

Pension Trust

1000 Mill Street
San Luis Obispo, CA 93408
(805) 781-5465 Phone
(805) 781-5697 Fax
www.SLOPensionTrust.org



AGENDA

PENSION TRUST BOARD OF TRUSTEES

Monday, August 26, 2019 9:30 AM
Board of Supervisors Chambers
County Government Center
San Luis Obispo, CA 93408

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

A) 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.

B) CONSENT

2. Minutes of the Regular Meeting of July 22, 2019 (Approve Without Correction).
3. Report of Deposits and Contributions for the month of July 2019 (Receive and File).
4. Report of Service Retirements, Disability Retirements and DROP Participants for the month of July 2019 (Receive, Approve and File).

C) ORGANIZATIONAL

5. Board of Trustees Meeting Schedule – Revised 2019 and 2020 Schedule (Recommend Approval).

D) APPLICATIONS FOR DISABILITY RETIREMENT

See Closed Session

E) OLD BUSINESS

None

F) NEW BUSINESS

6. June 30, 2019 Mid-Year Financial Statements and Fiscal Year 2018-2019 Administrative Budget Status (Receive and File).

G) INVESTMENTS

7. Quarterly Investment Report for the 2nd Quarter of 2019 – Presentation by Scott Whalen, Verus (Receive and File).
8. Monthly Investment Report for July 2019 (Receive and File).
9. ESG Investment Criteria – Current Investment Managers - Presentation by Scott Whalen, Verus (Review, Discuss, and Direct Staff as necessary)
10. Private Markets – Program Review and 2019 Commitment Recommendation – Presentation by Scott Whalen, Verus (Recommend Approval).
11. Asset Allocation - (Review, Discuss, and Direct Staff as necessary)

H) OPERATIONS

12. Staff Reports
13. General Counsel Reports
14. Committee Reports:
 - i. Audit Committee No Report
 - ii. Personnel Committee No Report
 - iii. PAS Replacement Committee No Report
15. Upcoming Board Topics (subject to change)
 - i. September 23, 2019 (Strategic Planning session)
 - a. Actuarial Risk and Sustainability

- b. Business Continuity Plan
 - c. Executive Director evaluation
- ii. October 18, 2019 (planned as a non-meeting month)
- iii. November 25, 2019
 - a. Interest Crediting Rates – annual determination
 - b. Quarterly Investment Report
 - c. Investment Program Review
 - d. Asset Allocation Policy
- iv. December 16, 2019 (planned as a non-meeting month)

16. Trustee Comments

I) CLOSED SESSION

18. PUBLIC EMPLOYEE DISABILITY RETIREMENT: The Board will convene in closed session pursuant to Gov. Code section 54957.6 to consider the Application for Industrial Disability Retirement in Case 2018-06 (Recommend Approval).

J) ADJOURNMENT

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**PENSION TRUST
BOARD OF TRUSTEES**

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MINUTES

July 22, 2019
Regular Meeting of the Pension Trust
Board of Trustees

- Board Members Present:** Will Clemens President
Guy Savage Vice President
Matt Janssen
Jim Hamilton
Jeff Hamm
Michelle Shoresman
Gere Sibbach
- Board Members Absent:** -
- Pension Trust Staff:** Carl Nelson Executive Secretary
Amy Burke Deputy Executive Secretary
- General Counsel:** Chris Waddell (via telephone)
- Consultants:** -
- Others:** Larry Batchelder SLOCREA
Jennifer Alderete Pension Trust staff

Call to Order: 9:31 AM by President Clemens, presiding over the meeting.

A) PUBLIC COMMENT

- 1. None

B) CONSENT

2. Minutes of the Regular Meeting of June 24, 2019 (Approve Without Correction).
3. Report of Deposits and Contributions for the month of June 2019 (Receive and File).
4. Report of Service Retirements, Disability Retirements and DROP Participants for the month of June 2019 (Receive, Approve and File).
5. Applications & Elections to participate in the Deferred Retirement Option Program (DROP) received through July 5, 2019 (Receive, Approve and File).
6. Stipulation for the Division of Pension Benefits – Option Four Pension Benefit Election (Recommend Approval)

Motion: Approve the Consent items.

Public Comment: None

Motion Made: Mr. Janssen Motion Seconded: Mr. Hamilton

Carried: Unanimous

C) ORGANIZATIONAL

None

D) APPLICATIONS FOR DISABILITY RETIREMENT

See Closed Session

E) OLD BUSINESS

None

F) NEW BUSINESS

7. **Actuarial Services – 2019 Experience Study & 2020 Valuation – 2020 RFP (Review, Discuss, and Direct Staff as necessary).**

Discussion: Staff reviewed the recommendation memo related to the October 31, 2019 retirement of the Plan Actuary – Leslie Thompson of Gabriel Roeder Smith (GRS). : The Staff recommendation was to: 1) Continue the engagement of GRS to perform the 2019 Experience Study and the 2020 Annual Actuarial Valuation in 2020; and, 2) Issue an RFP for actuarial services in mid-2020. The effect on the normal 5-year schedule for actuarial audits – in the event that a different actuary is selected in 2020 – was discussed and is a matter for Board decision in late 2020.

Public Comment: None

No Action Necessary – No further direction provided to Staff which will proceed as recommended.

8. Survey Results 2019 – Retirees and Active Members (Review, Discuss, and Direct Staff as necessary).

Discussion: Staff reported on the results of surveys of Pension Trust Active Members and Retirees conducted in May-June 2019. The Board discussed the results.

Public Comment: None

No Action Necessary – No further direction provided to Staff.

G) INVESTMENTS

9. Monthly Investment Report for June 2019

Discussion: Monthly investment performance report by Staff.

Motion: Receive and File

Public Comment: None

Motion Made: Mr. Savage

Motion Seconded: Mr. Hamilton

Carried: Unanimous

10. Asset Allocation

Discussion: Staff reviewed routine administrative asset allocation transfers related to liquidity.

Public Comment: None

No Action Necessary

H) OPERATIONS

11. Staff Reports

- i) Retirement Technician Recruitment – Staff reported that one of the Pension Trust’s Retirement Technicians is leaving for a job with a shorter commute. A recruitment for a replacement is currently underway.

- ii) PensionGold Go-Live – Staff reported that PensionGold is officially the system of record for the Pension Trust as of July 1, 2019. Staff will continue to develop and document new procedures in the coming year.
- iii) Benefit Overpayment – Staff reported that as part of routine review of an account transition from a retiree (recently deceased) to their survivor under an Option 3 payment option, a defect in the recently retired RAD Pension Administration System was discovered. While not creating an overpayment for the case being reviewed, it did lead to a review of similar cases. One case of an ongoing overpayment to a beneficiary of a deceased retiree that was the result of this RAD program error was discovered. As a Trust, the SLOCPT must correct and recover overpayments. The Beneficiary has been contacted and the overpayment stopped. Further analysis by the Plan Actuary will lead to communications to the Beneficiary on the amount of cumulative overpayment that must be collected. The Beneficiary has the right of Appeal to the Board of Trustees and this is expected at a future Board meeting.
- iv) Business Continuity Plan – Staff reported that a full Business Continuity Plan will be presented to the Board in September. Staff is currently expecting a proposal from LRS, the vendor for the PensionGold system on additional Business Continuity Plan services available.
- v) Retirement Classes – Staff reported that they have conducted two retirement classes (“Retirement 101 and 201”) for Courts employees and two more are scheduled. A Pension RoundTable for DSS employees was also held. Two further Retirement 101 and 201 classes are scheduled for general Member sign-up through Human Resources for late July and early August.
- vi) PEPRA – post-retirement 90 day waiting period – Staff reported that the SLO County Clerk & Recorder’s office has followed proper means to bring back a new retiree as a temporary employee due to her status as an election expert. In compliance with PEPRA the County Board of Supervisors passed a resolution certifying the critical need for this employee, thereby removing the need for the 180-day post-retirement waiting period.
- vii) The Fiduciary Newsletter – Staff reported that the mid-year edition of The Fiduciary was being drafted including the annual financial report on the SLOCPT to members.
- viii) By-Laws amendments – Staff reported that the Board of Trustees’ recommended amendments to the SLOCPT By-Laws and technical Retirement Plan amendments are scheduled to be presented to the Board of Supervisors on August 13th.

12. **General Counsel Reports** – Counsel Waddell reported that he would be participating in a CALAPRS Principles of Pension Governance for Trustees class in August immediately following the August 26th Board of Trustees meeting.
13. **Committee Reports:**
 - i) Audit Committee – No report.
 - ii) Personnel Committee - No report.
 - iii) PAS Replacement Committee – No report.
14. **Upcoming Board Topics** – published on meeting agenda
15. **Trustee Comments** – None

I) CLOSED SESSION

10:42 AM – entered Closed Session

16. PUBLIC EMPLOYEE DISABILITY RETIREMENT: The Board convened in closed session pursuant to Gov. Code section 54957.6 to consider the Application for Industrial Disability Retirement in Case 2019-01 (Recommend Approval).

10:47 AM – exited Closed Session

Report – President Clemens reported that the application for Industrial Disability Retirement in Case 2019-01 was approved by unanimous vote of the Trustees.

I) ADJOURNMENT –

There being no further business, the meeting was adjourned at 10:48 AM. The next Regular Meeting was set for August 26, 2019, at 9:30 AM, in the Board of Supervisors chambers, County Government Center, San Luis Obispo, California 93408.

Respectfully submitted,

Carl Nelson
Executive Secretary

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**REPORT OF DEPOSITS AND CONTRIBUTIONS FOR THE MONTH OF
JULY 2019**

PP 14 7/5/2019	Pensionable Salary	Employer Contributions	Employer Rate	Employee Contributions	Employer for		Employee Rate	Combined Rate	Additional Contributions	Buy Backs	TOTAL Contributions
					Employee Contributions	Employee Rate					
By Employer and Tier:											
County Tier 1	3,508,550.27	827,434.38	23.58%	395,888.43	298,325.19	19.79%	43.37%	2,098.00	5,452.80		1,529,198.80
County Tier 2	979,915.08	237,622.07	24.25%	42,213.80	82,821.47	12.76%	37.01%	50.55	396.33		363,104.22
County Tier 3	2,834,419.68	644,590.79	22.74%	330,301.17	-	11.65%	34.39%	-	10,793.47		985,685.43
Superior Court Tier 1	258,613.89	68,016.99	26.30%	44,590.31	-	17.24%	43.54%	-	-		112,607.30
Superior Court Tier 3	82,869.05	20,612.24	24.87%	9,964.51	-	12.02%	36.90%	-	-		30,576.75
APCD Tier 1	54,490.57	12,670.49	23.25%	7,286.50	3,858.60	20.45%	43.71%	-	-		23,815.59
APCD Tier 3	16,513.50	3,723.66	22.55%	2,116.88	-	12.82%	35.37%	-	-		5,840.54
Pension Trust Staff Tier 1	7,204.40	1,655.57	22.98%	877.50	669.29	21.47%	44.45%	-	-		3,202.36
Pension Trust Staff Tier 2	8,374.40	1,924.43	22.98%	221.92	777.98	11.94%	34.92%	-	-		2,924.33
Pension Trust Staff Tier 3	10,759.48	2,419.81	22.49%	1,340.59	-	12.46%	34.95%	-	-		3,760.40
LAFCO Tier 1	13,227.91	3,882.79	29.35%	716.94	1,228.88	14.71%	44.06%	-	-		5,828.61
	7,774,938.23	1,824,553.22	23.47%	835,518.55	387,681.41	15.73%	39.20%	2,148.55	16,642.60		\$ 3,066,544.33
PP 15 7/19/2019	Pensionable Salary	Employer Contributions	Employer Rate	Employee Contributions	Employer for		Employee Rate	Combined Rate	Additional Contributions	Buy Backs	TOTAL Contributions
					Employee Contributions	Employee Rate					
By Employer and Tier:											
County Tier 1	3,499,388.43	890,263.66	25.44%	432,866.87	297,619.92	20.87%	46.32%	2,098.00	1,542.66		1,624,391.11
County Tier 2	962,158.14	253,477.54	26.34%	52,080.96	81,193.55	13.85%	40.20%	-	396.33		387,148.38
County Tier 3	2,851,221.52	697,925.04	24.48%	360,666.12	-	12.65%	37.13%	-	3,228.59		1,061,819.75
Superior Court Tier 1	263,519.54	69,316.99	26.30%	45,448.08	-	17.25%	43.55%	-	-		114,765.07
Superior Court Tier 3	91,546.35	22,991.97	25.12%	11,000.76	-	12.02%	37.13%	-	-		33,992.73
APCD Tier 1	54,614.43	12,698.68	23.25%	7,308.30	3,865.72	20.46%	43.71%	-	-		23,872.70
APCD Tier 3	16,525.39	3,726.31	22.55%	2,118.07	-	12.82%	35.37%	-	-		5,844.38
Pension Trust Staff Tier 1	7,348.66	1,771.76	24.11%	978.11	682.69	22.60%	46.71%	-	-		3,432.56
Pension Trust Staff Tier 2	8,540.80	2,059.19	24.11%	322.84	793.44	13.07%	37.18%	-	-		3,175.47
Pension Trust Staff Tier 3	11,384.77	2,689.08	23.62%	1,546.49	-	13.58%	37.20%	-	-		4,235.57
LAFCO Tier 1	10,832.21	3,269.43	30.18%	709.51	1,006.31	15.84%	46.02%	-	-		4,985.25
	7,777,080.24	1,960,189.65	25.20%	915,046.11	385,161.63	16.72%	41.92%	2,098.00	5,167.58		\$ 3,267,662.97
TOTAL FOR THE MONTH	15,552,018.47	3,784,742.87	24.34%	1,750,564.66	772,843.04	16.23%	40.56%	4,246.55	21,810.18		\$ 6,334,207.30
TOTAL YEAR TO DATE	115,006,659.69	26,994,357.99	23.47%	12,592,386.22	5,830,705.08	16.02%	39.49%	24,887.76	172,875.86		45,615,212.91

REPORT OF RETIREMENTS

July 2019

RETIREE NAME	DEPARTMENT	BENEFIT TYPE *	EFFECTIVE DATE	MONTHLY BENEFIT	SS TEMP ANNUITY**
Bishop, Stewart	Sheriff-Coroner	DROP	06/01/19	2,554.39	True
Bloyd, Donna	LAFCO	Service Retirement	06/29/19	2,945.05	False
Calvert, Christine A	Sheriff - Coroner	Disability	05/18/19	2,274.20	False
Conroy, Howard	Assessors	Service Retirement	07/01/19	577.65	False
Conroy, Howard	Assessors	Additional Annuity	07/01/19	1.33	False
Coughlin, Frances	General Hospotial	Service Retirement	07/01/19	2,065.46	False
Dutra, Mary	Sheriff-Coroner	DROP	06/01/19	1,585.86	False
Ford, Patricia	Behavioral Health	Service Retirement	07/06/19	4,872.45	False
Gorman, Janelle	Public Health	Service Retirement	07/01/19	6,991.39	False
Gorman, Janelle	Public Health	Additional Annuity	07/01/19	21.27	False
Holmes, Reginald	Behavioral Health	DROP	07/01/19	3,704.76	False
Krikorian-Jewell, Doreen	Superior Court	Service Retirement	07/16/19	581.28	False
Liebscher, Tina	Probation	Service Retirement	07/06/19	5,814.08	False
Ludwig, Jamie	Social Services	Service Retirement	06/15/19	1,545.66	False
McDonough, Shaun	ITD	DROP	07/01/19	5,432.92	False
McKeon, Marianne	Public Health	Service Retirement	07/06/19	2,114.02	False
Peabody, Kristin	ITD	DROP	06/01/19	4,740.95	False
Polino, Lisa	District Attorney	Service Retirement	07/06/19	653.53	False
Richards, Cindy	Library	Service Retirement	06/16/19	1,507.33	False
Rincon, Ricardo	Superior Court	Service Retirement	06/29/19	408.10	False
Spino, Karen	General Services	Service Retirement	07/01/19	358.34	False
Spino, Karen	General Services	Additional Annuity	07/01/19	132.40	False
Trinidad, Arthur	Planning Department	Service Retirement	07/13/19	6,187.06	True
Trinidad, Arthur	Planning Department	Additional Annuity	07/13/19	8.87	False
Walters, Christopher	Social Services	Service Retirement	06/25/19	2,260.64	False
Zohns, Laura	Clerk-Recorder	Service Retirement	07/15/19	2,078.42	False

* Additional Annuity Benefits are calculated based on the Additional Contribution and associated Interest balance of the Retiree at the point of retirement (per Sections 5.07, 27.12, 28.12, 29.12, 30.12, and 31.12 of the Plan)

** If "True" Retiree has elected an optional Social Security Coordinated Temporary Annuity (per Section 13.06 of the Plan), actual monthly allowance will be increased until age 62 and then actuarially reduced going forward

Board of Trustees

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Date: August 26, 2019

To: Board of Trustees

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

Agenda Item 5: Board of Trustees Meeting Schedule – Revised 2019 and 2020 Schedule

Recommendation:

Approve the attached Board of Trustees meeting schedules –

- 2019 Revised
- 2020

Discussion:

With the Board of Supervisors approval of amended By-Laws for the Pension Trust at their August 13, 2019 meeting, the requirement for monthly Board of Trustees meetings is now more flexible. Consistent with a Board consensus to move to an eight meetings per year schedule, the attached schedules omit the April, July, October, and December meetings.

Note, that the Board of Trustees will be scheduled for meetings every month on the 4th Monday (adjusted for holidays) to preserve those dates if Board action is necessary and a meeting needs to be called with the normal 72 hour Brown Act notice.

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San Luis Obispo County
Pension Trust
SLOOPT

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DATE: August 26, 2019

TO: Board of Trustees

FROM: Carl Nelson
Executive Secretary

RE: **Board of Trustees Meeting Schedule for 2019 (REVISED)**

Pursuant to Section 5.01:Regular Meetings of the By-Laws of the San Luis Obispo County Pension Trust, the following dates have been established for the Regular Meetings of the Board of Trustees for the year 2019. Unless otherwise indicated, meetings will take place on the 4th Monday of each month and be held in the Board of Supervisors Chambers in the County Administration Building.

January 28, 2019	9:30 AM	BoS Chambers
February 25, 2019	9:30 AM	BoS Chambers
March 25, 2019	9:30 AM	BoS Chambers
April 22, 2019	9:30 AM	BoS Chambers
May 20, 2019 (3rd Mon.)	9:30 AM	BoS Chambers
June 24, 2019	9:30 AM	BoS Chambers
July 22, 2019	9:30 AM	BoS Chambers
August 26, 2019	9:30 AM	BoS Chambers
September 23, 2019	9:30 AM	Room 161/162
October 28, 2019	9:30 AM	BoS Chambers *
November 25, 2019	9:30 AM	BoS Chambers
December 16, 2019 (3rd Mon.)	9:30 AM	BoS Chambers *

* Meetings removed from the schedule effective August 26, 2019

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San Luis Obispo County
Pension Trust
SLOOPT

DATE: August 26, 2019
TO: Board of Trustees
FROM: Carl Nelson
Executive Secretary
RE: Board of Trustees Meeting Schedule for 2020

Pursuant to Section 5.01:Regular Meetings of the amended By-Laws of the San Luis Obispo County Pension Trust, the following dates have been established for the Regular Meetings of the Board of Trustees for the year 2020. Unless otherwise indicated, meetings will take place on the 4th Monday of each month and be held in the Board of Supervisors Chambers in the County Administration Building.

Note – in the months where meetings are not scheduled (April, July, October and December) the 4th Monday will be held as a possible meeting date should Board of Trustees action be necessary.

January 27, 2020	9:30 AM	Room 161/162
February 24, 2020	9:30 AM	BoS Chambers
March 23, 2020	9:30 AM	BoS Chambers
April 27, 2020	non-meeting month	
May 18, 2020 (3rd Mon.)	9:30 AM	Room 161/162
June 22, 2020	9:30 AM	BoS Chambers
July 27, 2020	non-meeting month	
August 24, 2020	9:30 AM	BoS Chambers
September 28, 2020	9:30 AM	Room 161/162
October 26, 2020	non-meeting month	
November 23, 2020	9:30 AM	BoS Chambers
December 21, 2020 (3rd Mon.)	non-meeting month	

Board of Trustees

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Date: August 26, 2019

To: Board of Trustees

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

Agenda Item 6: June 30, 2019 Mid-Year Financial Statements and Fiscal Year (FY) 2018-2019 Final Administrative Budget Status

Recommendation:

It is recommended by Staff that the Board of Trustees –

- Receive and file the unaudited June 30, 2019 mid-year financial statements
- Receive and file the final FY18-19 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, 2019 (unaudited) and December 31, 2018
- Statements of Changes in Fiduciary Net Position for the six months ended June 30, 2019 (unaudited) and the year ended December 31, 2018
- Final Administrative Budget Status – FY18-19

The SLOCPT produces audited financial statements in a full Comprehensive Annual Financial Report (CAFR) format at 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 FY18-19 Administrative Budget was adopted by the Board of Trustees. The total expense budget for FY18-19 was adopted to be \$2,729,500. Staff has determined actual expenses to be \$2,324,329 for FY18-19, which is \$405,171 or 14.84% under the approved budget. Actual expenses for FY17-18 and FY19-20 adopted budget amounts have been shown for comparison.

Respectfully Submitted,

**SAN LUIS OBISPO COUNTY PENSION TRUST
STATEMENTS OF FIDUCIARY NET POSITION
JUNE 30, 2019 AND DECEMBER 31, 2018**

	Unaudited 6/30/2019	12/31/2018
ASSETS		
Cash and Cash Equivalents	\$ 44,436,238	\$ 55,156,155
Receivables		
Accrued Interest and Dividends Receivable	556,323	769,193
Accounts Receivable	9,727	23,672
Contributions Receivable	3,047,753	3,013,566
Securities Sold	6,658,684	1,262,251
Total Receivables	10,272,487	5,068,682
Investments, at Fair Value		
Bonds and Notes	273,990,736	264,058,167
International Fixed Income	146,426,794	152,893,552
Collateralized Mortgage Obligations	5,036,035	4,365,340
Domestic Equities	273,508,631	250,084,930
International Equities	302,610,330	258,784,769
Alternative Investments	142,750,581	124,392,603
Real Estate	199,491,110	192,202,582
Total Investments	1,343,814,217	1,246,781,943
Other Assets		
Prepaid Expenses	2,296	62,905
Capital Assets - Net of Accumulated Depreciation	7,592,965	3,559,827
Total Other Assets	7,595,261	3,622,732
Total Assets	\$ 1,406,118,203	\$ 1,310,629,512
LIABILITIES		
Securities Purchased	\$ 20,621,272	\$ 10,667,232
Accrued Liabilities	2,879,630	1,284,059
Prefunded Contributions	1,279,714	27,058,137
Total Liabilities	\$ 24,780,616	\$ 39,009,428
FIDUCIARY NET POSITION		
Fiduciary Net Position Restricted for Pension Benefits	\$ 1,381,337,587	\$ 1,271,620,084

**SAN LUIS OBISPO COUNTY PENSION TRUST
STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION
SIX MONTHS ENDED JUNE 30, 2019 AND YEAR ENDED DECEMBER 31, 2018**

	Unaudited 6/30/2019	12/31/2018
ADDITIONS		
Contributions		
Employer Contributions	\$ 23,255,844	\$ 46,243,596
Plan Member Contributions	16,059,348	32,952,747
	39,315,192	79,196,343
Investment Income (Loss)		
Realized and Unrealized Gains and Losses, Net	121,829,827	(60,131,990)
Interest	2,178,185	4,120,406
Dividends	1,843,244	9,451,610
Real Estate Management Trust Income, Net	-	-
Real Estate Operating Income, Net	3,423	376,191
Investment Expenses	(1,807,698)	(3,849,273)
	124,046,981	(50,033,056)
Net Investment Income		
	163,362,173	29,163,287
DEDUCTIONS		
Benefits		
Monthly Benefit Payments	49,862,036	92,811,810
Refund of Contributions	1,509,650	1,756,682
Death Benefits	85,838	60,376
	51,457,524	94,628,868
Other Deductions		
Administration and Actuarial	996,433	1,972,465
Prefunded Discount Amortization	1,190,713	1,412,892
	2,187,146	3,385,357
Total Other Deductions		
	53,644,670	98,014,225
Net Increase (Decrease) in Fiduciary Net Position	\$ 109,717,503	\$ (68,850,938)
Fiduciary Net Position Restricted for Pension Benefits - December 31, 2018 and December 31, 2017	\$ 1,271,620,084	\$ 1,340,471,022
Fiduciary Net Position Restricted for Pension Benefits - June 30, 2019 and December 31, 2018	\$ 1,381,337,587	\$ 1,271,620,084

San Luis Obispo County Pension Trust
BUDGET STATUS UPDATE
Fiscal Year 2018-2019
as of 6/30/2019

	FY17-18 Actual Expenses	FY18-19 Adopted Budget	FY18-19 Total Expenses	Budget Variance	FY19-20 Adopted Budget
INVESTMENT EXPENSE (discretionary):					
Custody & Consultant	\$ 524,497	\$ 481,000	\$ 450,931	\$ (30,069)	\$ 505,000
ADMINISTRATIVE EXPENSE:					
Personnel Services	\$ 1,107,932	\$ 1,220,400	\$ 1,096,016	\$ (124,384)	\$ 1,111,000
Professional Service					
Accounting & Auditing	61,821	65,000	64,146	(854)	60,000
Actuarial	205,657	100,000	93,376	(6,624)	136,000
Legal	211,917	220,500	197,511	(22,989)	220,500
Medical Evaluations - Disabilities	23,275	21,500	22,703	1,203	21,500
Human Resources Consulting	5,000	5,000	5,000	(0)	5,000
Information Technology Services	156,178	166,000	152,934	(13,066)	271,500
Banking and Payroll	19,448	22,500	18,129	(4,371)	21,000
Other Professional Services	1,516	2,500	1,514	(986)	2,500
Total Professional Services	\$ 684,812	\$ 603,000	\$ 555,313	\$ (47,687)	\$ 738,000
Other Expenses					
Trustee Election Expenses	-	6,000	-	(6,000)	6,000
Property Taxes	-	-	-	-	22,000
Insurance	116,954	126,000	116,402	(9,598)	126,000
Building Maintenance	25,483	31,500	26,056	(5,444)	58,000
Office Expense	18,324	28,500	22,510	(5,990)	28,500
Memberships & Publications	5,028	5,100	5,522	422	5,000
Postage	22,570	27,000	27,016	16	32,000
Communications	4,434	5,000	1,557	(3,443)	3,000
Training & Travel	21,287	53,500	18,394	(35,106)	43,000
Information Technology	3,881	4,500	900	(3,600)	4,500
Equipment	12,155	8,000	3,712	(4,288)	10,000
Total Other Expenses	\$ 230,116	\$ 295,100	\$ 222,069	\$ (73,031)	\$ 338,000
TOTAL ADMINISTRATIVE	\$ 2,022,860	\$ 2,118,500	\$ 1,873,398	\$ (245,102)	\$ 2,187,000
TOTAL ADMIN. + INVEST.	\$ 2,547,357	\$ 2,599,500	\$ 2,324,329	\$ (275,171)	\$ 2,692,000
Contingencies	\$ -	\$ 130,000	\$ -	\$ (130,000)	\$ 135,000
TOTAL	\$ 2,547,357	\$ 2,729,500	\$ 2,324,329	\$ (405,171)	\$ 2,827,000

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Board of Trustees

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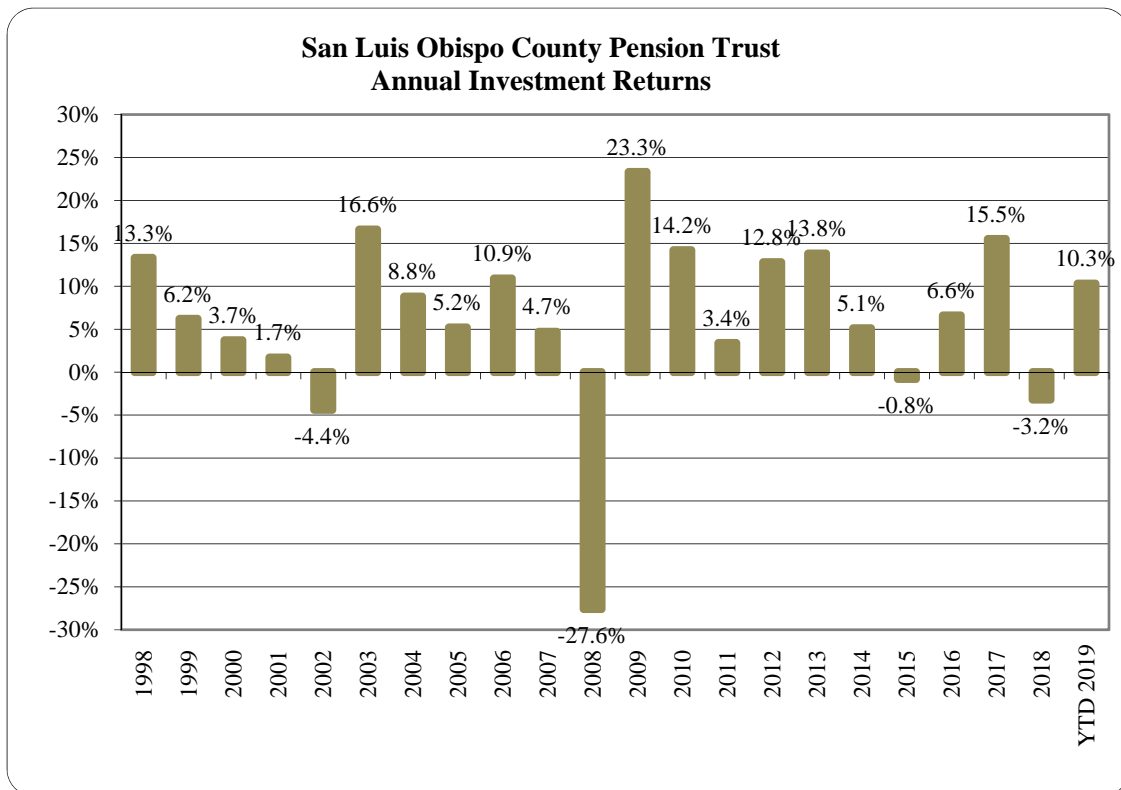
Date: August 26, 2019

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 2019

Attached to this memo is the 2Q19 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.



Respectfully submitted,

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**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**



PERIOD ENDING: JUNE 30, 2019

Investment Performance Review for

San Luis Obispo County Pension Trust

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[VERUSINVESTMENTS.COM](https://www.verusinvestments.com)

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SAN FRANCISCO 415-362-3484

Investment Landscape

TAB I

Investment Performance
Review

TAB II



**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**

3RD QUARTER 2019
Investment Landscape

Recent Verus research

Visit: <https://www.verusinvestments.com/insights/>

Annual outlooks

REAL ASSETS OUTLOOK

Inflation fears have been subdued in the market over the past year. Both core CPI and headline CPI have been declining over the past nine months and came in at 2.0% and 1.9%, respectively, in March. Over the past twelve months, core CPI has ranged between 2.0 and 2.3%, near the Fed's inflation target. At this stage of the market cycle, we view the risk of deflation from an economic slowdown to be of greater concern than unanticipated inflation.

Topics of interest

A PRACTICAL UNDERSTANDING OF LDI

For corporate pension plans, LDI can be an effective way to reduce the range of outcomes in funded status, which has particular appeal given the asymmetric trade-off associated with a declining funded status relative to a stronger funded status.

Our Topics of Interest paper aims to provide a practical introduction into these issues to assist plan sponsors in evaluating whether LDI makes sense for their organization.

LDI GLIDE PATH CREATION

Our latest Topics of Interest paper on LDI glide path creation seeks to explain the methodology and considerations of building a glide path for a pension plan. It addresses the following points:

- How much of the plan's allocation should be deployed in an LDI strategy?
- How do we align a glide path with the plan's objectives and financial constraints?
- How does the risk of our glide path differ based on changing objectives and financial constraints?

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Economic environment 6

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Equity 24

Other assets 34

Appendix 37

2nd quarter summary

THE ECONOMIC CLIMATE

- U.S. real GDP expanded 3.2% YoY in Q1 (3.1% quarterly annualized rate). Year-over-year growth was the strongest since the second quarter of 2015. The U.S. Congressional Budget Office expects the U.S. economy to slow to a 2.1% pace in 2020, near the growth rate of other developed markets. [p. 7](#)
- Effective May 10th, U.S. tariff rates on \$200 billion in Chinese imports were hiked from 10% to 25%, and the Chinese responded with commensurate tariff rate hikes. In June, Presidents Trump and Xi met on the sidelines of the G20 summit in Osaka. The meeting yielded a “trade truce” in which both countries agreed to pause any additional tariffs. [p. 14](#)

PORTFOLIO IMPACTS

- Equity performance in Q2 appears to have been largely driven by higher prices, rather than improved earnings expectations. Estimated Q2 S&P 500 earnings worsened from -0.5% to -2.6% during this time. [p. 25](#)
- U.S. inflation remained stable at 2.1% YoY in June, excluding food & energy. Headline inflation rose 1.6% YoY, dragged down by falling energy prices. Core inflation has been range-bound over the past five years, fluctuating between 1.7% and 2.3%. Investors and consumers expect this trend to continue. [p. 9](#)

THE INVESTMENT CLIMATE

- The Federal Open Market Committee left the range for its benchmark interest rate unchanged at 2.25%-2.50% and reiterated that it would continue to act appropriately to sustain the expansion. Markets interpreted the press conference as confirmation of a 0.25% rate cut in July. [p. 18 & 19](#)
- European Central Bank President Mario Draghi issued dovish forward guidance, announcing that “additional stimulus” was on the table should the economic backdrop worsen, and inflation remain subdued. European and international developed sovereign yields have fallen along with U.S. yields. German 10-year bunds closed the month at new lows of -0.33%. [p. 18 & 19](#)

ASSET ALLOCATION ISSUES

- Risk assets delivered strong returns over the quarter. Global Equities gained +3.6% and U.S. high yield gained +2.5%. Longer duration exposures generally outperformed as interest rates fell. [p. 41](#)
- U.S. equity prices have continued to rise on expectations of nearly three interest rate cuts in 2019 and perhaps an assumption that U.S. earnings exceptionalism will extend into the future. If domestic conditions converge with other developed economies and these expectations turn out to be overly optimistic, we believe U.S. equities may possess greater downside risk. [p. 26](#)

A neutral risk stance may be appropriate in today's environment

What drove the market in Q2?

“US-China trade truce leaves markets with big questions”

U.S. SOYBEAN EXPORTS TO CHINA (METRIC TONS) (000s)

Jan	Feb	Mar	Apr	May	Jun
133	3,217	1,256	719	1,219	1,670

Article Source: CNN, July 1st, 2019

“Bond-Yield Plunge Confounds the World’s Economy”

VALUE OF GLOBAL NEGATIVE-YIELDING DEBT (USD TRILLIONS)

Jan	Feb	Mar	Apr	May	Jun
8.85	8.81	10.40	10.03	11.27	12.92

Article Source: Wall Street Journal, June 23rd, 2019

“Fed holds rates steady, but opens the door for a rate cut in the future”

FUTURES IMPLIED PROBABILITY (%) OF CUTTING RATES BY JULY

Jan	Feb	Mar	Apr	May	Jun
7.1	5.4	23.6	31.9	47.8	100.0

Article Source: CNBC, June 19th, 2019

“Draghi Sees Prospect of More ECB Stimulus Amid Weak Inflation”

EUROZONE CONSUMER PRICE INFLATION (YoY %)

Jan	Feb	Mar	Apr	May	Jun
1.4	1.5	1.4	1.7	1.2	1.3

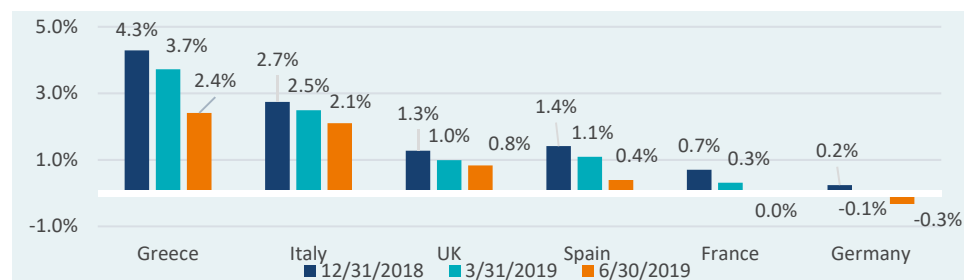
Article Source: Bloomberg, June 18th, 2019

RELATIVE EQUITY MARKET PERFORMANCE (CHINA VS. U.S.)



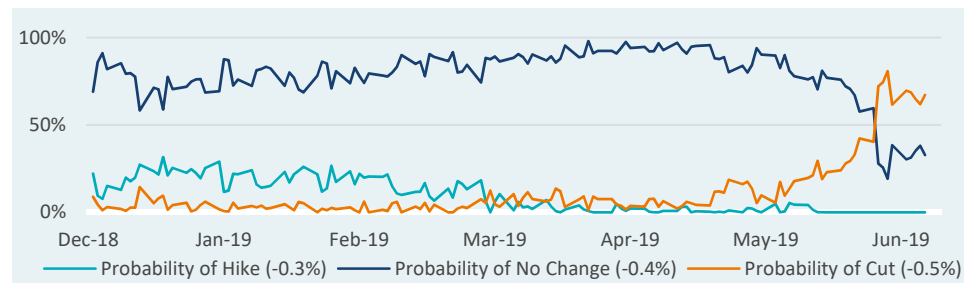
Source: Bloomberg, as of 6/30/19

TEN-YEAR EUROPEAN SOVEREIGN YIELDS



Source: Bloomberg, as of 6/30/19

PROBABILITY OF THE ECB CUTTING ITS MAIN RATE BY SEPTEMBER



Source: Bloomberg, as of 6/30/19

Economic environment

U.S. economics summary

- U.S. real GDP expanded 3.2% YoY in Q1 (3.1% quarterly annualized rate). Year-over-year growth was the strongest since the second quarter of 2015.
- The U.S. economy is expected to slow to a 2.1% pace in 2020, near the growth rate of other developed markets, as indicated by the U.S. Congressional Budget Office.
- U.S.-China trade remained central to headlines over the quarter. Effective May 10th, U.S. tariff rates on \$200 billion in Chinese imports were hiked from 10% to 25%, and the Chinese responded with commensurate tariff increases. In June, Presidents Trump and Xi met on the sidelines of the G20 summit in Osaka. The meeting yielded a “trade truce” in which both countries agreed to pause any additional tariff rate hikes.
- Headline CPI inflation fell from a YoY rate of 1.9% in March to 1.6% in June. PCE inflation, the Fed’s preferred inflation gauge, ticked up from a YoY rate of 1.5% at the end of the 1st quarter to 1.6% in May.
- Average hourly earnings grew 3.1% YoY in June, below expectations of 3.2%. The average non-farm private workweek fell slightly from 34.5 hours per week to 34.4.
- The labor market continued to show strength in Q2. The U-3 unemployment rate touched 50-year lows at 3.6% in May and ended the quarter in June at 3.7%.
- The Federal Open Market Committee messaged that it would continue to “act as appropriate to sustain the expansion”, which markets viewed as dovish. Over the quarter, expectations for additional 2019 rate cuts moved from a 64% chance of a 0.25% cut to a 61% chance of 0.75% in cuts.

	Most Recent	12 Months Prior
GDP (YoY)	3.2% 3/31/19	2.6% 3/31/18
Inflation (CPI YoY, Core)	2.1% 6/30/19	2.2% 6/30/18
Expected Inflation (5yr-5yr forward)	1.9% 6/30/19	2.2% 6/30/18
Fed Funds Target Range	2.25 – 2.50% 6/30/19	1.75 – 2.00% 6/30/18
10 Year Rate	2.0% 6/30/19	2.9% 6/30/18
U-3 Unemployment	3.7% 6/30/19	4.0% 6/30/18
U-6 Unemployment	7.2% 6/30/19	7.8% 6/30/18

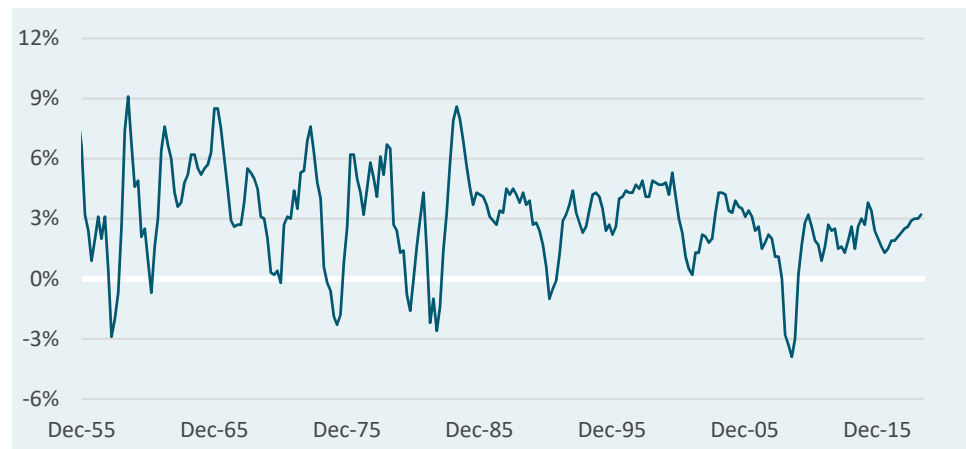
GDP growth

Real GDP grew at an annualized quarterly rate of 3.1% in the first quarter, ahead of analysts' estimates for a 2.3% expansion. Inventory builds and net exports, which tend to be more volatile components of GDP, contributed 1.7% to the print, their most significant addition since 2013. Corporate inventory builds added 0.6% to the overall 3.1% GDP print, a contribution which ranked in the 74th percentile over the past five years. Looking ahead, trade balance volatility may persist as firms around the globe adjust to evolving international trade policies.

U.S. economic growth appears to face many of the same headwinds. The lack of a definitive trade resolution between the U.S. and China, supply chain disruptions caused by new tariff impositions, and the upside limitations of an unemployment rate near 50-year lows may dampen growth prospects for the second quarter. On June 28th, the Federal Reserve Bank of Atlanta GDPNow forecast indicated annualized quarterly GDP growth of 1.5% in the second quarter. This forecast suggests consumer expenditures will provide the greatest contribution of 2.5% to overall growth.

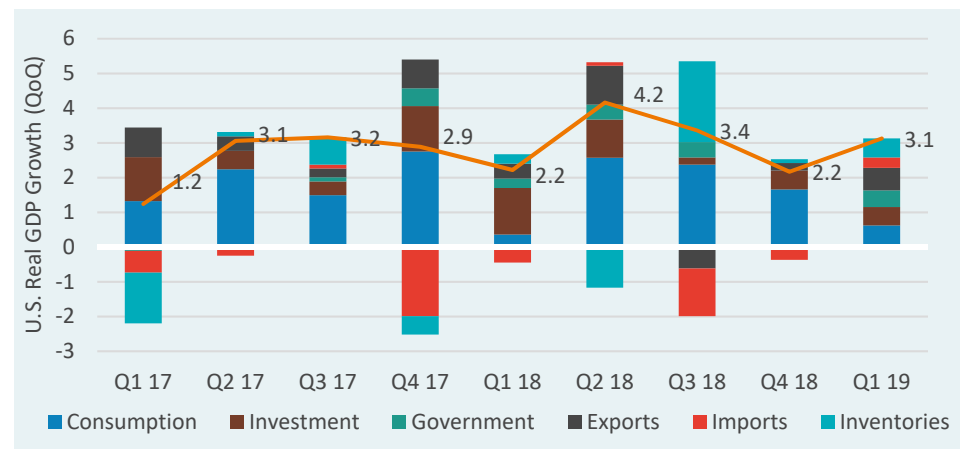
The U.S. economy is expected to slow to 2.1% in 2020, near the growth rate of the developed world

U.S. REAL GDP GROWTH (YOY)



Source: Bloomberg, as of 3/31/19

U.S. GDP GROWTH ATTRIBUTION



Source: BEA, annualized quarterly rate, as of 3/31/19

Inflation

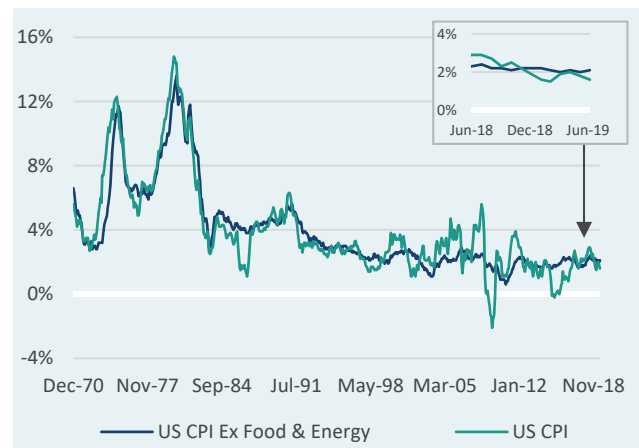
U.S. core inflation (ex-food & energy) remained stable at 2.1% YoY in June. Headline inflation rose 1.6% YoY, dragged down by falling energy prices year-over-year. Core inflation has been range-bound over the past five years, fluctuating between 1.7% and 2.3%. Investors and consumers generally expect this trend to continue, as indicated by market pricing and consumer surveys.

The market is pricing inflation to fall over the next five years (as indicated by U.S. TIPS 5-year breakeven rate of 1.5%) and

is pricing inflation to stay lower for longer (U.S. TIPS 10-year breakeven rate of 1.7%).

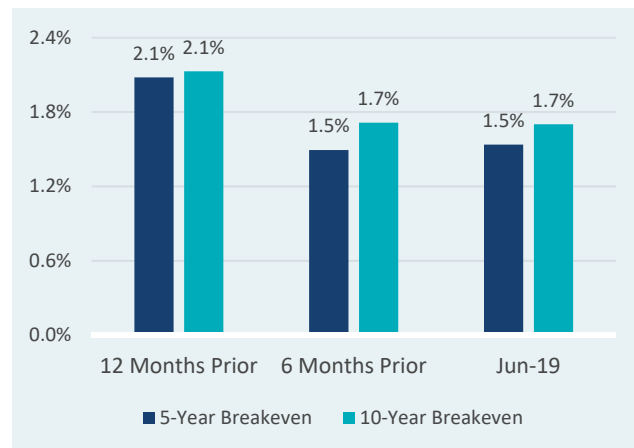
We believe subdued inflation of around 2% has been, and will be, a key influence on Federal Reserve policy. Lower inflation provides the Fed with more legroom for easier positioning to support economic growth and strong employment. If the inflation trend were to shift in either direction, this may put Fed officials in a more tenuous position. We will be watching inflation trends closely.

U.S. CPI (YOY)



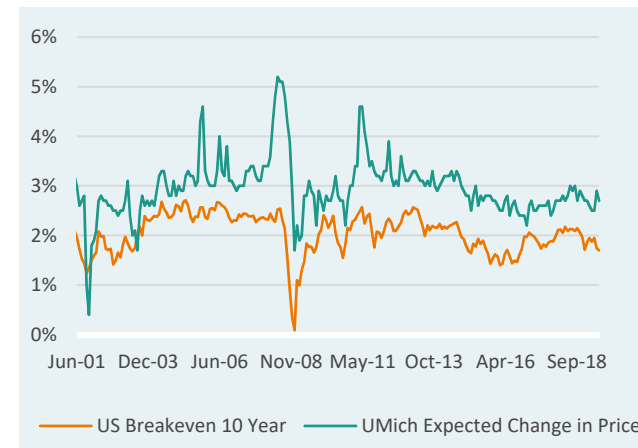
Source: Bloomberg, as of 6/30/19

U.S. BREAKEVEN INFLATION RATES



Source: FRED, as of 6/30/19

INFLATION EXPECTATIONS



Source: Bloomberg, as of 6/30/19

Labor market

The U.S. labor market remains tight. Unemployment during the quarter reached a level of strength not seen since 1969. Nonfarm payrolls expanded by 224,000 in June, well above the consensus estimate of 160,000. The number of U.S. job openings now exceed the number of jobs available.

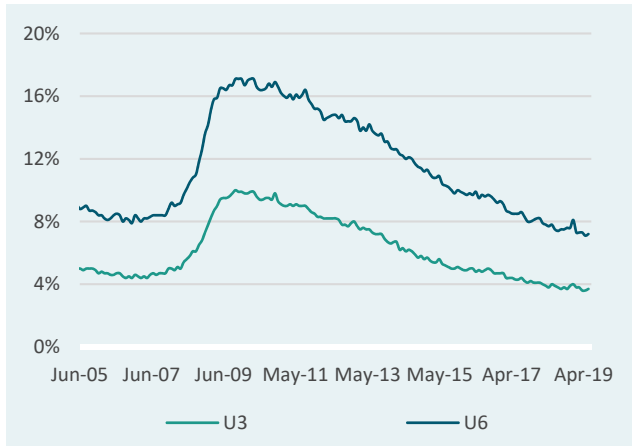
The U.S. unemployment rate was 3.7% in June, according to the narrower U-3 measure which only encompasses those workers seeking a job. The broader U-6 unemployment rate was 7.2%, which also includes discouraged and part-time workers who seek full-time employment.

Given the relatively limited number of unemployed persons and the high percentage of companies reporting that jobs are hard to fill, we believe it may be difficult for job growth to continue at its recent pace.

Wages have grown modestly but have slowed year-to-date. Weak wage growth limits the spending power of consumers, but also reduces the risk of corporate margin deterioration and may limit general price inflation. In June, average hourly earnings rose 3.1% year-over-year.

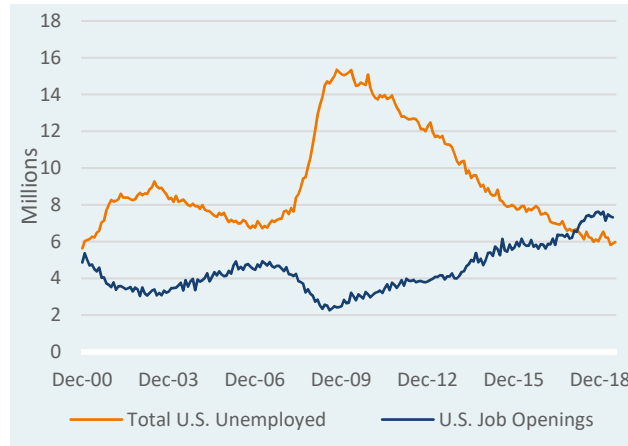
U.S. labor market remains strong, though further upside may be limited

U.S. UNEMPLOYMENT



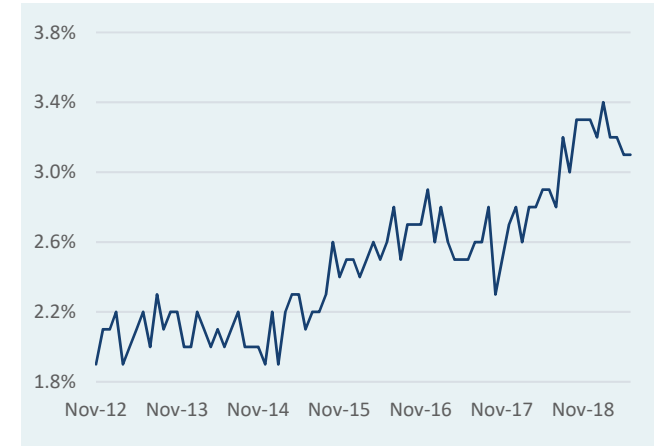
Source: FRED, as of 6/30/19

U.S. JOB OPENINGS VS. UNEMPLOYED



Source: Bloomberg, as 6/30/19

U.S. WAGE GROWTH



Source: FRED, as of 6/30/19

The consumer

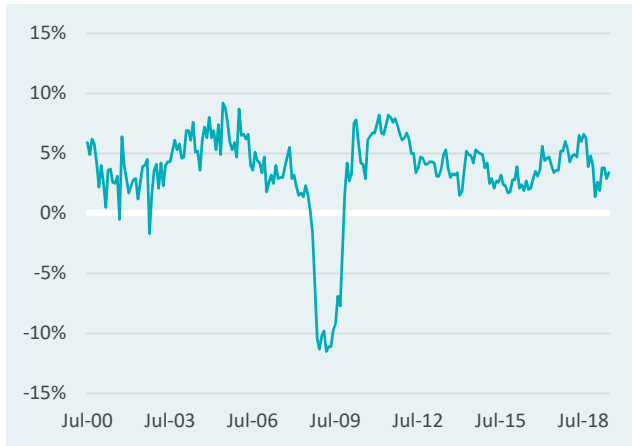
Headline retail sales grew 3.4% from the prior year in June. Core retail sales, which exclude spending on automobiles, gasoline, building materials, and food services, grew at a strong pace of 4.6% from the prior year. Typically, core retail sales correspond most closely with the consumer expenditures component of the quarterly GDP calculation.

U.S. personal incomes grew at a YoY rate of 4.1% in May, up from 3.5% at the end of the first quarter. Personal consumption expenditures grew at a YoY rate of 4.2% in May, slightly lower than the pace of 4.4% at the end of Q1. Benign

inflation, improving real wages, and consumers' perceptions of a strong labor market have all likely played a key role in the resilience of consumer spending patterns as of late.

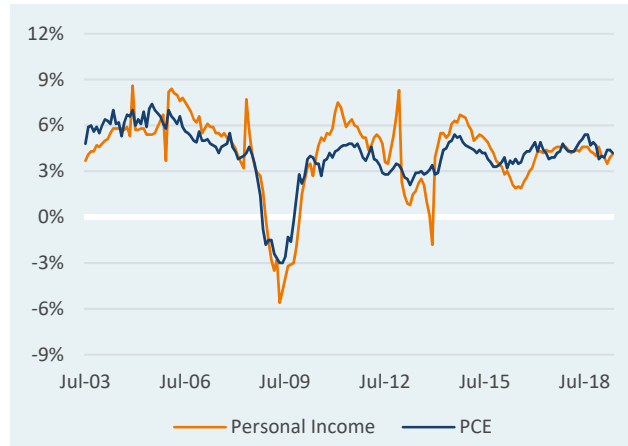
Consumer credit growth has remained tempered over the expansion, but the composition of that credit has shifted. Over the past ten years, student loans have increased their share while mortgage debt has decreased its share.

REAL RETAIL SALES GROWTH (YOY)



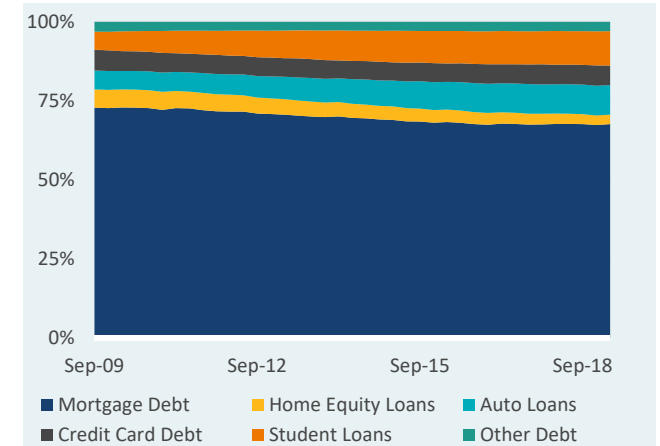
Source: Bloomberg, as of 6/30/19

PERSONAL INCOME AND NOMINAL PERSONAL CONSUMPTION EXPENDITURES (YOY)



Source: Bloomberg, as of 5/31/19

SHARE OF CONSUMER CREDIT OUTSTANDING



Source: Federal Reserve Bank of NY, Bloomberg as of 6/30/19

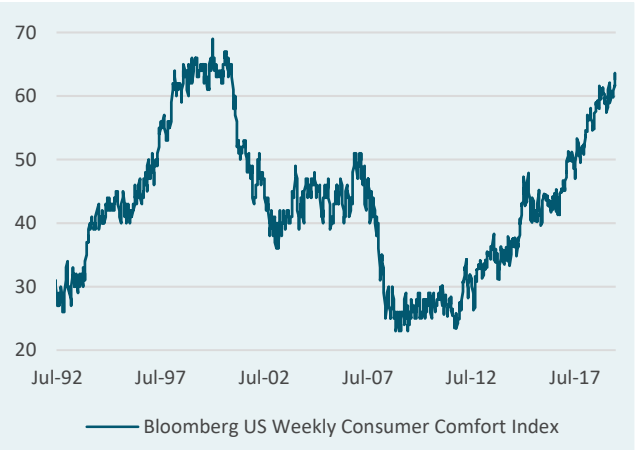
Sentiment

Consumer sentiment indicators were mixed over the quarter but remain very strong relative to history. In May, the University of Michigan Consumer Sentiment Index registered its highest reading since September 2018 at 100.0 but ended the quarter at 98.2, slightly below its March reading. According to the University of Michigan, consumers were concerned about the impact of ongoing trade tensions on the economic outlook and a moderating job market.

The Bloomberg Consumer Comfort Index rose from 58.9 to 62.6 over the quarter, remaining at cycle highs.

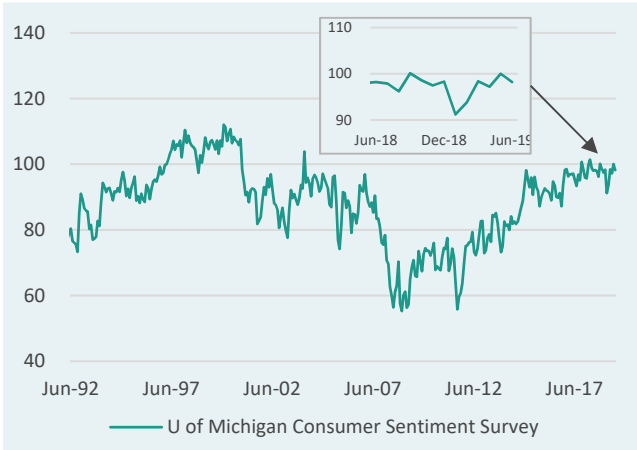
The Conference Board’s Consumer Confidence Index advanced in April and May before falling at quarter-end. In June, the indicator fell from 131.3 to 121.5, below expectations for a slight dip to 131.0. While the index remained at a high level, consumers were less optimistic about the current economic climate and the near-term future. The percentage of consumers expecting business conditions to improve in the next six months fell from 21.4% to 18.1% and the percentage expecting conditions to worsen rose from 8.8% to 13.1%.

CONSUMER COMFORT INDEX



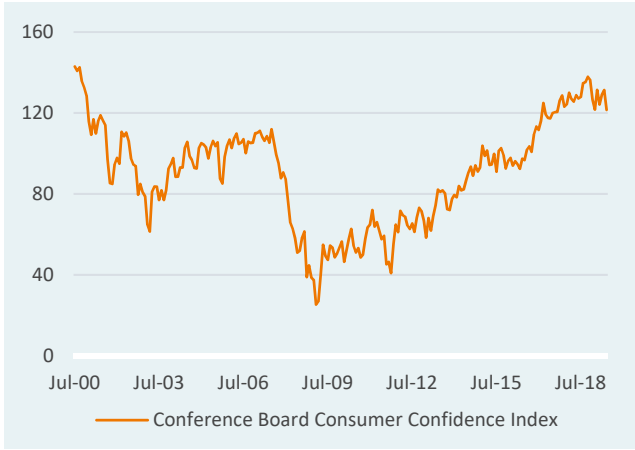
Source: Bloomberg, as of 6/30/19 (see Appendix)

CONSUMER SENTIMENT



Source: University of Michigan, as of 6/30/19 (see Appendix)

CONSUMER CONFIDENCE



Source: Conference Board, as of 6/30/19 (see Appendix)

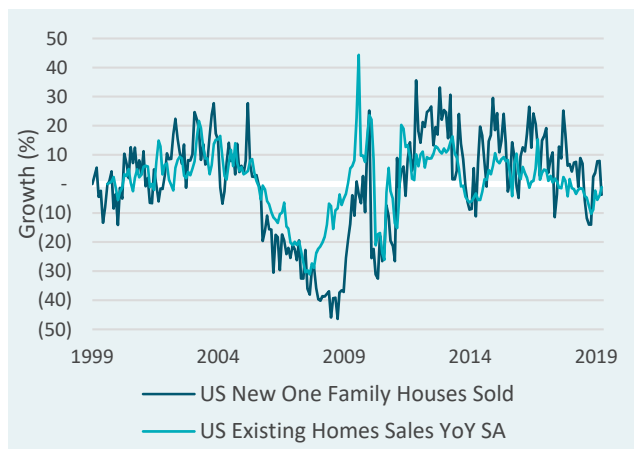
Housing

Some weakness has appeared in the U.S. housing market. U.S. home sales appear to have peaked in late 2017 and have continued to fall, declining -1.1% YoY in May. Higher prices have damaged affordability, and rising interest rates through the end of 2018 likely contributed to weaker purchase activity. On the other hand, the notable shift of the Federal Reserve from rate hikes to rate cuts, and the subsequent drop in interest rates and therefore mortgage rates, may help reignite buying activity.

Housing starts in May were down -4.7% from one year prior, while building permits fell -0.5%. Slowing home construction activity may reflect affordability issues and/or falling homebuilder optimism.

Home prices have fallen slightly. The median U.S. home sale price was down -3% year-over-year as of May. Home price trends can vary significantly by location, which means national statistics are sometimes difficult to interpret at a local level.

U.S. HOME SALES (YOY)



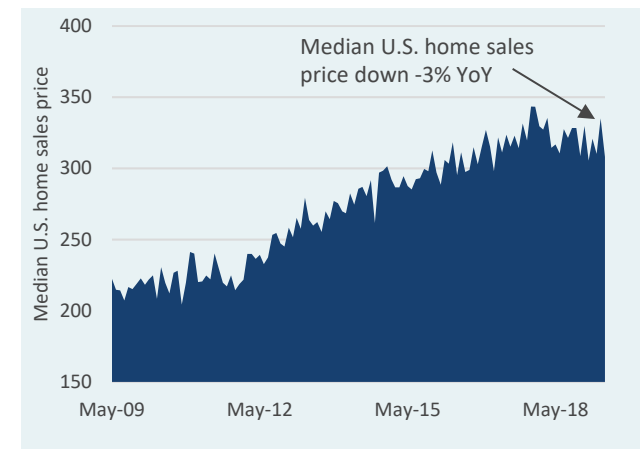
Source: FRED, as of 5/31/19

HOUSING STARTS & PERMITS



Source: Bloomberg, NAHB, as of 5/31/19 (see appendix)

MEDIAN U.S. HOME SALES PRICE



Source: FRED, as of 5/31/19

International economics summary

- U.S.-China trade remained central to headlines over the quarter. Effective May 10th, U.S. tariff rates on \$200 billion in Chinese imports were hiked from 10% to 25%, and the Chinese responded with commensurate tariff rate hikes. In June, Presidents Trump and Xi met on the sidelines of the G20 summit in Osaka. The meeting yielded a “trade truce” in which both countries agreed to pause any additional tariff rate hikes.
- The U.K. Prime Minister Theresa May announced her resignation effective June 7th. In July, Boris Johnson defeated Jeremy Hunt and will replace Theresa May as Britain’s next prime minister. Mr. Johnson has taken a harder line on Brexit than Mr. Hunt, and his election likely increases the probability that the U.K. exits the E.U. without a deal.
- President Trump called off prospective 5% tariffs on Mexican imports after the two countries signed an immigration deal aimed at reducing illegal border crossings. The deal expanded the Migrant Protection Protocols program, which requires asylum-seekers to wait on the Mexican side of the border while their cases are reviewed.
- Chinese GDP growth slowed 0.2% to 6.2% YoY in the second quarter, its slowest rate in 27 years. On a brighter note, YoY growth in industrial production and retail sales both surprised to the upside, supporting the view that Beijing’s countercyclical easing measures have proven effective.
- The Citi Global Economic Surprise Index fell from -18.8 to -27.7 in June, registering its 15th consecutive month in negative territory.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	3.2% <i>3/31/19</i>	1.6% <i>6/30/19</i>	3.7% <i>6/30/19</i>
Eurozone	1.2% <i>3/31/19</i>	1.1% <i>5/31/19</i>	7.5% <i>5/31/19</i>
Japan	0.9% <i>3/31/19</i>	0.7% <i>5/31/19</i>	2.4% <i>5/31/19</i>
BRICS Nations	5.2% <i>3/31/19</i>	2.4% <i>3/31/19</i>	5.2% <i>3/31/19</i>
Brazil	1.4% <i>3/31/19</i>	3.4% <i>6/30/19</i>	12.4% <i>6/30/19</i>
Russia	2.7% <i>12/31/18</i>	4.7% <i>6/30/19</i>	4.5% <i>5/31/19</i>
India	7.2% <i>12/31/18</i>	3.2% <i>6/30/19</i>	8.5% <i>12/31/17</i>
China	6.4% <i>3/31/19</i>	2.7% <i>6/30/19</i>	3.7% <i>3/31/19</i>

International economics

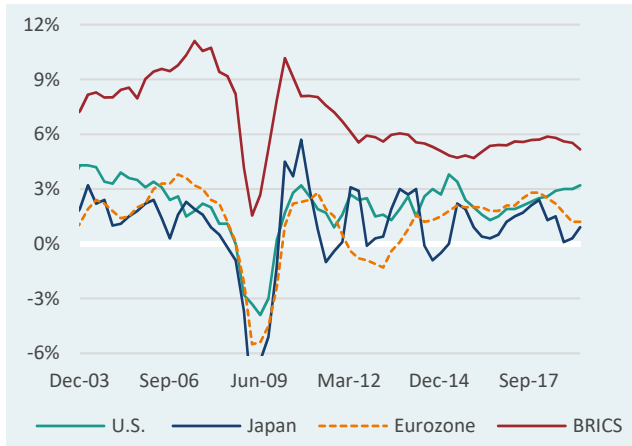
Developed countries are generally exhibiting growth rates between 1-2% YoY. The U.S. remains an exception, at a 3.2% pace, though the domestic economy is forecast to slow to around 2.1% in 2020 as government stimulus fades. Economists expect global growth of 3.3% in both 2019 and 2020, according to Bloomberg.

Inflation remains stable and subdued in developed economies, at or below 2%. Emerging economies have also exhibited lower than average inflation – a 2.4% rate across the BRICS nations. Employment continues to improve in most

markets, though the rate of job gains in some economies appears to be slowing.

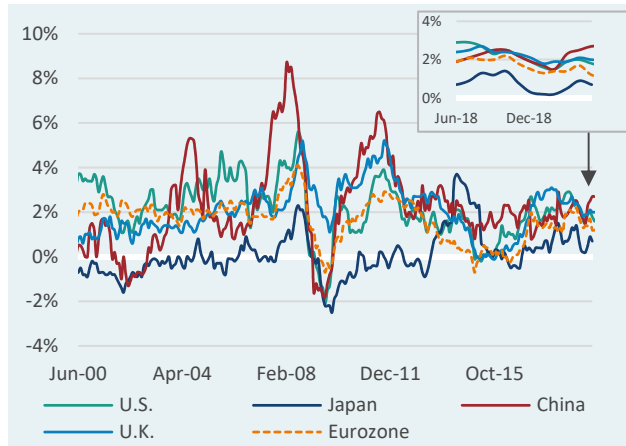
The U.K. Prime Minister Theresa May announced her resignation effective June 7th. In July, Boris Johnson defeated Jeremy Hunt and will replace Theresa May as Britain's next prime minister. Mr. Johnson has taken a harder line on Brexit than Mr. Hunt, and his election likely increases the probability that the U.K. exits the E.U. without a deal.

REAL GDP GROWTH (YOY)



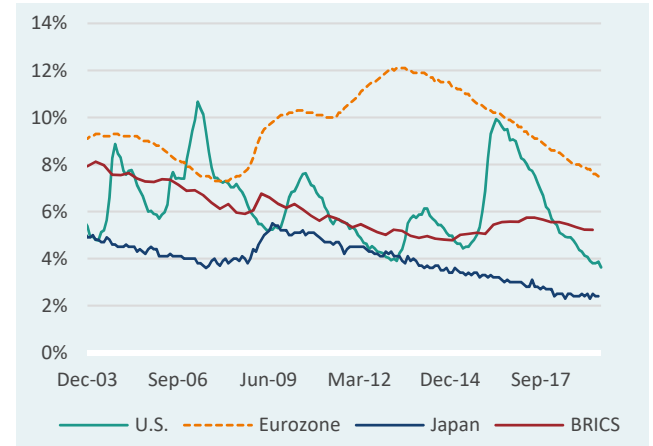
Source: Bloomberg, as of 3/31/19

INFLATION (CPI YOY)



Source: Bloomberg, as of 6/30/19

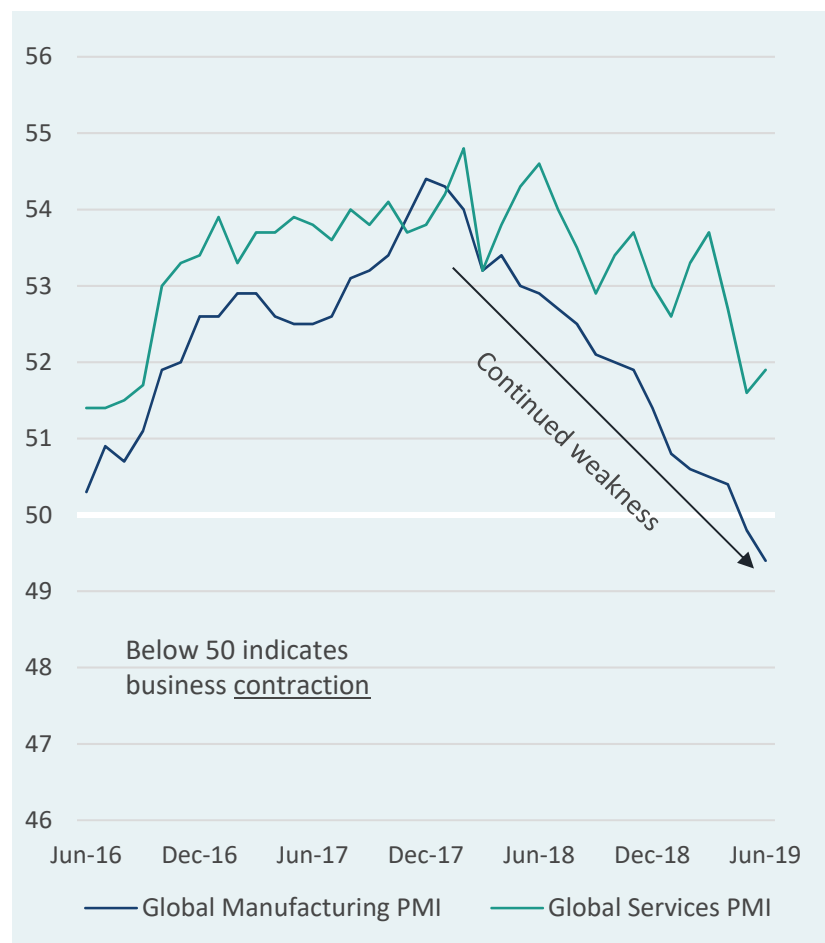
UNEMPLOYMENT RATE



Source: Bloomberg, as of 6/30/19 or most recent release

Global PMI

GLOBAL PMI



Source: JPMorgan, as of 6/30/19

- The PMI business surveys attempt to gauge business sentiment and conditions around the world.
- Surveys have indicated weakening since late 2017 and resumed their decline in the second quarter.
- The Global Manufacturing PMI fell from 50.5 in March to 49.4 in June, below the neutral level of 50.0 that separates expansion from contraction. The stickier Services PMI, which is less cyclical in nature than the Manufacturing PMI, fell from 53.7 to 51.9 over Q2.
- Developed economy Manufacturing PMI readings (48.9) have weakened materially over the past year and are now below emerging economy readings (49.9). Services PMI readings remain similar for developed and emerging economies at 52.0 and 51.5, respectively.
- Surveys remain above levels that might indicate recession.

Fixed income rates & credit

Interest rate environment

— The Federal Open Market Committee left the range for its benchmark interest rate unchanged at 2.25%-2.50% and reiterated that it would continue to act appropriately to sustain the expansion. Markets viewed the Fed's press conference as successful in setting expectations for a 0.25% rate cut in July.

— The fed funds futures market now implies 2 or even 3 rate cuts (0.50% to 0.75% total cuts) as likely by the end of 2019. The market's expectation of three rate cuts seems aggressive, and we worry about possible downside to risk markets if the Fed does not deliver on these expectations.

— U.S. Treasury yields continued to push lower following the messaging from the Federal Reserve. The 10-year U.S. Treasury yield finished the quarter at 2.00%, down from 3.14% in Q4 2018.

— European Central Bank President

Mario Draghi announced "additional stimulus" was on the table should the economic backdrop worsen and inflation remain subdued. Over the month, the likelihood that the ECB would cut its main deposit rate from -0.40% to -0.50% by its September meeting rose from 18% to 67%, as indicated by market pricing.

— European and international developed sovereign yields have fallen along with U.S. yields. German 10-year bunds closed the month at new lows of -0.33%.

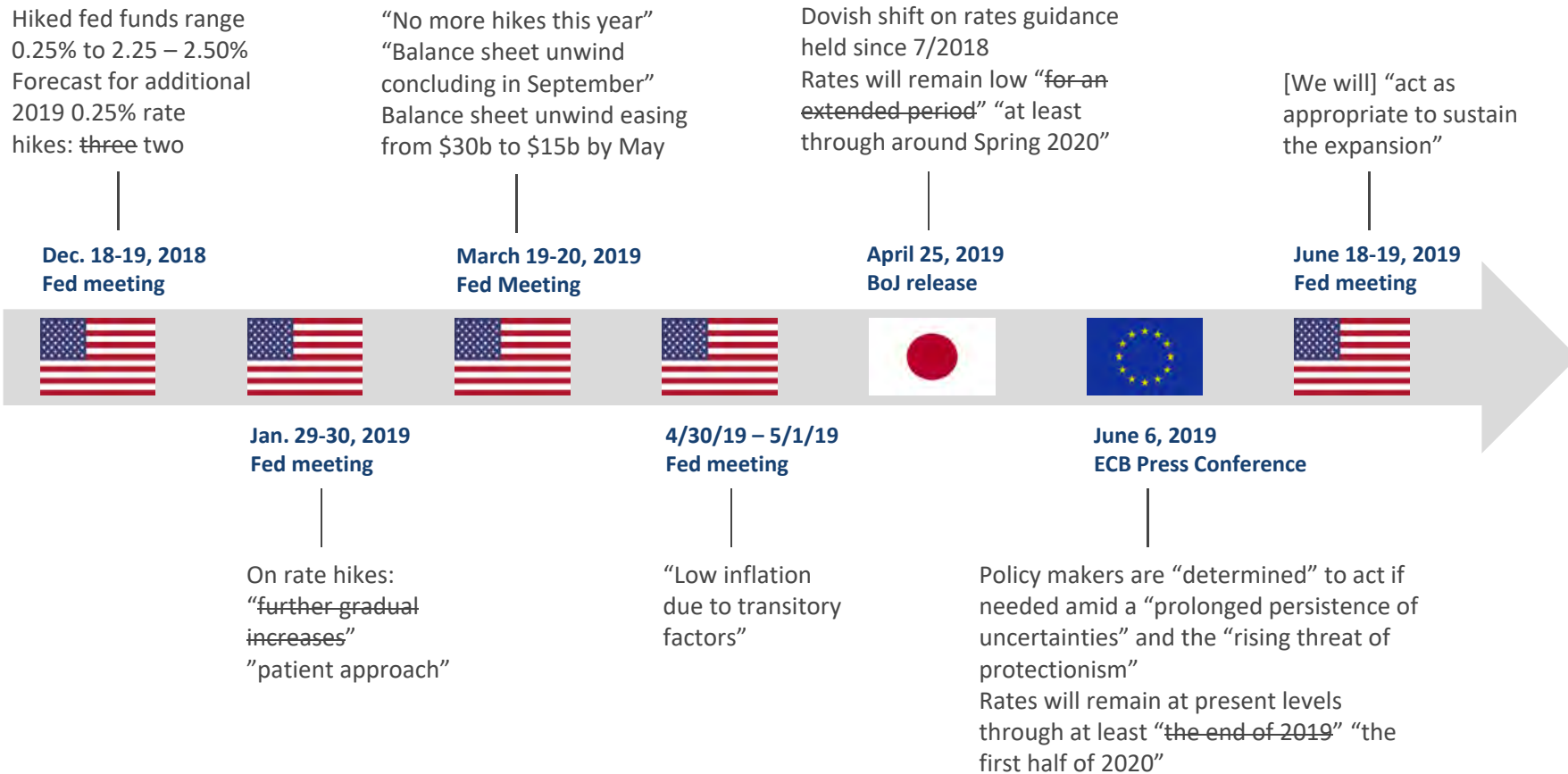
— High yield bond spreads tightened alongside equities as the asset class was positively impacted by Federal Reserve dovishness. Anticipation of easier interest rate policies, which could potentially lengthen the credit cycle, has strengthened sentiment for risk assets.

— Emerging market bonds delivered outsized returns in Q2. The JPM GBI-EM Index returned +5.6% and the JPM EMBI Index returned +4.1%.

Area	Short Term (3M)	10-Year
United States	2.09%	2.00%
Germany	(0.57%)	(0.33%)
France	(0.55%)	(0.01%)
Spain	(0.47%)	0.39%
Italy	(0.14%)	2.10%
Greece	0.99%	2.41%
U.K.	0.78%	0.83%
Japan	(0.08%)	(0.17%)
Australia	1.43%	1.32%
China	2.25%	3.21%
Brazil	6.24%	7.44%
Russia	8.03%	8.26%

Source: Bloomberg, as of 6/30/19

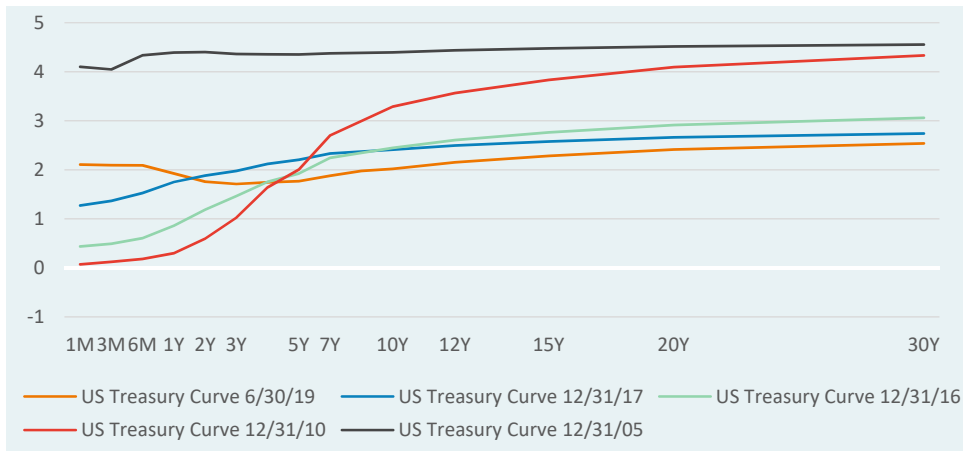
Central bank reversal



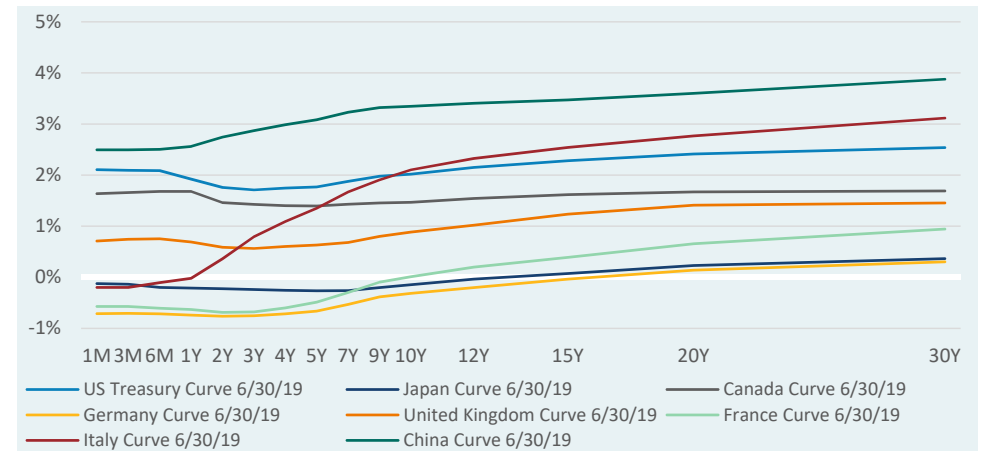
Source: Wikimedia Commons

Yield environment

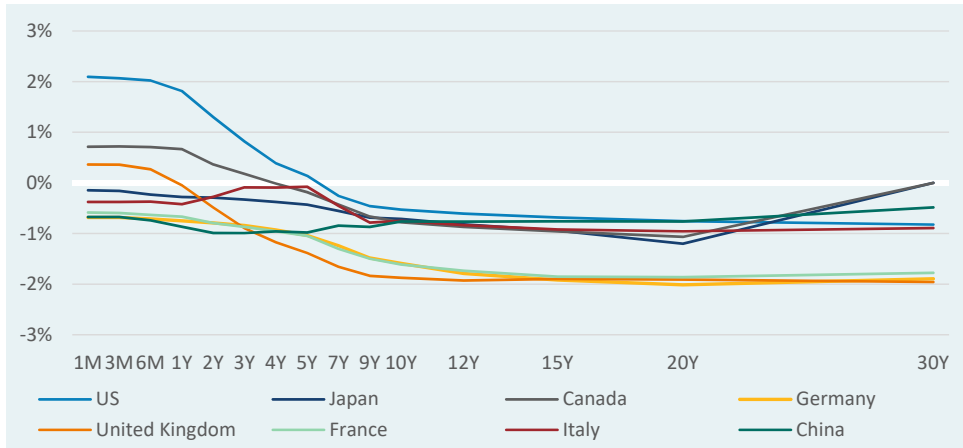
U.S. YIELD CURVE



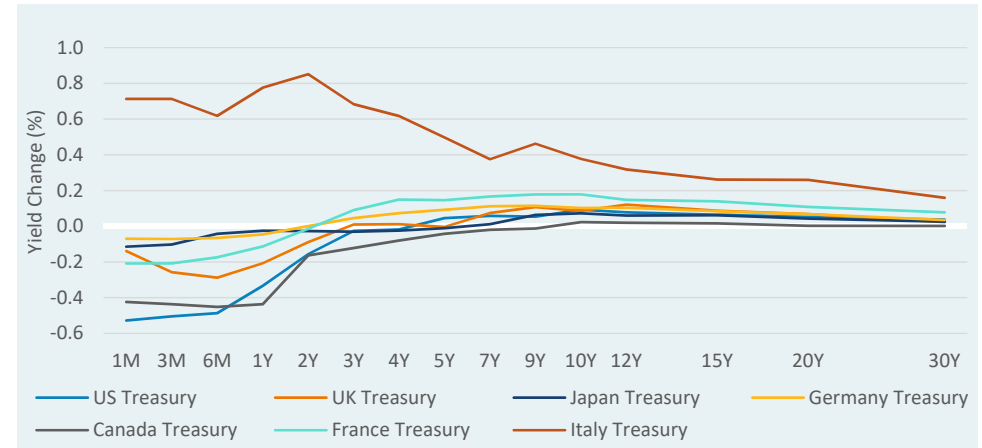
GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS



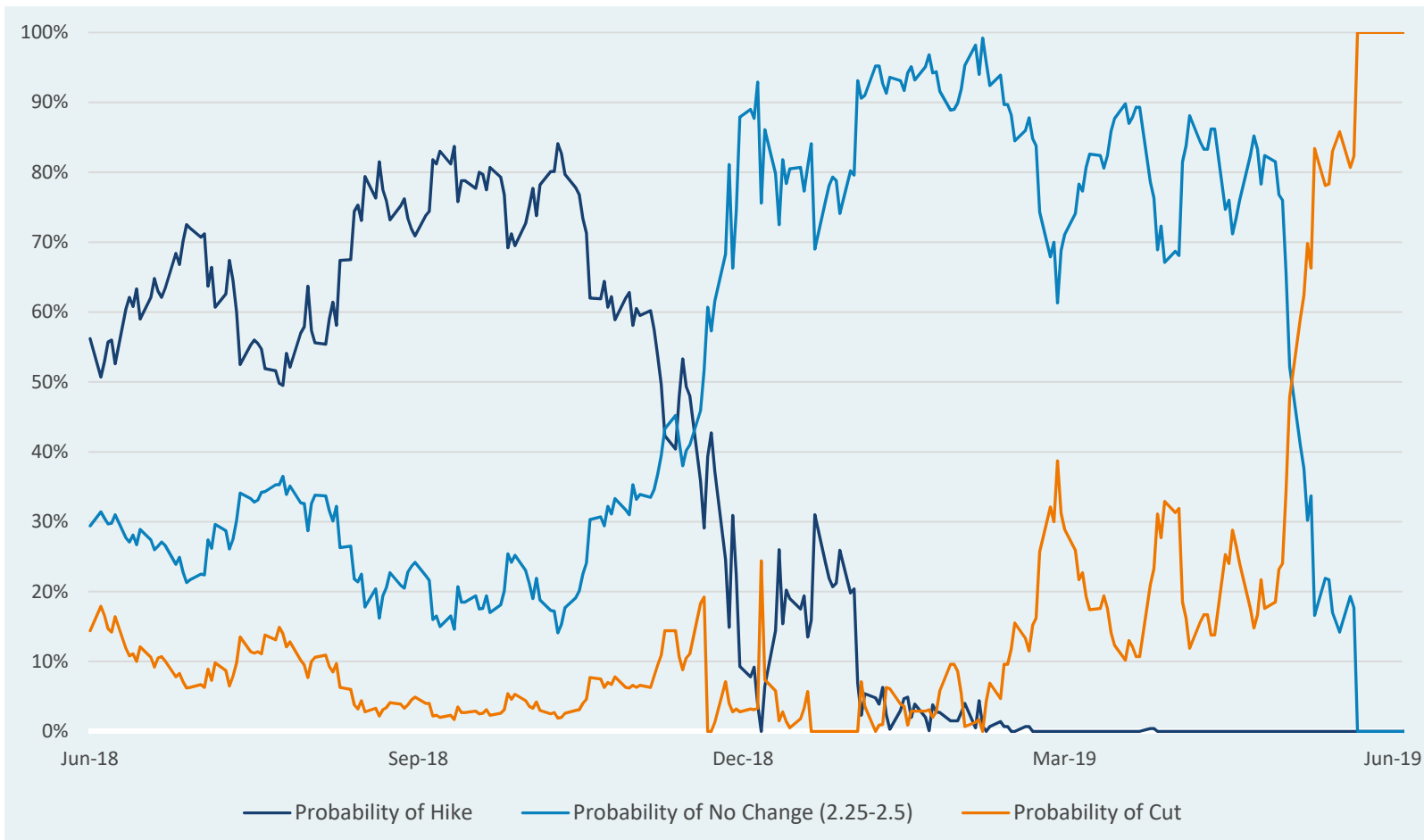
IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 6/30/19

July Fed meeting

FUTURES IMPLIED PROBABILITIES FOR JULY FED RATE DECISION



In April and May, dovish guidance from global central banks made its way into fed funds futures pricing

In June, the Fed pledged to “act appropriately to sustain the expansion” and a 0.25% cut became 100% priced in July

Source: Bloomberg, as of 6/30/19

Credit environment

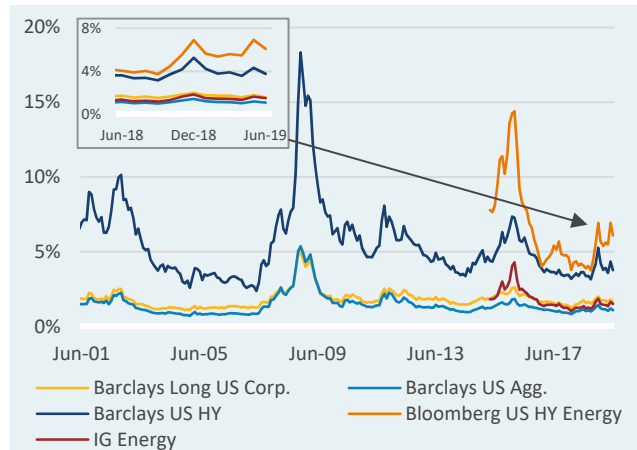
High yield bond spreads tightened alongside equities as the asset class was positively impacted by Federal Reserve dovishness. Anticipation of easier interest rate policies, which could potentially lengthen the credit cycle, has strengthened sentiment for risk assets. BB-rated bonds outperformed both CCC- and B-rated bonds in the second quarter. High yield bonds have returned +9.9% YTD, outperforming investment grade credit (+9.4%) and bank loans (+5.7%).

Bank loan prices continued to decline as demand for the asset class was impacted by a pause in the Fed's hiking cycle and uncertainty surrounding future moves from the Fed. Loan funds

have reported their ninth consecutive monthly outflow in June, totaling over \$40 billion in total. Bank loans have returned +0.3% YTD, underperforming both high yield and investment grade bonds.

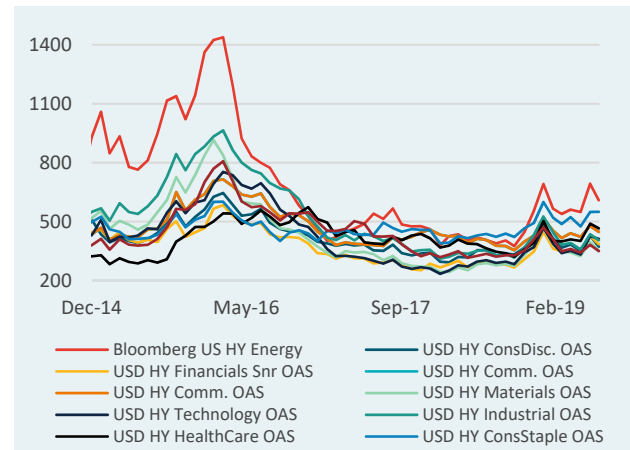
Based on concerns over late-cycle behavior in credit markets, we do not believe investors are being adequately compensated for credit risk. Late-cycle volatility tends to coincide with a jump in credit spreads and steep credit losses. An underweight to U.S. investment grade, high yield credit, and bank loans may be warranted. Within credit, higher quality and more liquid assets appear most attractive.

SPREADS



Source: Barclays, Bloomberg, as of 6/30/19

HIGH YIELD SECTOR SPREADS (BPS)



Source: Bloomberg, as of 6/30/19

Market	Credit Spread (OAS)	
	6/30/19	6/30/18
Long U.S. Corp	1.6%	1.8%
U.S. Agg Corp	1.1%	1.2%
U.S. High Yield	3.8%	3.6%
U.S. Bank Loans*	4.4%	3.9%

Source: Barclays, Credit Suisse, Bloomberg, as of 6/30/19

*Discount margin (4-year life)

Default & issuance

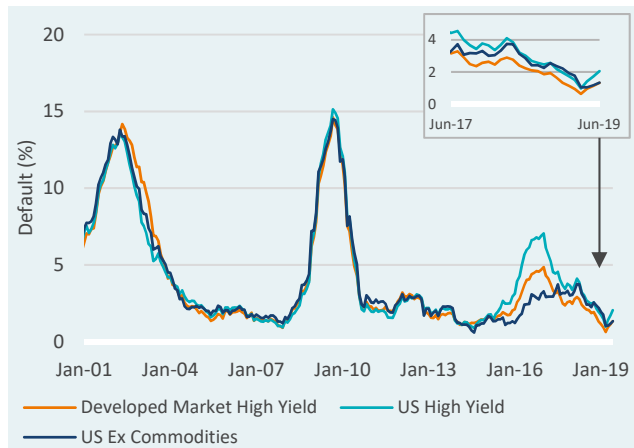
Default activity has been low and stable in the U.S. credit market, despite price volatility. The par-weighted default rate for high yield increased to 1.5% but remains below its long-term average range of 3.0-3.5%. For loans, the par-weighted default rate at the end of the second quarter was 1.3% and remains below the long-term average of 3.1%, according to data from J.P. Morgan. Consumer, retail, telecom, and utilities sectors have been more prone to defaults.

Senior loan and high yield markets have essentially recovered from a wave of defaults seen in 2015-2016 that were

generated by energy and metals/mining sectors. High yield bond recovery rates have improved significantly since that time.

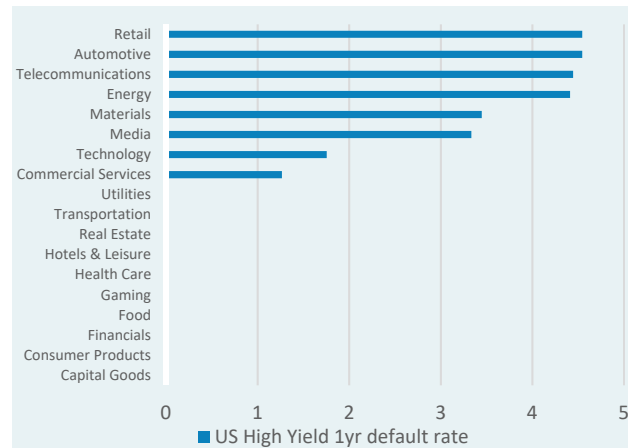
Gross high yield issue activity increased in June as investors took advantage of a dip in yields. Loan market issuance is significantly behind last year's pace, likely influenced by lower demand for floating rate securities now that the Federal Reserve has paused monetary tightening.

HY DEFAULT RATE (ROLLING 1-YEAR)



Source: BofA Merrill Lynch, as of 6/30/19

U.S. HY SECTOR DEFAULTS (LAST 12 MONTHS)



Source: BofA Merrill Lynch, as of 6/30/19 – par weighted

GLOBAL ISSUANCE (\$ BILLIONS)



Source: Bloomberg, BofA Merrill Lynch, as of 6/30/19

Equity

Equity environment

- The Russell 1000 Index slightly outperformed international developed equities in Q2, gaining +4.2% while the MSCI EAFE Index gained +3.7%. Perceptions of an accommodative Federal Reserve and views that U.S.-China relations are on a productive track likely impacted price movement.
- Equity performance in Q2 appears to have been largely driven by higher prices, rather than improved earnings expectations. The valuation expansion of equity markets (U.S., international developed, emerging markets) aligned with performance over the quarter.
- According to FactSet, estimated Q2 S&P 500 YoY earnings worsened from -0.5% to -2.6% in Q2. Nine of eleven sectors saw downward revisions to EPS estimates. Further negative revisions will likely act as a headwind to equity performance.
- Currency movement had a material positive impact on unhedged exposure to the U.K. (+3.1%) and Japan (+2.3%) over the quarter, though currency movement had a negligible impact on overall international equity performance (MSCI EAFE). Unhedged currency movement on a 1-year basis has had a substantially negative effect on investors' performance.
- The J.P. Morgan Emerging Market Currency Index gained +0.5% in the second quarter, stabilizing after a downward trend since 2018.
- Size and value factors continued to underperform. Small-cap equities lagged large-cap by -2.1% during the quarter and -13.3% over the past year (Russell 2000 vs. Russell 1000). Value equities underperformed growth by -0.8% over the quarter and by -3.1% over the past year (Russell 1000 Value vs Russell 1000 Growth).

	QTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (Russell 1000)	4.2%		10.0%	
US Small Cap (Russell 2000)	2.1%		(3.3%)	
US Large Value (Russell 1000 Value)	3.8%		8.5%	
US Large Growth (Russell 1000 Growth)	4.6%		11.6%	
International Large (MSCI EAFE)	3.7%	3.5%	1.1%	4.8%
Eurozone (Euro Stoxx 50)	6.2%	6.4%	0.4%	8.6%
U.K. (FTSE 100)	4.0%	0.9%	(2.3%)	3.7%
Japan (NIKKEI 225)	3.1%	0.8%	0.1%	(2.6%)
Emerging Markets (MSCI Emerging Markets)	0.6%	0.1%	1.2%	1.7%

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 6/30/19

Domestic equity

U.S. equities outperformed in the second quarter following a strong rebound in the first quarter. The S&P 500 Index delivered a total return of 4.3%, bringing its first-half return to 18.5%. Perceptions of an accommodative Federal Reserve and views that U.S-China relations were on a productive track likely impacted price movement.

Over the last decade, U.S. equities have led global equity indices, which is not typically the case. In prior periods, U.S. equities have ranked from slightly below average to slightly above average among regional indices. Furthermore, a

portion of U.S. equity outperformance has been due to a move towards high prices, which will most likely negatively impact future performance.

A number of secular trends have helped create a supportive environment for U.S. stocks. Technological advances, falling interest rates and therefore costs of corporate borrowing, and lower corporate tax rates have all helped to boost profit margins to all-time-highs. As expectations moderate, these margins may be increasingly scrutinized by investors.

U.S. EQUITIES



Source: Standard & Poors, as of 6/30/19

SECULAR TRENDS SUPPORTING MARGINS



Source: FRED, BLS, Bloomberg, Verus, as of 6/30/19

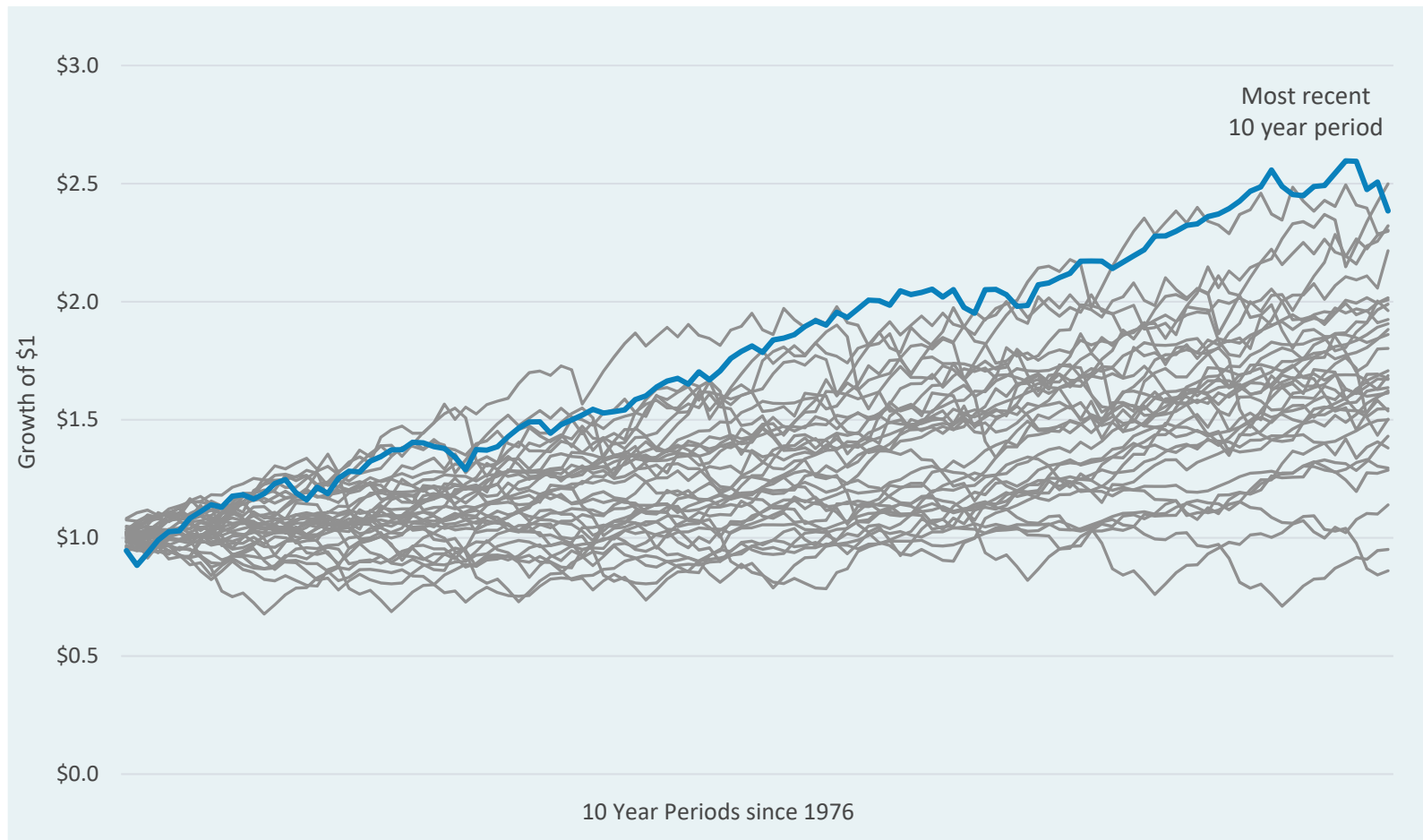
U.S. RELATIVE PERFORMANCE - HISTORICAL

	2014-2019	2009-2014	2004-2009	1999-2004	1994-1999
Best ↑	United States	United States	China	Australia	Sweden
	Australia	Sweden	India	India	Spain
	France	Japan	Spain	Canada	France
	India	Germany	Australia	United States	United States
	UK	Switzerland	Sweden	Spain	Germany
	Italy	India	Canada	Switzerland	Switzerland
	Japan	Australia	Germany	UK	UK
	Sweden	UK	UK	Italy	Canada
	Canada	Canada	Switzerland	France	Australia
	Switzerland	France	France	Sweden	India
	Germany	Spain	United States	Japan	Japan
	China	China	Japan	Germany	
Worst ↓	Spain	Italy	Italy		

Source: Verus, as of 6/30/19

Domestic equity

DOMESTIC 60/40 EXCESS RETURNS



U.S. asset performance over the past 10 years has been unusually strong

Investors should not necessarily expect U.S. outperformance to continue

Source: Verus, 60/40 (S&P 500 / BbgBarc US Aggregate Bond), excess return over T-bills since 1973

Domestic equity size & style

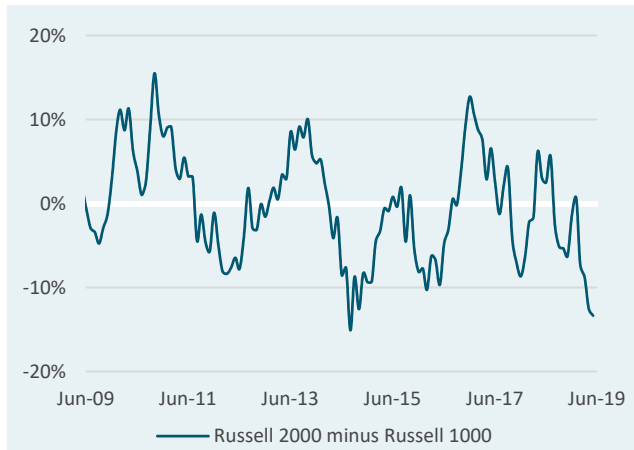
Size and value factors continued to underperform. Small-cap equities lagged large-cap by -2.1% during the quarter and -13.3% over the past year (Russell 2000 vs. Russell 1000). Value equities underperformed growth by -0.8% over the quarter and by -3.1% over the past year (Russell 1000 Value vs Russell 1000 Growth).

Similar to Q1, the impact of sector performance on the value premium was more nuanced in the second quarter. Financials (+8.0%) and Materials (+6.3%) outperformed the overall index (S&P 500 +13.6%), but Energy (-2.8%)

underperformed. Information Technology performed better than the overall index (+6.1%) which acted as a headwind for value stocks.

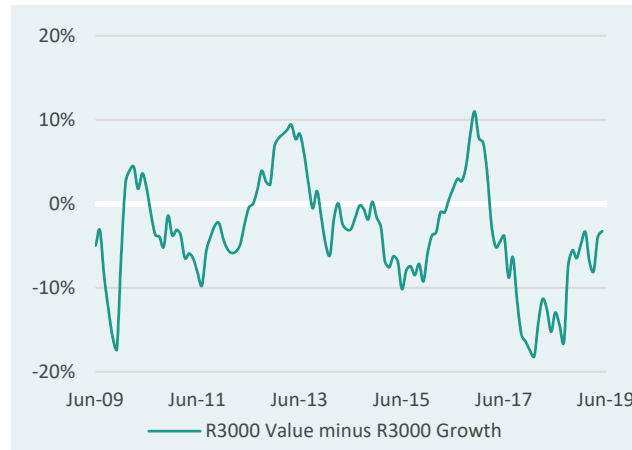
Both small cap and value premia have exhibited underperformance for an extended period of time. Longer periods of underperformance do not necessarily indicate an investment opportunity if value stocks and small cap stocks remain fairly-priced. This appears to be the case today, as neither value stocks nor small cap stocks are particularly cheap by traditional measures.

SMALL CAP VS LARGE CAP (YOY)



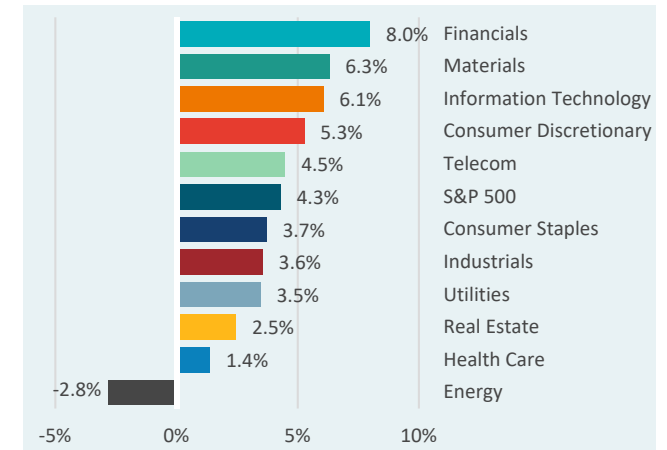
Source: FTSE, as of 6/30/19

VALUE VS GROWTH (YOY)



Source: FTSE, as of 6/30/19

Q2 S&P 500 SECTOR RETURNS



Source: Morningstar, as of 6/30/19

International developed equity

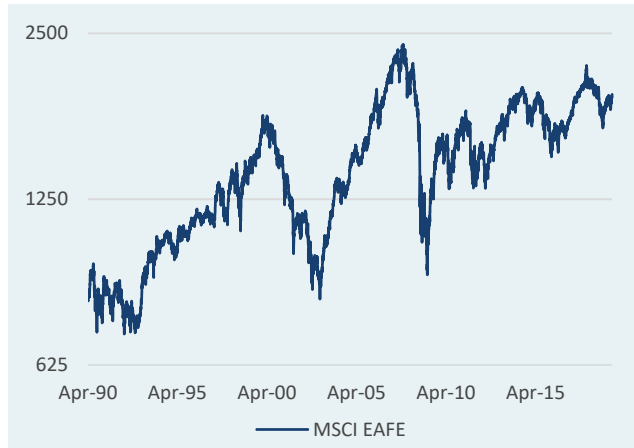
International developed equities posted a second consecutive quarter of solid performance. The MSCI EAFE Index returned +3.9% for the quarter (+14.5% YTD). On a currency hedged basis, the MSCI EAFE Index returned +3.5% for the quarter (+15.2% YTD), indicating that unhedged U.S. investors in EAFE equities benefited from non-dollar exposure over the quarter, but not in the year-to-date.

Japanese equities, which represent about 24% of the MSCI EAFE Index, underperformed, and gained only +0.5% in Q2. Japan's exposure China's economy, which in Q2 grew at its slowest pace in 27 years, likely weighed on performance.

U.K. equities underperformed the international developed equities on an unhedged basis, with the FTSE 100 Index delivering a +3.3% return for the quarter. In U.S. dollar terms, the FTSE 100 Index returned +4.0% in Q2, indicating that the weakness in the British Pound relative to the dollar presented headwinds for unhedged U.S. investors.

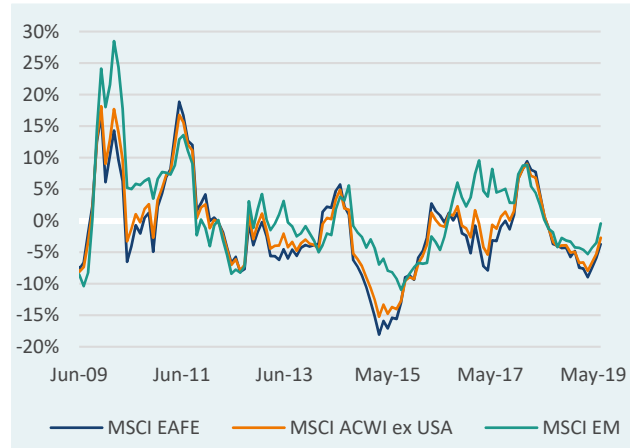
Wage gains and employment have been strong in the U.K., which would typically prompt higher rates and a stronger currency, but the uncertainty surrounding Brexit has likely had a significant impact on the British Pound.

INTERNATIONAL DEVELOPED EQUITIES



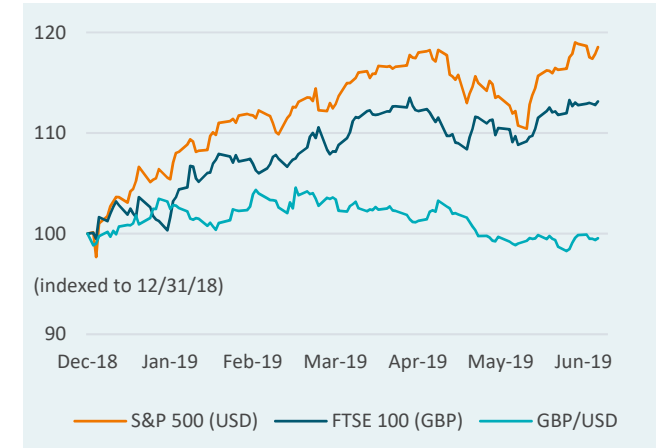
Source: MSCI, as of 6/30/19

EFFECT OF CURRENCY (1-YEAR ROLLING)



Source: MSCI, as of 6/30/19

YTD CUMULATIVE PERFORMANCE (U.S. VS. U.K.)



Source: Bloomberg, as of 6/30/19

Emerging market equity

Emerging market equity performance (MSCI Emerging Markets +0.6%) lagged developed markets (MSCI EAFE +3.7%) over the quarter, while U.S. equities outperformed (Russell 1000 +4.2%). Economists expect emerging market economies to accelerate modestly in 2020 and expect developed economies to slow. This divergence may provide a tailwind to emerging market equity performance. Recent central bank dovishness may also boost returns, as easing conditions have often had an outsized positive impact on the emerging markets.

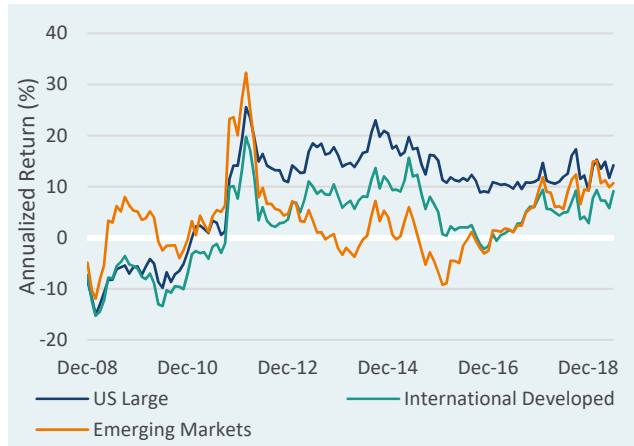
kept near their long-term average - the U.S. being an exception. The divide between U.S. equity valuations and the rest of the world remains wide.

Decelerating global growth and a rising probability of recession presents unique risks to emerging markets, as these markets typically exhibit a higher beta during market downside and upside moves. However, a recession does not appear to be on the immediate horizon, and we believe recent central bank easing may lead to emerging market outperformance in the interim.

Moderate growth and central bank easing may boost emerging market equities

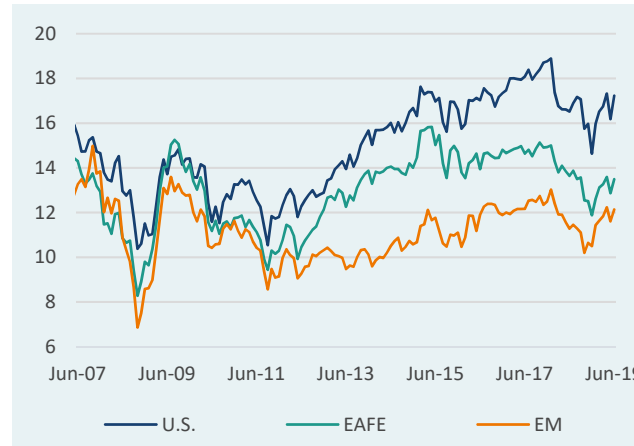
Equity multiples expanded in the second quarter but have

EQUITY PERFORMANCE (3-YR ROLLING)



Source: Standard & Poor's, MSCI, as of 6/30/19

FORWARD P/E



Source: MSCI, as of 6/30/19

EMERGING MARKET PERFORMANCE



Source: MSCI, as of 6/30/19

Equity valuations

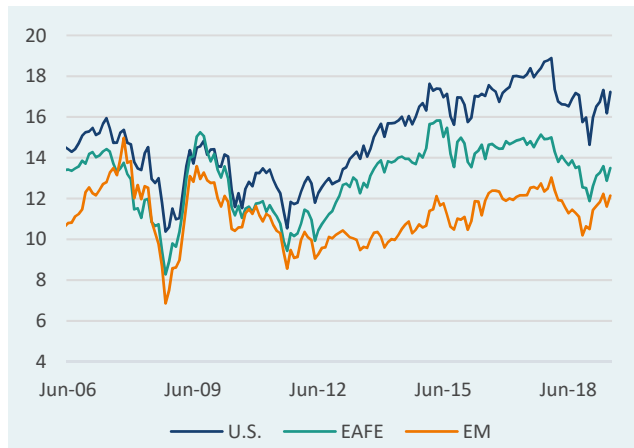
Equity performance in Q2 appears to have been largely driven by higher prices, rather than improved earnings expectations. Valuation expansion of equity markets (U.S., international developed, emerging markets) aligned with performance over the quarter.

The U.S. equity forward P/E multiple sits at 17.2x, with international equities at 13.5x and emerging markets at 12.1x. International and emerging equity valuations remain near their long-term average, while U.S. equities appear expensive relative to history. U.S. equities currently trade at a 27%

forward premium to EAFE equities, and a 42% premium over emerging.

We believe there are reasons that EAFE equity markets warrant cheap valuations, particularly in Europe, but it is difficult to know whether the current valuation gap is justified. As U.S. corporate earnings expectations, business conditions, and economic growth seem to be converging somewhat with the rest of the developed world, investors may begin to question whether such elevated U.S. valuations are appropriate.

FORWARD P/E RATIOS



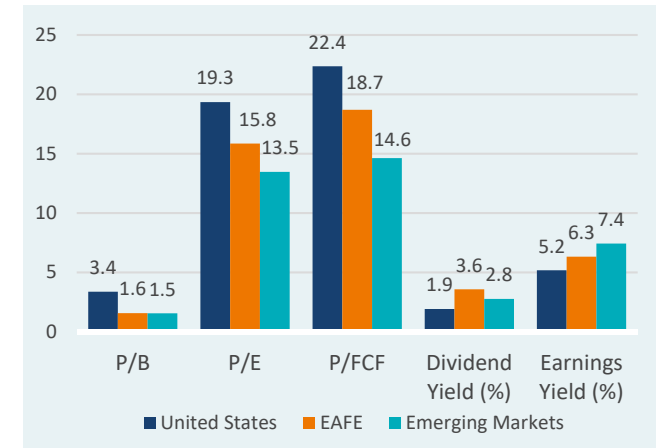
Source: MSCI, as of 6/30/19

U.S. CORPORATE EARNINGS GROWTH (YOY)



Source: Standard & Poor's, as of 6/30/19

VALUATION METRICS (3-MONTH AVERAGE)



Source: Bloomberg, MSCI as of 6/30/19 - trailing P/E

Equity volatility

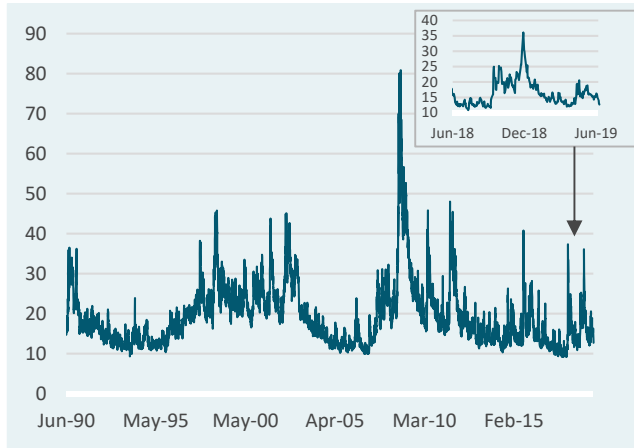
Implied volatility remained depressed over the quarter, as indicated by the VIX Index. Though the implied volatility measure reached as high as 20.6 in the days following the Trump administration’s decision to hike tariff rates on Chinese imports, the VIX Index traded mostly below its long-term average. Out of sixty-three trading days in the second quarter, the VIX Index closed above its historical daily average of 19.2 only three times.

The rolling realized 90-day volatility of the S&P 500 Index retreated from 19.5% to 11.4% over the second quarter. At

quarter-end, the 30-day forward implied volatility of the S&P 500 Index exceeded that of the Euro Stoxx 50 Index. Historically, the VIX has traded at a discount to the V2X, the proxy for expected European equity volatility.

Some pundits have expressed concerns about the low levels of realized volatility despite geopolitical and trade conflict. Other investors have argued that a healthy, less-leveraged financial system is the major driver of a low-vol environment, and that the impacts of geopolitics may be overblown.

U.S. IMPLIED VOLATILITY (VIX)



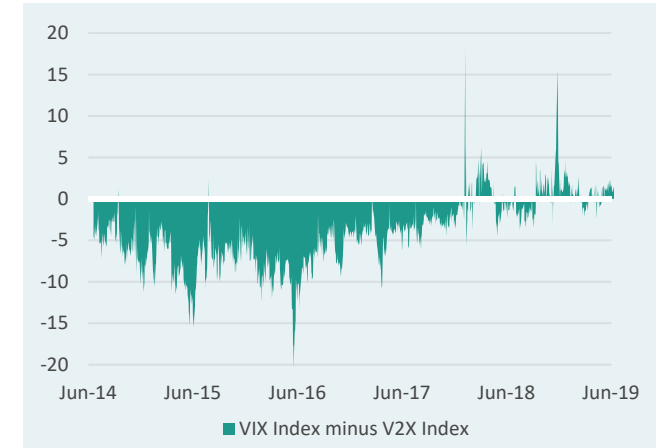
Source: CBOE, as of 6/30/19

REALIZED 90-DAY VOLATILITY



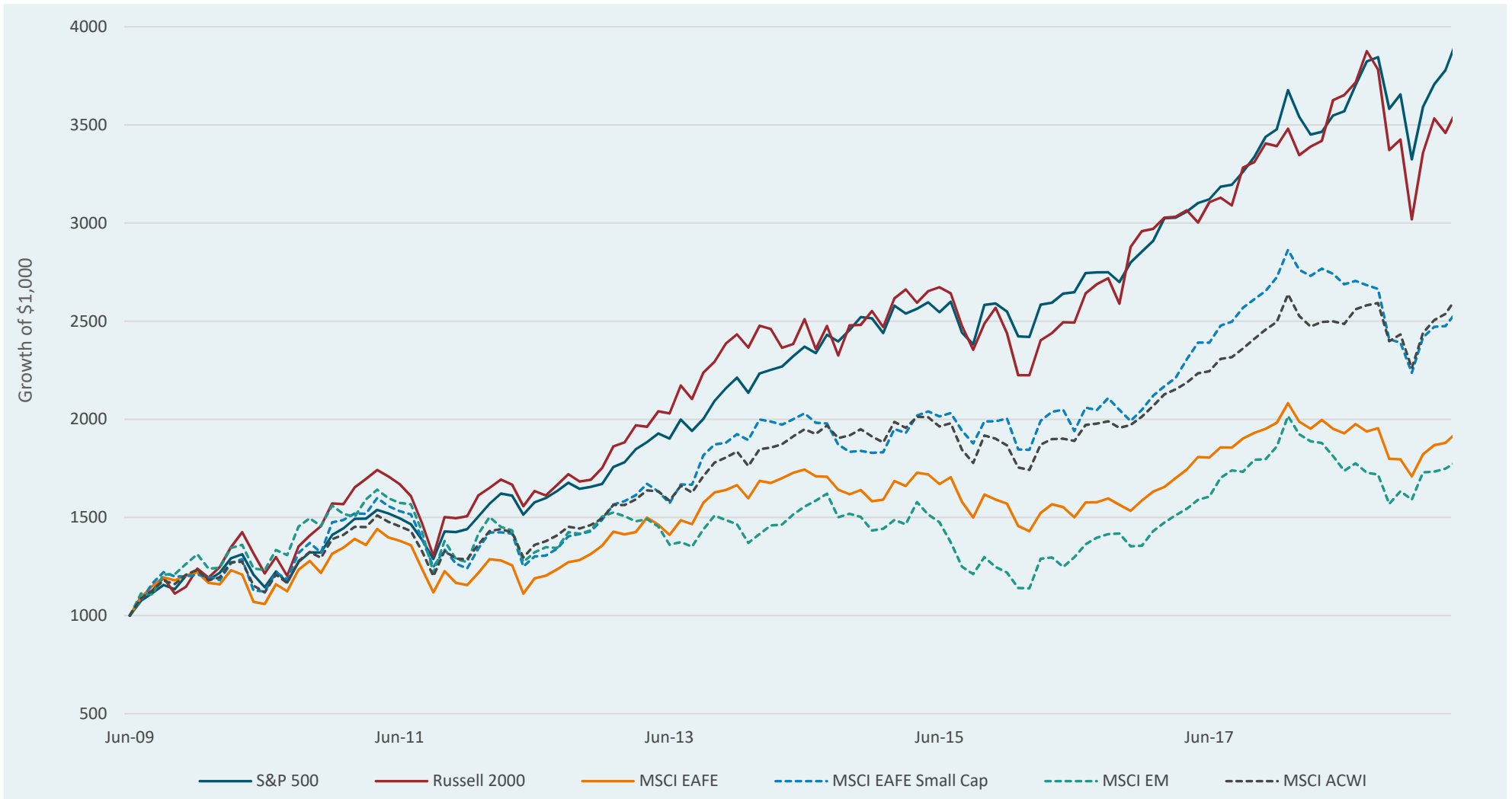
Source: Bloomberg, as of 6/30/19

U.S. IMPLIED VOLATILITY VS. EUROPEAN IMPLIED VOLATILITY



Source: Bloomberg, as of 6/30/19

Long-term equity performance



Source: Morningstar, as of 6/30/19

Other assets

Currency

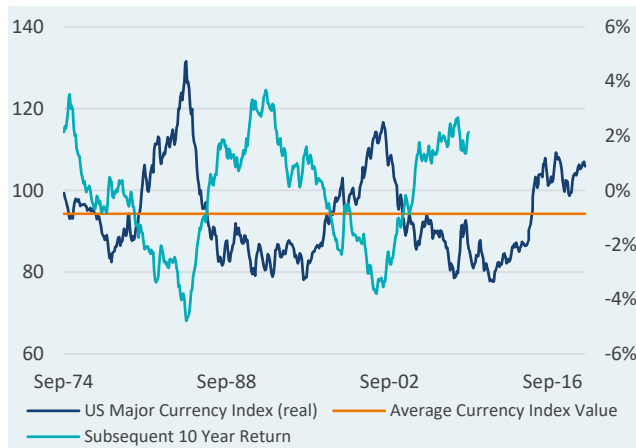
The U.S. dollar depreciated -0.2% in Q2 relative to a trade-weighted basket of currencies. After a period of strength in April and May, the dollar weakened significantly vs. developed currency pairs in June as the Federal Reserve issued dovish guidance. By the end of the quarter, markets were pricing between 0.50% and 0.75% in cuts to the federal funds range in 2019. In Europe, investors were pricing between 0.1% and 0.2% in cuts to the ECB's main deposit rate, which was already in negative territory at -0.40%.

Some analysts attributed the dollar's weakness relative to the euro as a byproduct of converging interest rate differentials driven by the Fed's ability to cut rates more significantly than the ECB.

Emerging market currencies rose in the second quarter, with the JPM Emerging Markets Currency Index gaining 0.5%. The South African Rand led the complex higher.

Surprise central bank dovishness has likely contributed to currency movement

U.S. DOLLAR TRADE WEIGHTED INDEX



Source: Federal Reserve, Verus, as of 6/30/19

EUR/USD



Source: Bloomberg, as of 6/30/19

JPM EMERGING MARKET CURRENCY INDEX



Source: Bloomberg, JPMorgan, as of 6/30/19

Hedge funds

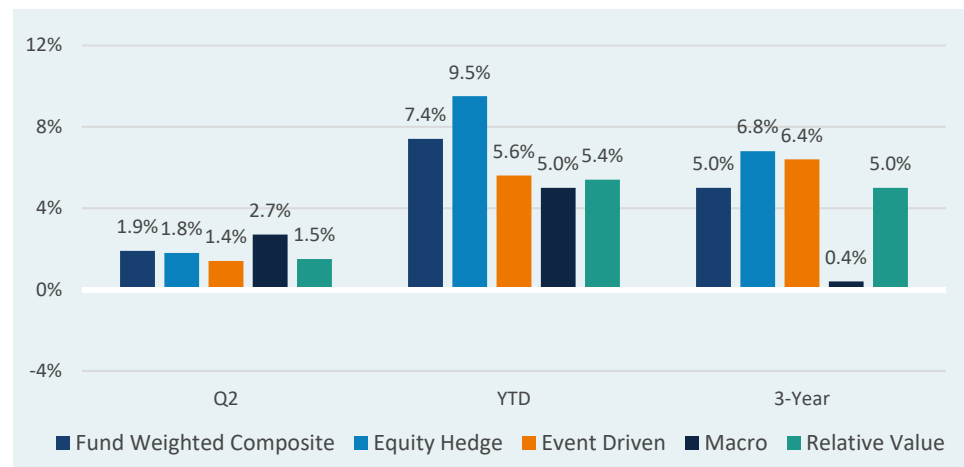
Hedge fund performance was generally positive across strategy types during the second quarter (HFRI Hedge Fund Weighted Composite +1.9% in Q2, +7.4% YTD). This marked the best first half of the year since 2009. Quantitative macro strategies, including CTAs, were the best performing sub strategy group in 2019 Q2 (+2.7%).

Within equities, technology focused funds stood out as top performers (+2.9%) for the quarter. As a group, value-oriented managers (+2.3%) outperformed growth-oriented

peers (+1.6%). Most other strategy types were modestly positive. Healthcare focused strategies (-0.1%) lagged peers due in part to fears of a changing regulatory environment.

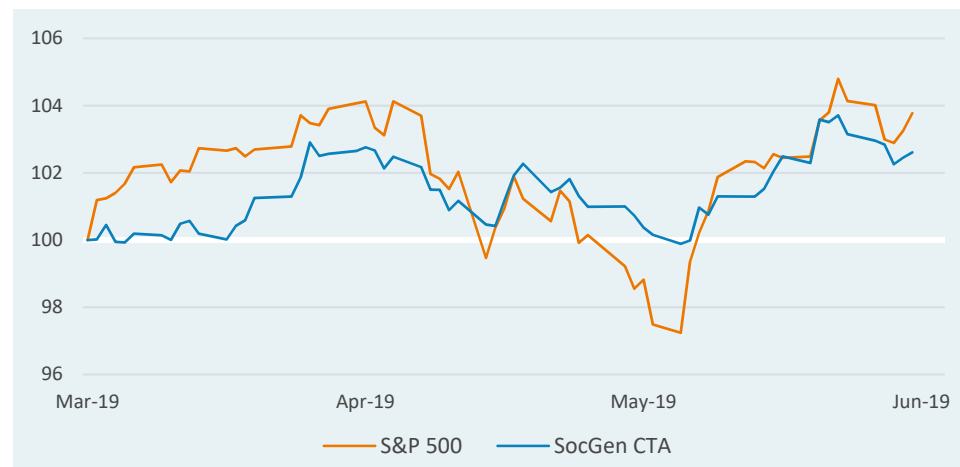
Within the fixed income-oriented strategy set, managers trading corporate bonds (+2.5%) and credit arbitrage (+2.2%) strategies were the best performers during the quarter. Managers trading convertibles (+1.7%), asset backed (+1.4%) and distress (+1.3%) posted more muted gains.

HFRI HEDGE FUND STYLE PERFORMANCE



Source: HFRI, as of 6/30/19

Q2 2019 CUMULATIVE PERFORMANCE (INDEXED TO 3/31/19)



Source: Standard & Poor's, Société Générale, as of 6/30/19

Appendix

Periodic table of returns

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	YTD	5-Year	10-Year
Large 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	6.7	21.5	13.4	16.3
Small 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	1.9	20.4	10.5	14.8
Large 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	0.0	18.8	8.6	14.4
Small Cap Equity	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	-1.5	17.0	8.5	13.4
Large Cap Value	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	-3.5	16.2	7.5	13.2
International Equity	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	-4.8	14.0	7.1	12.4
Small 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	-6.0	13.5	5.4	9.1
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	-8.3	12.0	4.3	7.4
Emerging Markets Equity	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	-9.3	10.6	2.9	6.9
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	-11.0	6.3	2.5	5.8
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	7.0	-11.2	6.1	2.2	3.9
Commodities	-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	-12.9	5.1	2.2	3.2
Real Estate	-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	-13.8	1.8	0.9	0.5
Cash	-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	-14.6	1.2	-9.1	-3.7

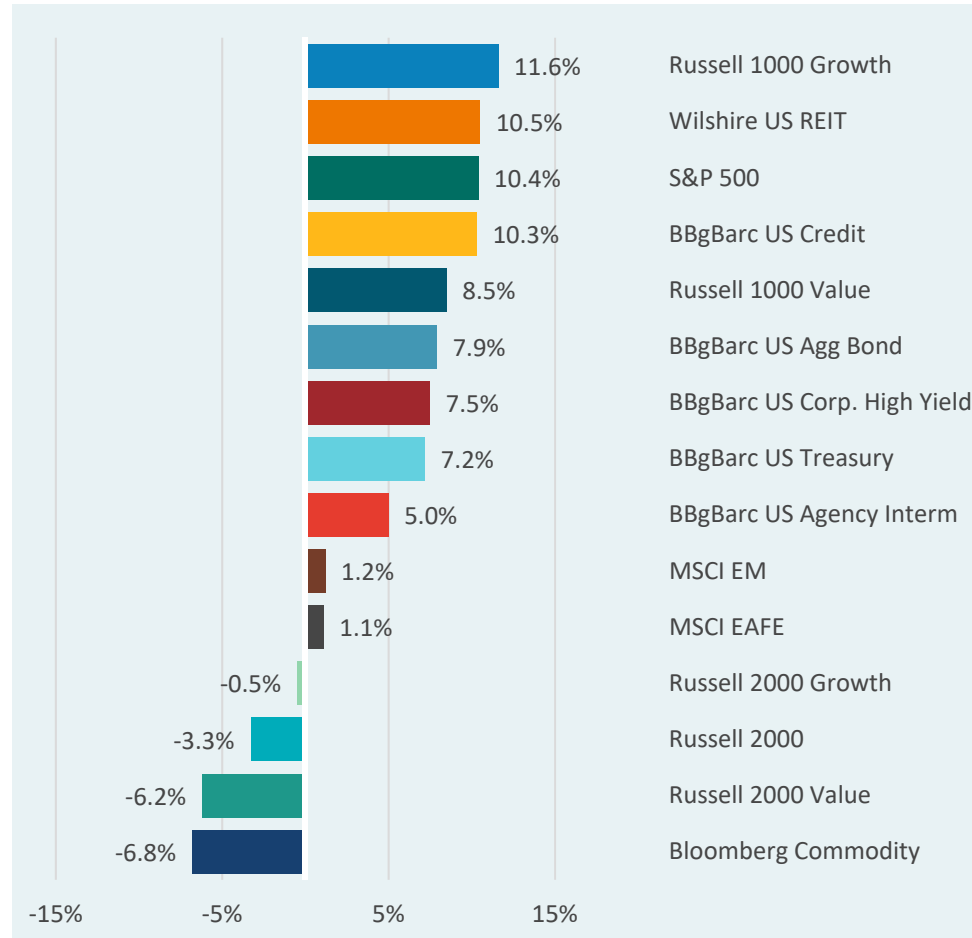
BEST
↑
↓
WORST

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

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 3/31/19.

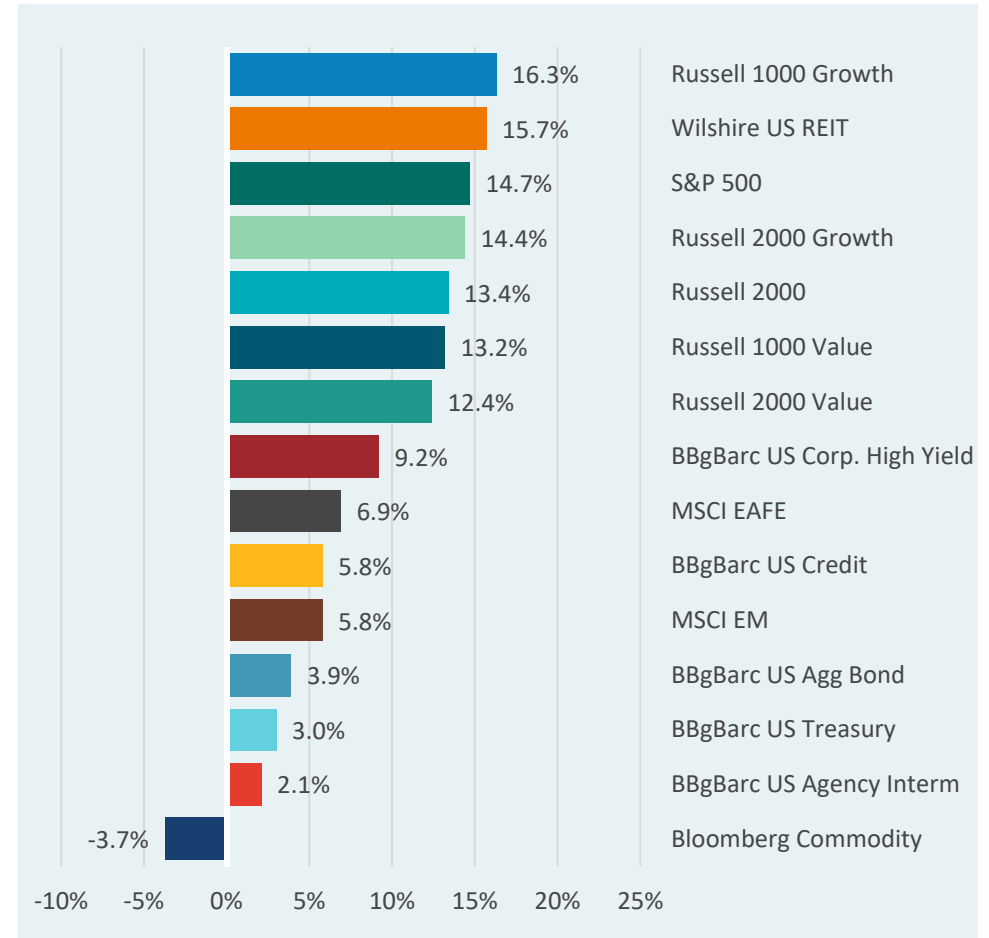
Major asset class returns

ONE YEAR ENDING JUNE



Source: Morningstar, as of 6/30/19

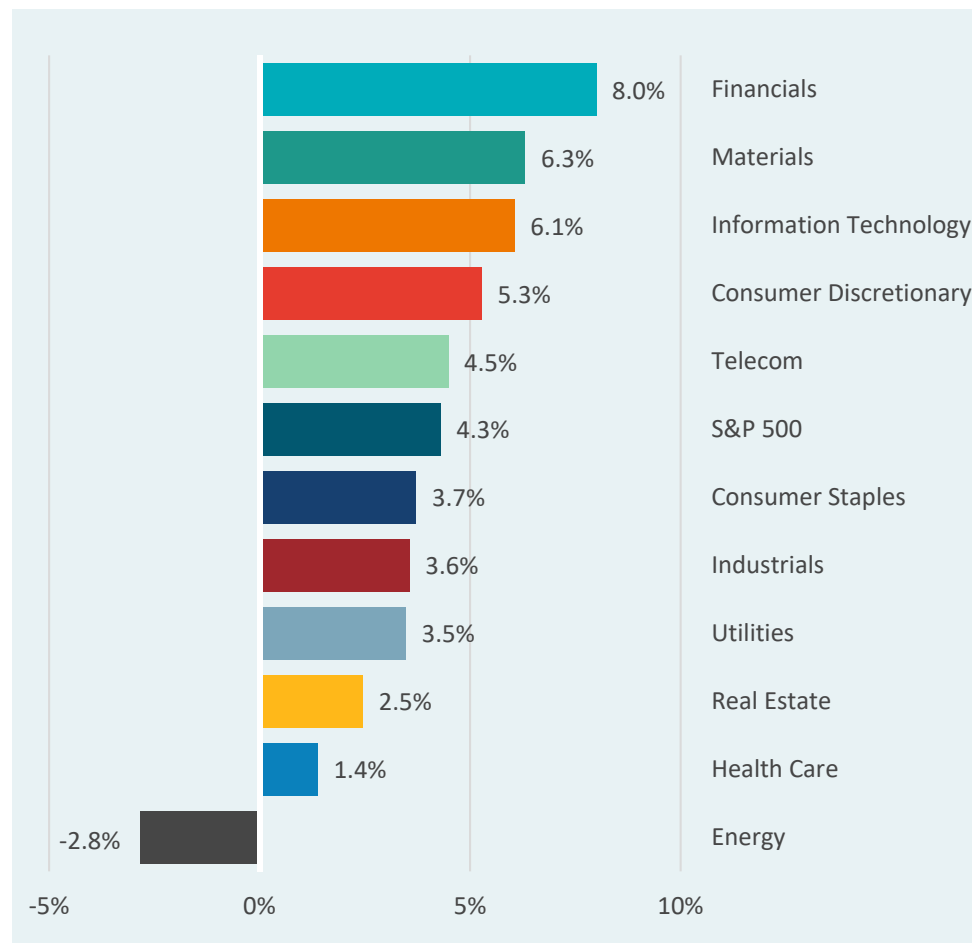
TEN YEARS ENDING JUNE



Source: Morningstar, as of 6/30/19

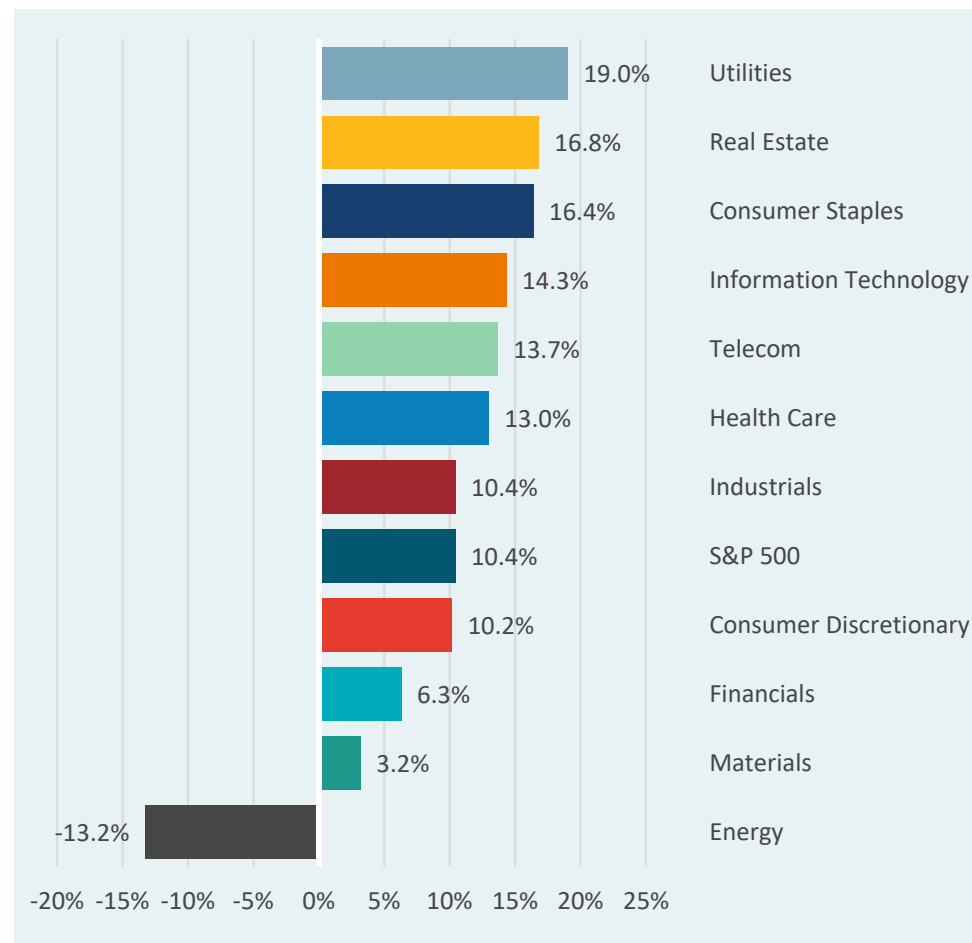
S&P 500 sector returns

Q2



Source: Morningstar, as of 6/30/19

ONE YEAR ENDING JUNE



Source: Morningstar, as of 6/30/19

Detailed index returns

DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Core Index							
S&P 500	7.0	4.3	18.5	10.4	14.2	10.7	14.7
S&P 500 Equal Weighted	7.5	3.7	19.2	8.2	12.4	9.1	15.6
DJ Industrial Average	7.3	3.2	15.4	12.2	16.8	12.3	15.0
Russell Top 200	7.1	4.3	17.9	10.9	14.9	11.2	14.6
Russell 1000	7.0	4.2	18.8	10.0	14.1	10.5	14.8
Russell 2000	7.1	2.1	17.0	(3.3)	12.3	7.1	13.4
Russell 3000	7.0	4.1	18.7	9.0	14.0	10.2	14.7
Russell Mid Cap	6.9	4.1	21.3	7.8	12.2	8.6	15.2
Style Index							
Russell 1000 Growth	6.9	4.6	21.5	11.6	18.1	13.4	16.3
Russell 1000 Value	7.2	3.8	16.2	8.5	10.2	7.5	13.2
Russell 2000 Growth	7.7	2.7	20.4	(0.5)	14.7	8.6	14.4
Russell 2000 Value	6.4	1.4	13.5	(6.2)	9.8	5.4	12.4

INTERNATIONAL EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
MSCI ACWI	6.5	3.6	16.2	5.7	11.6	6.2	10.1
MSCI ACWI ex US	6.0	3.0	13.6	1.3	9.4	2.2	6.5
MSCI EAFE	5.9	3.7	14.0	1.1	9.1	2.2	6.9
MSCI EM	6.2	0.6	10.6	1.2	10.7	2.5	5.8
MSCI EAFE Small Cap	4.2	1.7	12.5	(6.3)	9.1	4.4	9.7
Style Index							
MSCI EAFE Growth	6.5	5.7	18.5	4.2	9.7	4.4	8.2
MSCI EAFE Value	5.3	1.5	9.6	(2.1)	8.5	0.1	5.5
Regional Index							
MSCI UK	5.0	0.9	12.9	(2.0)	6.9	(0.3)	6.8
MSCI Japan	3.7	1.0	7.7	(4.2)	8.1	4.5	5.8
MSCI Euro	7.6	5.9	16.2	0.5	10.4	1.1	5.6
MSCI EM Asia	6.4	(1.2)	9.7	(2.3)	11.2	4.5	7.5
MSCI EM Latin American	6.2	4.4	12.6	18.4	10.8	(0.8)	2.3

FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
BBgBarc US TIPS	0.9	2.9	6.2	4.8	2.1	1.8	3.6
BBgBarc US Treasury Bills	0.2	0.7	1.3	2.4	1.4	0.9	0.5
BBgBarc US Agg Bond	1.3	3.1	6.1	7.9	2.3	2.9	3.9
Duration							
BBgBarc US Treasury 1-3 Yr	0.5	1.5	2.5	4.0	1.3	1.2	1.2
BBgBarc US Treasury Long	1.3	6.0	11.0	12.3	1.3	5.7	6.5
BBgBarc US Treasury	0.9	3.0	5.2	7.2	1.3	2.5	3.0
Issuer							
BBgBarc US MBS	0.7	2.0	4.2	6.2	2.1	2.6	3.2
BBgBarc US Corp. High Yield	2.3	2.5	9.9	7.5	7.5	4.7	9.2
BBgBarc US Agency Interm	0.6	1.7	3.1	5.0	1.6	1.8	2.1
BBgBarc US Credit	2.3	4.3	9.4	10.3	3.7	3.9	5.8

OTHER

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Index							
Bloomberg Commodity	2.7	(1.2)	5.1	(6.8)	(2.2)	(9.1)	(3.7)
Wilshire US REIT	1.4	1.6	17.9	10.5	4.1	7.8	15.7
CS Leveraged Loans	0.2	1.6	5.4	4.1	5.4	3.9	6.3
Alerian MLP	2.6	0.3	17.8	5.5	(0.4)	(6.5)	9.1
Regional Index							
JPM EMBI Global Div	3.4	4.1	11.3	12.4	5.5	5.3	7.8
JPM GBI-EM Global Div	5.5	5.6	8.7	9.0	4.2	(0.5)	3.4
Hedge Funds							
HFRI Composite	2.6	2.0	7.6	1.6	5.1	3.0	4.7
HFRI FOF Composite	1.7	1.6	6.3	1.3	4.3	2.2	3.2
Currency (Spot)							
Euro	2.2	1.4	(0.4)	(2.5)	0.8	(3.6)	(2.1)
Pound	1.0	(2.3)	(0.1)	(3.6)	(1.6)	(5.7)	(2.5)
Yen	0.8	2.7	1.8	2.8	(1.6)	(1.2)	(1.1)

Source: Morningstar, HFR, as of 6/30/19

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.lanqerresearch.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/>)

NAHB Housing Market Index - the housing market index is a weighted average of separate diffusion indices for three key single-family indices: market conditions for the sale of new homes at the present time, market conditions for the sale of new homes in the next six months, and the traffic of prospective buyers of new homes. The first two series are rated on a scale of Good, Fair, and Poor and the last is rated on a scale of High/Very High, Average, and Low/Very Low. A diffusion index is calculated for each series by applying the formula $(\text{Good-Poor} + 100)/2$ to the present and future sales series and $(\text{High/Very High-Low/Very Low} + 100)/2$ to the traffic series. Each resulting index is then seasonally adjusted and weighted to produce the HMI. Based on this calculation, the HMI can range between 0 and 100.

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San Luis Obispo County Pension Trust

Investment Performance Review

Period Ending: June 30, 2019



VERUSINVESTMENTS.COM

SEATTLE 206-622-3700

LOS ANGELES 310-297-1777

SAN FRANCISCO 415-362-3484

Portfolio Reconciliation

	Last Three Months	One Year
Beginning Market Value	\$1,344,691,625	\$1,320,114,851
Net Cash Flow	-\$15,502,939	-\$21,303,466
Net Investment Change	\$48,092,944	\$78,470,245
Ending Market Value	\$1,377,281,630	\$1,377,281,630



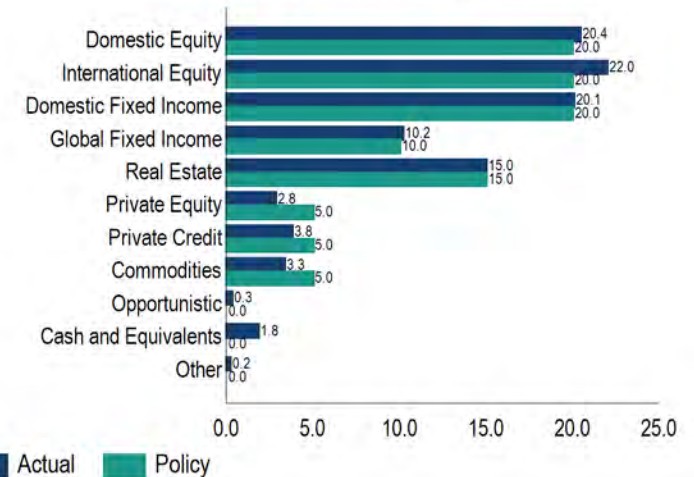
Contributions and withdrawals may include intra-account transfers between managers/funds.

Total Fund Executive Summary (Gross of Fees)

Period Ending: June 30, 2019

	QTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank
Total Fund	3.7	14	6.4	47	8.1	78	5.1	82
<i>Policy Index</i>	3.3	42	6.5	42	7.9	83	5.3	79
Total Fund ex Overlay	3.7	14	6.5	44	8.1	79	5.1	82
<i>Policy Index</i>	3.3	42	6.5	42	7.9	83	5.3	79
Total Domestic Equity	4.9	13	10.2	17	14.8	19	10.6	17
<i>Russell 3000</i>	4.1	55	9.0	38	14.0	37	10.2	30
Total International Equity	6.6	2	6.6	3	11.3	9	4.1	16
<i>MSCI ACWI ex USA Gross</i>	3.2	30	1.8	22	9.9	28	2.6	57
Total Domestic Fixed Income	2.8	33	7.4	26	3.6	21	3.5	18
<i>BBgBarc US Aggregate TR</i>	3.1	16	7.9	15	2.3	47	2.9	41
Total Global Fixed	3.3	62	4.5	95	2.7	81	-0.6	99
<i>FTSE World Govt Bond Index</i>	3.6	44	5.5	82	1.0	99	0.8	92
Total Real Estate	1.3	--	5.2	--	7.1	--	9.5	--
<i>NCREIF Property Index</i>	1.5	--	6.5	--	6.9	--	8.8	--
Total Commodities	-1.6	--	-9.0	--	-0.4	--	-8.3	--
<i>Bloomberg Commodity Index TR USD</i>	-1.2	--	-6.8	--	-2.2	--	-9.1	--
Total Private Equity	3.1	--	9.9	--	16.1	--	16.2	--
<i>Russell 3000 + 3%</i>	4.9	--	12.2	--	17.4	--	13.5	--
Total Private Credit	3.5	--	9.0	--	--	--	--	--
<i>BBgBarc High Yield +2% (Lagged)</i>	7.8	--	8.0	--	--	--	--	--
Total Cash	1.0	--	2.0	--	1.4	--	1.0	--
<i>91 Day T-Bills</i>	0.6	--	2.3	--	1.4	--	0.9	--
Total Opportunistic	-3.3	--	1.5	--	9.7	--	6.8	--
<i>Russell 3000 + 3%</i>	4.9	--	12.2	--	17.4	--	13.5	--

Actual vs Target Allocation (%)



Rolling Annualized Excess Performance and Tracking Error
Total Fund vs. Policy Index



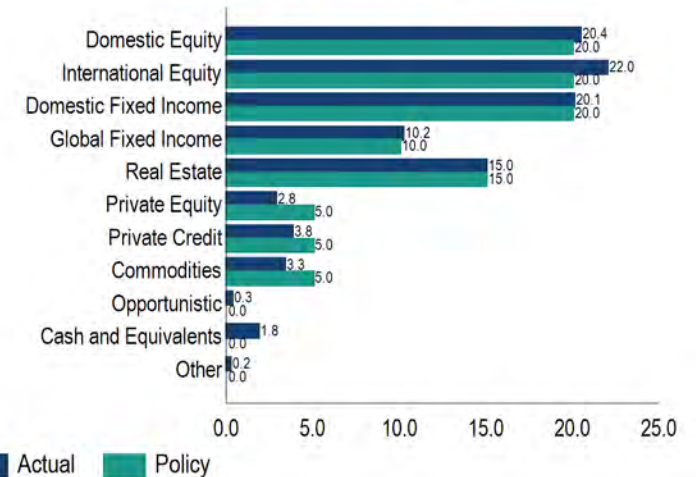
New Policy Index as of 10/1/2016: 20% Russell 3000, 20% MSCI ACWI ex. US, 30% BBgBarc Aggregate, 15% NCREIF Property, 5% Bloomberg Commodity Index, 5% Russell 3000 +3%, 5% BBgBarc High Yield +2% (Lagged). Private Equity, Private Credit and Opportunistic composite returns are lagged by one quarter. Stone 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. Harbourvest 2018 Global Fund L.P. funded 12/14/2018. Stone Harbor Local Markets terminated 3/22/2019. Ashmore EM Blended Debt funded 3/31/2019. 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.

Total Fund Executive Summary (Net of Fees)

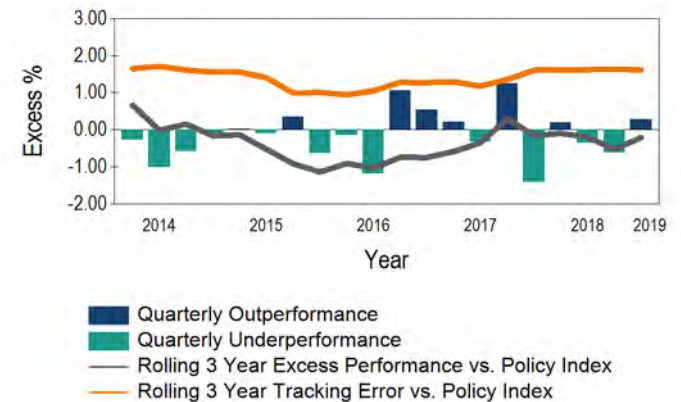
Period Ending: June 30, 2019

	QTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank
Total Fund	3.6	20	6.0	63	7.7	86	4.7	90
<i>Policy Index</i>	3.3	42	6.5	42	7.9	83	5.3	79
Total Fund ex Overlay	3.6	19	6.1	61	7.7	86	4.7	90
<i>Policy Index</i>	3.3	42	6.5	42	7.9	83	5.3	79
Total Domestic Equity	4.7	17	9.7	23	14.3	25	10.2	32
<i>Russell 3000</i>	4.1	55	9.0	38	14.0	37	10.2	30
Total International Equity	6.4	2	5.9	4	10.6	15	3.4	31
<i>MSCI ACWI ex USA Gross</i>	3.2	30	1.8	22	9.9	28	2.6	57
Total Domestic Fixed Income	2.7	38	7.0	41	3.3	25	3.2	24
<i>BBgBarc US Aggregate TR</i>	3.1	16	7.9	15	2.3	47	2.9	41
Total Global Fixed	3.1	71	3.8	97	2.0	99	-1.2	99
<i>FTSE World Govt Bond Index</i>	3.6	44	5.5	82	1.0	99	0.8	92
Total Real Estate	1.3	--	5.2	--	6.9	--	9.0	--
<i>NCREIF Property Index</i>	1.5	--	6.5	--	6.9	--	8.8	--
Total Commodities	-1.6	--	-9.0	--	-0.6	--	-8.6	--
<i>Bloomberg Commodity Index TR USD</i>	-1.2	--	-6.8	--	-2.2	--	-9.1	--
Total Private Equity	3.1	--	9.9	--	15.8	--	15.2	--
<i>Russell 3000 + 3%</i>	4.9	--	12.2	--	17.4	--	13.5	--
Total Private Credit	3.5	--	9.0	--	--	--	--	--
<i>BBgBarc High Yield +2% (Lagged)</i>	7.8	--	8.0	--	--	--	--	--
Total Cash	1.0	--	2.0	--	1.4	--	1.0	--
<i>91 Day T-Bills</i>	0.6	--	2.3	--	1.4	--	0.9	--
Total Opportunistic	-3.3	--	1.5	--	9.5	--	6.5	--
<i>Russell 3000 + 3%</i>	4.9	--	12.2	--	17.4	--	13.5	--

Actual vs Target Allocation (%)



Rolling Annualized Excess Performance and Tracking Error
Total Fund vs. Policy Index



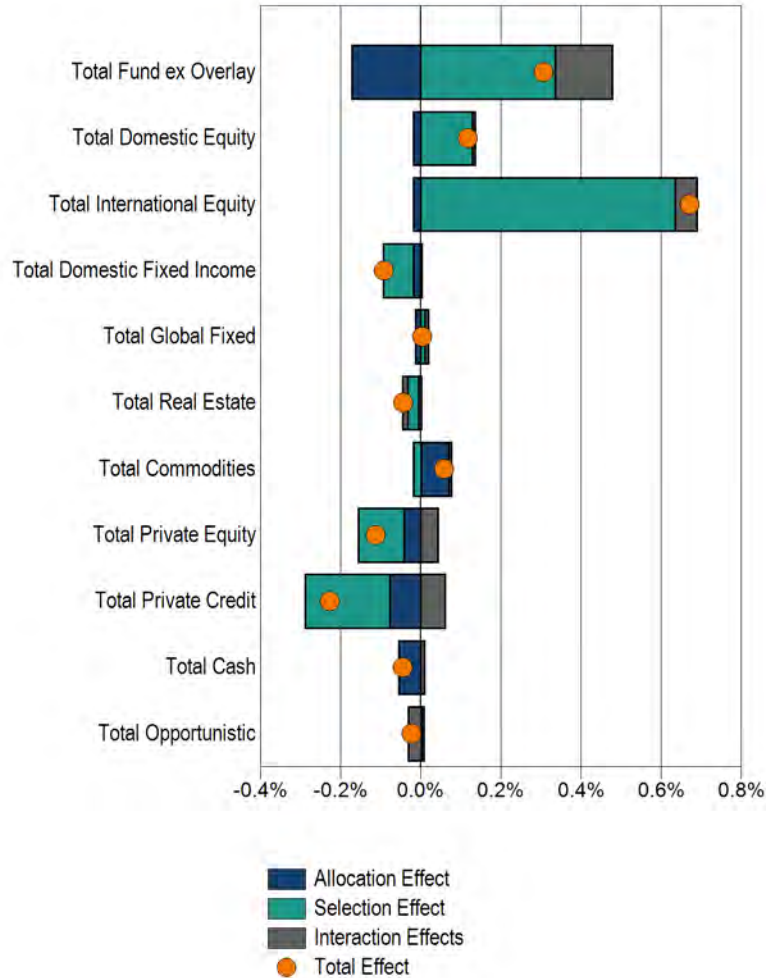
New Policy Index as of 10/1/2016: 20% Russell 3000, 20% MSCI ACWI ex. US, 30% BBgBarc Aggregate, 15% NCREIF Property, 5% Bloomberg Commodity Index, 5% Russell 3000 +3%, 5% BBgBarc High Yield +2% (Lagged). Private Equity, Private Credit and Opportunistic composite returns are lagged by one quarter. Stone 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. Harbourvest 2018 Global Fund L.P. funded 12/14/2018. Stone Harbor Local Markets terminated 3/22/2019. Ashmore EM Blended Debt funded 3/31/2019. 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.

Total Fund ex Overlay
Attribution (Net of Fees)

Period Ending: June 30, 2019

Performance Attribution

Attribution Effects
3 Months Ending June 30, 2019



	Last 3 Mo.
Wtd. Actual Return	3.60%
Wtd. Index Return *	3.29%
Excess Return	0.31%
Selection Effect	0.34%
Allocation Effect	-0.17%
Interaction Effect	0.14%

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

Attribution Summary
3 Months Ending June 30, 2019

	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Total Domestic Equity	4.74%	4.10%	0.65%	0.13%	-0.02%	0.01%	0.12%
Total International Equity	6.43%	3.22%	3.21%	0.63%	-0.02%	0.05%	0.67%
Total Domestic Fixed Income	2.72%	3.08%	-0.36%	-0.07%	-0.02%	0.00%	-0.09%
Total Global Fixed	3.15%	3.08%	0.07%	0.01%	-0.01%	0.01%	0.00%
Total Real Estate	1.34%	1.51%	-0.17%	-0.03%	-0.01%	-0.01%	-0.04%
Total Commodities	-1.62%	-1.19%	-0.43%	-0.02%	0.07%	0.01%	0.06%
Total Private Equity	3.10%	4.86%	-1.76%	-0.11%	-0.04%	0.04%	-0.11%
Total Private Credit	3.55%	7.78%	-4.23%	-0.21%	-0.08%	0.06%	-0.23%
Total Cash	1.04%	0.57%	0.47%	0.00%	-0.05%	0.01%	-0.04%
Total Opportunistic	-3.25%	4.86%	-8.11%	0.00%	0.01%	-0.03%	-0.02%
Total	3.60%	3.29%	0.31%	0.34%	-0.17%	0.14%	0.31%

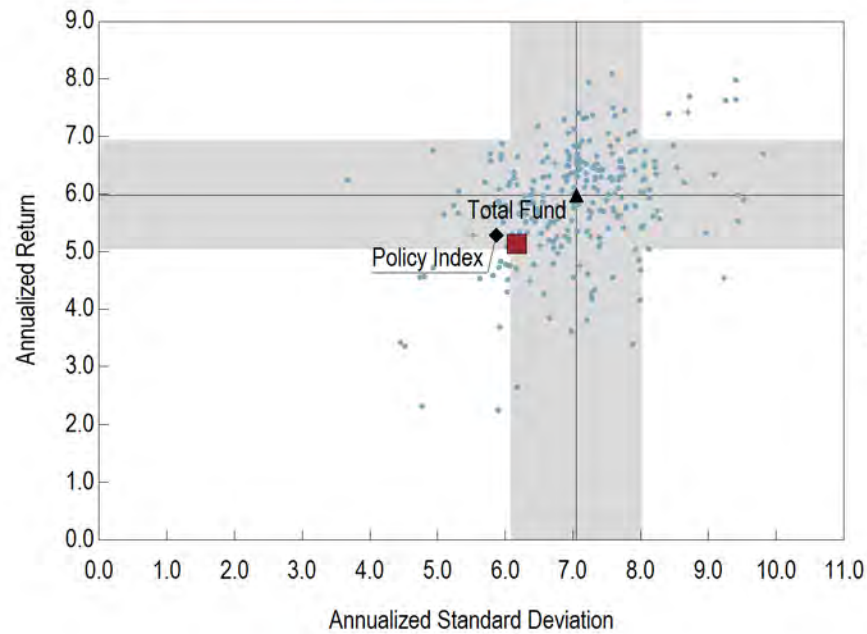
Attribution does not account for effects of overlay program. Weighted returns shown in attribution analysis may differ from actual returns. Wtd. Actual Return is the sum of the products of each group's return and its respective weight at the beginning of the period.

Total Fund
Risk Analysis - 5 Years (Gross of Fees)

Period Ending: June 30, 2019

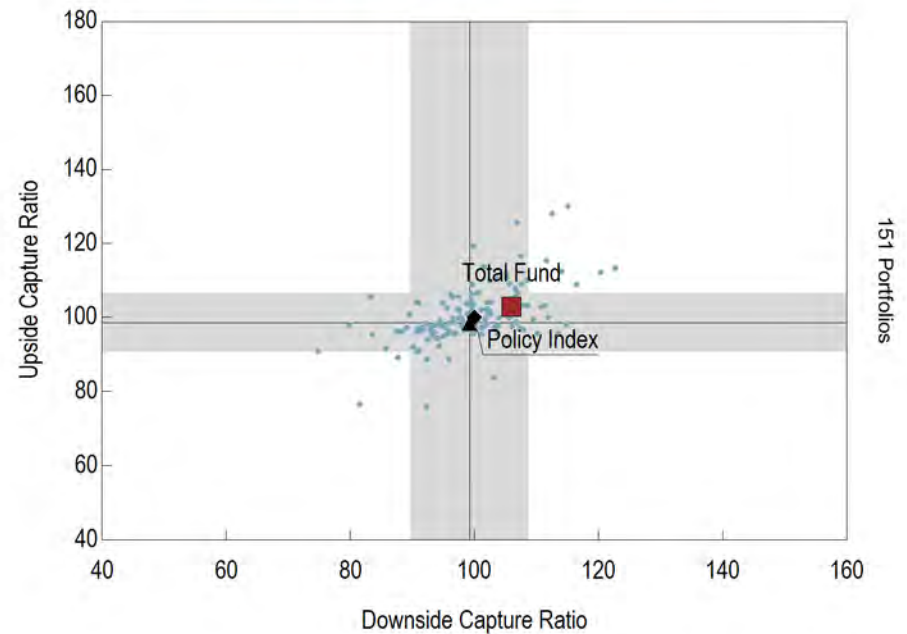
	Anlzd Ret	Ann Excess BM Return	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
Total Fund	5.13%	-0.16%	6.17%	-0.31%	1.03	1.30%	0.96	0.69	-0.12	102.83%	105.93%

Annualized Return vs. Annualized Standard Deviation



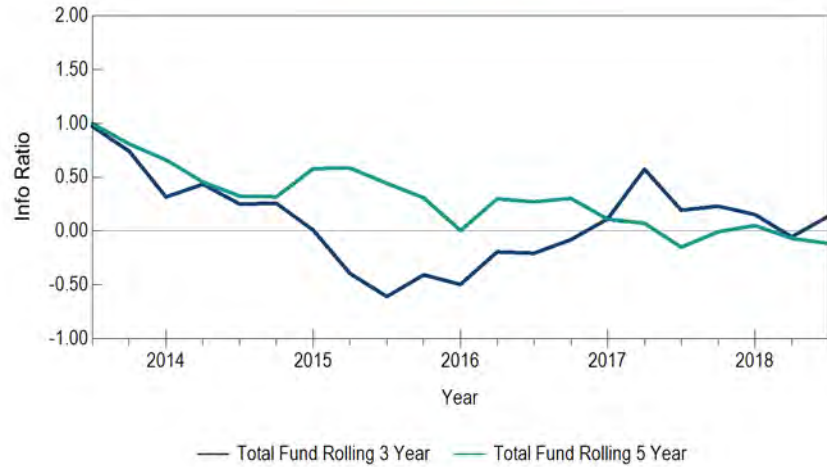
- Total Fund
- ◆ Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvMetrics Public DB Gross

Upside Capture Ratio vs. Downside Capture Ratio

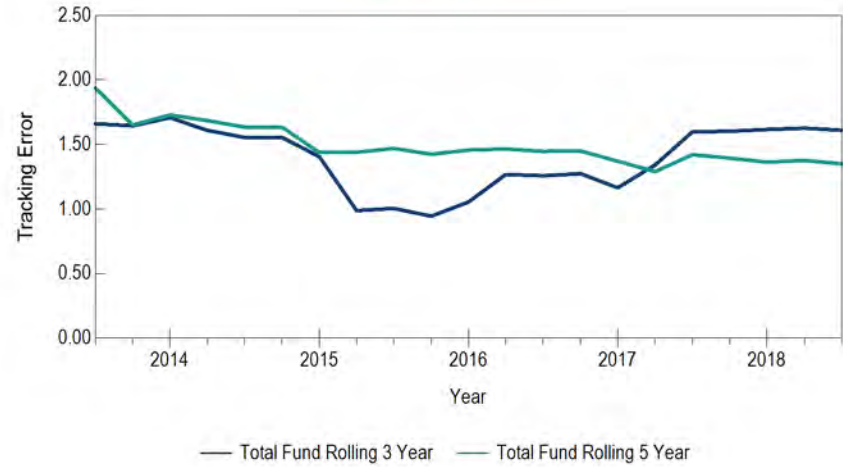


- Total Fund
- ◆ Policy Index
- ▲ Universe Median
- 68% Confidence Interval
- InvMetrics Public DB Gross

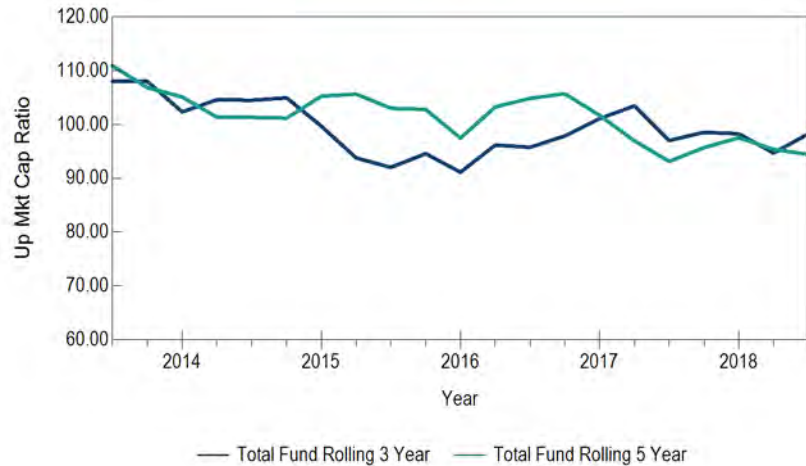
Rolling Information Ratio



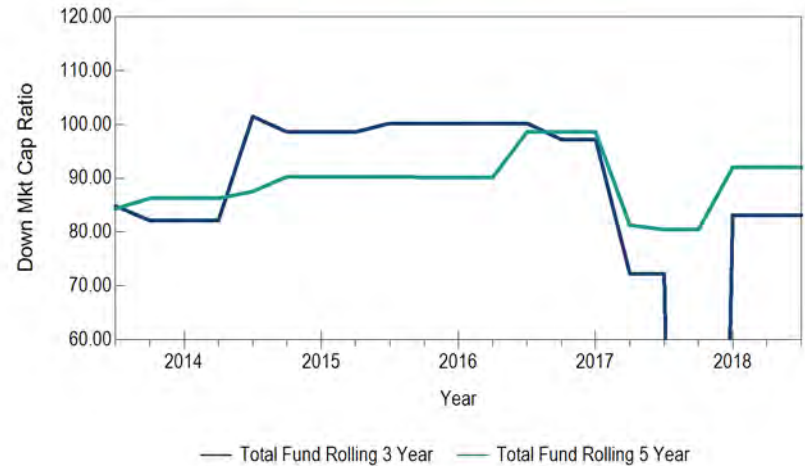
Rolling Tracking Error



Rolling Up Market Capture Ratio (%)



Rolling Down Market Capture Ratio (%)



Total Fund Performance Summary (Gross of Fees)

Period Ending: June 30, 2019

	Market Value	% of Portfolio	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2018	2017	2016	2015	2014	Inception	Inception Date
Total Fund	1,377,281,630	100.0	3.7	6.4	8.1	5.1	9.3	-3.1	15.5	6.6	-0.8	5.1		
<i>InvMetrics Public DB Gross Rank</i>			14	47	78	82	44	25	47	84	74	66		
Total Fund ex Overlay	1,374,602,722	99.8	3.7	6.5	8.1	5.1	9.2	-3.1	15.3	6.6	-0.8	5.2		
<i>Policy Index</i>			3.3	6.5	7.9	5.3	8.4	-3.2	13.4	7.8	-0.5	5.2		
<i>InvMetrics Public DB Gross Rank</i>			14	44	79	82	46	25	51	83	75	64		
Total Domestic Equity	281,290,871	20.4	4.9	10.2	14.8	10.6	15.7	-5.2	25.1	13.0	1.2	11.0		
<i>Russell 3000</i>			4.1	9.0	14.0	10.2	14.7	-5.2	21.1	12.7	0.5	12.6		
<i>InvMetrics Public DB US Eq Gross Rank</i>			13	17	19	17	2	36	4	48	18	60		
PIMCO RAE Fundamental PLUS Instl	54,815,073	4.0	2.3	5.1	10.8	7.9	14.5	-6.6	17.0	15.9	-2.7	12.7	7.9	Nov-07
<i>S&P 500</i>			4.3	10.4	14.2	10.7	14.7	-4.4	21.8	12.0	1.4	13.7	8.4	Nov-07
<i>eV US Large Cap Core Equity Gross Rank</i>			87	85	90	91	52	72	89	6	86	58	82	Nov-07
Loomis Sayles Large Cap Growth	82,484,767	6.0	5.3	15.8	--	--	--	-1.7	34.1	--	--	--	21.1	Dec-16
<i>Russell 1000 Growth</i>			4.6	11.6	--	--	--	-1.5	30.2	--	--	--	19.4	Dec-16
<i>eV US Large Cap Growth Equity Gross Rank</i>			47	19	--	--	--	58	16	--	--	--	36	Dec-16
Boston Partners Large Cap Value	78,342,892	5.7	3.0	5.0	--	--	--	-8.5	--	--	--	--	8.9	Jan-17
<i>Russell 1000 Value</i>			3.8	8.5	--	--	--	-8.3	--	--	--	--	8.0	Jan-17
<i>eV US Large Cap Value Equity Gross Rank</i>			65	65	--	--	--	54	--	--	--	--	39	Jan-17
Atlanta Capital Mgmt	65,648,139	4.8	9.0	14.8	16.9	14.7	--	-4.5	26.6	12.6	10.4	5.8	18.3	Aug-10
<i>Russell 2500</i>			3.0	1.8	12.3	7.7	--	-10.0	16.8	17.6	-2.9	7.1	13.6	Aug-10
<i>eV US Small-Mid Cap Equity Gross Rank</i>			4	8	20	4	--	25	15	62	1	56	1	Aug-10
Total International Equity	302,610,241	22.0	6.6	6.6	11.3	4.1	9.4	-12.2	26.6	2.2	-4.3	2.1		
<i>MSCI ACWI ex USA Gross</i>			3.2	1.8	9.9	2.6	7.0	-13.8	27.8	5.0	-5.3	-3.4		
<i>InvMetrics Public DB ex-US Eq Gross Rank</i>			2	3	9	16	4	9	81	82	68	1		
Dodge & Cox Intl Stock	140,934,184	10.2	3.0	0.3	10.0	1.1	8.1	-17.5	24.7	9.0	-10.8	0.6	2.5	Dec-07
<i>MSCI EAFE Gross</i>			4.0	1.6	9.6	2.7	7.4	-13.4	25.6	1.5	-0.4	-4.5	1.8	Dec-07
<i>eV All EAFE Equity Gross Rank</i>			53	43	31	93	67	73	74	3	99	14	68	Dec-07
WCM International Growth	161,676,057	11.7	10.1	13.0	--	--	--	-6.7	--	--	--	--	16.9	Feb-17
<i>MSCI ACWI ex USA Gross</i>			3.2	1.8	--	--	--	-13.8	--	--	--	--	7.9	Feb-17
<i>eV ACWI ex-US All Cap Growth Eq Gross Rank</i>			1	1	--	--	--	1	--	--	--	--	10	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. Harbourvest 2018 Global Fund L.P. funded 12/14/2018. Stone Harbor Local Markets terminated 3/22/2019. Ashmore EM Blended Debt funded 3/31/2019.

Total Fund Performance Summary (Gross of Fees)

Period Ending: June 30, 2019

	Market Value	% of Portfolio	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2018	2017	2016	2015	2014	Inception	Inception Date
Total Domestic Fixed Income	276,308,832	20.1	2.8	7.4	3.6	3.5	5.7	0.4	4.3	4.5	1.1	4.7		
BBgBarc US Aggregate TR			3.1	7.9	2.3	2.9	3.9	0.0	3.5	2.6	0.6	6.0		
InvMetrics Public DB US Fix Inc Gross Rank			33	26	21	18	13	55	50	49	17	68		
BlackRock Core Bond	101,718,613	7.4	3.4	9.0	--	--	--	0.3	--	--	--	--	4.4	Jan-17
BBgBarc US Aggregate TR			3.1	7.9	--	--	--	0.0	--	--	--	--	3.9	Jan-17
eV US Core Fixed Inc Gross Rank			16	8	--	--	--	27	--	--	--	--	33	Jan-17
Dodge & Cox Income Fund	99,300,696	7.2	2.9	8.0	--	--	--	0.1	--	--	--	--	4.7	Jan-17
BBgBarc US Aggregate TR			3.1	7.9	--	--	--	0.0	--	--	--	--	3.9	Jan-17
eV US Core Fixed Inc Gross Rank			87	59	--	--	--	43	--	--	--	--	15	Jan-17
Pacific Asset Corporate Loan	75,289,523	5.5	1.9	4.5	5.7	--	--	1.0	4.9	9.2	2.5	--	4.6	Sep-14
S&P/LSTA Leveraged Loan Index			1.7	4.0	5.2	--	--	0.4	4.1	10.2	-0.7	--	3.8	Sep-14
eV US Float-Rate Bank Loan Fixed Inc Gross Rank			14	26	23	--	--	29	26	51	9	--	32	Sep-14
Total Global Fixed	140,613,560	10.2	3.3	4.5	2.7	-0.6	3.3	-6.6	14.4	5.8	-11.8	-2.2		
FTSE World Govt Bond Index			3.6	5.5	1.0	0.8	2.2	-0.8	7.5	1.6	-3.6	-0.5		
InvMetrics Public DB Gbl Fix Inc Gross Rank			62	95	81	99	99	99	29	67	95	93		
Brandywine Global Fixed Income	67,592,640	4.9	2.0	1.7	1.8	-0.1	3.8	-4.1	12.5	2.2	-9.3	2.9	3.8	Nov-07
FTSE WGBl ex US TR			3.9	4.5	0.8	0.2	1.9	-1.8	10.3	1.8	-5.5	-2.7	2.4	Nov-07
eV Global Fixed Inc Unhedged Gross Rank			80	96	81	94	63	83	9	71	96	43	59	Nov-07
Ashmore EM Blended Debt Fund	73,020,920	5.3	4.6	--	--	--	--	--	--	--	--	--	4.6	Mar-19
50% JPM EMBI GD/25% JPM GBI EM GD/25% JPM ELMI+			4.0	--	--	--	--	--	--	--	--	--	4.0	Mar-19
eV All Emg Mkts Fixed Inc Gross Rank			41	--	--	--	--	--	--	--	--	--	41	Mar-19
Total Real Estate	206,785,359	15.0	1.3	5.2	7.1	9.5	7.7	7.5	7.8	7.8	18.0	10.4		
NCREIF Property Index			1.5	6.5	6.9	8.8	9.2	6.7	7.0	8.0	13.3	11.8		
JP Morgan Core Real Estate	165,870,433	12.0	0.9	4.3	6.2	8.6	9.5	7.0	6.1	8.4	15.2	11.2	5.5	Mar-08
NCREIF-ODCE			1.0	6.4	7.6	9.8	9.9	8.3	7.6	8.8	15.0	12.5	5.4	Mar-08
NCREIF Property Index			1.5	6.5	6.9	8.8	9.2	6.7	7.0	8.0	13.3	11.8	6.3	Mar-08
ARA American Strategic Value Realty	33,374,724	2.4	2.3	8.6	8.7	--	--	9.1	7.4	--	--	--	8.7	Jun-16
NCREIF-ODCE			1.0	6.4	7.6	--	--	8.3	7.6	--	--	--	7.6	Jun-16
NCREIF Property Index			1.5	6.5	6.9	--	--	6.7	7.0	--	--	--	6.9	Jun-16
Direct Real Estate	7,540,202	0.5	8.9	17.3	16.1	15.2	7.8	11.6	20.6	5.5	22.9	6.1		
NCREIF-ODCE			1.0	6.4	7.6	9.8	9.9	8.3	7.6	8.8	15.0	12.5		
NCREIF Property Index			1.5	6.5	6.9	8.8	9.2	6.7	7.0	8.0	13.3	11.8		

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. Harbourvest 2018 Global Fund L.P. funded 12/14/2018. Stone Harbor Local Markets terminated 3/22/2019. Ashmore EM Blended Debt funded 3/31/2019.

Total Fund Performance Summary (Gross of Fees)

Period Ending: June 30, 2019

	Market Value	% of Portfolio	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2018	2017	2016	2015	2014	Inception	Inception Date
Total Commodities	46,036,505	3.3	-1.6	-9.0	-0.4	-8.3	-2.5	-12.4	6.2	12.6	-25.2	-16.0		
<i>Bloomberg Commodity Index TR USD</i>			-1.2	-6.8	-2.2	-9.1	-3.7	-11.2	1.7	11.8	-24.7	-17.0		
Gresham MTAP Commodity Builder	46,036,505	3.3	-1.6	-9.0	-0.4	-8.3	--	-12.4	6.2	12.6	-25.2	-16.0	-6.5	Aug-13
<i>Bloomberg Commodity Index TR USD</i>			-1.2	-6.8	-2.2	-9.1	--	-11.2	1.7	11.8	-24.7	-17.0	-7.4	Aug-13
Total Private Equity	38,992,481	2.8												
Harbourvest Partners IX Buyout Fund L.P.	14,866,449	1.1												
Pathway Private Equity Fund Investors 9 L.P.	22,698,714	1.6												
Harbourvest 2018 Global Fund L.P.	1,427,318	0.1												
Total Private Credit	52,277,257	3.8												
TPG Diversified Credit Program	52,277,257	3.8												
Total Cash	25,236,467	1.8	1.0	2.0	1.4	1.0	0.7	1.5	1.0	0.5	0.4	0.3		
<i>91 Day T-Bills</i>			0.6	2.3	1.4	0.9	0.5	1.9	0.9	0.3	0.0	0.0		
Cash Account	25,236,467	1.8	1.0	2.0	1.4	1.0	0.7	1.5	1.0	0.5	0.4	0.3		
<i>91 Day T-Bills</i>			0.6	2.3	1.4	0.9	0.5	1.9	0.9	0.3	0.0	0.0		
Total Opportunistic	4,451,149	0.3												
Kohlberg Kravis Roberts & Co. Mezzanine Partners I	4,348,928	0.3												
PIMCO Distressed Credit Fund	102,221	0.0												
<i>CPI + 5%</i>			2.0	6.7	7.1	6.5	--	7.0	7.2	7.2	5.8	5.8	6.9	Jun-10

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. Harbourvest 2018 Global Fund L.P. funded 12/14/2018. Stone Harbor Local Markets terminated 3/22/2019. Ashmore EM Blended Debt funded 3/31/2019.

Total Fund Performance Summary (Net of Fees)

Period Ending: June 30, 2019

	Market Value	% of Portfolio	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2018	2017	2016	2015	2014
Total Fund	1,377,281,630	100.0	3.6	6.0	7.7	4.7	8.8	-3.5	15.0	6.0	-1.3	4.6
Total Fund ex Overlay	1,374,602,722	99.8	3.6	6.1	7.7	4.7	8.7	-3.5	14.9	6.1	-1.3	4.7
<i>Policy Index</i>			3.3	6.5	7.9	5.3	8.4	-3.2	13.4	7.8	-0.5	5.2
Total Domestic Equity	281,290,871	20.4	4.7	9.7	14.3	10.2	15.3	-5.7	24.5	12.7	0.8	10.5
<i>Russell 3000</i>			4.1	9.0	14.0	10.2	14.7	-5.2	21.1	12.7	0.5	12.6
PIMCO RAE Fundamental PLUS Instl	54,815,073	4.0	2.2	4.7	10.3	7.4	14.0	-7.0	16.5	15.4	-3.2	12.3
<i>S&P 500</i>			4.3	10.4	14.2	10.7	14.7	-4.4	21.8	12.0	1.4	13.7
Loomis Sayles Large Cap Growth	82,484,767	6.0	5.2	15.3	--	--	--	-2.1	33.5	--	--	--
<i>Russell 1000 Growth</i>			4.6	11.6	--	--	--	-1.5	30.2	--	--	--
Boston Partners Large Cap Value	78,342,892	5.7	2.9	4.6	--	--	--	-8.9	--	--	--	--
<i>Russell 1000 Value</i>			3.8	8.5	--	--	--	-8.3	--	--	--	--
Atlanta Capital Mgmt	65,648,139	4.8	8.8	13.9	16.0	13.8	--	-5.3	25.6	11.7	9.6	5.0
<i>Russell 2500</i>			3.0	1.8	12.3	7.7	--	-10.0	16.8	17.6	-2.9	7.1
Total International Equity	302,610,241	22.0	6.4	5.9	10.6	3.4	8.8	-12.8	25.8	1.6	-4.9	1.4
<i>MSCI ACWI ex USA Gross</i>			3.2	1.8	9.9	2.6	7.0	-13.8	27.8	5.0	-5.3	-3.4
Dodge & Cox Intl Stock	140,934,184	10.2	2.8	-0.3	9.3	0.4	7.4	-18.0	23.9	8.3	-11.4	0.1
<i>MSCI EAFE Gross</i>			4.0	1.6	9.6	2.7	7.4	-13.4	25.6	1.5	-0.4	-4.5
WCM International Growth	161,676,057	11.7	9.9	12.3	--	--	--	-7.4	--	--	--	--
<i>MSCI ACWI ex USA Gross</i>			3.2	1.8	--	--	--	-13.8	--	--	--	--
Total Domestic Fixed Income	276,308,832	20.1	2.7	7.0	3.3	3.2	5.4	0.0	3.9	4.2	0.9	4.4
<i>BBgBarc US Aggregate TR</i>			3.1	7.9	2.3	2.9	3.9	0.0	3.5	2.6	0.6	6.0
BlackRock Core Bond	101,718,613	7.4	3.4	8.7	--	--	--	0.1	--	--	--	--
<i>BBgBarc US Aggregate TR</i>			3.1	7.9	--	--	--	0.0	--	--	--	--
Dodge & Cox Income Fund	99,300,696	7.2	2.8	7.6	--	--	--	-0.3	--	--	--	--
<i>BBgBarc US Aggregate TR</i>			3.1	7.9	--	--	--	0.0	--	--	--	--
Pacific Asset Corporate Loan	75,289,523	5.5	1.8	4.2	5.4	--	--	0.7	4.6	8.8	2.1	--
<i>S&P/LSTA Leveraged Loan Index</i>			1.7	4.0	5.2	--	--	0.4	4.1	10.2	-0.7	--
Total Global Fixed	140,613,560	10.2	3.1	3.8	2.0	-1.2	2.6	-7.2	13.7	5.1	-12.4	-2.8
<i>FTSE World Govt Bond Index</i>			3.6	5.5	1.0	0.8	2.2	-0.8	7.5	1.6	-3.6	-0.5
Brandywine Global Fixed Income	67,592,640	4.9	1.9	1.2	1.4	-0.5	3.3	-4.5	12.0	1.7	-9.7	2.4
<i>FTSE WGBI ex US TR</i>			3.9	4.5	0.8	0.2	1.9	-1.8	10.3	1.8	-5.5	-2.7
Ashmore EM Blended Debt Fund	73,020,920	5.3	4.3	--	--	--	--	--	--	--	--	--
<i>50% JPM EMBI GD/25% JPM GBI EM GD/25% JPM ELM+</i>			4.0	--	--	--	--	--	--	--	--	--

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. Harbourvest 2018 Global Fund L.P. funded 12/14/2018. Stone Harbor Local Markets terminated 3/22/2019. Ashmore EM Blended Debt funded 3/31/2019.

Total Fund
Performance Summary (Net of Fees)

Period Ending: June 30, 2019

	Market Value	% of Portfolio	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2018	2017	2016	2015	2014
Total Real Estate	206,785,359	15.0	1.3	5.2	6.9	9.0	7.3	7.5	7.8	6.8	16.9	9.6
<i>NCREIF Property Index</i>			1.5	6.5	6.9	8.8	9.2	6.7	7.0	8.0	13.3	11.8
JP Morgan Core Real Estate	165,870,433	12.0	0.9	4.3	6.0	8.0	8.7	7.0	6.1	7.3	14.1	10.0
<i>NCREIF-ODCE</i>			1.0	6.4	7.6	9.8	9.9	8.3	7.6	8.8	15.0	12.5
<i>NCREIF Property Index</i>			1.5	6.5	6.9	8.8	9.2	6.7	7.0	8.0	13.3	11.8
ARA American Strategic Value Realty	33,374,724	2.4	2.3	8.6	8.4	--	--	9.1	7.4	--	--	--
<i>NCREIF-ODCE</i>			1.0	6.4	7.6	--	--	8.3	7.6	--	--	--
<i>NCREIF Property Index</i>			1.5	6.5	6.9	--	--	6.7	7.0	--	--	--
Direct Real Estate	7,540,202	0.5	8.9	17.3	16.0	15.0	7.7	11.6	20.6	4.9	22.2	6.1
<i>NCREIF-ODCE</i>			1.0	6.4	7.6	9.8	9.9	8.3	7.6	8.8	15.0	12.5
<i>NCREIF Property Index</i>			1.5	6.5	6.9	8.8	9.2	6.7	7.0	8.0	13.3	11.8
Total Commodities	46,036,505	3.3	-1.6	-9.0	-0.6	-8.6	-2.8	-12.4	6.2	11.8	-25.8	-16.6
<i>Bloomberg Commodity Index TR USD</i>			-1.2	-6.8	-2.2	-9.1	-3.7	-11.2	1.7	11.8	-24.7	-17.0
Gresham MTAP Commodity Builder	46,036,505	3.3	-1.6	-9.0	-0.6	-8.6	--	-12.4	6.2	11.8	-25.8	-16.6
<i>Bloomberg Commodity Index TR USD</i>			-1.2	-6.8	-2.2	-9.1	--	-11.2	1.7	11.8	-24.7	-17.0
Total Private Equity	38,992,481	2.8										
Harbourvest Partners IX Buyout Fund L.P.	14,866,449	1.1										
Pathway Private Equity Fund Investors 9 L.P.	22,698,714	1.6										
Harbourvest 2018 Global Fund L.P.	1,427,318	0.1										
Total Private Credit	52,277,257	3.8										
TPG Diversified Credit Program	52,277,257	3.8										
Total Cash	25,236,467	1.8	1.0	2.0	1.4	1.0	0.7	1.5	1.0	0.5	0.4	0.3
91 Day T-Bills			0.6	2.3	1.4	0.9	0.5	1.9	0.9	0.3	0.0	0.0
Cash Account	25,236,467	1.8	1.0	2.0	1.4	1.0	0.7	1.5	1.0	0.5	0.4	0.3
91 Day T-Bills			0.6	2.3	1.4	0.9	0.5	1.9	0.9	0.3	0.0	0.0
Total Opportunistic	4,451,149	0.3										
Kohlberg Kravis Roberts & Co. Mezzanine Partners I	4,348,928	0.3										
PIMCO Distressed Credit Fund	102,221	0.0										
CPI + 5%			2.0	6.7	7.1	6.5	--	7.0	7.2	7.2	5.8	5.8

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. Harbourvest 2018 Global Fund L.P. funded 12/14/2018. Stone Harbor Local Markets terminated 3/22/2019. Ashmore EM Blended Debt funded 3/31/2019.

Investment Manager
Performance Analysis - 3 & 5 Years (Net of Fees)

Period Ending: June 30, 2019

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	10.33%	-3.86%	12.68%	-4.05%	1.01	2.85%	0.95	0.71	-1.35	83.85%	104.72%
Atlanta Capital Mgmt	15.99%	3.65%	13.72%	5.90%	0.82	5.96%	0.85	1.07	0.61	96.62%	77.07%
Dodge & Cox Intl Stock	9.32%	-0.33%	13.70%	-1.65%	1.14	5.61%	0.84	0.58	-0.06	113.10%	116.14%
Pacific Asset Corporate Loan	5.37%	0.12%	2.68%	0.38%	0.95	0.48%	0.97	1.48	0.26	102.05%	100.09%
Brandywine Global Fixed Income	1.37%	0.54%	7.43%	0.63%	0.89	4.27%	0.68	0.00	0.13	91.44%	87.24%
JP Morgan Core Real Estate	5.99%	-1.58%	0.85%	5.51%	0.06	3.04%	0.06	5.48	-0.52	27.07%	--
Direct Real Estate	16.05%	8.48%	7.97%	21.99%	-0.78	9.42%	0.09	1.84	0.90	11.42%	--
Gresham MTAP Commodity Builder	-0.56%	1.63%	9.46%	1.66%	1.01	3.70%	0.85	-0.20	0.44	124.03%	102.74%

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	7.44%	-3.27%	12.13%	-3.11%	0.98	2.61%	0.95	0.54	-1.25	82.15%	103.26%
Atlanta Capital Mgmt	13.77%	6.10%	13.28%	7.43%	0.83	5.41%	0.87	0.97	1.13	100.38%	74.68%
Dodge & Cox Intl Stock	0.42%	-2.31%	14.82%	-2.67%	1.13	5.42%	0.88	-0.03	-0.43	105.38%	111.32%
Brandywine Global Fixed Income	-0.50%	-0.69%	7.50%	-0.66%	0.84	4.59%	0.65	-0.18	-0.15	69.23%	84.34%
Direct Real Estate	14.98%	5.23%	9.13%	10.40%	0.47	9.19%	0.05	1.55	0.57	54.39%	--
JP Morgan Core Real Estate	8.01%	-1.74%	1.31%	6.84%	0.12	3.88%	0.15	5.49	-0.45	27.35%	--

Private Markets
Non Marketable Securities Overview

Period Ending: June 30, 2019

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.	\$14,866,449	\$20,000,000	\$16,550,000	83%	\$3,450,000	\$11,534,181	\$14,722,927	69.7%	159.5%	17.9%	3/31/19
2018	HarbourVest Partners 2018 Global Fund L.P.	\$1,427,318	\$20,000,000	\$1,400,000	7%	\$18,600,000	-	-	-	-	-	-
2010	KKR Mezzanine Partners I L.P. ⁶	\$4,348,928	\$20,000,000	\$20,000,000	100%	\$0	\$29,566,840	\$4,348,928	147.8%	169.6%	8.2%	3/31/19
2010	PIMCO Distressed Credit Fund ⁴	\$102,221	\$20,000,000	\$20,000,000	100%	\$0	\$27,950,093	\$102,221	139.8%	140.3%	12.3%	3/31/19
2016	TPG Diversified Credit Program	\$52,277,257	\$75,000,000	\$50,546,852	67%	\$24,453,148	\$4,551,021	\$47,249,704	9.0%	112.4%	9.2%	3/31/19
2017	Pathway Private Equity Fund Investors 9 L.P.	\$22,698,714	\$65,000,000	\$22,990,704	35%	\$42,009,296	\$243,599	-	1.1%	99.8%	-	-
Total Alternative Illiquids		\$95,720,887	\$220,000,000	\$131,487,556	60%	\$88,512,444	\$73,845,734	\$66,423,780	50.5%	106.7%		
% of Portfolio (Market Value)		6.9%										

	Management Fee	Admin Fee	Interest Expense	Other Expense	Total Expense ⁷
HarbourVest Partners IX-Buyout Fund L.P.	\$49,795	\$0	\$0	\$16,544	\$66,339
HarbourVest Partners 2018 Global Fund L.P.	\$23,500	\$0	\$0	\$13,525	\$37,025
KKR Mezzanine Partners I L.P.	\$15,688	\$0	\$0	\$7,596	\$23,284
PIMCO Distressed Credit Fund ⁴	\$0	\$0	\$0	\$1,496	\$1,496
TPG Diversified Credit Program	\$31,754	\$0	\$0	\$0	\$31,754
Pathway Private Equity Fund Investors 9 L.P.	\$66,250	\$0	\$0	\$0	\$66,250
	\$186,987	\$0	\$0	\$39,161	\$226,148

¹(DPI) is equal to (capital returned / capital called)

²(TVPI) is equal to (market value + capital returned) / capital called

³Last known market value + capital calls - distributions

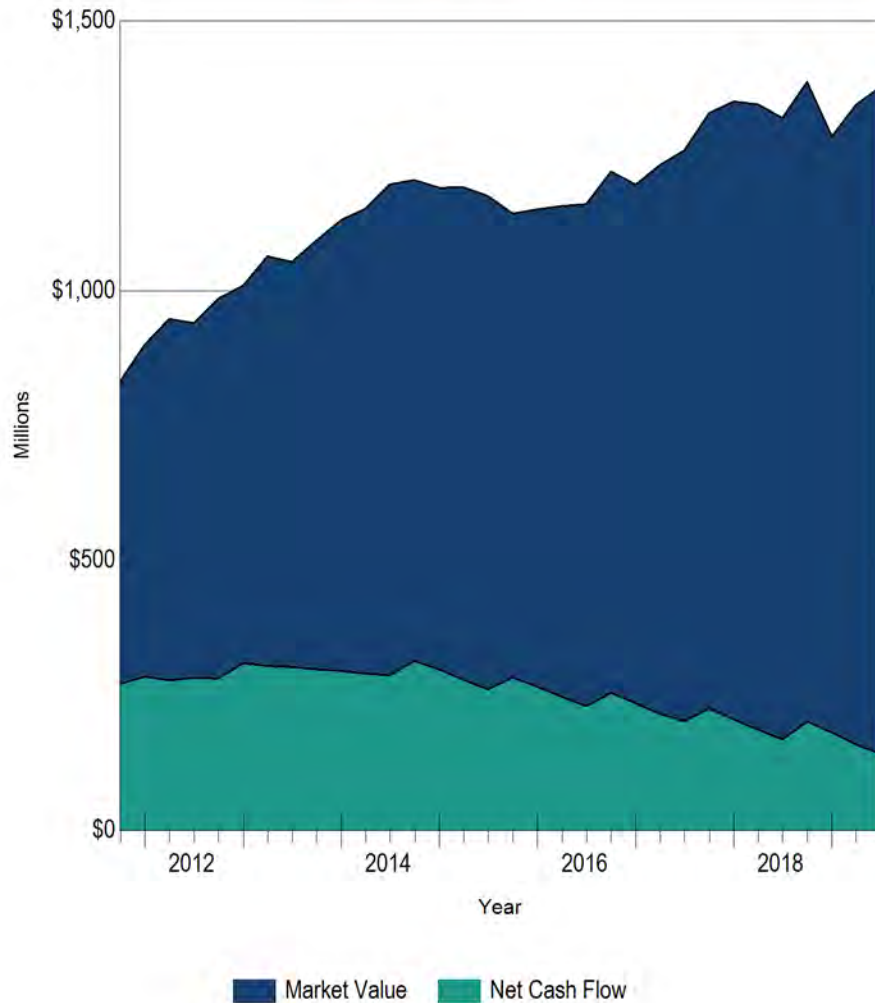
⁴Investment period ended, no further capital to be called.

⁵Net 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.

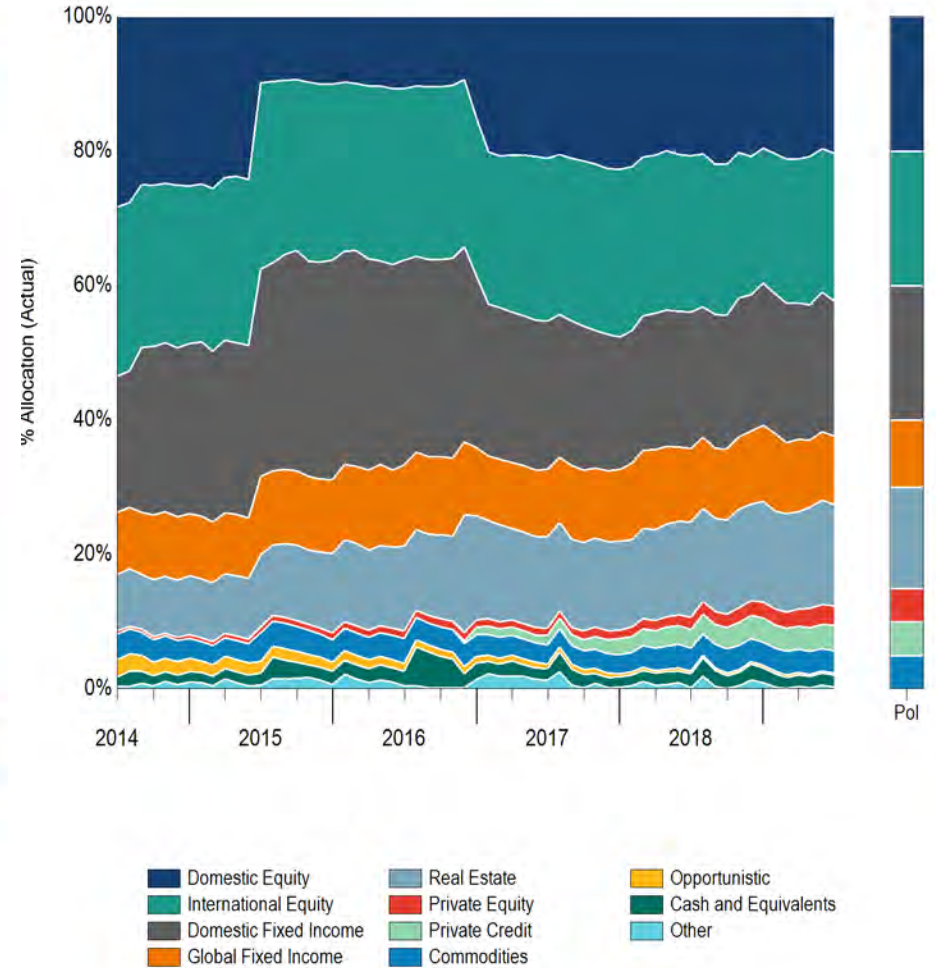
⁶KKR: As of 2Q2019, total capital called is \$23,593,570, which includes recycled distributions. Unused capital commitment is \$2,109,437 after including distribution proceeds available for reinvestment

⁷All fees and expenses are for 1Q 2019, except for Pathway, for which 4Q18 fees are shown.

Market Value History



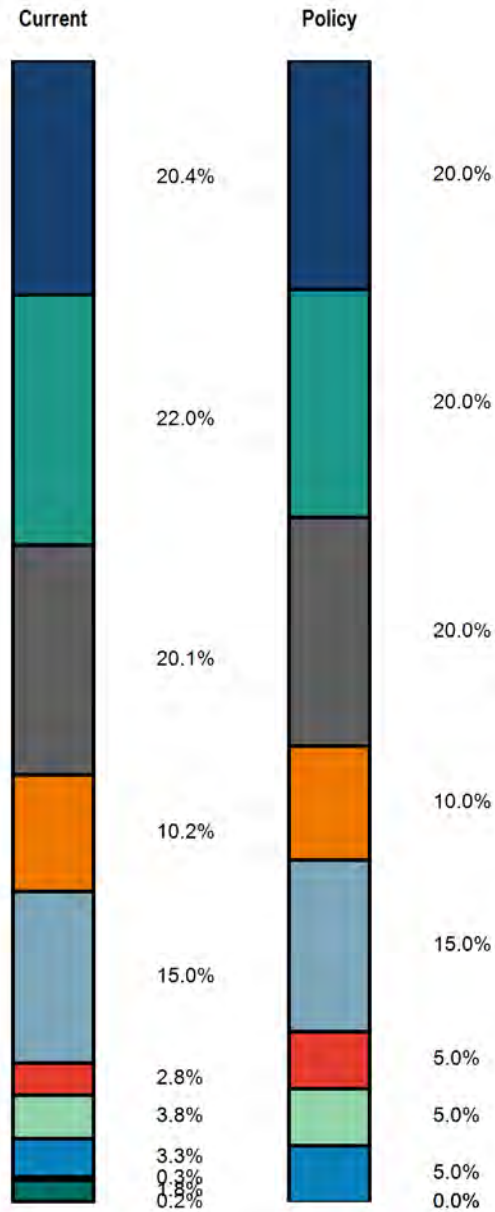
Asset Allocation History



*Other balance represents Clifton Group

Total Fund
Asset Allocation vs. Policy

Period Ending: June 30, 2019



	Current Balance	Current Allocation	Policy	Difference	Policy Range	Within IPS Range?
Domestic Equity	\$281,290,871	20.4%	20.0%	\$5,834,545	15.0% - 30.0%	Yes
International Equity	\$302,610,241	22.0%	20.0%	\$27,153,915	15.0% - 30.0%	Yes
Domestic Fixed Income	\$276,308,832	20.1%	20.0%	\$852,506	10.0% - 30.0%	Yes
Global Fixed Income	\$140,613,560	10.2%	10.0%	\$2,885,397	0.0% - 20.0%	Yes
Real Estate	\$206,785,359	15.0%	15.0%	\$193,115	5.0% - 20.0%	Yes
Private Equity	\$38,992,481	2.8%	5.0%	-\$29,871,601	0.0% - 10.0%	Yes
Private Credit	\$52,277,257	3.8%	5.0%	-\$16,586,825	0.0% - 10.0%	Yes
Commodities	\$46,036,505	3.3%	5.0%	-\$22,827,576	0.0% - 10.0%	Yes
Opportunistic	\$4,451,149	0.3%	0.0%	\$4,451,149	0.0% - 10.0%	Yes
Cash and Equivalents	\$25,236,467	1.8%	0.0%	\$25,236,467	0.0% - 5.0%	Yes
Other	\$2,678,909	0.2%	--	\$2,678,909	--	No
Total	\$1,377,281,630	100.0%	100.0%			

*Other balance represents Clifton Group

Total Fund Investment Fund Fee Analysis

Period Ending: June 30, 2019

Account	Fee Schedule	Market Value As of 6/30/2019	% 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	\$33,374,724	2.4%	\$397,122	1.19%
Ashmore EM Blended Debt Fund	1.00% of Assets	\$73,020,920	5.3%	\$730,209	1.00%
Atlanta Capital Mgmt	0.80% of First 50.0 Mil, 0.70% of Next 100.0 Mil, 0.60% Thereafter	\$65,648,139	4.8%	\$509,537	0.78%
BlackRock Core Bond	0.28% of First 100.0 Mil, 0.26% Thereafter	\$101,718,613	7.4%	\$284,468	0.28%
Boston Partners Large Cap Value	0.40% of Assets	\$78,342,892	5.7%	\$313,372	0.40%
Brandywine Global Fixed Income	0.45% of First 50.0 Mil, 0.40% of Next 50.0 Mil, 0.35% Thereafter	\$67,592,640	4.9%	\$295,371	0.44%
Cash Account	No Fee	\$25,236,467	1.8%	--	--
Direct Real Estate	No Fee	\$7,540,202	0.5%	--	--
Dodge & Cox Income Fund	0.43% of Assets	\$99,300,696	7.2%	\$426,993	0.43%
Dodge & Cox Intl Stock	0.64% of Assets	\$140,934,184	10.2%	\$901,979	0.64%
Gresham MTAP Commodity Builder	0.75% of First 50.0 Mil, 0.50% Thereafter	\$46,036,505	3.3%	\$345,274	0.75%
Harbourvest 2018 Global Fund L.P.	282,000 Annually	\$1,427,318	0.1%	\$282,000	19.76%
Harbourvest Partners IX Buyout Fund L.P.	200,000 Annually	\$14,866,449	1.1%	\$200,000	1.35%
JP Morgan Core Real Estate	1.00% of Assets	\$165,870,433	12.0%	\$1,658,704	1.00%
Kohlberg Kravis Roberts & Co. Mezzanine Partners I	300,000 Annually	\$4,348,928	0.3%	\$300,000	6.90%
Loomis Sayles Large Cap Growth	0.45% of First 100.0 Mil, 0.40% Thereafter	\$82,484,767	6.0%	\$371,181	0.45%
Pacific Asset Corporate Loan	0.37% of Assets	\$75,289,523	5.5%	\$278,571	0.37%
Pathway Private Equity Fund Investors 9 L.P.	Please see footnote	\$22,698,714	1.6%	--	--
PIMCO Distressed Credit Fund	150,000 Annually	\$102,221	0.0%	\$150,000	146.74%
PIMCO RAE Fundamental PLUS Instl	0.40% of Assets	\$54,815,073	4.0%	\$219,260	0.40%
The Clifton Group	50,000 Annually	\$2,678,909	0.2%	\$50,000	1.87%
TPG Diversified Credit Program	Please see footnote	\$52,277,257	3.8%	--	--
WCM International Growth	0.70% of Assets	\$161,676,057	11.7%	\$1,131,732	0.70%
Investment Management Fee		\$1,377,281,630	100.0%	\$8,845,774	0.64%

*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.

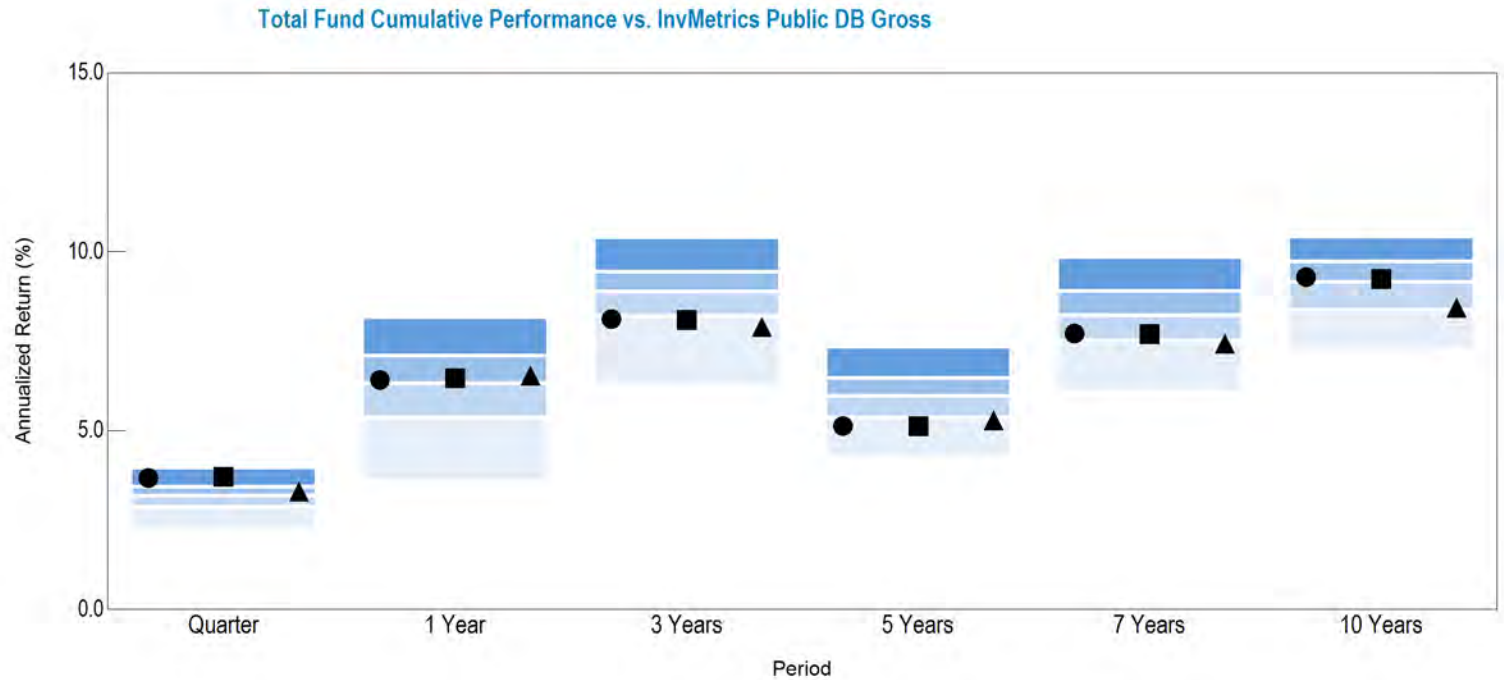
*Clifton Group fee schedule represents contractual minimum fee. Actual fee charged is \$1,500 per month through at least 6/30/2015.

*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.

Total Fund

Peer Universe Comparison: Cumulative Performance (Gross of Fees)

Period Ending: June 30, 2019

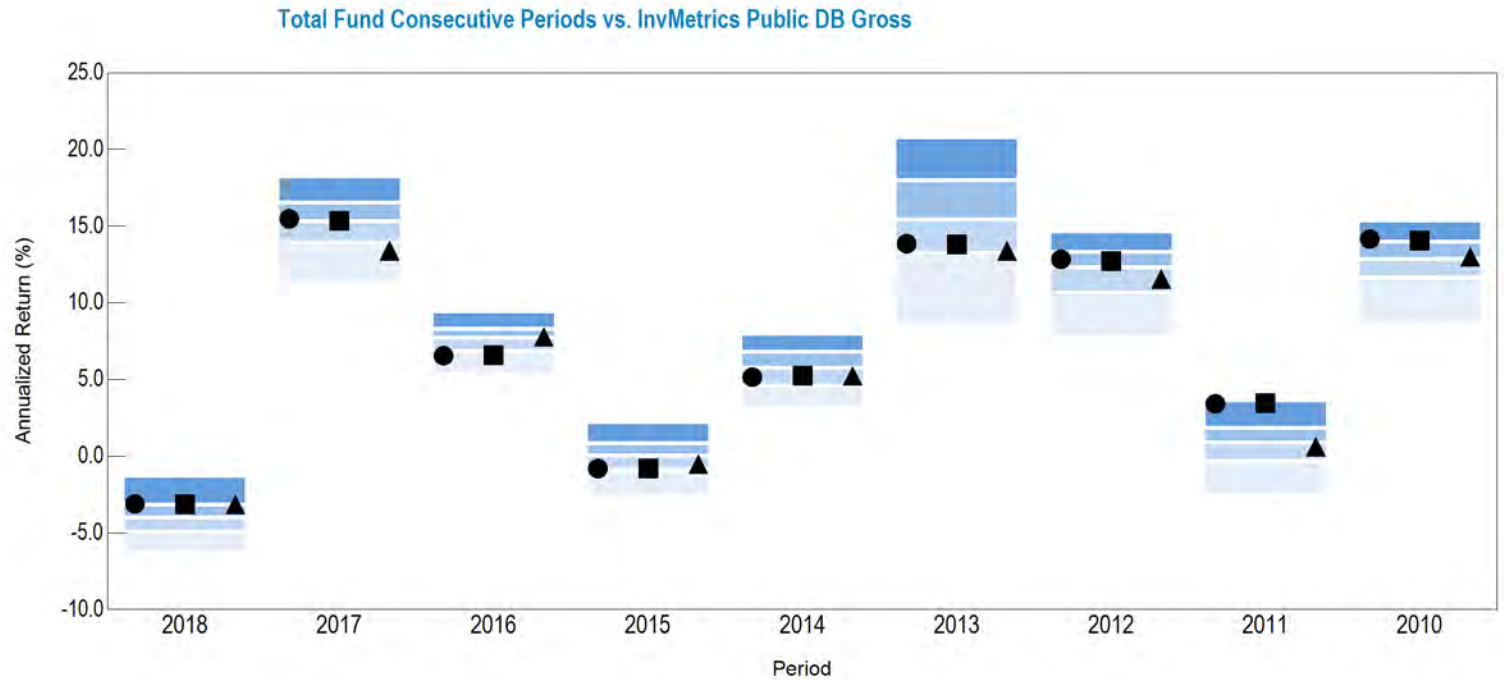


	Return (Rank)					
	Quarter	1 Year	3 Years	5 Years	7 Years	10 Years
5th Percentile	4.0	8.2	10.4	7.3	9.9	10.4
25th Percentile	3.4	7.1	9.5	6.5	8.9	9.7
Median	3.2	6.3	8.9	6.0	8.2	9.2
75th Percentile	2.9	5.4	8.2	5.4	7.5	8.4
95th Percentile	2.3	3.6	6.2	4.3	6.1	7.3
# of Portfolios	279	273	264	254	239	217
● Total Fund	3.7 (14)	6.4 (47)	8.1 (78)	5.1 (82)	7.7 (70)	9.3 (44)
■ Total Fund ex Overlay	3.7 (14)	6.5 (44)	8.1 (79)	5.1 (82)	7.7 (70)	9.2 (46)
▲ Policy Index	3.3 (42)	6.5 (42)	7.9 (83)	5.3 (79)	7.4 (79)	8.4 (75)

Total Fund

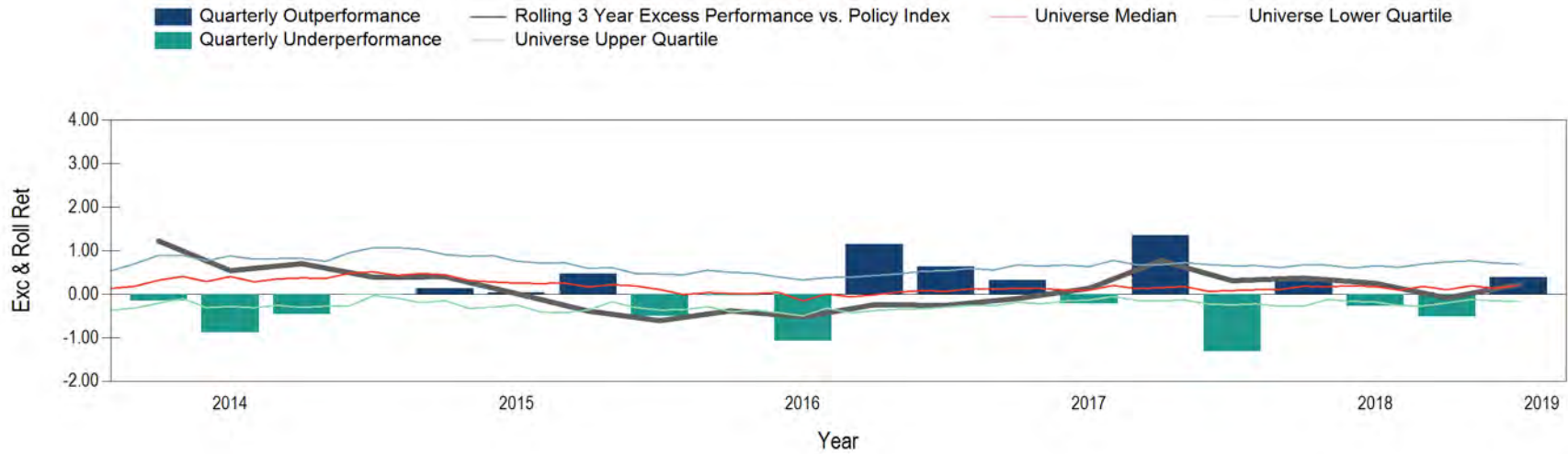
Peer Universe Comparison: Consecutive Periods (Gross of Fees)

Period Ending: June 30, 2019

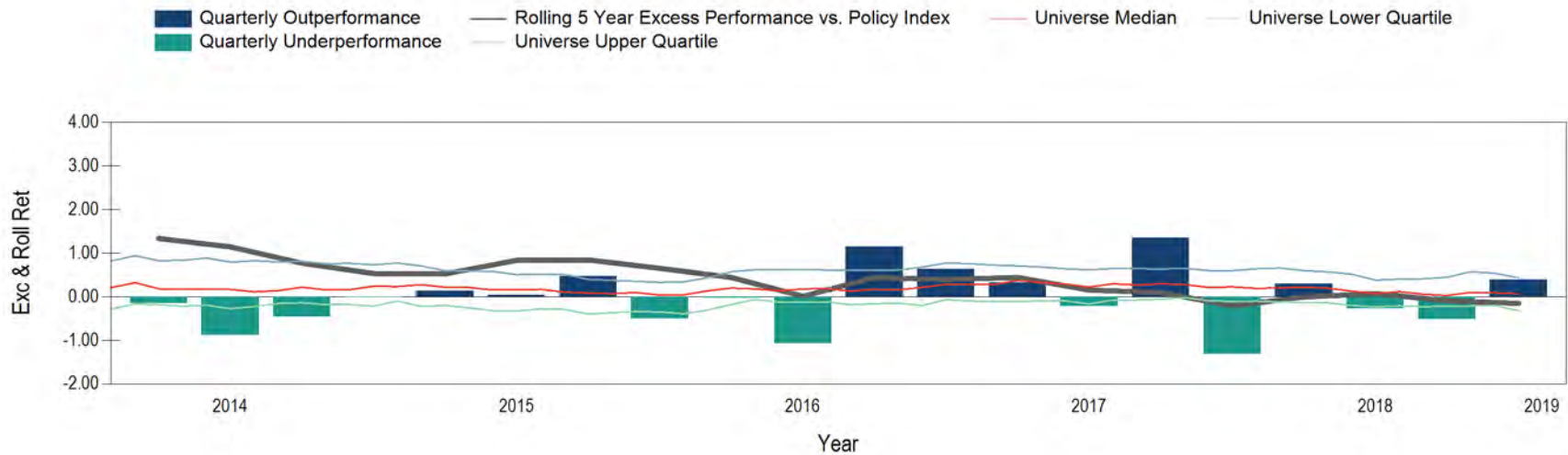


	2018	2017	2016	2015	2014	2013	2012	2011	2010
5th Percentile	-1.3	18.2	9.4	2.2	8.0	20.8	14.6	3.6	15.4
25th Percentile	-3.1	16.5	8.4	0.9	6.8	18.0	13.4	1.9	14.0
Median	-4.0	15.3	7.7	0.1	5.8	15.5	12.4	0.9	12.9
75th Percentile	-4.9	14.0	6.9	-0.9	4.6	13.3	10.7	-0.3	11.7
95th Percentile	-6.3	11.3	5.3	-2.6	3.2	8.5	7.8	-2.5	8.6
# of Portfolios	319	304	305	316	248	231	236	206	188
● Total Fund	-3.1 (25)	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	-3.1 (25)	15.3 (51)	6.6 (83)	-0.8 (75)	5.2 (64)	13.8 (72)	12.7 (43)	3.5 (6)	14.1 (24)
▲ Policy Index	-3.2 (26)	13.4 (86)	7.8 (49)	-0.5 (67)	5.2 (64)	13.4 (74)	11.6 (69)	0.6 (60)	13.0 (48)

Rolling 3 Year Annualized Excess Performance



Rolling 5 Year Annualized Excess Performance



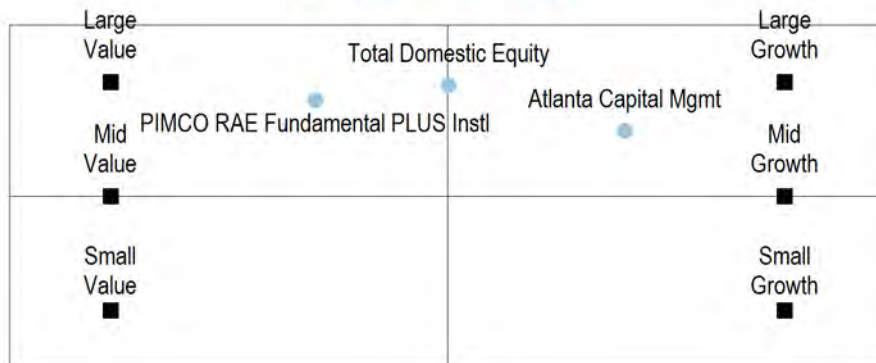
Total Domestic Equity

Asset Class Overview (Gross of Fees)

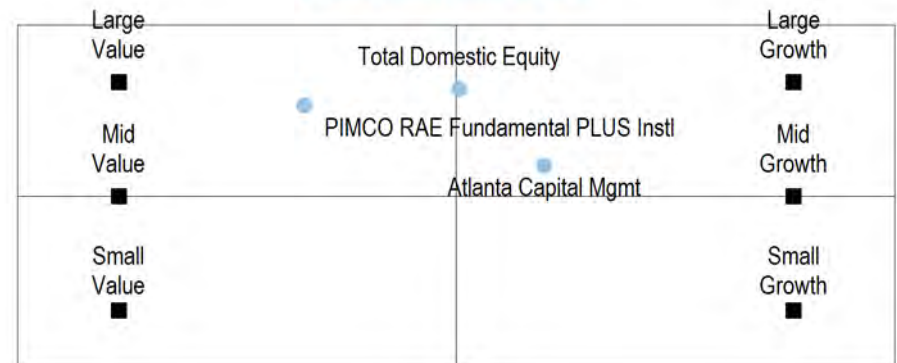
Period Ending: June 30, 2019

	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2018	2017	2016	2015	2014
Total Domestic Equity	281,290,871	4.9	10.2	14.8	10.6	15.7	-5.2	25.1	13.0	1.2	11.0
<i>Russell 3000</i>		4.1	9.0	14.0	10.2	14.7	-5.2	21.1	12.7	0.5	12.6
<i>InvMetrics Public DB US Eq Gross Rank</i>		13	17	19	17	2	36	4	48	18	60
PIMCO RAE Fundamental PLUS Instl	54,815,073	2.3	5.1	10.8	7.9	14.5	-6.6	17.0	15.9	-2.7	12.7
<i>S&P 500</i>		4.3	10.4	14.2	10.7	14.7	-4.4	21.8	12.0	1.4	13.7
<i>eV US Large Cap Core Equity Gross Rank</i>		87	85	90	91	52	72	89	6	86	58
Loomis Sayles Large Cap Growth	82,484,767	5.3	15.8	--	--	--	-1.7	34.1	--	--	--
<i>Russell 1000 Growth</i>		4.6	11.6	--	--	--	-1.5	30.2	--	--	--
<i>eV US Large Cap Growth Equity Gross Rank</i>		47	19	--	--	--	58	16	--	--	--
Boston Partners Large Cap Value	78,342,892	3.0	5.0	--	--	--	-8.5	--	--	--	--
<i>Russell 1000 Value</i>		3.8	8.5	--	--	--	-8.3	--	--	--	--
<i>eV US Large Cap Value Equity Gross Rank</i>		65	65	--	--	--	54	--	--	--	--
Atlanta Capital Mgmt	65,648,139	9.0	14.8	16.9	14.7	--	-4.5	26.6	12.6	10.4	5.8
<i>Russell 2500</i>		3.0	1.8	12.3	7.7	--	-10.0	16.8	17.6	-2.9	7.1
<i>eV US Small-Mid Cap Equity Gross Rank</i>		4	8	20	4	--	25	15	62	1	56

U.S. Effective Style Map
3 Years Ending June 30, 2019



U.S. Effective Style Map
5 Years Ending June 30, 2019



Total Domestic Equity
Asset Class Overview (Net of Fees)

Period Ending: June 30, 2019

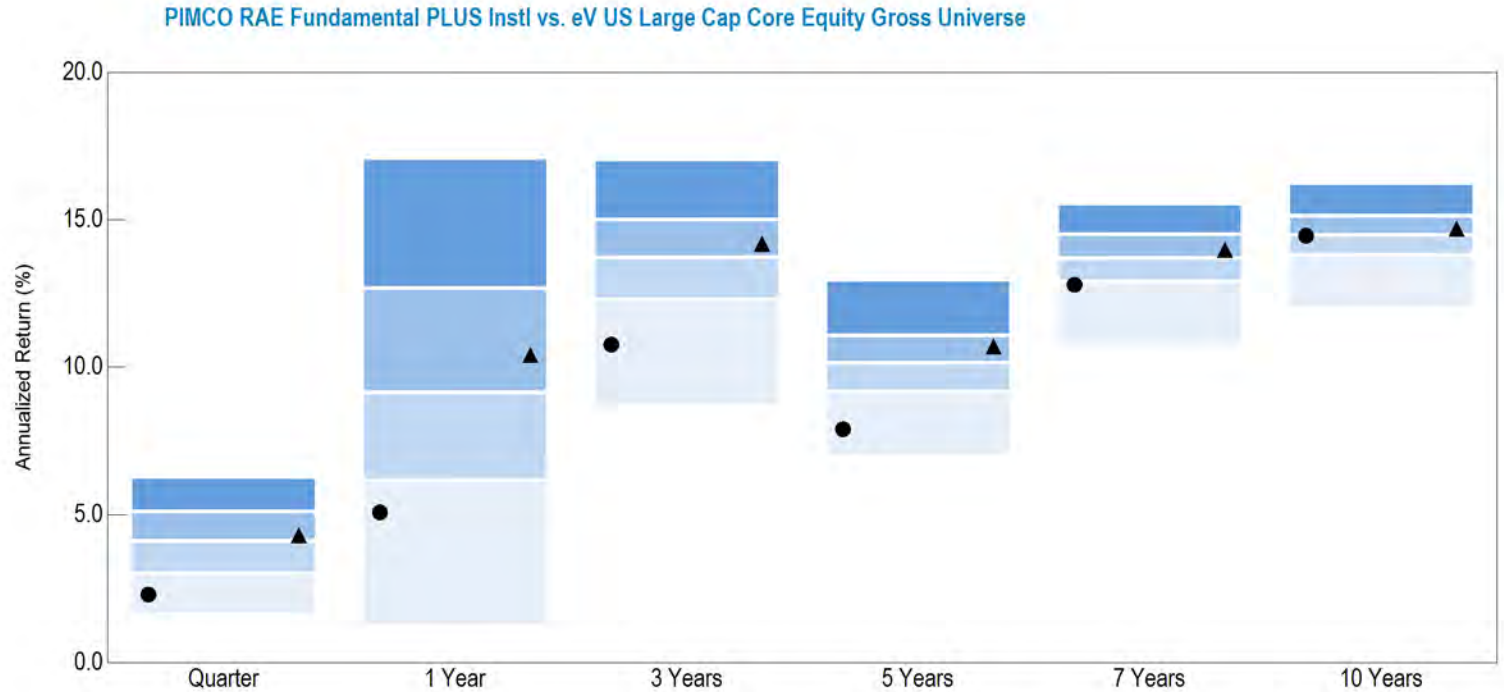
	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2018	2017	2016	2015	2014
Total Domestic Equity	281,290,871	4.7	9.7	14.3	10.2	15.3	-5.7	24.5	12.7	0.8	10.5
<i>Russell 3000</i>		4.1	9.0	14.0	10.2	14.7	-5.2	21.1	12.7	0.5	12.6
PIMCO RAE Fundamental PLUS Instl	54,815,073	2.2	4.7	10.3	7.4	14.0	-7.0	16.5	15.4	-3.2	12.3
<i>S&P 500</i>		4.3	10.4	14.2	10.7	14.7	-4.4	21.8	12.0	1.4	13.7
Loomis Sayles Large Cap Growth	82,484,767	5.2	15.3	--	--	--	-2.1	33.5	--	--	--
<i>Russell 1000 Growth</i>		4.6	11.6	--	--	--	-1.5	30.2	--	--	--
Boston Partners Large Cap Value	78,342,892	2.9	4.6	--	--	--	-8.9	--	--	--	--
<i>Russell 1000 Value</i>		3.8	8.5	--	--	--	-8.3	--	--	--	--
Atlanta Capital Mgmt	65,648,139	8.8	13.9	16.0	13.8	--	-5.3	25.6	11.7	9.6	5.0
<i>Russell 2500</i>		3.0	1.8	12.3	7.7	--	-10.0	16.8	17.6	-2.9	7.1

Correlation Matrix
 Last 1 Year

	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	1.00	1.00	--	--	--
Loomis Sayles Large Cap Growth	0.99	0.99	1.00	--	--
Boston Partners Large Cap Value	0.99	0.99	0.97	1.00	--
Russell 3000	1.00	1.00	1.00	0.99	1.00

PIMCO RAE Fundamental PLUS Instl
 Cumulative Performance Comparison (Gross of Fees)

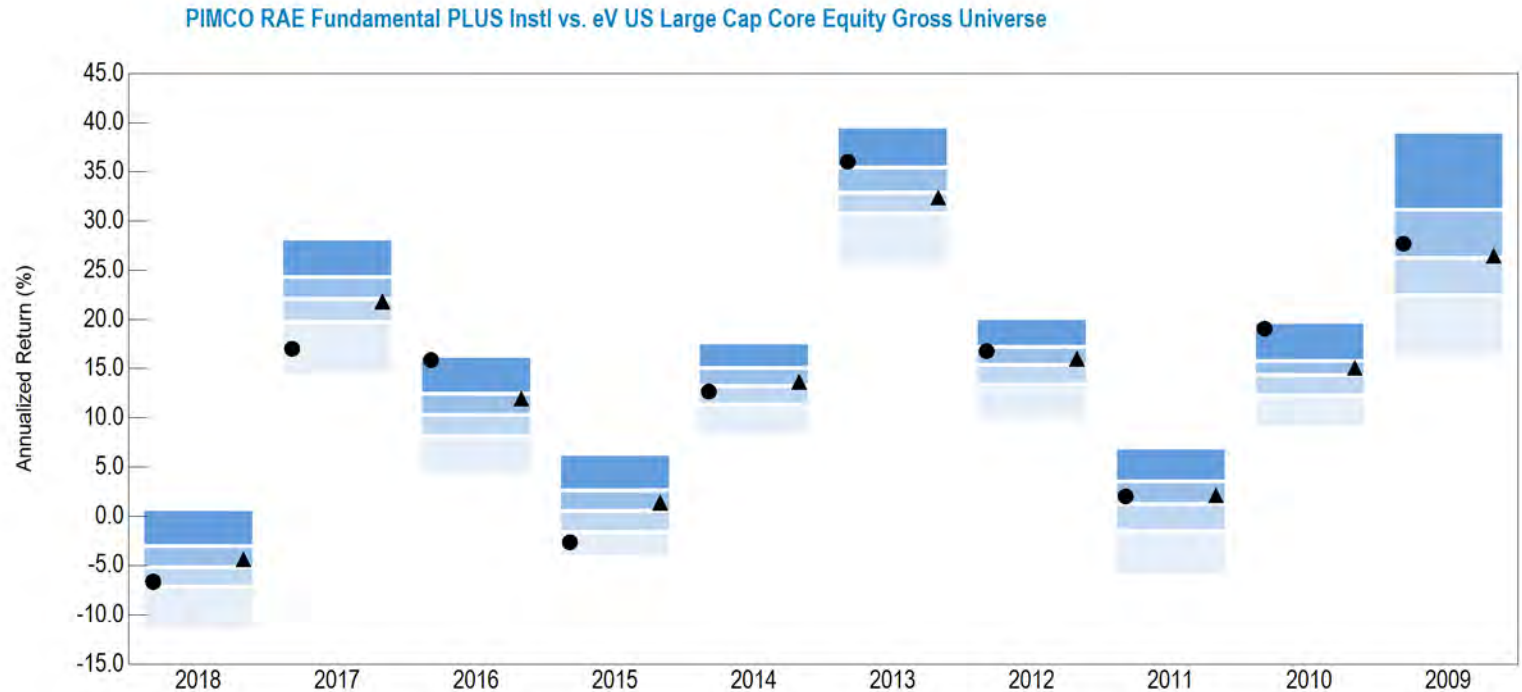
Period Ending: June 30, 2019



	Quarter		1 Year		3 Years		5 Years		7 Years		10 Years	
5th Percentile	6.3		17.1		17.1		13.0		15.6		16.2	
25th Percentile	5.1		12.7		15.0		11.1		14.5		15.2	
Median	4.1		9.2		13.8		10.2		13.7		14.5	
75th Percentile	3.0		6.2		12.3		9.2		12.9		13.8	
95th Percentile	1.7		1.3		8.7		7.0		10.7		12.0	
# of Portfolios	313		313		300		281		254		223	
● PIMCO RAE Fundamental PLUS Instl	2.3	(87)	5.1	(85)	10.8	(90)	7.9	(91)	12.8	(79)	14.5	(52)
▲ S&P 500	4.3	(47)	10.4	(40)	14.2	(39)	10.7	(35)	14.0	(44)	14.7	(41)

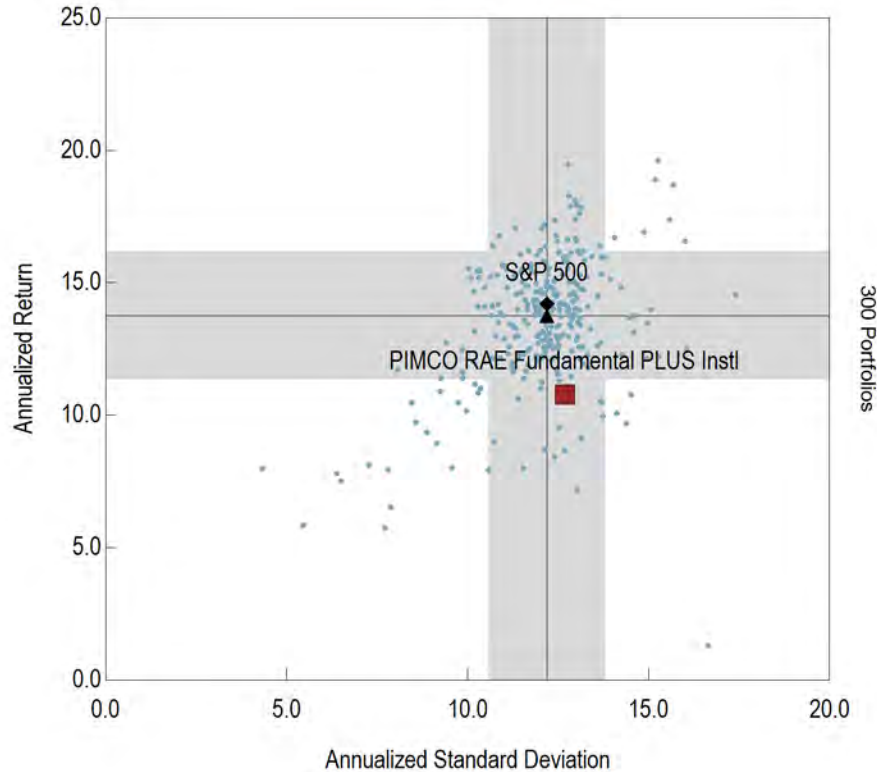
PIMCO RAE Fundamental PLUS Instl
 Consecutive Performance Comparison (Gross of Fees)

Period Ending: June 30, 2019



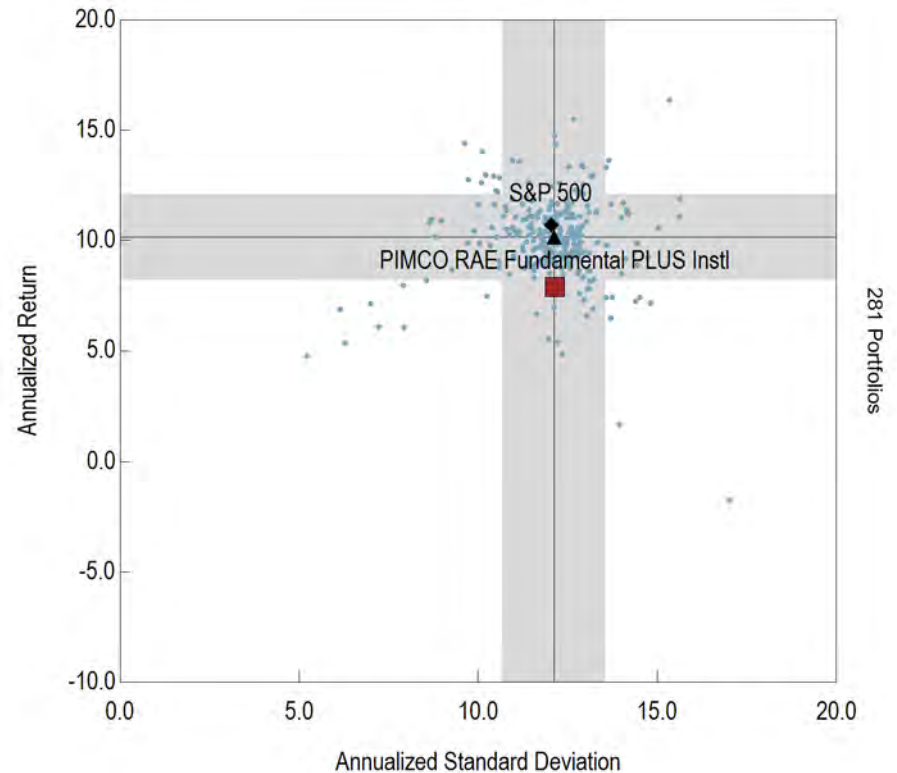
	Return (Rank)									
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
5th Percentile	0.7	28.2	16.3	6.3	17.7	39.6	20.1	7.0	19.7	39.1
25th Percentile	-3.0	24.3	12.5	2.7	15.1	35.5	17.2	3.6	15.8	31.2
Median	-5.1	22.1	10.4	0.6	13.3	32.9	15.4	1.3	14.4	26.3
75th Percentile	-7.1	19.8	8.2	-1.6	11.4	30.8	13.4	-1.5	12.3	22.6
95th Percentile	-11.4	14.4	4.3	-4.1	8.2	25.4	9.8	-5.9	9.1	16.1
# of Portfolios	316	318	308	267	267	261	254	259	254	280
● PIMCO RAE Fundamental PLUS Instl	-6.6 (72)	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)
▲ S&P 500	-4.4 (40)	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)

Annualized Return vs. Annualized Standard Deviation
 3 Years Ending June 30, 2019

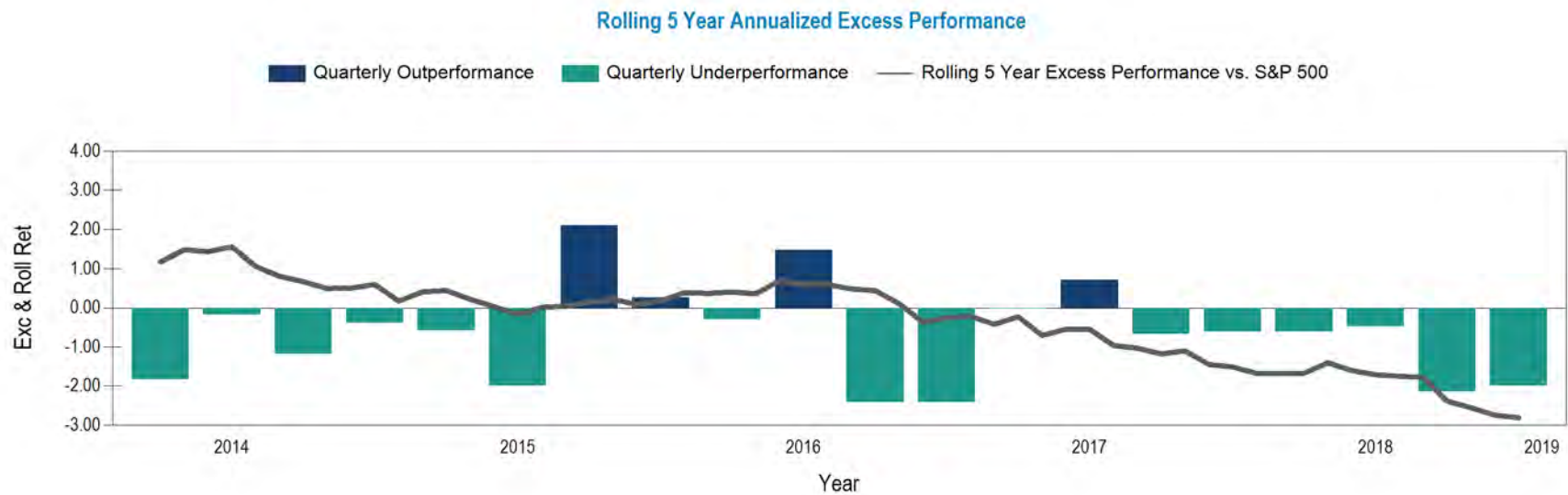
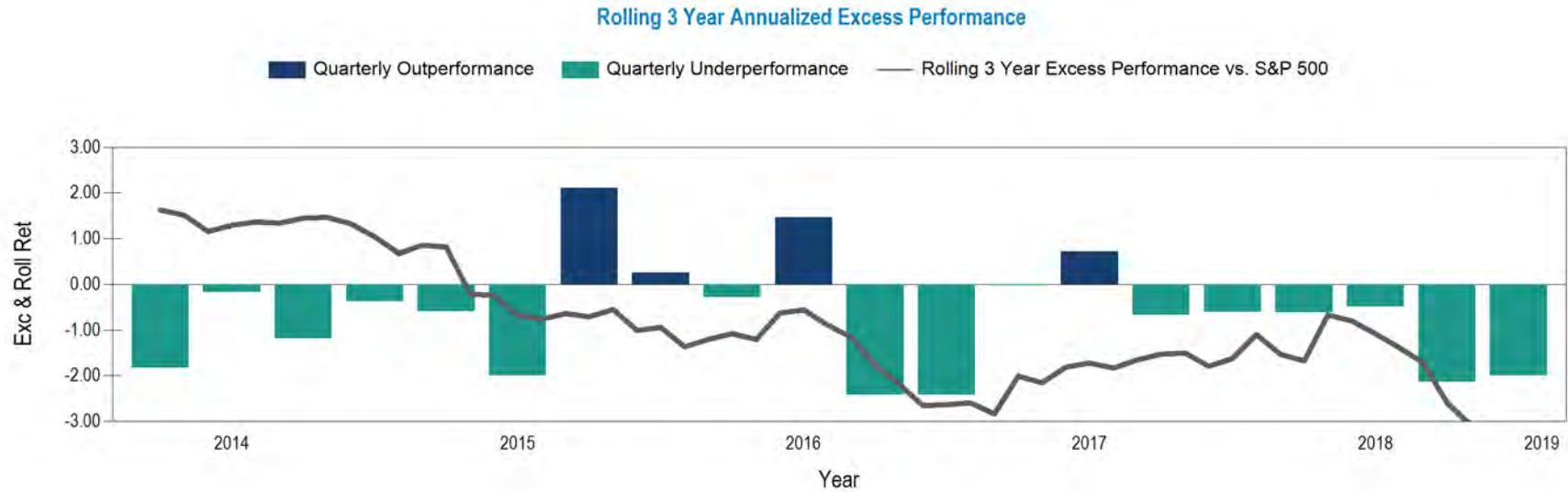


- PIMCO RAE Fundamental PLUS Instl
- ◆ S&P 500
- ▲ Universe Median
- 68% Confidence Interval
- eV US Large Cap Core Equity Gross

Annualized Return vs. Annualized Standard Deviation
 5 Years Ending June 30, 2019



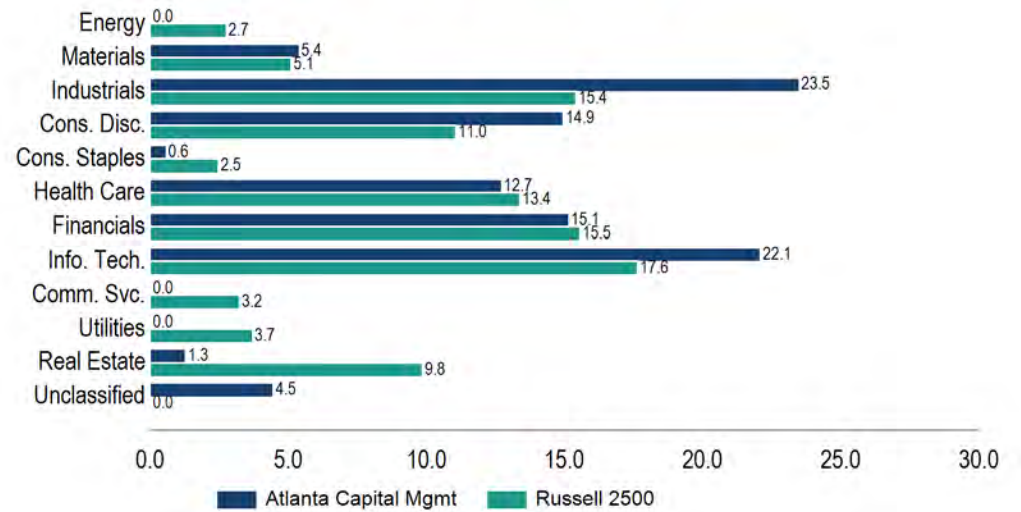
- PIMCO RAE Fundamental PLUS Instl
- ◆ S&P 500
- ▲ Universe Median
- 68% Confidence Interval
- eV US Large Cap Core Equity Gross



Characteristics

	Portfolio	Russell 2500
Number of Holdings	54	2,448
Weighted Avg. Market Cap. (\$B)	9.59	5.70
Median Market Cap. (\$B)	8.01	1.12
Price To Earnings	27.85	20.27
Price To Book	4.32	2.73
Price To Sales	1.83	1.34
Return on Equity (%)	21.00	8.80
Yield (%)	0.77	1.57
Beta	0.89	1.00

Sector Allocation (%) vs Russell 2500



*Unclassified includes Cash

Top Holdings
 Ending Period Weight

W R BERKLEY	4.79%
TELEFLEX	4.60%
JPMORGAN FEDERAL MMKT - AGENCY SHR FUND 355 MONTHLY VARIABLE 12312049	4.45%
TRANSUNION	4.21%
ARAMARK	3.94%
SERVICEMASTER GLB.HDG.	3.85%
CDW	3.50%
WEX	3.01%
LENNOX INTL.	2.89%
APTARGROUP	2.82%
Total	38.06%

Top Contributors

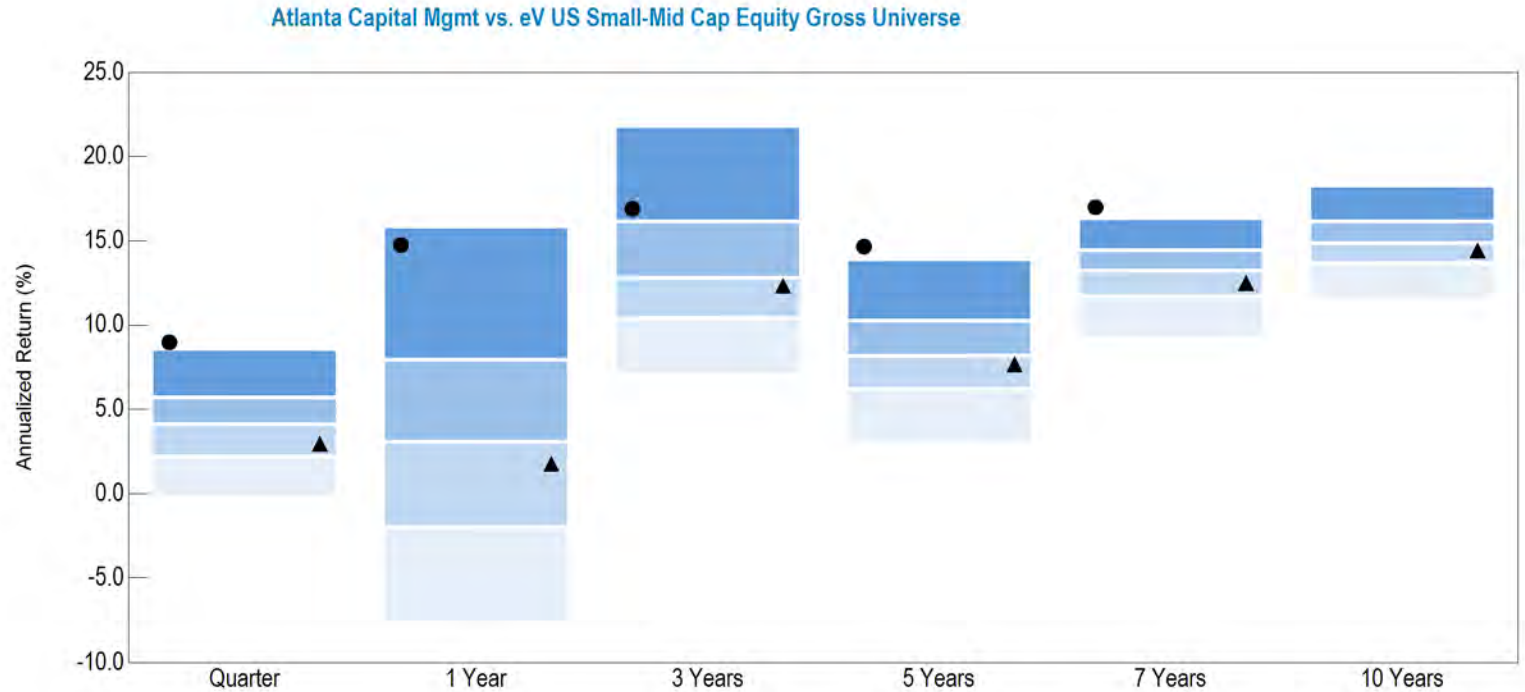
	Avg Wgt	Return	Contribution
W R BERKLEY	4.89	17.83	0.87
ARAMARK	3.30	22.45	0.74
MANHATTAN ASSOCS.	2.33	25.80	0.60
CDW	3.72	15.51	0.58
TELEFLEX	5.12	9.72	0.50
APTARGROUP	2.74	17.25	0.47
SERVICEMASTER GLB.HDG.	3.91	11.54	0.45
TRANSUNION	4.34	10.10	0.44
COPART	1.83	23.35	0.43
CARLISLE COS.	2.87	14.85	0.43

Bottom Contributors

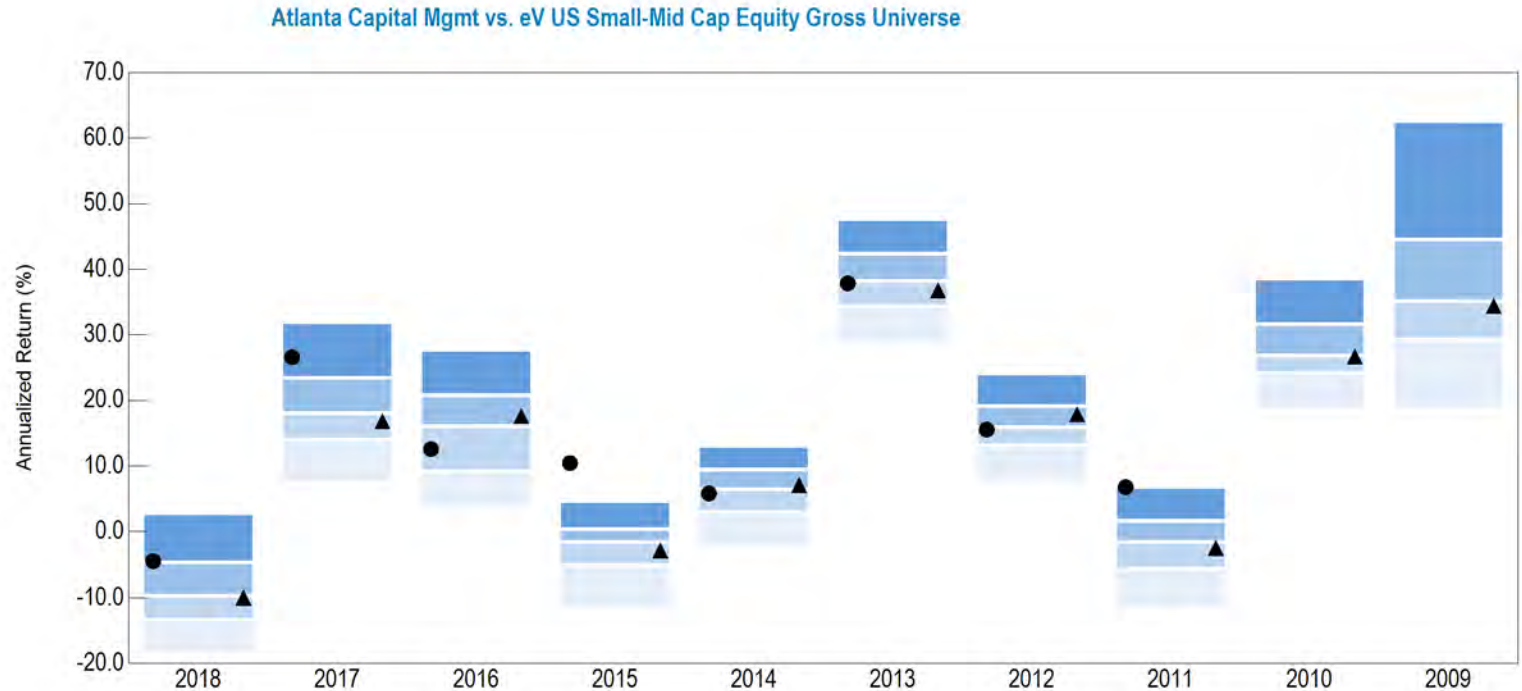
	Avg Wgt	Return	Contribution
SALLY BEAUTY HOLDINGS	1.63	-27.54	-0.45
HUNT JB TRANSPORT SVS.	2.45	-9.51	-0.23
JONES LANG LASALLE	1.58	-8.46	-0.13
COVETRUS	0.52	-23.20	-0.12
AFFILIATED MANAGERS	0.84	-13.67	-0.12
COLUMBIA SPORTSWEAR	1.69	-3.62	-0.06
PROSPERITY BCSH.	1.33	-3.77	-0.05
VARIAN MEDICAL SYSTEMS	1.17	-3.94	-0.05
JACK HENRY & ASSOCS.	1.31	-3.19	-0.04
LANDSTAR SYSTEM	1.55	-1.13	-0.02

Atlanta Capital Mgmt
 Cumulative Performance Comparison (Gross of Fees)

Period Ending: June 30, 2019

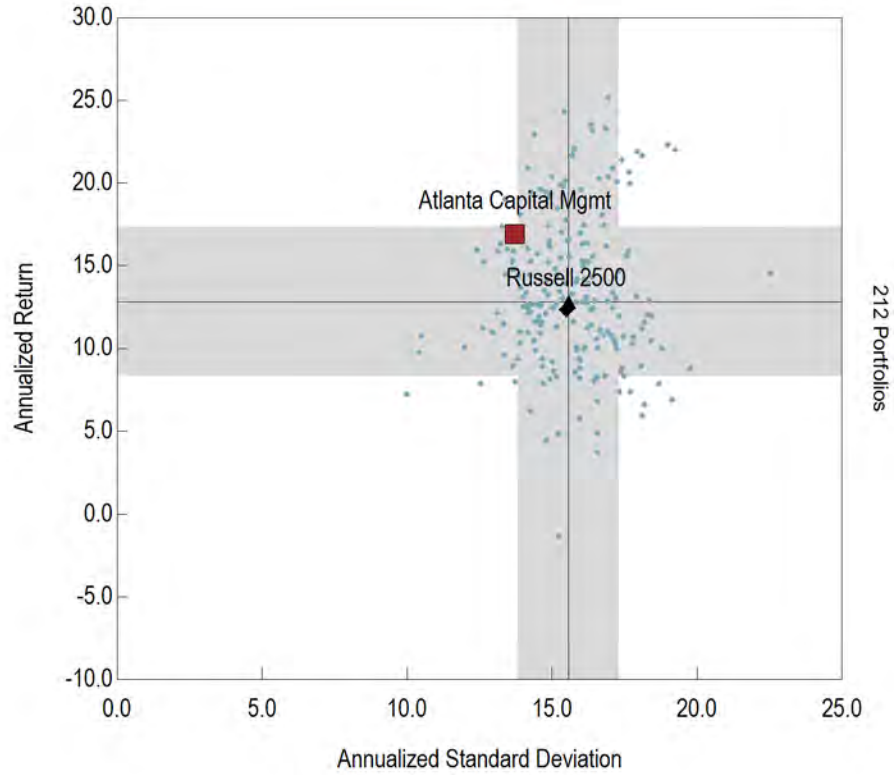


	Quarter		1 Year		3 Years		5 Years		7 Years		10 Years	
5th Percentile	8.6		15.9		21.8		13.9		16.3		18.2	
25th Percentile	5.7		8.0		16.2		10.3		14.5		16.2	
Median	4.1		3.1		12.8		8.2		13.2		14.9	
75th Percentile	2.3		-2.0		10.4		6.2		11.7		13.7	
95th Percentile	-0.2		-7.7		7.1		3.0		9.3		11.5	
# of Portfolios	231		231		212		197		178		148	
● Atlanta Capital Mgmt	9.0	(4)	14.8	(8)	16.9	(20)	14.7	(4)	17.0	(3)	--	(--)
▲ Russell 2500	3.0	(66)	1.8	(56)	12.3	(57)	7.7	(61)	12.5	(64)	14.4	(59)



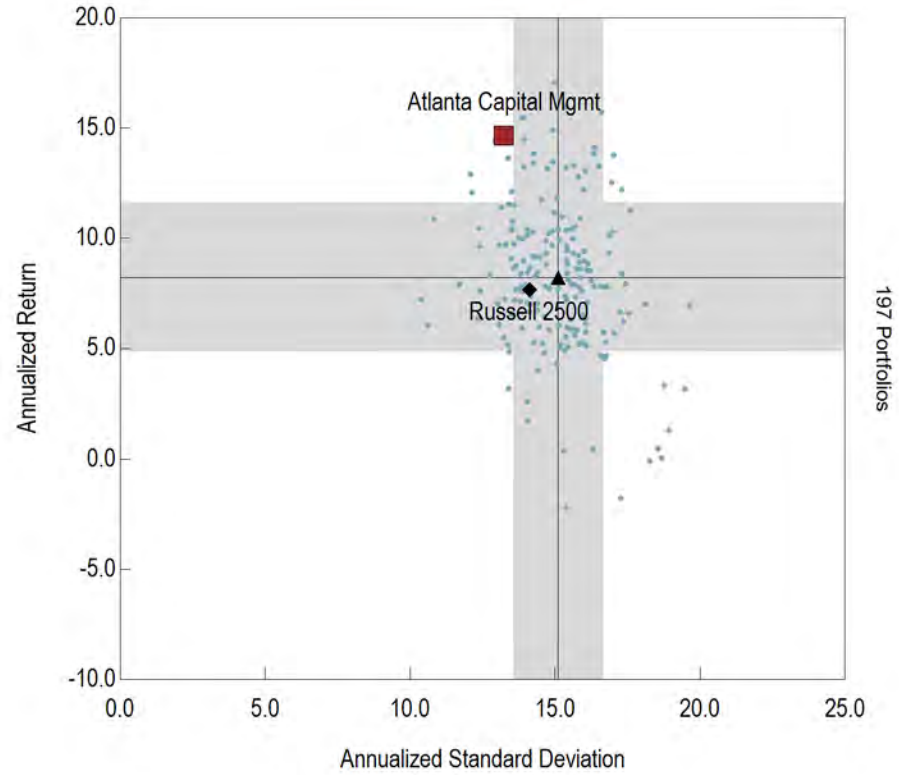
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Return (Rank)										
5th Percentile	2.8	31.9	27.6	4.6	13.0	47.6	24.1	6.8	38.5	62.6
25th Percentile	-4.6	23.5	20.8	0.4	9.6	42.5	19.2	1.7	31.7	44.6
Median	-9.6	18.1	16.1	-1.5	6.5	38.2	16.0	-1.5	26.9	35.2
75th Percentile	-13.3	14.1	9.2	-5.0	3.1	34.4	13.3	-5.6	24.3	29.4
95th Percentile	-18.5	7.5	3.8	-11.6	-2.3	28.7	7.8	-11.6	18.7	18.7
# of Portfolios	236	233	238	215	210	210	216	211	210	226
● Atlanta Capital Mgmt	-4.5 (25)	26.6 (15)	12.6 (62)	10.4 (1)	5.8 (56)	37.8 (52)	15.5 (55)	6.8 (5)	-- (--)	-- (--)
▲ Russell 2500	-10.0 (53)	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)

Annualized Return vs. Annualized Standard Deviation
 3 Years Ending June 30, 2019

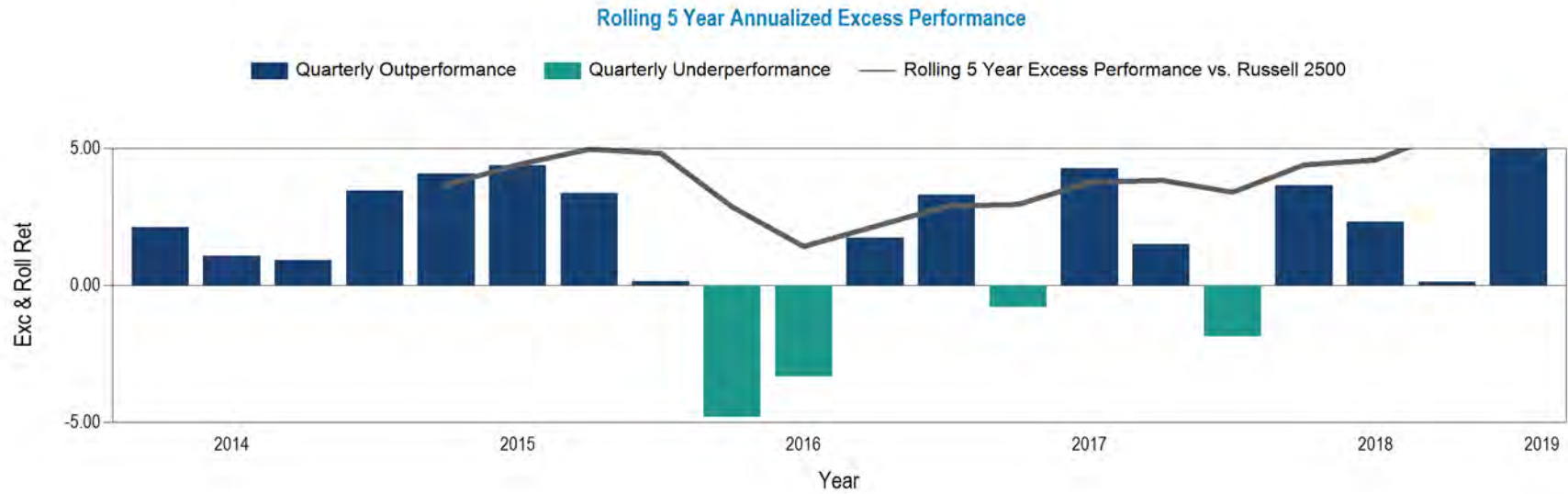
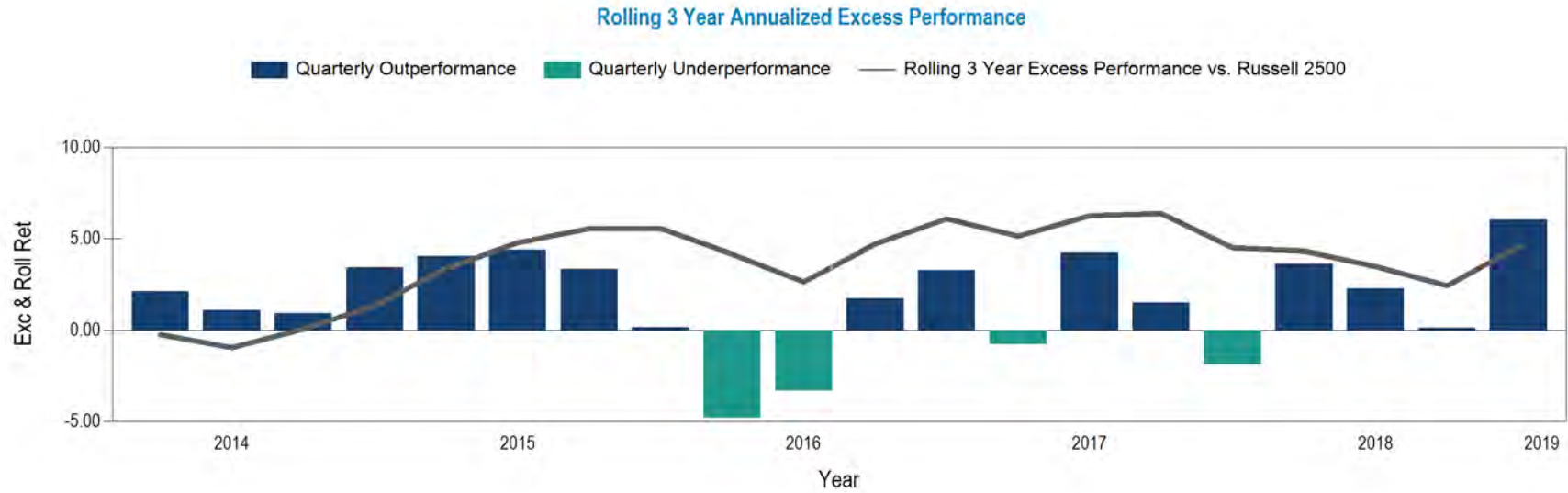


- Atlanta Capital Mgmt
- ◆ Russell 2500
- ▲ Universe Median
- 68% Confidence Interval
- eV US Small-Mid Cap Equity Gross

Annualized Return vs. Annualized Standard Deviation
 5 Years Ending June 30, 2019



- Atlanta Capital Mgmt
- ◆ Russell 2500
- ▲ Universe Median
- 68% Confidence Interval
- eV US Small-Mid Cap Equity Gross

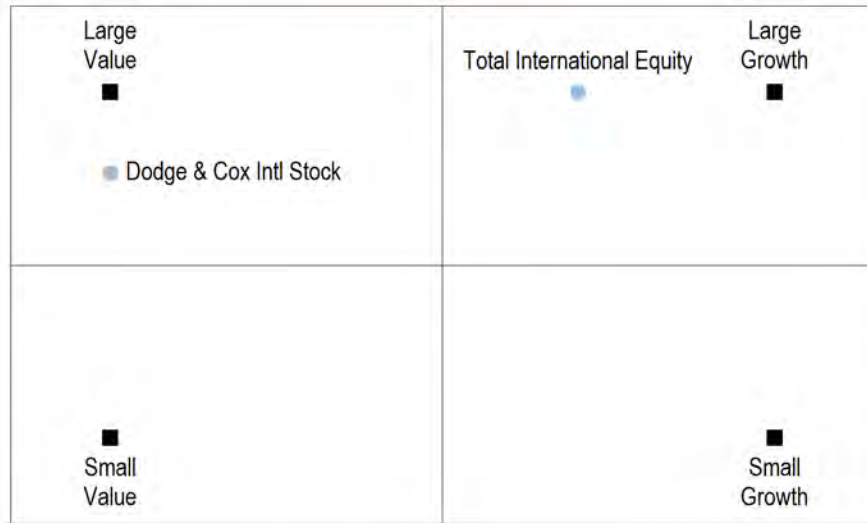


Total International Equity
Asset Class Overview (Gross of Fees)

Period Ending: June 30, 2019

	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2018	2017	2016	2015	2014
Total International Equity	302,610,241	6.6	6.6	11.3	4.1	9.4	-12.2	26.6	2.2	-4.3	2.1
MSCI ACWI ex USA Gross		3.2	1.8	9.9	2.6	7.0	-13.8	27.8	5.0	-5.3	-3.4
InvMetrics Public DB ex-US Eq Gross Rank		2	3	9	16	4	9	81	82	68	1
Dodge & Cox Intl Stock	140,934,184	3.0	0.3	10.0	1.1	8.1	-17.5	24.7	9.0	-10.8	0.6
MSCI EAFE Gross		4.0	1.6	9.6	2.7	7.4	-13.4	25.6	1.5	-0.4	-4.5
eV All EAFE Equity Gross Rank		53	43	31	93	67	73	74	3	99	14
WCM International Growth	161,676,057	10.1	13.0	--	--	--	-6.7	--	--	--	--
MSCI ACWI ex USA Gross		3.2	1.8	--	--	--	-13.8	--	--	--	--
eV ACWI ex-US All Cap Growth Eq Gross Rank		1	1	--	--	--	1	--	--	--	--

EAFE Effective Style Map
3 Years Ending June 30, 2019



EAFE Effective Style Map
5 Years Ending June 30, 2019



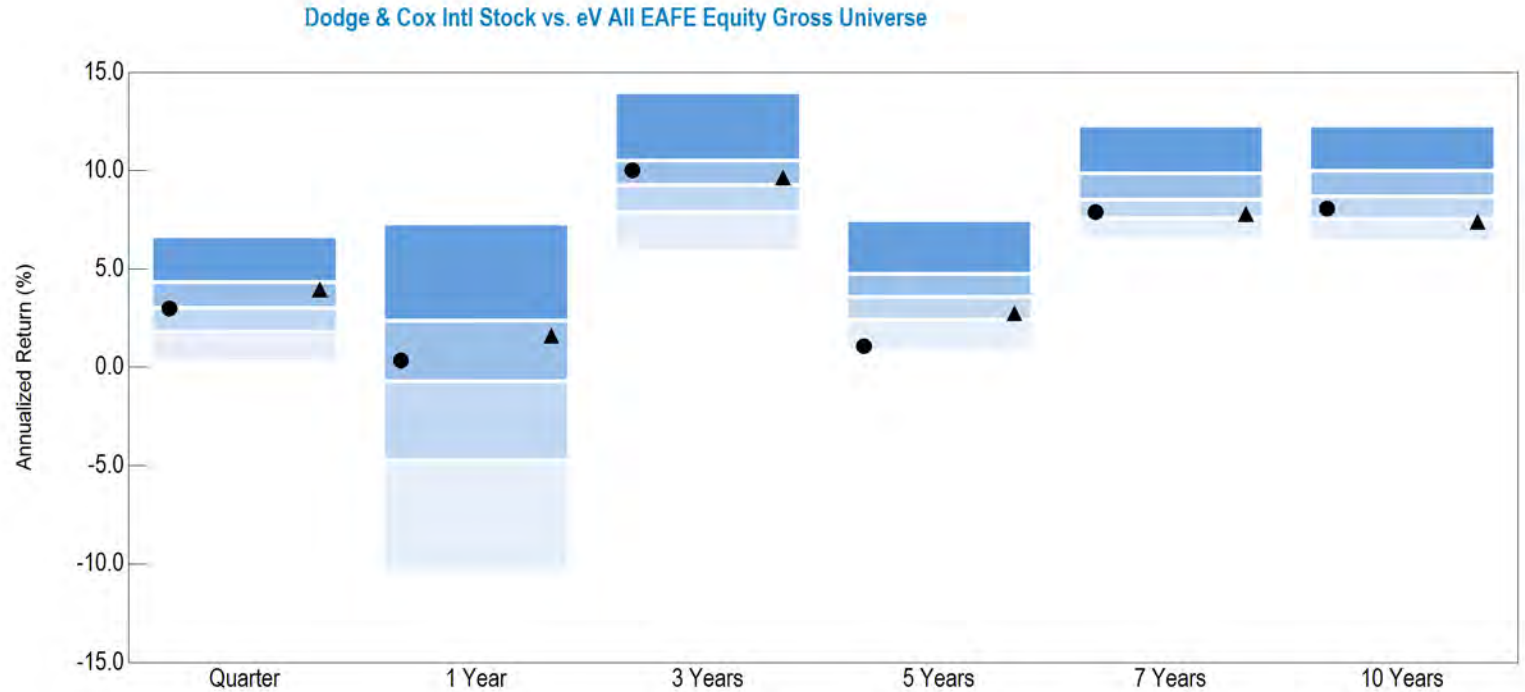
Total International Equity
 Asset Class Overview (Net of Fees)

Period Ending: June 30, 2019

	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2018	2017	2016	2015	2014
Total International Equity	302,610,241	6.4	5.9	10.6	3.4	8.8	-12.8	25.8	1.6	-4.9	1.4
<i>MSCI ACWI ex USA Gross</i>		3.2	1.8	9.9	2.6	7.0	-13.8	27.8	5.0	-5.3	-3.4
Dodge & Cox Intl Stock	140,934,184	2.8	-0.3	9.3	0.4	7.4	-18.0	23.9	8.3	-11.4	0.1
<i>MSCI EAFE Gross</i>		4.0	1.6	9.6	2.7	7.4	-13.4	25.6	1.5	-0.4	-4.5
WCM International Growth	161,676,057	9.9	12.3	--	--	--	-7.4	--	--	--	--
<i>MSCI ACWI ex USA Gross</i>		3.2	1.8	--	--	--	-13.8	--	--	--	--

Dodge & Cox Intl Stock
 Cumulative Performance Comparison (Gross of Fees)

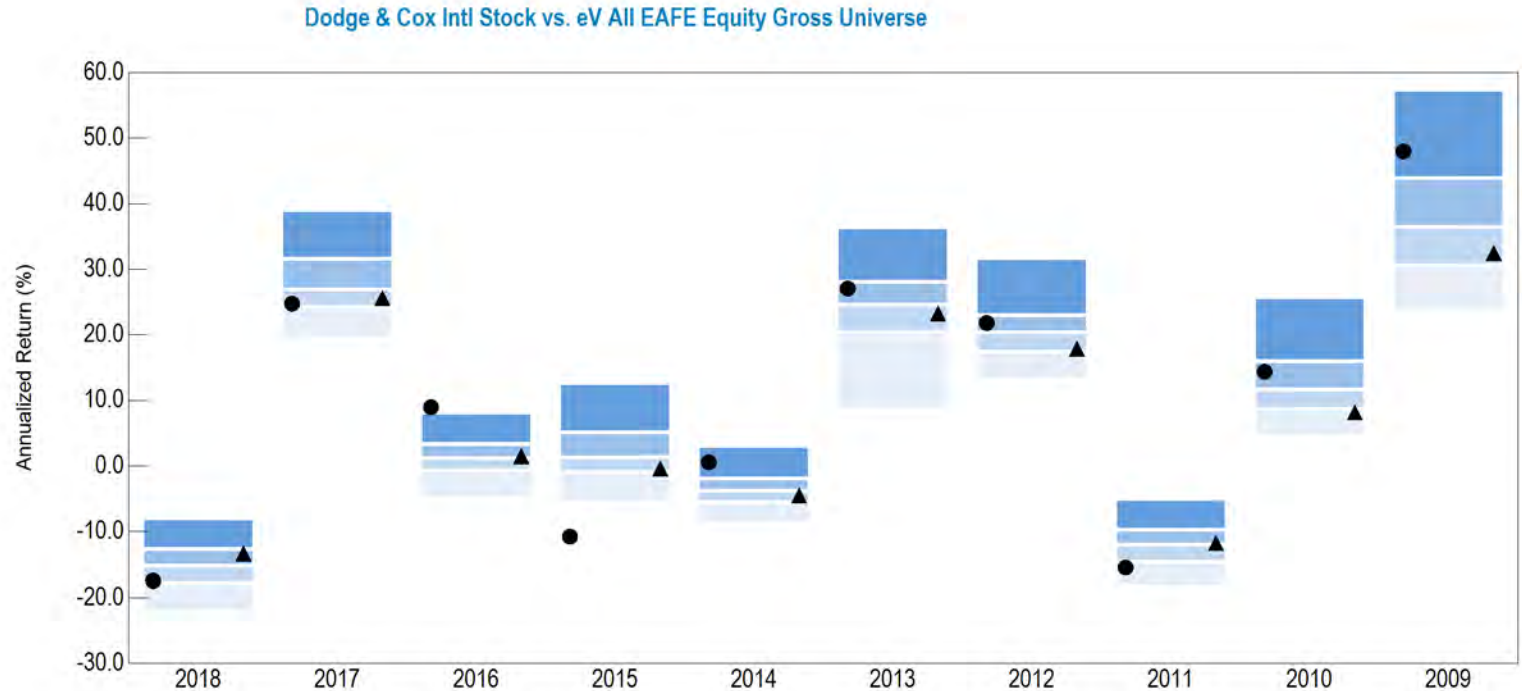
Period Ending: June 30, 2019



	Quarter		1 Year		3 Years		5 Years		7 Years		10 Years	
5th Percentile	6.7		7.3		14.0		7.5		12.3		12.3	
25th Percentile	4.4		2.4		10.5		4.8		9.9		10.0	
Median	3.1		-0.7		9.3		3.6		8.5		8.7	
75th Percentile	1.8		-4.7		7.9		2.4		7.6		7.6	
95th Percentile	0.3		-10.4		5.9		0.9		6.5		6.4	
# of Portfolios	384		384		367		326		294		262	
● Dodge & Cox Intl Stock	3.0	(53)	0.3	(43)	10.0	(31)	1.1	(93)	7.9	(67)	8.1	(67)
▲ MSCI EAFE Gross	4.0	(33)	1.6	(31)	9.6	(41)	2.7	(67)	7.8	(70)	7.4	(80)

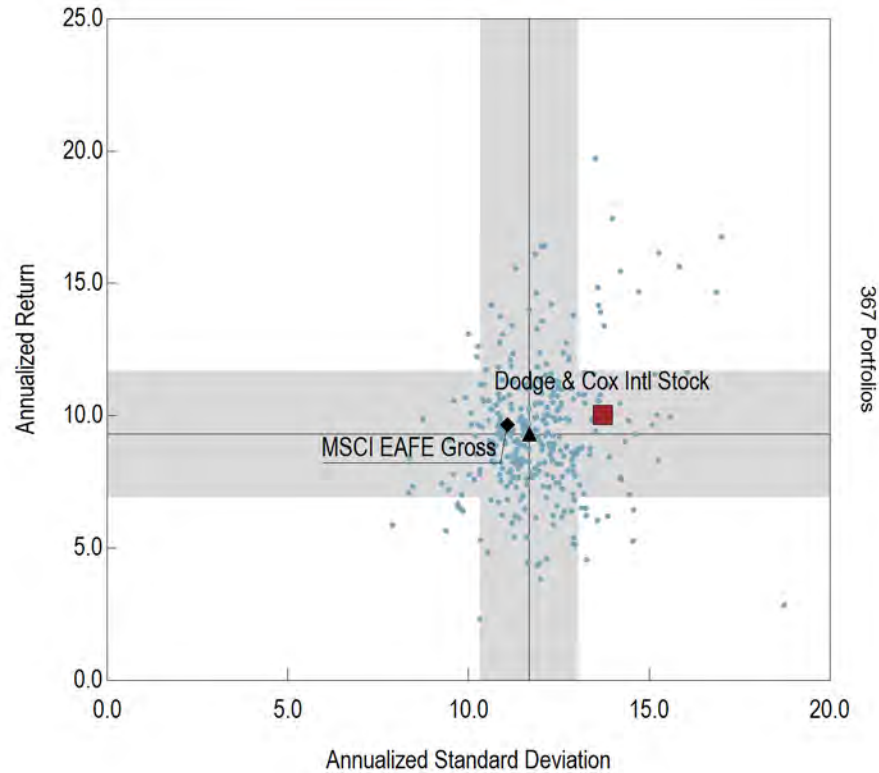
Dodge & Cox Intl Stock
 Consecutive Performance Comparison (Gross of Fees)

Period Ending: June 30, 2019



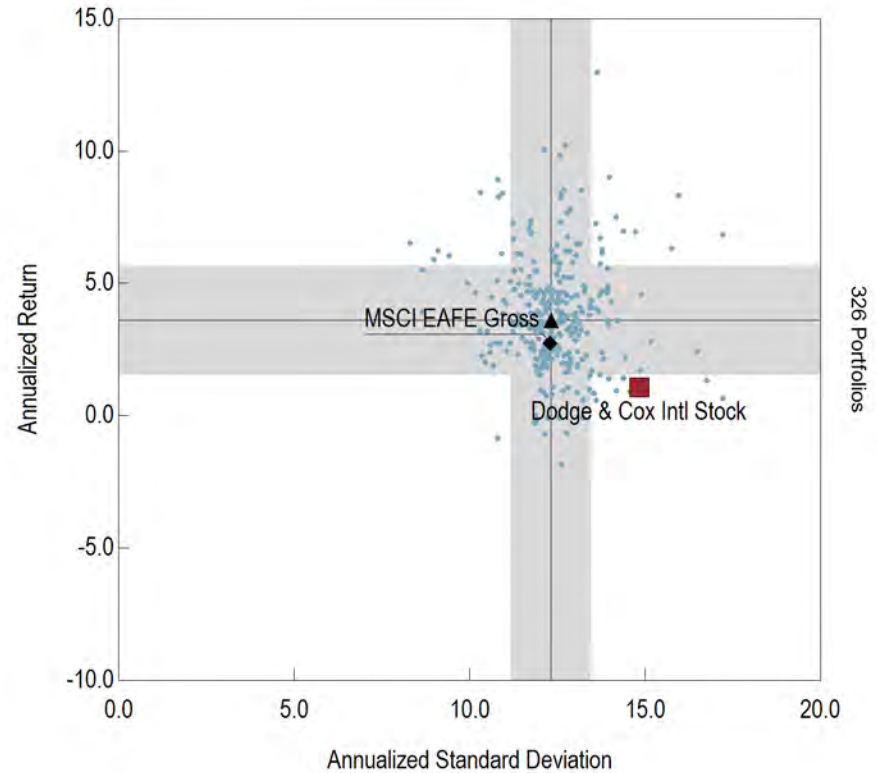
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
Return (Rank)										
5th Percentile	-8.0	39.0	8.1	12.6	3.0	36.3	31.7	-5.1	25.7	57.3
25th Percentile	-12.6	31.6	3.4	5.2	-1.9	28.1	23.1	-9.7	16.1	44.0
Median	-15.1	27.0	1.3	1.4	-3.7	24.6	20.4	-12.0	11.7	36.5
75th Percentile	-17.8	24.3	-0.6	-0.9	-5.4	20.5	17.5	-14.5	8.7	30.7
95th Percentile	-22.2	19.7	-4.9	-5.4	-8.6	8.6	13.3	-18.2	4.6	23.7
# of Portfolios	391	370	350	325	314	284	263	278	352	455
● Dodge & Cox Intl Stock	-17.5 (73)	24.7 (74)	9.0 (3)	-10.8 (99)	0.6 (14)	27.1 (32)	21.8 (37)	-15.5 (82)	14.4 (36)	48.0 (17)
▲ MSCI EAFE Gross	-13.4 (35)	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)

Annualized Return vs. Annualized Standard Deviation
 3 Years Ending June 30, 2019

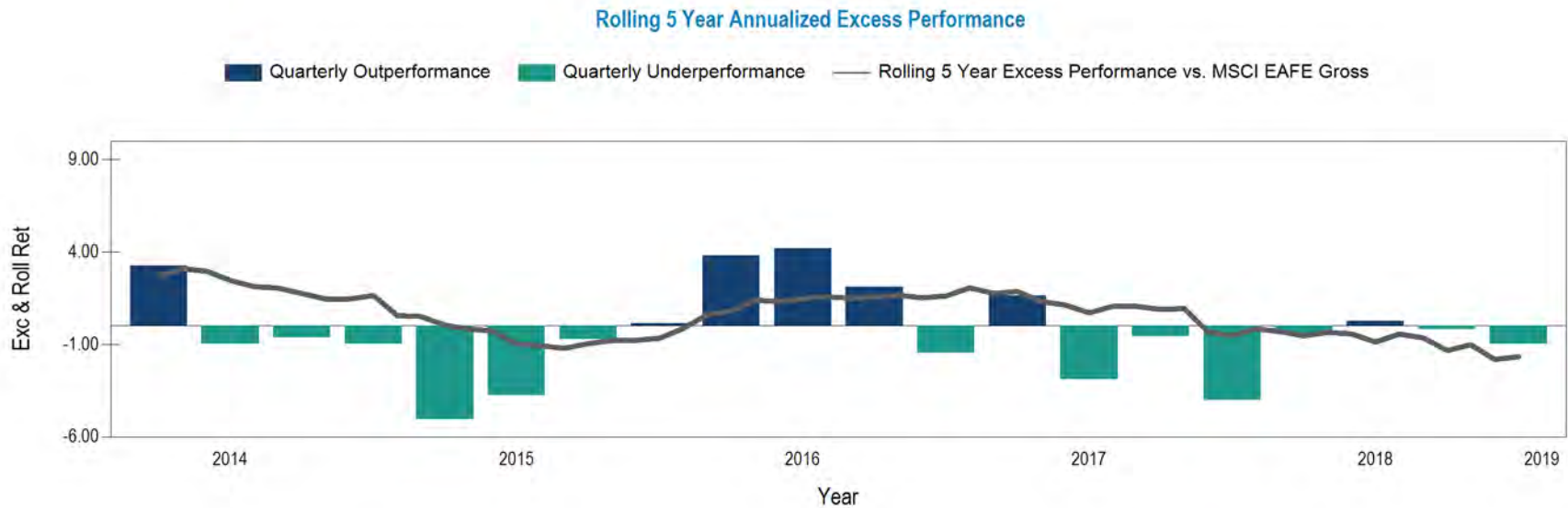
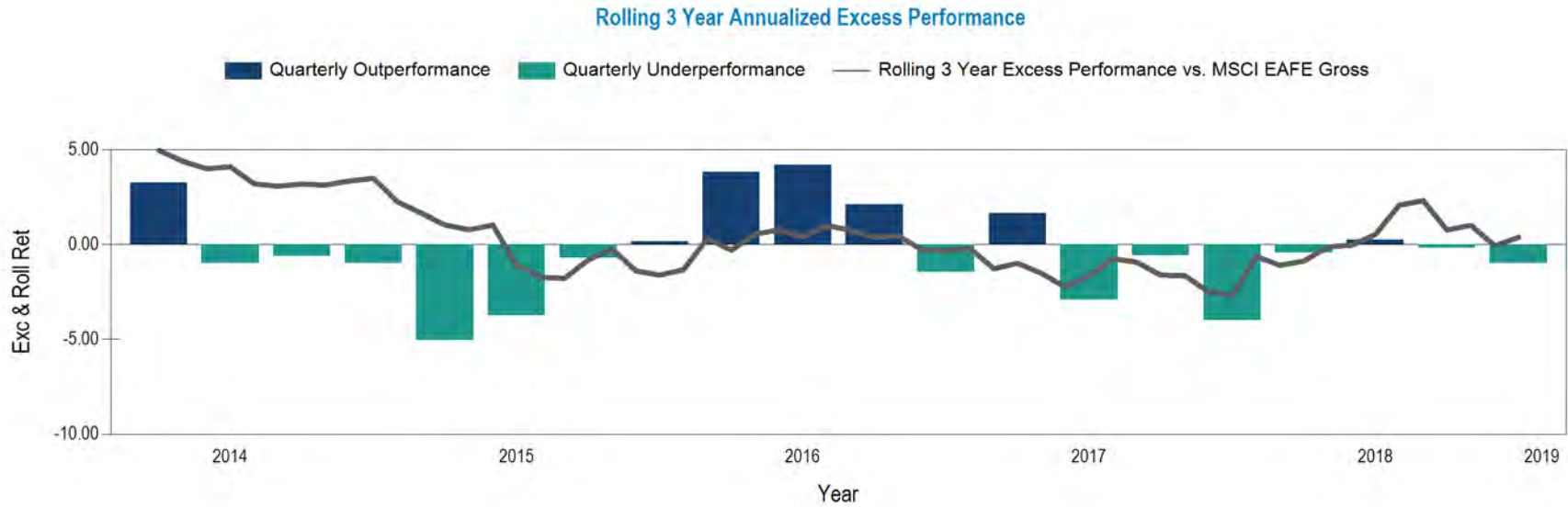


- Dodge & Cox Intl Stock
- ◆ MSCI EAFE Gross
- ▲ Universe Median
- 68% Confidence Interval
- eV All EAFE Equity Gross

Annualized Return vs. Annualized Standard Deviation
 5 Years Ending June 30, 2019



- Dodge & Cox Intl Stock
- ◆ MSCI EAFE Gross
- ▲ Universe Median
- 68% Confidence Interval
- eV All EAFE Equity Gross



Total Domestic Fixed Income Asset Class Overview (Gross of Fees)

Period Ending: June 30, 2019

	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2018	2017	2016	2015	2014
Total Domestic Fixed Income	276,308,832	2.8	7.4	3.6	3.5	5.7	0.4	4.3	4.5	1.1	4.7
<i>BBgBarc US Aggregate TR</i>		3.1	7.9	2.3	2.9	3.9	0.0	3.5	2.6	0.6	6.0
<i>InvMetrics Public DB US Fix Inc Gross Rank</i>		33	26	21	18	13	55	50	49	17	68
BlackRock Core Bond	101,718,613	3.4	9.0	--	--	--	0.3	--	--	--	--
<i>BBgBarc US Aggregate TR</i>		3.1	7.9	--	--	--	0.0	--	--	--	--
<i>eV US Core Fixed Inc Gross Rank</i>		16	8	--	--	--	27	--	--	--	--
Dodge & Cox Income Fund	99,300,696	2.9	8.0	--	--	--	0.1	--	--	--	--
<i>BBgBarc US Aggregate TR</i>		3.1	7.9	--	--	--	0.0	--	--	--	--
<i>eV US Core Fixed Inc Gross Rank</i>		87	59	--	--	--	43	--	--	--	--
Pacific Asset Corporate Loan	75,289,523	1.9	4.5	5.7	--	--	1.0	4.9	9.2	2.5	--
<i>S&P/LSTA Leveraged Loan Index</i>		1.7	4.0	5.2	--	--	0.4	4.1	10.2	-0.7	--
<i>eV US Float-Rate Bank Loan Fixed Inc Gross Rank</i>		14	26	23	--	--	29	26	51	9	--

Fixed Income Effective Style Map
3 Years Ending June 30, 2019



Fixed Income Effective Style Map
5 Years Ending June 30, 2019



Total Domestic Fixed Income
Asset Class Overview (Net of Fees)

Period Ending: June 30, 2019

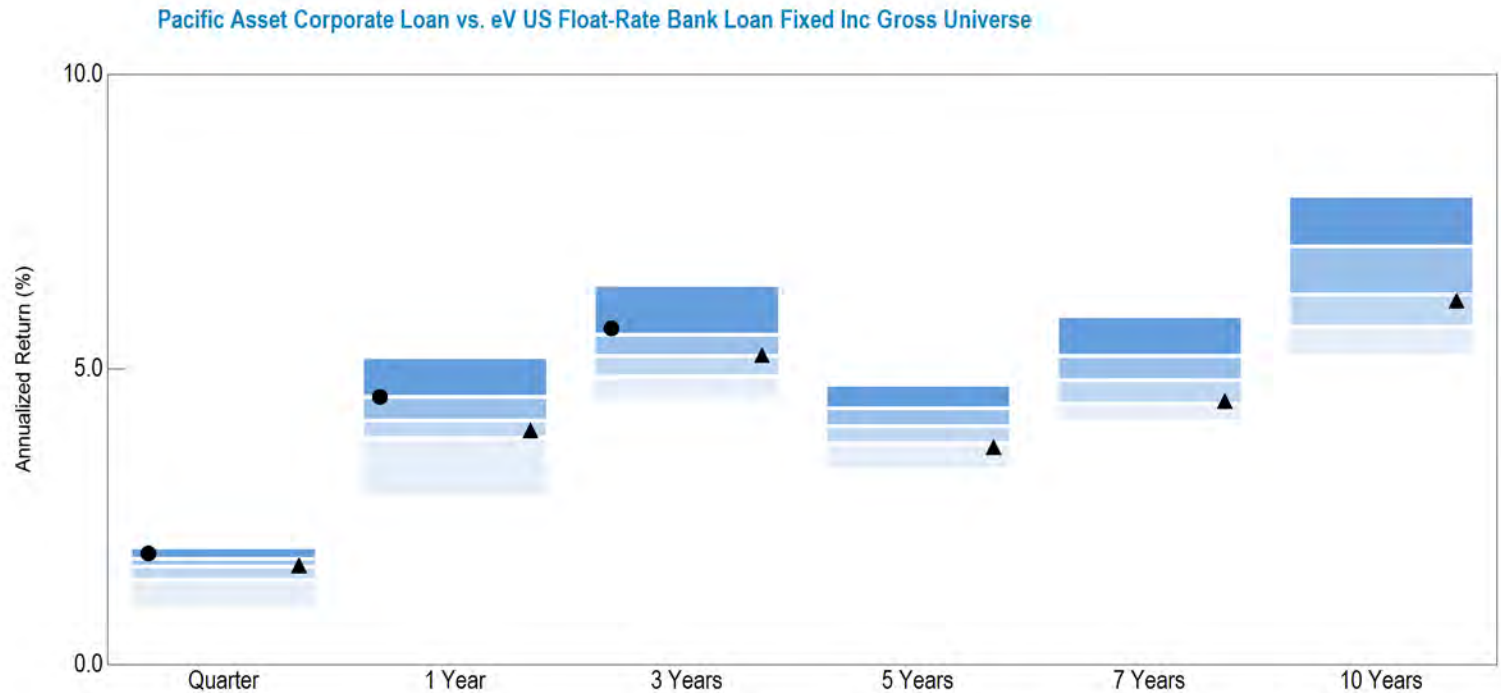
	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2018	2017	2016	2015	2014
Total Domestic Fixed Income	276,308,832	2.7	7.0	3.3	3.2	5.4	0.0	3.9	4.2	0.9	4.4
<i>BBgBarc US Aggregate TR</i>		3.1	7.9	2.3	2.9	3.9	0.0	3.5	2.6	0.6	6.0
BlackRock Core Bond	101,718,613	3.4	8.7	--	--	--	0.1	--	--	--	--
<i>BBgBarc US Aggregate TR</i>		3.1	7.9	--	--	--	0.0	--	--	--	--
Dodge & Cox Income Fund	99,300,696	2.8	7.6	--	--	--	-0.3	--	--	--	--
<i>BBgBarc US Aggregate TR</i>		3.1	7.9	--	--	--	0.0	--	--	--	--
Pacific Asset Corporate Loan	75,289,523	1.8	4.2	5.4	--	--	0.7	4.6	8.8	2.1	--
<i>S&P/LSTA Leveraged Loan Index</i>		1.7	4.0	5.2	--	--	0.4	4.1	10.2	-0.7	--

Correlation Matrix
Last 1 Year

	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	0.87	1.00	--	--	--
Dodge & Cox Income Fund	0.98	0.95	1.00	--	--
Pacific Asset Corporate Loan	0.87	0.52	0.76	1.00	--
BBgBarc US Aggregate TR	0.69	0.95	0.81	0.24	1.00

Pacific Asset Corporate Loan
 Cumulative Performance Comparison (Gross of Fees)

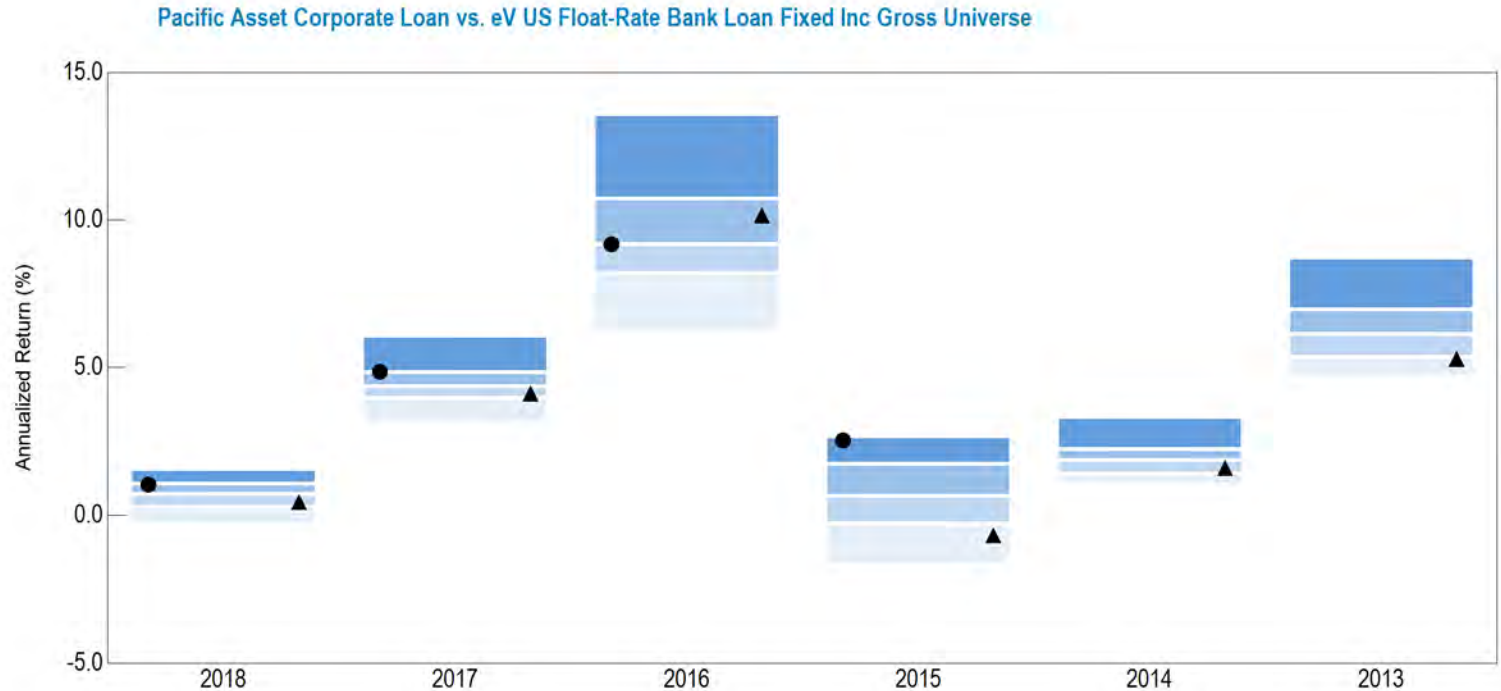
Period Ending: June 30, 2019



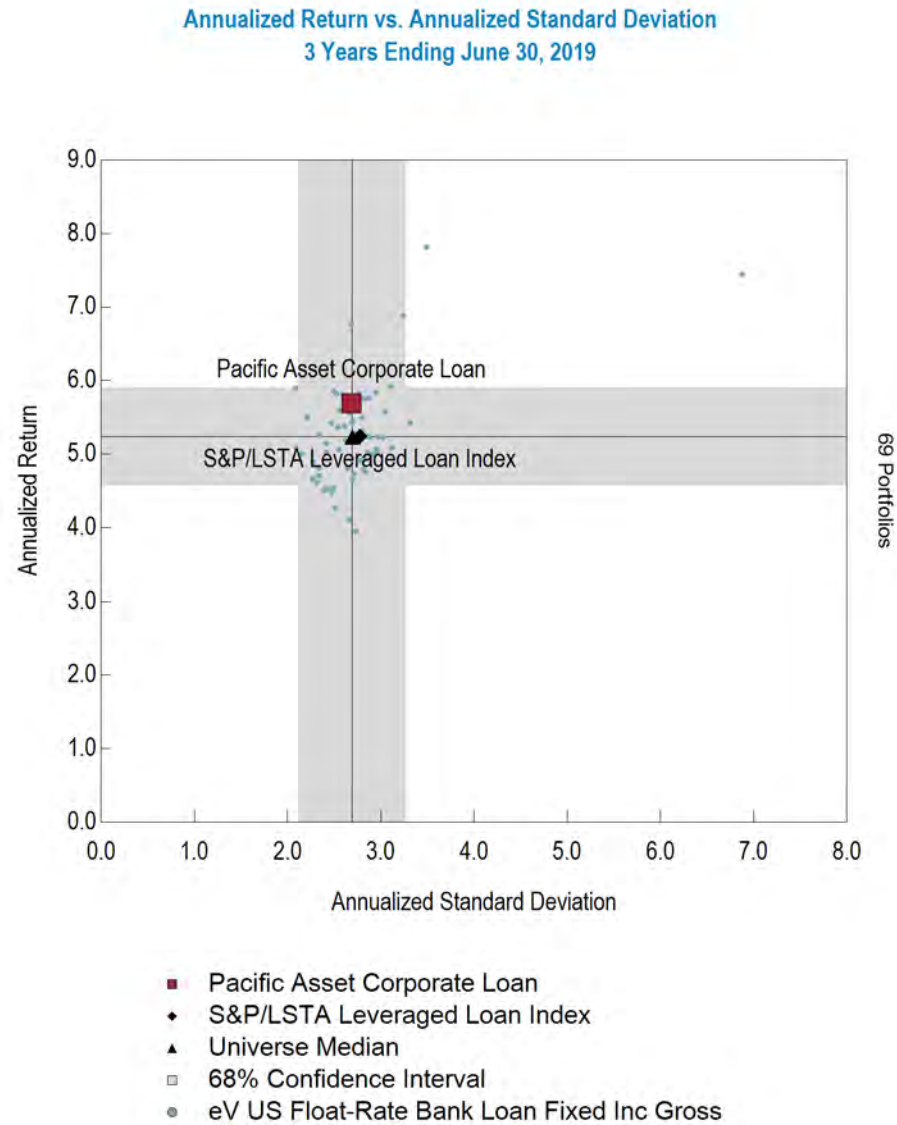
	Quarter		1 Year		3 Years		5 Years		7 Years		10 Years	
5th Percentile	2.0		5.2		6.4		4.7		5.9		7.9	
25th Percentile	1.8		4.5		5.6		4.3		5.2		7.1	
Median	1.7		4.1		5.2		4.0		4.8		6.3	
75th Percentile	1.4		3.8		4.9		3.8		4.4		5.7	
95th Percentile	1.0		2.9		4.5		3.3		4.1		5.2	
# of Portfolios	71		71		69		69		61		46	
● Pacific Asset Corporate Loan	1.9	(14)	4.5	(26)	5.7	(23)	--	(--)	--	(--)	--	(--)
▲ S&P/LSTA Leveraged Loan Index	1.7	(47)	4.0	(65)	5.2	(49)	3.7	(81)	4.5	(74)	6.2	(60)

Pacific Asset Corporate Loan
 Consecutive Performance Comparison (Gross of Fees)

Period Ending: June 30, 2019



	Return (Rank)											
	2018		2017		2016		2015		2014		2013	
5th Percentile	1.6		6.1		13.6		2.7		3.3		8.7	
25th Percentile	1.1		4.9		10.7		1.8		2.3		7.0	
Median	0.7		4.4		9.2		0.7		1.9		6.2	
75th Percentile	0.3		4.0		8.2		-0.3		1.4		5.4	
95th Percentile	-0.3		3.1		6.2		-1.7		1.1		4.7	
# of Portfolios	76		75		69		54		48		53	
● Pacific Asset Corporate Loan	1.0	(29)	4.9	(26)	9.2	(51)	2.5	(9)	--	(--)	--	(--)
▲ S&P/LSTA Leveraged Loan Index	0.4	(68)	4.1	(71)	10.2	(35)	-0.7	(82)	1.6	(68)	5.3	(79)





Total Global Fixed
Asset Class Overview (Gross of Fees)

Period Ending: June 30, 2019

	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2018	2017	2016	2015	2014
Total Global Fixed	140,613,560	3.3	4.5	2.7	-0.6	3.3	-6.6	14.4	5.8	-11.8	-2.2
<i>FTSE World Govt Bond Index</i>		3.6	5.5	1.0	0.8	2.2	-0.8	7.5	1.6	-3.6	-0.5
<i>InvMetrics Public DB Gbl Fix Inc Gross Rank</i>		62	95	81	99	99	99	29	67	95	93
Brandywine Global Fixed Income	67,592,640	2.0	1.7	1.8	-0.1	3.8	-4.1	12.5	2.2	-9.3	2.9
<i>FTSE WGBI ex US TR</i>		3.9	4.5	0.8	0.2	1.9	-1.8	10.3	1.8	-5.5	-2.7
<i>eV Global Fixed Inc Unhedged Gross Rank</i>		80	96	81	94	63	83	9	71	96	43
Ashmore EM Blended Debt Fund	73,020,920	4.6	--	--	--	--	--	--	--	--	--
<i>50% JPM EMBI GD/25% JPM GBI EM GD/25% JPM ELMI+</i>		4.0	--	--	--	--	--	--	--	--	--
<i>eV All Emg Mkts Fixed Inc Gross Rank</i>		41	--	--	--	--	--	--	--	--	--

Total Global Fixed
Asset Class Overview (Net of Fees)

Period Ending: June 30, 2019

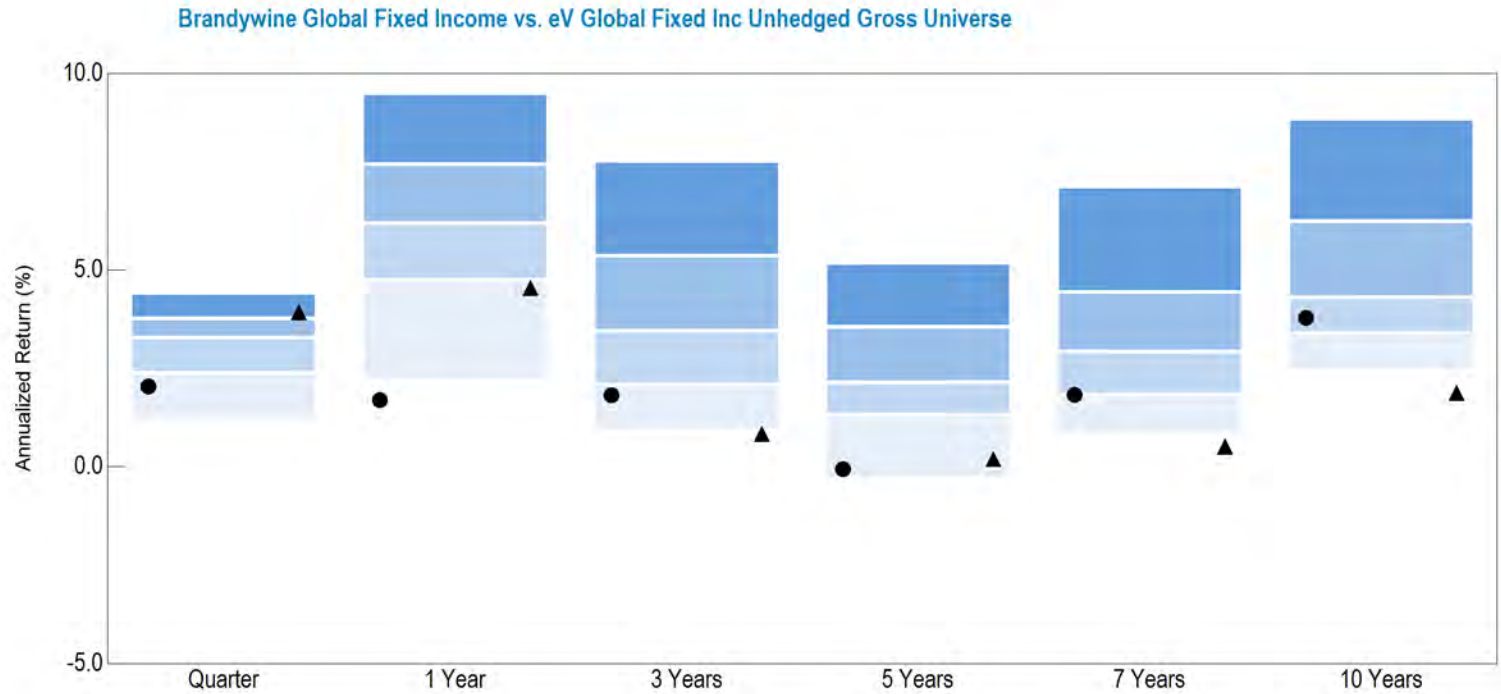
	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2018	2017	2016	2015	2014
Total Global Fixed	140,613,560	3.1	3.8	2.0	-1.2	2.6	-7.2	13.7	5.1	-12.4	-2.8
<i>FTSE World Govt Bond Index</i>		3.6	5.5	1.0	0.8	2.2	-0.8	7.5	1.6	-3.6	-0.5
Brandywine Global Fixed Income	67,592,640	1.9	1.2	1.4	-0.5	3.3	-4.5	12.0	1.7	-9.7	2.4
<i>FTSE WGBI ex US TR</i>		3.9	4.5	0.8	0.2	1.9	-1.8	10.3	1.8	-5.5	-2.7
Ashmore EM Blended Debt Fund	73,020,920	4.3	--	--	--	--	--	--	--	--	--
<i>50% JPM EMBI GD/25% JPM GBI EM GD/25% JPM ELMI+</i>		4.0	--	--	--	--	--	--	--	--	--

Correlation Matrix
Last 1 Year

	Total Global Fixed	Brandywine Global Fixed Income	Ashmore EM Blended Debt Fund	FTSE World Govt Bond Index
Total Global Fixed	1.00	--	--	--
Brandywine Global Fixed Income	0.79	1.00	--	--
Ashmore EM Blended Debt Fund	--	--	1.00	--
FTSE World Govt Bond Index	0.82	0.35	--	1.00

Brandywine Global Fixed Income
 Cumulative Performance Comparison (Gross of Fees)

Period Ending: June 30, 2019

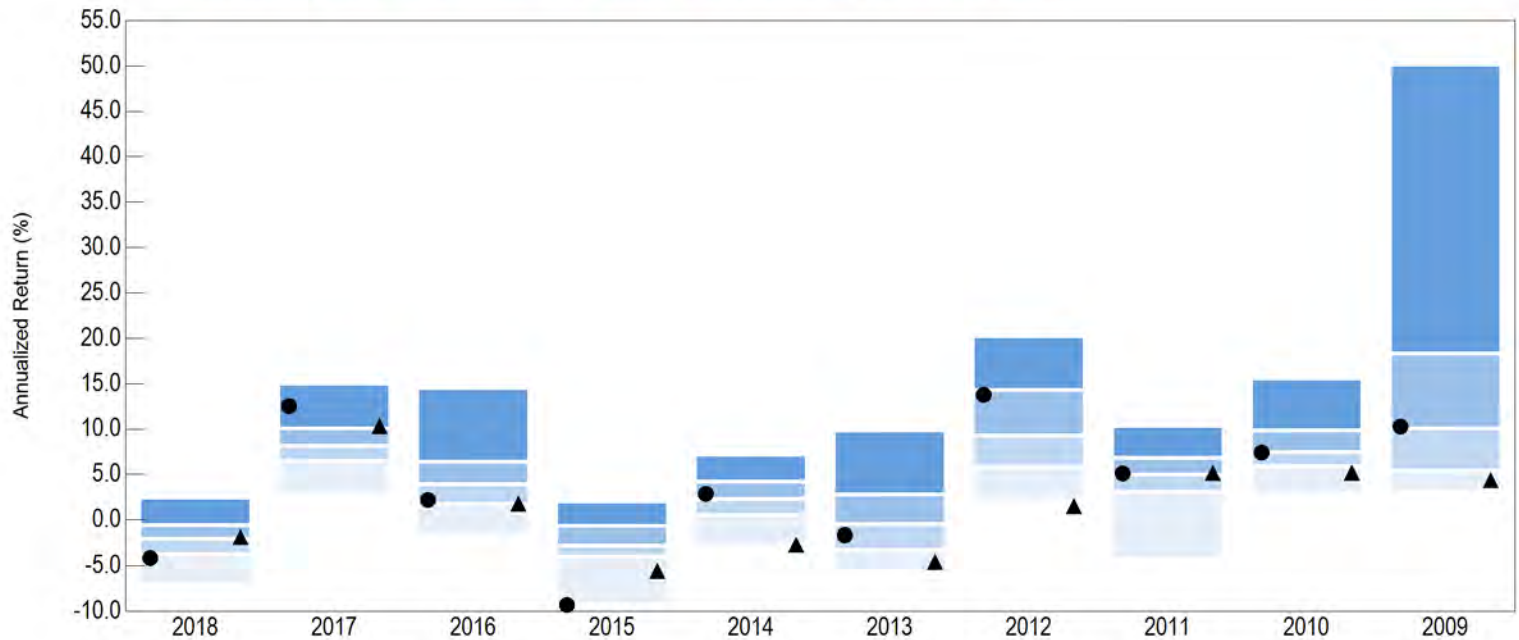


	Return (Rank)												
	Quarter	1 Year	3 Years	5 Years	7 Years	10 Years							
5th Percentile	4.4	9.5	7.8	5.2	7.1	8.8							
25th Percentile	3.8	7.7	5.4	3.6	4.4	6.3							
Median	3.3	6.2	3.5	2.1	2.9	4.3							
75th Percentile	2.4	4.8	2.1	1.3	1.8	3.4							
95th Percentile	1.2	2.2	0.9	-0.3	0.8	2.5							
# of Portfolios	222	222	211	195	163	119							
● Brandywine Global Fixed Income	2.0 (80)	1.7 (96)	1.8 (81)	-0.1 (94)	1.8 (77)	3.8 (63)							
▲ FTSE WGBI ex US TR	3.9 (20)	4.5 (80)	0.8 (97)	0.2 (93)	0.5 (98)	1.9 (98)							

Brandywine Global Fixed Income
 Consecutive Performance Comparison (Gross of Fees)

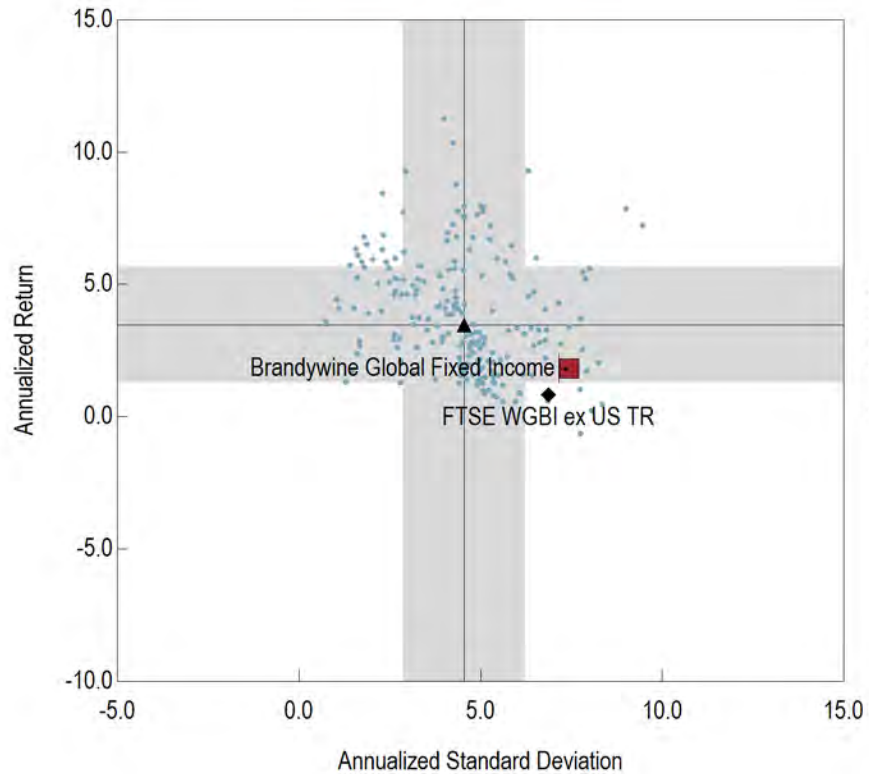
Period Ending: June 30, 2019

Brandywine Global Fixed Income vs. eV Global Fixed Inc Unhedged Gross Universe

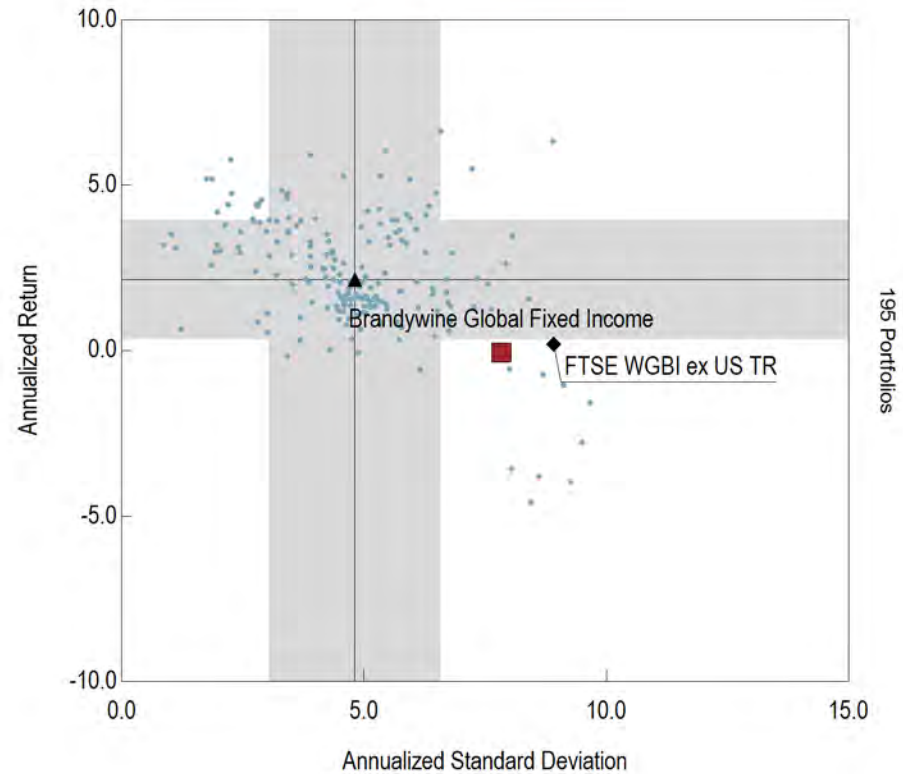


	Return (Rank)									
	2018	2017	2016	2015	2014	2013	2012	2011	2010	2009
5th Percentile	2.5	15.0	14.5	2.0	7.1	9.8	20.2	10.4	15.5	50.1
25th Percentile	-0.5	10.1	6.5	-0.6	4.2	2.8	14.3	6.9	9.9	18.4
Median	-2.0	8.2	4.0	-2.7	2.3	-0.4	9.4	5.0	7.5	10.1
75th Percentile	-3.7	6.5	1.8	-4.0	0.6	-3.2	5.9	3.2	6.0	5.4
95th Percentile	-7.0	3.0	-1.5	-9.2	-2.7	-5.6	2.2	-4.2	3.0	3.2
# of Portfolios	231	231	221	189	159	142	118	108	76	72
● Brandywine Global Fixed Income	-4.1 (83)	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)
▲ FTSE WGBI ex US TR	-1.8 (48)	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)

Annualized Return vs. Annualized Standard Deviation
 3 Years Ending June 30, 2019



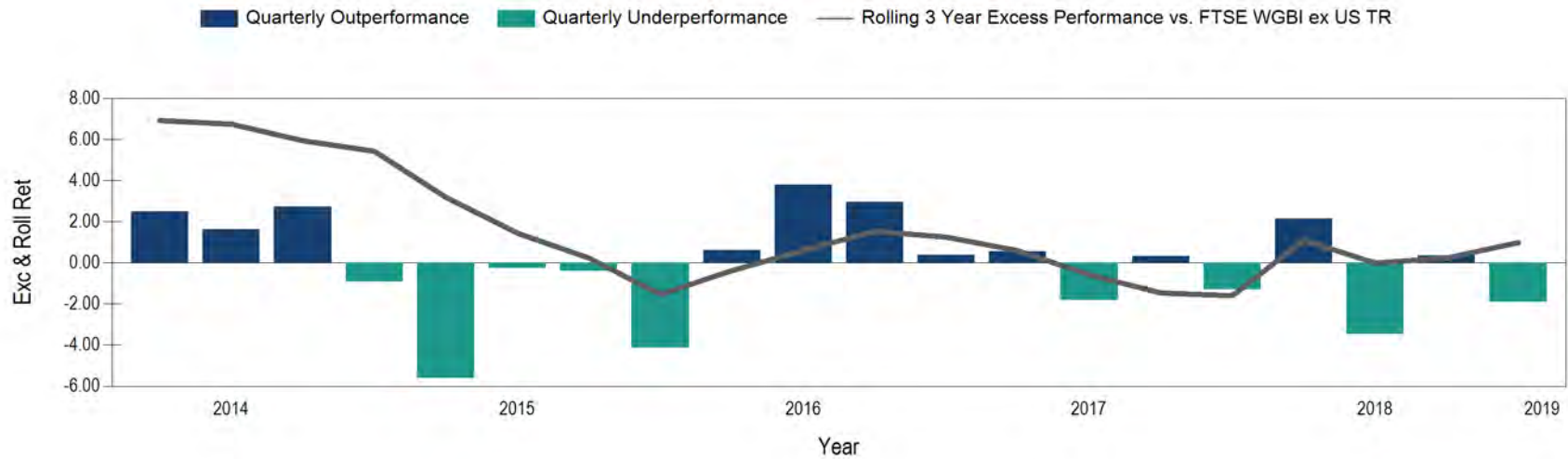
Annualized Return vs. Annualized Standard Deviation
 5 Years Ending June 30, 2019



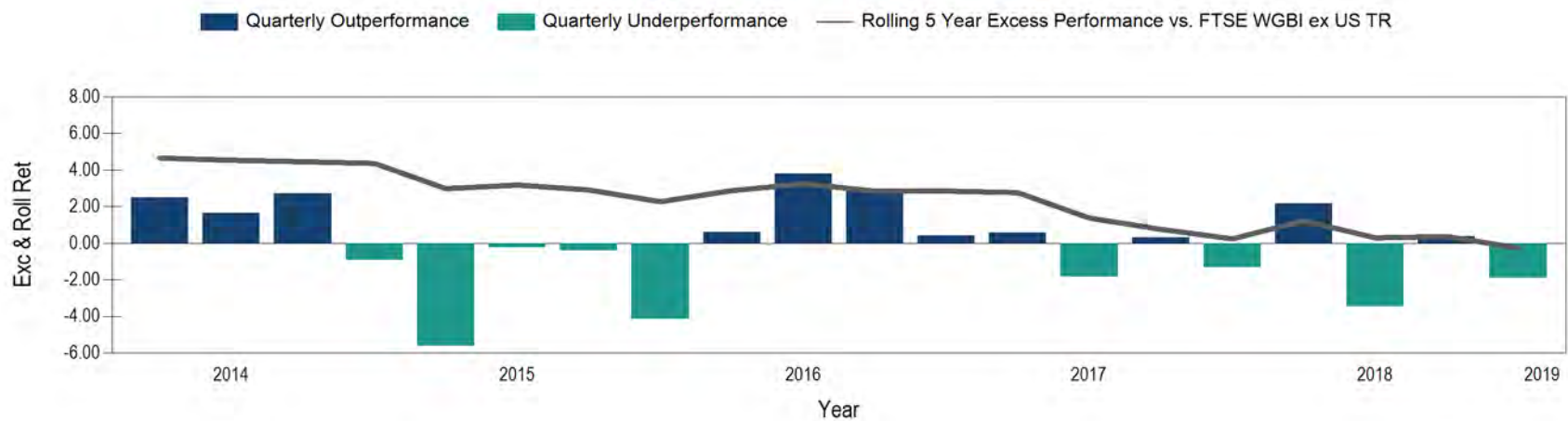
- Brandywine Global Fixed Income
- ◆ FTSE WGBI ex US TR
- ▲ Universe Median
- 68% Confidence Interval
- eV Global Fixed Inc Unhedged Gross

- Brandywine Global Fixed Income
- ◆ FTSE WGBI ex US TR
- ▲ Universe Median
- 68% Confidence Interval
- eV Global Fixed Inc Unhedged Gross

Rolling 3 Year Annualized Excess Performance

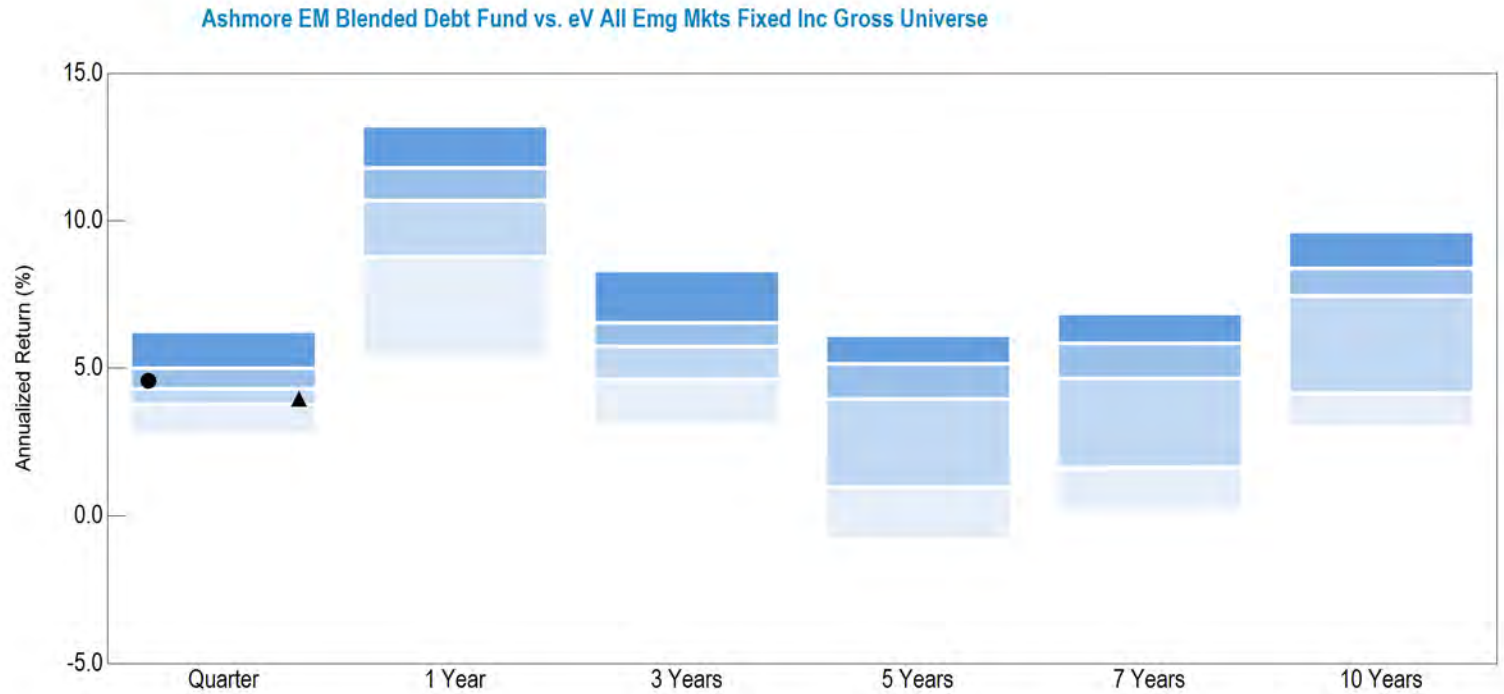


Rolling 5 Year Annualized Excess Performance



Ashmore EM Blended Debt Fund
 Cumulative Performance Comparison (Gross of Fees)

Period Ending: June 30, 2019



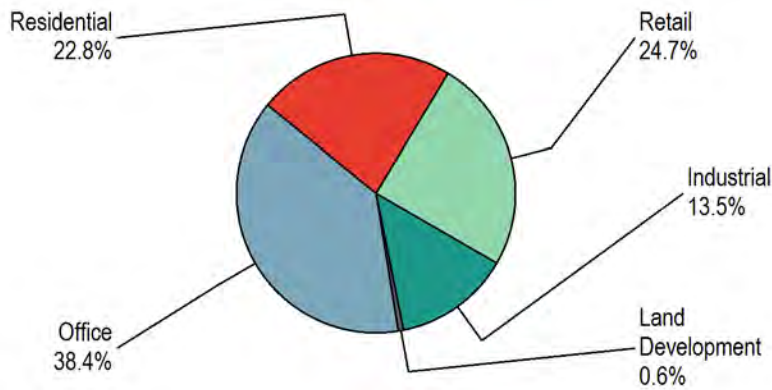
	Return (Rank)											
5th Percentile	6.2	13.2	8.3	6.1	6.9	9.6						
25th Percentile	5.0	11.8	6.6	5.2	5.8	8.4						
Median	4.3	10.7	5.8	4.0	4.7	7.5						
75th Percentile	3.8	8.8	4.6	1.0	1.6	4.2						
95th Percentile	2.8	5.4	3.1	-0.8	0.2	3.0						
# of Portfolios	271	269	259	229	178	100						
● Ashmore EM Blended Debt Fund	4.6	(41)	--	(--)	--	(--)	--	(--)	--	(--)	--	(--)
▲ 50% JPM EMBI GD/25% JPM GBI EM GD/25%	4.0	(67)	--	(--)	--	(--)	--	(--)	--	(--)	--	(--)

Total Real Estate
Asset Class Overview (Gross of Fees)

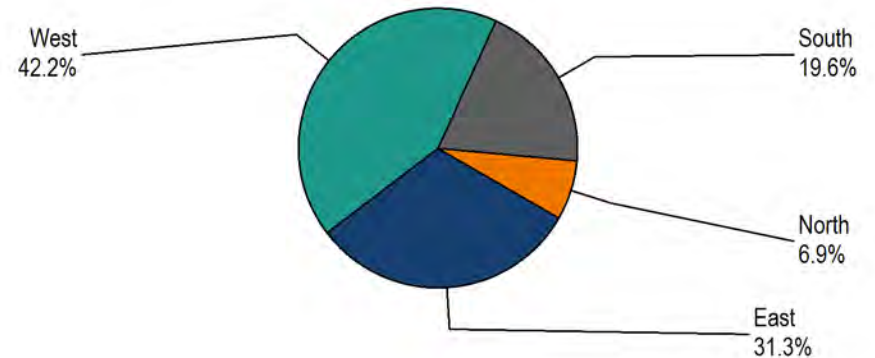
Period Ending: June 30, 2019

	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2018	2017	2016	2015	2014
Total Real Estate	206,785,359	1.3	5.2	7.1	9.5	7.7	7.5	7.8	7.8	18.0	10.4
<i>NCREIF Property Index</i>		1.5	6.5	6.9	8.8	9.2	6.7	7.0	8.0	13.3	11.8
JP Morgan Core Real Estate	165,870,433	0.9	4.3	6.2	8.6	9.5	7.0	6.1	8.4	15.2	11.2
<i>NCREIF-ODCE</i>		1.0	6.4	7.6	9.8	9.9	8.3	7.6	8.8	15.0	12.5
<i>NCREIF Property Index</i>		1.5	6.5	6.9	8.8	9.2	6.7	7.0	8.0	13.3	11.8
ARA American Strategic Value Realty	33,374,724	2.3	8.6	8.7	--	--	9.1	7.4	--	--	--
<i>NCREIF-ODCE</i>		1.0	6.4	7.6	--	--	8.3	7.6	--	--	--
<i>NCREIF Property Index</i>		1.5	6.5	6.9	--	--	6.7	7.0	--	--	--
Direct Real Estate	7,540,202	8.9	17.3	16.1	15.2	7.8	11.6	20.6	5.5	22.9	6.1
<i>NCREIF-ODCE</i>		1.0	6.4	7.6	9.8	9.9	8.3	7.6	8.8	15.0	12.5
<i>NCREIF Property Index</i>		1.5	6.5	6.9	8.8	9.2	6.7	7.0	8.0	13.3	11.8

Property Type Allocation
Allocation as of June 30, 2019



Geographic Diversification
Allocation as of June 30, 2019



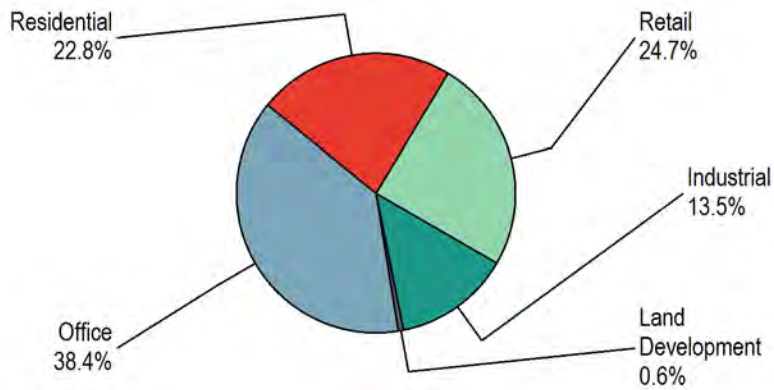
Property Allocation and Geographic Diversification analytics exclude Direct Real Estate. ARA American Strategic Value Realty and Direct Real Estate are lagged one quarter.

Total Real Estate
Asset Class Overview (Net of Fees)

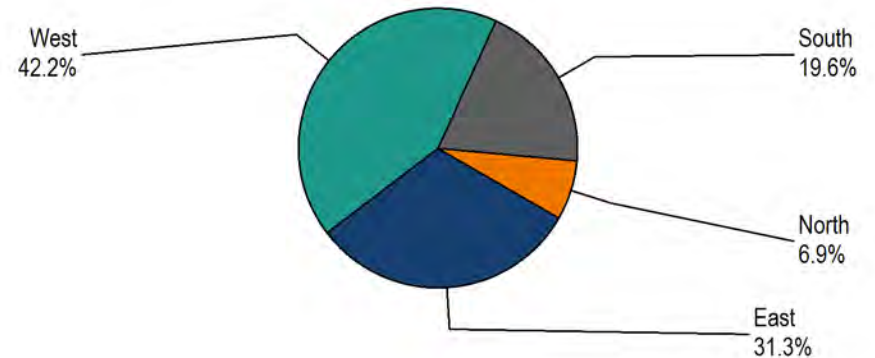
Period Ending: June 30, 2019

	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2018	2017	2016	2015	2014
Total Real Estate	206,785,359	1.3	5.2	6.9	9.0	7.3	7.5	7.8	6.8	16.9	9.6
<i>NCREIF Property Index</i>		1.5	6.5	6.9	8.8	9.2	6.7	7.0	8.0	13.3	11.8
JP Morgan Core Real Estate	165,870,433	0.9	4.3	6.0	8.0	8.7	7.0	6.1	7.3	14.1	10.0
<i>NCREIF-ODCE</i>		1.0	6.4	7.6	9.8	9.9	8.3	7.6	8.8	15.0	12.5
<i>NCREIF Property Index</i>		1.5	6.5	6.9	8.8	9.2	6.7	7.0	8.0	13.3	11.8
ARA American Strategic Value Realty	33,374,724	2.3	8.6	8.4	--	--	9.1	7.4	--	--	--
<i>NCREIF-ODCE</i>		1.0	6.4	7.6	--	--	8.3	7.6	--	--	--
<i>NCREIF Property Index</i>		1.5	6.5	6.9	--	--	6.7	7.0	--	--	--
Direct Real Estate	7,540,202	8.9	17.3	16.0	15.0	7.7	11.6	20.6	4.9	22.2	6.1
<i>NCREIF-ODCE</i>		1.0	6.4	7.6	9.8	9.9	8.3	7.6	8.8	15.0	12.5
<i>NCREIF Property Index</i>		1.5	6.5	6.9	8.8	9.2	6.7	7.0	8.0	13.3	11.8

Property Type Allocation
Allocation as of June 30, 2019



Geographic Diversification
Allocation as of June 30, 2019



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

Total Commodities
 Asset Class Summary (Gross of Fees)

Period Ending: June 30, 2019

	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2018	2017	2016	2015	2014
Total Commodities	46,036,505	-1.6	-9.0	-0.4	-8.3	-2.5	-12.4	6.2	12.6	-25.2	-16.0
<i>Bloomberg Commodity Index TR USD</i>		-1.2	-6.8	-2.2	-9.1	-3.7	-11.2	1.7	11.8	-24.7	-17.0
Gresham MTAP Commodity Builder	46,036,505	-1.6	-9.0	-0.4	-8.3	--	-12.4	6.2	12.6	-25.2	-16.0
<i>Bloomberg Commodity Index TR USD</i>		-1.2	-6.8	-2.2	-9.1	--	-11.2	1.7	11.8	-24.7	-17.0

Total Commodities
 Asset Class Summary (Net of Fees)

Period Ending: June 30, 2019

	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2018	2017	2016	2015	2014
Total Commodities	46,036,505	-1.6	-9.0	-0.6	-8.6	-2.8	-12.4	6.2	11.8	-25.8	-16.6
<i>Bloomberg Commodity Index TR USD</i>		-1.2	-6.8	-2.2	-9.1	-3.7	-11.2	1.7	11.8	-24.7	-17.0
Gresham MTAP Commodity Builder	46,036,505	-1.6	-9.0	-0.6	-8.6	--	-12.4	6.2	11.8	-25.8	-16.6
<i>Bloomberg Commodity Index TR USD</i>		-1.2	-6.8	-2.2	-9.1	--	-11.2	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	HarbourVest 2018 Global Fund L.P.	-	HarbourVest
BlackRock Core Bond	1/19/2017	J.P. Morgan	KKR Mezzanine Partners	2010 ¹	KKR
Dodge & Cox Income	1/19/2017	Deutsche Bank	PIMCO Distressed Credit Fund	2010 ¹	Brown Brothers Harriman
Pacific Asset Corporate Loan	9/1/2014	Deutsche Bank	ARA American Strategic Value	6/22/2016	American Realty Adv.
Brandywine Global Fixed	11/30/2007	J.P. Morgan	TPG Diversified Credit Program	2016 ¹	TPG
Ashmore EM Blended Debt Fund	3/31/2019	Ashmore	Pathway Private Equity Fund 9	2017 ¹	Pathway

¹Represents 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: $\text{Portfolio Return} - [\text{Risk-free Rate} + \text{Portfolio Beta} \times (\text{Market Return} - \text{Risk-free Rate})]$.

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: $\text{Portfolio Excess Return} / \text{Portfolio Standard Deviation}$.

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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The information presented may be deemed to contain forward-looking information. Examples of forward looking information include, but are not limited to, (a) projections of or statements regarding return on investment, future earnings, interest income, other income, growth prospects, capital structure and other financial terms, (b) statements of plans or objectives of management, (c) statements of future economic performance, and (d) statements of assumptions, such as economic conditions underlying other statements. Such forward-looking information can be identified by the use of forward looking terminology such as believes, expects, may, will, should, anticipates, or the negative of any of the foregoing or other variations thereon comparable terminology, or by discussion of strategy. No assurance can be given that the future results described by the forward-looking information will be achieved. Such statements are subject to risks, uncertainties, and other factors which could cause the actual results to differ materially from future results expressed or implied by such forward looking information. The findings, rankings, and opinions expressed herein are the intellectual property of Verus and are subject to change without notice. The information presented does not claim to be all-inclusive, nor does it contain all information that clients may desire for their purposes. The information presented should be read in conjunction with any other material provided by Verus, investment managers, and custodians.

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 InvMetrics, 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.

Board of Trustees

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Date: August 26, 2019

To: Board of Trustees

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

Agenda Item 8: Investment Report for July 2019

	July	Year to Date 2019	2018	2017	2016	2015	2014
Total Trust Investments (\$ millions)	\$1,420		\$1,285 year end	\$1,351 year end	\$1,196 year end	\$1,148 year end	\$1,190 year end
Total Fund Return	0.1% Gross	10.4% Gross	-3.2 % Gross	15.5 % Gross	6.6 % Gross	-0.8% Gross	5.1 % Gross
Policy Index Return (r)	0.3%	10.7%	-3.2 %	13.4 %	7.7 %	-0.5 %	5.2 %

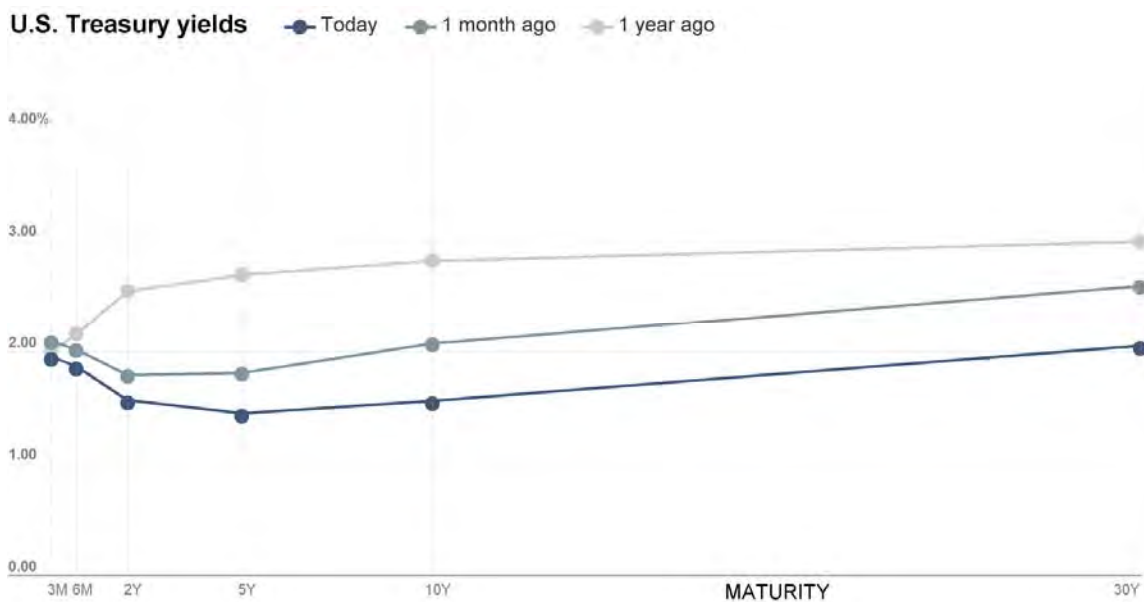
(r) Policy index as of Aug. 2016 revision to Strategic Asset Allocation Policy: 20% domestic equity, 20% international equity, 15% core bonds, 5% bank loans, 5% global bonds, 5% emerging market debt, 15% real estate, 5% commodities, 5% private equity, 5% private credit.

The Economy and Capital Markets:

- **Fed Policy and Interest Rates –**

- At the July 31st FOMC meeting the Fed reduced the Fed Funds rate by 0.25% as expected. In addition, the Fed ended their balance sheet reduction asset sales as a second key element in moving to a more accommodative monetary policy.
 - Market expectations of the July rate reduction were that it was an “insurance” rate reduction in an attempt to guard the economy against increasing geopolitical tensions (Iran), the impact of Brexit (either a “Hard Brexit” or a Brexit with an EU agreement in place) and fallout from the Administrations protracted trade war with China.

- Fed Chair Powell’s remarks in the press conference referred to the interest rate reduction as not the start of a longer easing cycle – counter to market expectations for a total of three Fed rate reduction in 2019. Fed Chair Powell described the rate cuts as “essentially a midcycle adjustment to policy” signaling that further rate cuts were not assured. Capital markets reacted negatively to this surprise in forward-guidance on future rate reductions.
- Reinforcing the Fed’s shift to a more accommodative monetary policy has been the persistently low rate of inflation below the Fed’s target of 2%. However, the 2Q19 GDP report also showed that national CPI inflation picked up to a 2.3% rate (or 1.8% excluding the more volatile food and energy components). This uptick in inflation may give pause to future Fed interest rate reductions.
- The yield curve, responding to a slowing global growth, slipped decidedly inverted August 14th. The 10-year Treasury vs. the 3-month rate has been mostly inverted for several months. The August 14th move to an inverted 10-year Treasury vs. the 2-year Treasury – a reliable predictor of recession in 2-6 quarters – spooked the capital markets with the S&P 500 down 3% for the day. The yield curve as of August 22nd is shown below -



- **Economic Growth / Recession Risk –**

- 2Q19 U.S. GDP growth was reported by the Commerce Department to be at a 2.1% rate, down from the 3.1% rate of 1Q19. 2Q19 is the 10th anniversary of the Great Recession or Global Financial Crisis making the positive 2Q19 GDP growth the longest U.S. economic expansion on record.
- The full year 2018 GDP growth was revised significantly lower from the previously reported 3.0% rate to 2.5%. The history of quarterly GDP growth rates is shown below.



➤ Details of the 2Q19 GDP growth include -

- Drop in exports – down 5.2% - with slowing growth in Europe and elsewhere. The turmoil in trade policy with China also contributed to the slowdown in exports.
- Decreases in business investment and commercial real estate investment limited the GDP growth and provide some concern over upcoming growth rates.
- Consumer spending proved to be the main driver of 2Q19 GDP growth with a 4.3% increase. Government spending also surged at a 5% rate.

➤ Outlook for GDP Growth –

- The baseline estimates for GDP growth among forecasters is for continued slow growth. A “lower-for-longer” expectation for U.S. Growth and with lagging GDP growth in the Eurozone and higher growth rates in emerging markets.
- Concerns over GDP growth include declines in future expectations shown in Purchasing Manager (PMI) surveys. Also, slowing level of corporate investment reinforces this concern. Further sounding a note of caution are recent declines in the Leading Economic Indicator data. However, buoyant consumer confidence survey readings are a basis for optimism.
- The shift of the Treasury Yield curve to an inverted spread between the 10-year Treasury and the 2-year Treasury in mid-August is a reliable predictor of recession within 2-6 quarters. However, the inverted yield curve needs to be in place across multiple calendar quarters to be consistent with its history as a reliable prediction of impending recession.

• **Trade Policy –**

➤ Ongoing turmoil in trade policy roiled the markets yet again.

- On August 1st the announcement via Presidential Tweet came that the U.S. would impose an additional 10% tariff on another \$300 billion of Chinese imports (on top of the 25% tariffs in place on a different category of \$250 billion in imports). A 1% gain

in the stock market for the day quickly turned into a 1% loss, oil prices fell by 8% and the yield on the 10-year Treasury fell to 1.91%.

- The capital markets' concerns over erratic trade policy include its effect on overall global output – including the growth rate in China – and a lack of predictability in what to expect in business conditions.
 - The latest round of 10% tariffs on \$300 billion of goods falls mostly on consumer products. The inflationary impact of tariffs being tacked on to consumer good prices may have an inhibiting effect on consumer spending.
 - The breakdown in trade talks was bilateral with firm U.S. demands for concessions met with a retreat by China on several issues that were expected to be settled. New negotiations will not take place until September.
 - On August 13th the U.S. Administration announced a delay to December 15th in the expanded list of Chinese imports subject to the new 10% tariffs. The items subject to the delayed tariffs were consumer products to limit tariff-induced price increases in advance of the Christmas gift buying season. Capital markets responded positively with over a 1.5% jump in the S&P 500 on August 13th.
- Chinese currency devaluation – the Chinese allowed a devaluation of the Yuan to happen under market pressure. Something the Chinese central bank has resisted in the past. The Yuan fell to an 11-year low, below the psychologically significant level of 7 Yuan/USD. The Peoples Bank of China in an unusually blunt statement blamed the devaluation on the Trump Administration's "unilateralism and trade protectionism measures and the imposition of increased tariffs on China."
- China also halted new purchases of American agricultural products as further retaliation.
 - Currency devaluations help exporting countries at the expense of their import partners. Currency devaluation are also a risk-prone public policy as they invite retaliatory rounds of currency devaluation by competing nations.
 - Following the Chinese devaluation global equity markets sold off with the S&P 500 down over 3% on August 5th and the yield on the 10-year Treasury plunging to 1.74% - the lowest rate since 2016. Subsequent equity market moves showed a bounce-back with the S&P 500 down about 2% through August 22nd.
- The International Monetary Fund warned in June that the ongoing U.S./China trade war alone could reduce global GDP by 0.5% in 2020.

- **Employment and Wages –**

- The July DOL report on nonfarm employment released August 2nd -
- New jobs came in at a reduced level of +164K in July following a July increase of 193k and a May increase of only +62k (revised).
 - New job formation remains above the approximately 100k/month to absorb workforce population growth.
 - Year to date monthly new job growth has averaged +172k/month versus the full year 2018 average of +223k/month.

- Unemployment remained at 3.7%
- Average hourly earnings for the trailing 12-month period increased 3.2%.
- SLO County unemployment in June was estimated at 3.0% - up from the prior month estimate of 2.4%, but below the 3.2% estimated one year ago. The California unemployment rate in June was measured at 4.2%, just above its record low of 4.1%.

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. The attached market commentary from Verus details market conditions in July, but subsequent activity in August are not yet factored into these numbers.

FPI – Local Real Estate - Note that the FPI local real estate portfolio no longer appears on the Verus report. The last local investment property was sold in May. The remaining property in the FPI portfolio – the Pension Trust office - was transferred out of FPI and into an Operating Asset category at the end of June.

August Estimated Returns – The strong equity market returns through most of 2019 so far drove the bulk of the +10.4 gross rate of return year to date through July. Subsequent capital market changes in August have been negative for equities (S&P 500 approximately -1.9% and international equities approximately -3.5%). Declining interest rates have been a positive for bond returns (U.S. bonds approximately +2.0%). **A rough estimate of the Pension Trust returns for August through the 22nd indicate approximately a -0.5% total return so far in August.**

Respectfully submitted

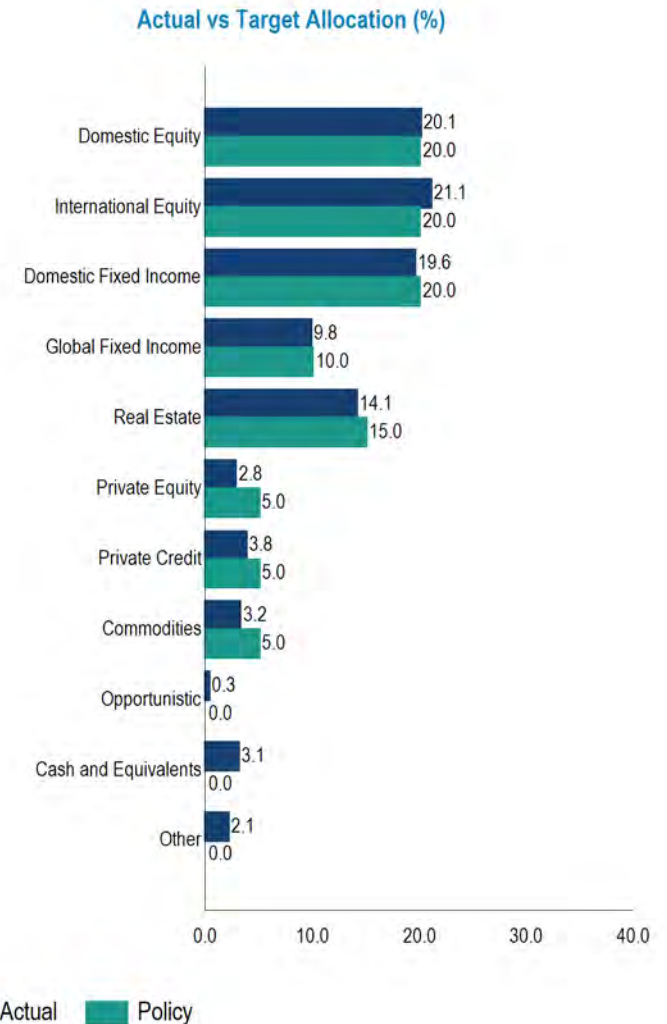
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San Luis Obispo County Pension Trust

Executive Summary - Preliminary (Gross of Fees)

Period Ending: July 31, 2019

	Market Value	% of Portfolio	1 Mo	YTD
Total Fund	1,420,110,895	100.0	0.1	10.4
Total Fund ex Overlay	1,389,788,832	97.9	0.1	10.5
Policy Index			0.3	10.7
Total Domestic Equity	285,385,451	20.1	1.5	20.5
Russell 3000			1.5	20.5
PIMCO RAE Fundamental PLUS Instl	55,358,775	3.9	1.0	15.3
S&P 500			1.4	20.2
Loomis Sayles Large Cap Growth	83,362,600	5.9	1.2	23.8
Russell 1000 Growth			2.3	24.2
Boston Partners Large Cap Value	79,465,319	5.6	1.5	14.5
Russell 1000 Value			0.8	17.2
Atlanta Capital Mgmt	67,198,757	4.7	2.4	29.4
Russell 2500			1.0	20.5
Total International Equity	299,040,352	21.1	-1.1	17.6
MSCI ACWI ex USA Gross			-1.2	12.7
Dodge & Cox Intl Stock	137,009,948	9.6	-2.7	10.1
MSCI EAFE Gross			-1.3	13.1
WCM International Growth	162,030,404	11.4	0.3	25.0
MSCI ACWI ex USA Gross			-1.2	12.7
Total Domestic Fixed Income	277,711,972	19.6	0.5	7.3
BBgBarc US Aggregate TR			0.2	6.3
BlackRock Core Bond	101,965,367	7.2	0.3	7.7
BBgBarc US Aggregate TR			0.2	6.3
Dodge & Cox Income Fund	99,799,930	7.0	0.5	7.4
BBgBarc US Aggregate TR			0.2	6.3
Pacific Asset Corporate Loan	75,946,675	5.3	0.9	6.8
S&P/LSTA Leveraged Loan Index			0.8	6.6
Total Global Fixed	139,692,438	9.8	-0.7	5.7
FTSE World Govt Bond Index			-0.5	4.9
Brandywine Global Fixed Income	66,563,442	4.7	-1.5	2.4
FTSE WGBI ex US TR			-0.7	4.8
Ashmore EM Blended Debt Fund	73,128,996	5.1	0.1	--
50% JPM EMBI GD/25% JPM GBI EM GD/25% JPM ELM+			0.8	--



*Other balance represents Clifton Group.

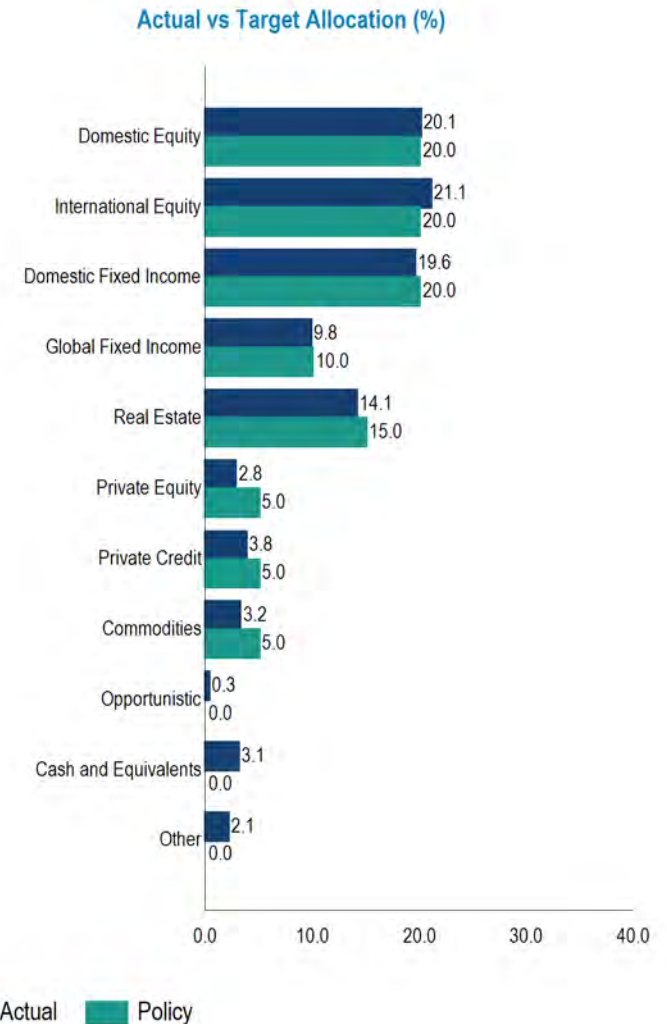
Policy Index (10/1/2016): 20% Russell 3000, 20% MSCI ACWI ex. US, 30% BBgBarc Aggregate, 15% NCREIF Property, 5% Bloomberg Commodity, 5% Russell 3000 + 300 bp, 5% BBgBarc High Yield + 200 bp lagged. Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment 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. Harbourvest 2018 Global Fund L.P. funded 12/14/2018. Stone Harbor liquidated 3/22/2019. Ashmore EM Blended Debt funded 3/31/2019. Direct RE liquidated 5/3/2019. Most recently reported market values for private equity/credit, opportunistic, and illiquid real estate funds adjusted for calls and distributions through the report end date. All data is preliminary.

San Luis Obispo County Pension Trust

Executive Summary - Preliminary (Gross of Fees)

Period Ending: July 31, 2019

	Market Value	% of Portfolio	1 Mo	YTD
Total Real Estate	200,077,156	14.1	0.3	2.1
NCREIF Property Index			0.0	3.3
JP Morgan Core Real Estate	166,045,967	11.7	0.0	1.1
NCREIF-ODCE			0.0	2.4
NCREIF Property Index			0.0	3.3
ARA American Strategic Value Realty	33,885,219	2.4	1.5	5.4
NCREIF-ODCE			0.0	2.4
NCREIF Property Index			0.0	3.3
Total Commodities	45,882,054	3.2	-0.3	5.3
Bloomberg Commodity Index TR USD			-0.7	4.4
Gresham MTAP Commodity Builder	45,882,054	3.2	-0.3	5.3
Bloomberg Commodity Index TR USD			-0.7	4.4
Total Private Equity	39,992,468	2.8		
Harbourvest Partners IX Buyout Fund L.P.	14,866,449	1.0		
Pathway Private Equity Fund Investors 9 L.P.	22,698,701	1.6		
Harbourvest 2018 Global Fund L.P.	2,427,318	0.2		
Total Private Credit	53,666,270	3.8		
TPG Diversified Credit Program	53,666,270	3.8		
Total Cash	43,736,144	3.1	0.0	1.5
91 Day T-Bills			0.2	1.3
Cash Account	43,736,144	3.1	0.0	1.5
91 Day T-Bills			0.2	1.3
Total Opportunistic	4,604,526	0.3		
Kohlberg Kravis Roberts & Co. Mezzanine Partners I	4,502,305	0.3		
PIMCO Distressed Credit Fund	102,221	0.0		
CPI + 5%			0.6	5.1



*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. Harbourvest 2018 Global Fund L.P. funded 12/14/2018. Stone Harbor liquidated 3/22/2019. Ashmore EM Blended Debt funded 3/31/2019. Direct RE liquidated 5/3/2019. Most recently reported market values for private equity/credit, opportunistic, and illiquid real estate funds adjusted for calls and distributions through the report end date. All data is preliminary.



**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**

JULY 2019

Capital Markets Update

Market commentary

U.S. ECONOMICS

- U.S. GDP expanded at an annualized quarterly rate of 2.1% (exp. 1.8%) in Q2 2019, the lowest since Q1 2017. Personal consumption drove growth, contributing 2.9% to the quarterly rate. This was partially offset by a 1.0% decrease in gross private domestic investment, the lowest since Q4 2015.
- Total nonfarm payroll employment rose by 164,000 in July, in line with expectations of an increase of 165,000. Hiring activity was strongest in professional and technical services (+31k) and health care (+30k). Unemployment remained unchanged at 3.7% (exp. 3.6%).
- Consumer confidence rebounded and beat estimates substantially in July. The Conference Board Consumer Confidence Index rose from 121.5 to 135.7 (exp. 125.0) its highest level since November 2018.

U.S. EQUITIES

- The S&P 500 Index rose 1.4% in July and continued to all time highs. At the end of July, the S&P 500 Index had generated a year-to-date total return of 20.2%.
- With 85% of companies reporting as of August 6th, revenue and earnings growth for the S&P 500 have come in at 3.4% and 1.5%, respectively. Revenue growth modestly topped expectations with a 0.6% surprise, while the earnings surprise of 5.2% was more substantial.
- Per FactSet the July 2020 bottom up price target for the S&P 500 is 3296 which represents an 11.6% year over year return. The Energy sector is expected to see the largest price appreciation of 20.3% while Real Estate is projected to see the smallest of 4.7%.

U.S. FIXED INCOME

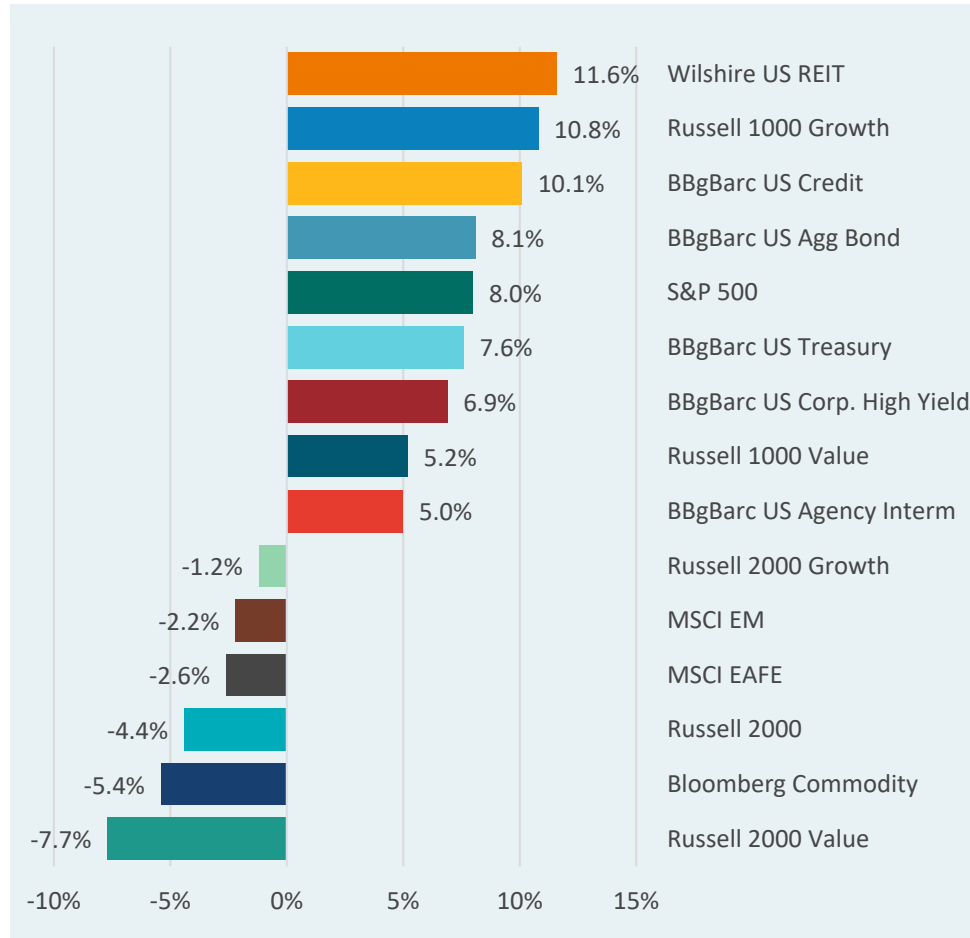
- The Federal Reserve cut rates 0.25%, bringing its new federal funds range to 2.00-2.25%. In his press conference following the release, Chairman Powell described the cut as a “mid-cycle adjustment” and noted that the cut was not an indication of the beginning of a “lengthy cutting cycle.”
- Following the FOMC meeting, Chairman Powell announced that the balance sheet unwind, which had been scheduled to conclude in September, would be concluding August 1st.
- Markets viewed the Fed’s release as less dovish than expected and appeared unconvinced of the Fed’s guidance relating to the rate-cutting cycle. At month-end, futures implied an 85% chance of at least another 0.25% cut by year-end, and a 43% chance of at least another 0.50% in cuts to the fed funds range by year-end.

INTERNATIONAL MARKETS

- U.S. equities extended outperformance in global equity markets. The S&P 500 Index advanced 1.4%, while emerging market (MSCI EM Index -1.2%) and international developed (MSCI EAFE Index -1.3%) equities offered negative performance for the month.
- The British pound depreciated sharply versus pairs as uncertainty surrounding “Brexit” built. Recently elected this month, Prime Minister Boris Johnson took a harder negotiating stance with the E.U., stoking speculation that the U.K. could leave the E.U. without a deal by October 31st.
- PMI data continued to paint a gloomy picture for the European industrial economy. The German Manufacturing PMI fell from 45.0 to 43.2 in July, farther into the contractionary level below 50.0.

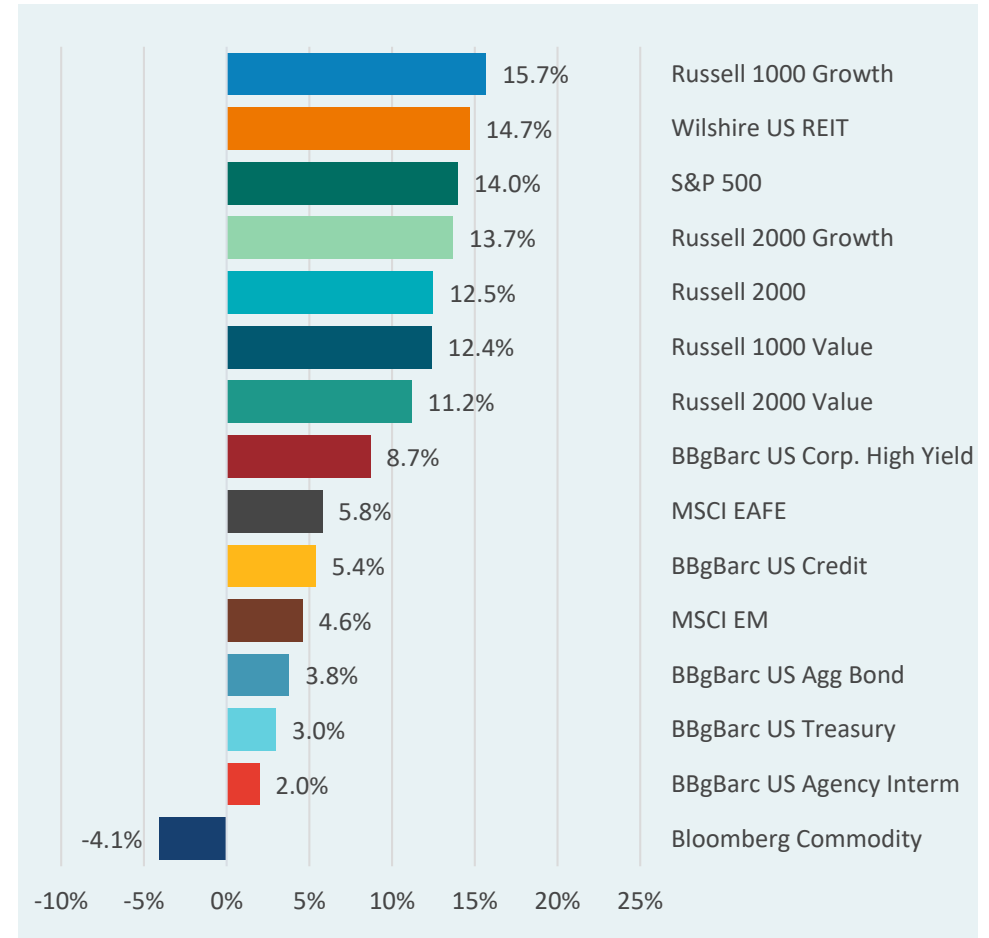
Major asset class returns

ONE YEAR ENDING JULY



Source: Morningstar, as of 7/31/19

TEN YEARS ENDING JULY



Source: Morningstar, as of 7/31/19

U.S. large cap equities

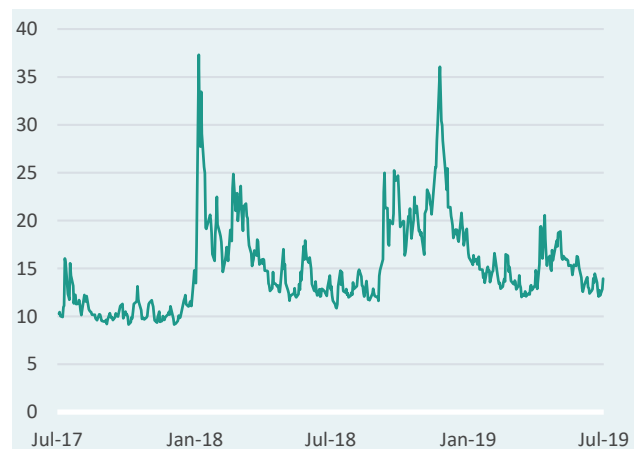
- The S&P 500 Index gained 1.4% in July. Telecom (+3.4%), Information Technology (+3.3%), and Consumer Staples (+2.5%) were the top performers of the month with Energy (-1.8%) and Health Care (-1.6%) lagging.
- At a weight of roughly 22% the Information Technology sector helped lead the overall index higher with a return of 3.3%. Apple's earnings beat, driven by an uptick in "Services" and wearables, helped to contribute 0.3% to the 1.4% index increase.
- At month-end, the forward one-year P/E ratio of the S&P 500 Index was 16.8, which exceeded both its 5- and 10-year averages of 16.5 and 14.8, respectively. Per FactSet, the Consumer Discretionary (21.3) and Financials (11.9) sectors have the highest and lowest forward one-year P/E.
- The CBOE VIX Index ticked up in July from 15.1 to 16.1, below its 20-year average of 19.7. The S&P 500 trailing 30- and 90-day realized volatility was subdued at 8.7 and 10.8, respectively.

S&P 500 PRICE INDEX



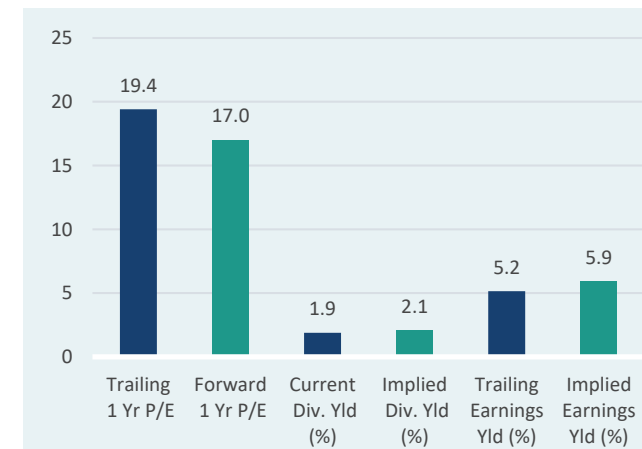
Source: Bloomberg, as of 7/31/19

IMPLIED VOLATILITY (VIX INDEX)



Source: CBOE, as of 7/31/19

S&P 500 VALUATION SNAPSHOT

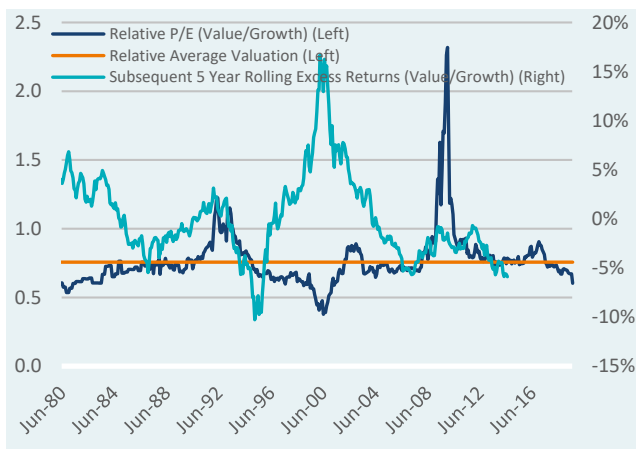


Source: Bloomberg, as of 7/31/19

Domestic equity size and style

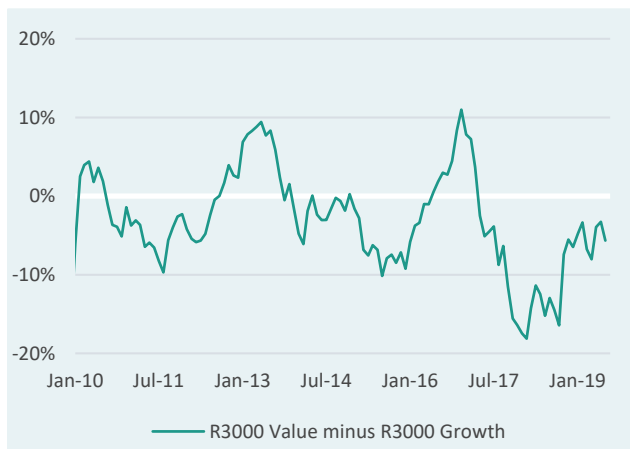
- Large cap stocks resumed outperformance over small-cap stocks. The Russell 1000 Index returned 1.6% while the Russell 2000 Index added 0.6%. Over the year-to-date, large cap equities (+20.7%) have outperformed their small-cap peers (+17.7%) by 3.0%.
- Growth outperformed value in July, across both large- and small-cap universes. The Russell 3000 Growth Index advanced 2.2%, outpacing the Russell 3000 Value Index (+0.8%) for six out of seven months this year. The price of value stocks relative to growth stocks remains in a normal range.
- Growth outperformance over the month was largely attributed to the outperformance of the Telecom (+3.4%) and Information Technology (+3.3%) sectors which at month-end held a combined weight of 47% in the Russell 3000 Growth Index and a 14% weight in the Russell 3000 Value Index.
- The S&P 500 Price Index closed the month at 2980, above its 50-, 100-, and 200-day moving-averages, indicating that there has been an upward price trend over the past six months.

VALUE VS. GROWTH RELATIVE VALUATIONS



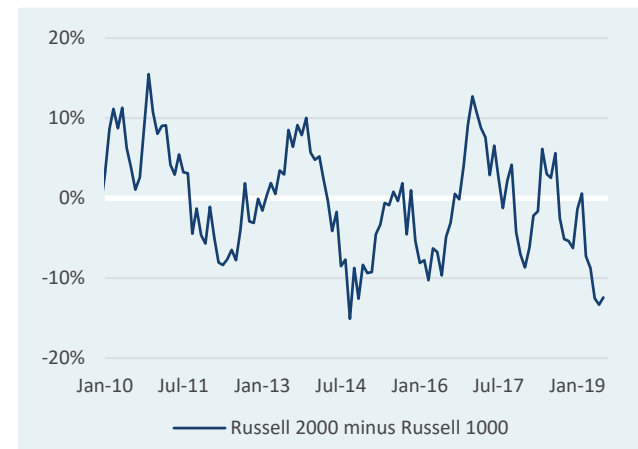
Source: Russell, Bloomberg, as of 7/31/19

VALUE VS. GROWTH 1-YR ROLLING RELATIVE PERFORMANCE



Source: FTSE, as of 7/31/19

SMALL VS. LARGE 1-YR ROLLING RELATIVE PERFORMANCE

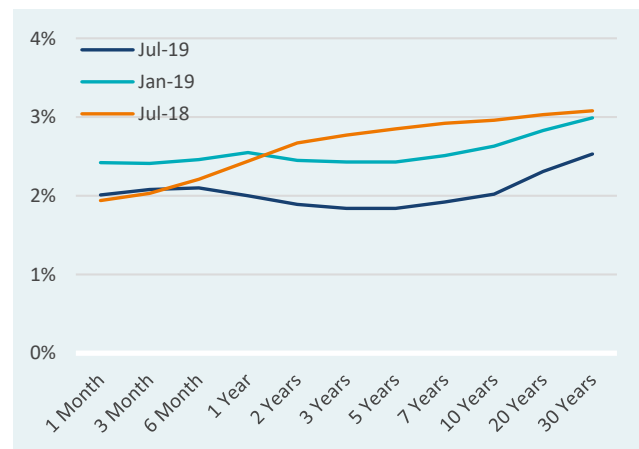


Source: FTSE, as of 7/31/19

Fixed income

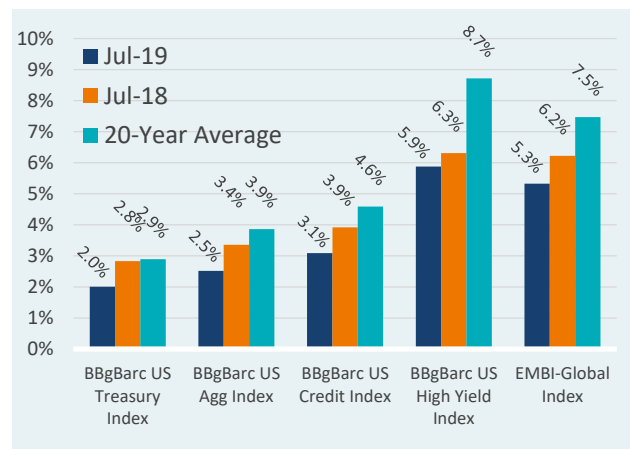
- The European Central Bank decided in its July meeting to keep its key interest rates unchanged but issued a dovish shift in forward guidance. The ECB now expects interest rates to remain “at present or lower levels, at least through the first half of 2020.” At month-end, futures implied a 92% chance the ECB would cut its main deposit rate by 10 bps to -0.5% in September.
- Emerging market debt extended year-to-date gains. Hard-currency EMD (+1.2%) and local-currency EMD (+0.9%) both outperformed U.S. credit.
- Ten-year Italian bond yields plunged from 2.1% to 1.5%, back below the 1.8% level held prior to the 2018 Italian election which yielded a hung Parliament, a coalition government, and a spike in sovereign yields. Rome’s decision to cut its 2019 budget deficit target, as well as hints of new stimulus from the ECB fueled the rally for Italian sovereign bonds.
- U.S. credit spreads ticked lower in July. Investment-grade spreads dropped 7 bps to YTD tight of 1.08% while high-yield spreads tightened 6 bps to 3.71%.

U.S. TREASURY YIELD CURVE



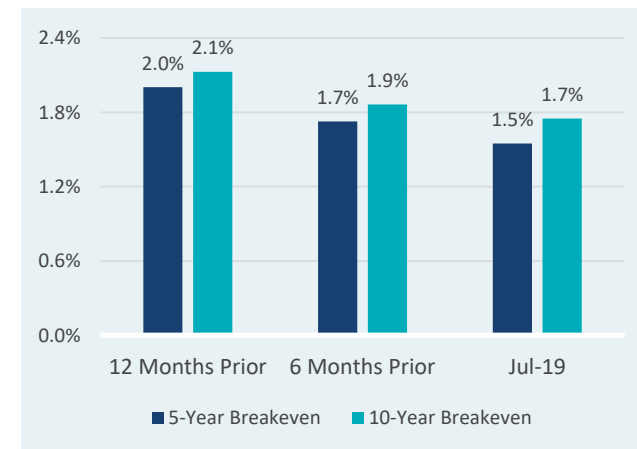
Source: Bloomberg, as of 7/31/19

NOMINAL YIELDS



Source: Morningstar, as of 7/31/19

BREAKEVEN INFLATION RATES

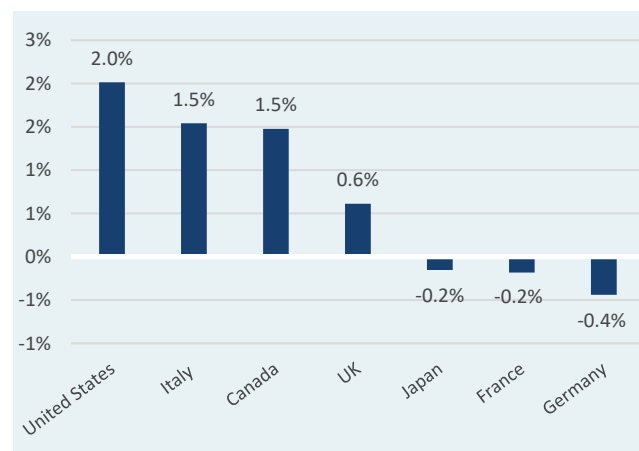


Source: Bloomberg, as of 7/31/19

Global markets

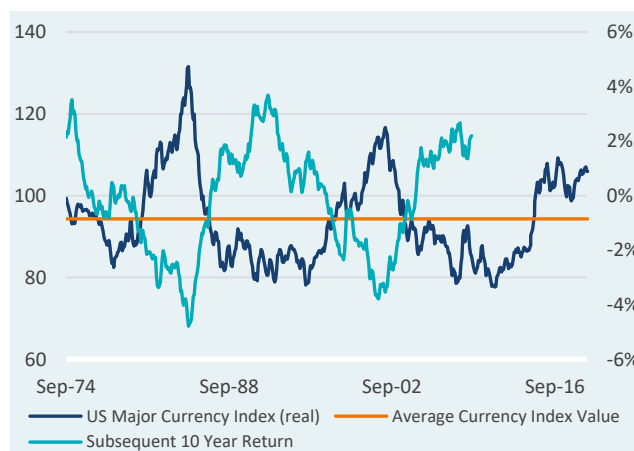
- U.S. and Chinese officials restarted trade negotiations for the first time since May. While official reports indicated that the talks were constructive, President Trump announced that a 10% tariff would be applied to the remaining \$300b in Chinese imports, effective September 1st. China responded by immediately halting U.S. purchases of U.S. agricultural goods.
- The U.S. dollar rebounded, appreciating materially versus trade-weighted pairs. The Bloomberg Dollar Spot Index added 1.8%, erasing its -1.6% slide in June.
- Global sovereign yields continued to sink, and ten-year bond yields in France and Germany established fresh all-time lows. French yields fell 18 bps to -0.19% and German yields fell from -0.33% to -0.44%, below the ECB's main deposit rate of -0.40%.
- Over the month of July, the value of global negative-yielding debt grew from \$12.9T to \$14.1T, representing 26% of global debt outstanding. At the end of 2018, the value of global negative-yielding debt was \$8.3T, representing only 17% of global debt outstanding.

GLOBAL SOVEREIGN 10-YEAR YIELDS



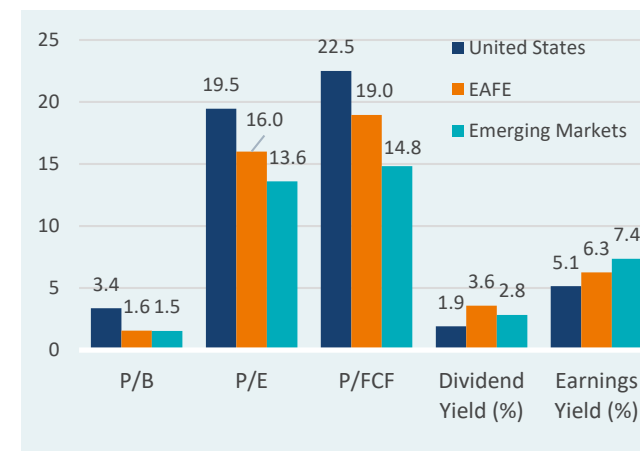
Source: Bloomberg, as of 7/31/19

U.S. DOLLAR MAJOR CURRENCY INDEX



Source: Federal Reserve, as of 7/31/19

MSCI VALUATION METRICS (3-MONTH AVG)



Source: Bloomberg, as of 7/31/19

Commodities

- The Bloomberg Commodity Index fell 0.7% over the month. The Livestock (+2.9%) and Precious Metals (+2.4%) sectors outperformed the overall index, while Softs (-5.2%) and Agriculture (-5.1%) underperformed.
- The Precious Metals Index continued its advance in July (+2.4%) driven by climbing silver prices. Silver gained 7.1% and reached its highest point since June 2018 of \$16.40 per ounce. Easier monetary policy from global central banks as well as simmering tensions in the Middle East have likely boosted demand for low-correlation assets.

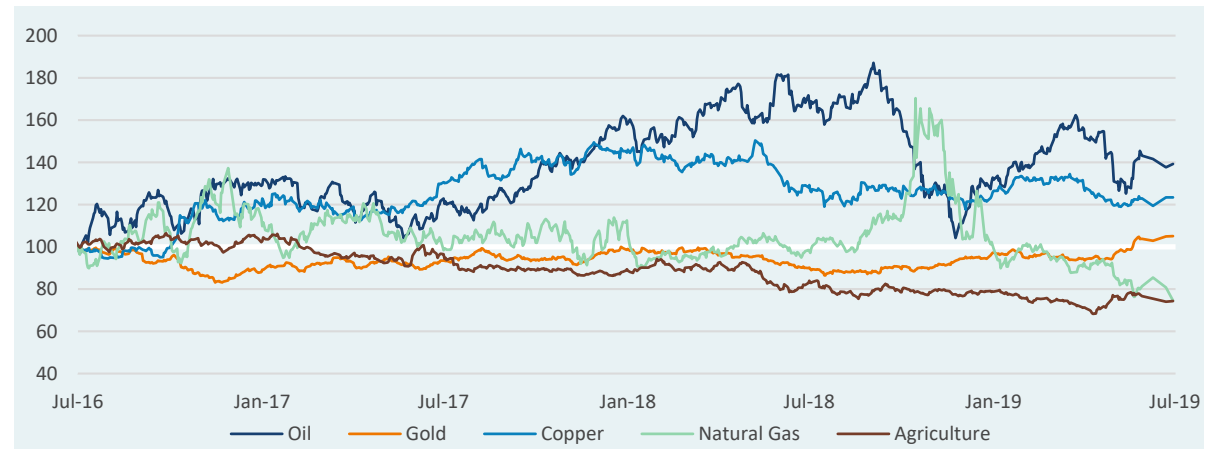
- Grains (-5.7%) offered the poorest performance of any commodity sector in July, as Chinese demand for U.S. agricultural products came in below expectations. African swine fever has continued to drive pig culling in China, which has softened demand for soybeans and pig feed.
- Following President Trump’s proposal to levy tariffs of 10% on \$300 in Chinese imports on September 1st, the Chinese halted domestic purchases of U.S. agricultural goods. In 2018, China spent \$5.9 billion on U.S. farm products, and purchased 60% of U.S. soybean exports.

INDEX AND SECTOR PERFORMANCE

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Bloomberg Commodity	(0.7)	(0.7)	4.4	(5.4)	(0.7)	(8.3)	(4.1)
Bloomberg Agriculture	(5.1)	(5.1)	(4.0)	(11.5)	(9.5)	(9.3)	(3.5)
Bloomberg Energy	0.1	0.1	10.8	(10.3)	3.3	(16.8)	(11.7)
Bloomberg Grains	(5.7)	(5.7)	(3.7)	(11.5)	(7.7)	(9.2)	(4.4)
Bloomberg Industrial Metals	1.4	1.4	6.2	(5.3)	5.8	(3.1)	(1.7)
Bloomberg Livestock	2.9	2.9	(4.2)	3.8	1.6	(5.9)	(1.7)
Bloomberg Petroleum	0.7	0.7	25.4	(10.4)	11.0	(15.0)	(6.2)
Bloomberg Precious Metals	2.4	2.4	9.7	13.2	(1.4)	(0.2)	3.0
Bloomberg Softs	(5.2)	(5.2)	(5.1)	(11.3)	(15.6)	(12.2)	(4.7)

Source: Morningstar, as of 7/31/19

COMMODITY PERFORMANCE



Source: Bloomberg, as of 7/31/19

Appendix

Periodic table of returns

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	YTD	5-Year	10-Year
Large 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	6.7	24.2	14.3	15.7
Small 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	1.9	21.5	11.2	14.1
Large 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	0.0	20.7	10.2	13.7
Small Cap Equity	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	-1.5	17.7	8.8	12.5
Large Cap Value	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	-3.5	17.2	8.5	12.4
Small 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	-6.0	13.6	8.0	11.2
International Equity	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	-4.8	12.6	6.7	9.3
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	-8.3	12.1	4.6	6.8
Emerging Markets Equity	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	-9.3	9.2	3.0	5.8
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	-11.0	6.9	2.4	4.6
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	7.0	-11.2	6.3	2.4	3.8
Commodities	-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	-12.9	4.4	1.8	3.1
Real Estate	-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	-13.8	3.3	0.9	0.5
Cash	-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	-14.6	1.4	-8.3	-4.1

- Large Cap Equity
- Large Cap Value
- Large Cap Growth
- Small Cap Equity
- Small Cap Value

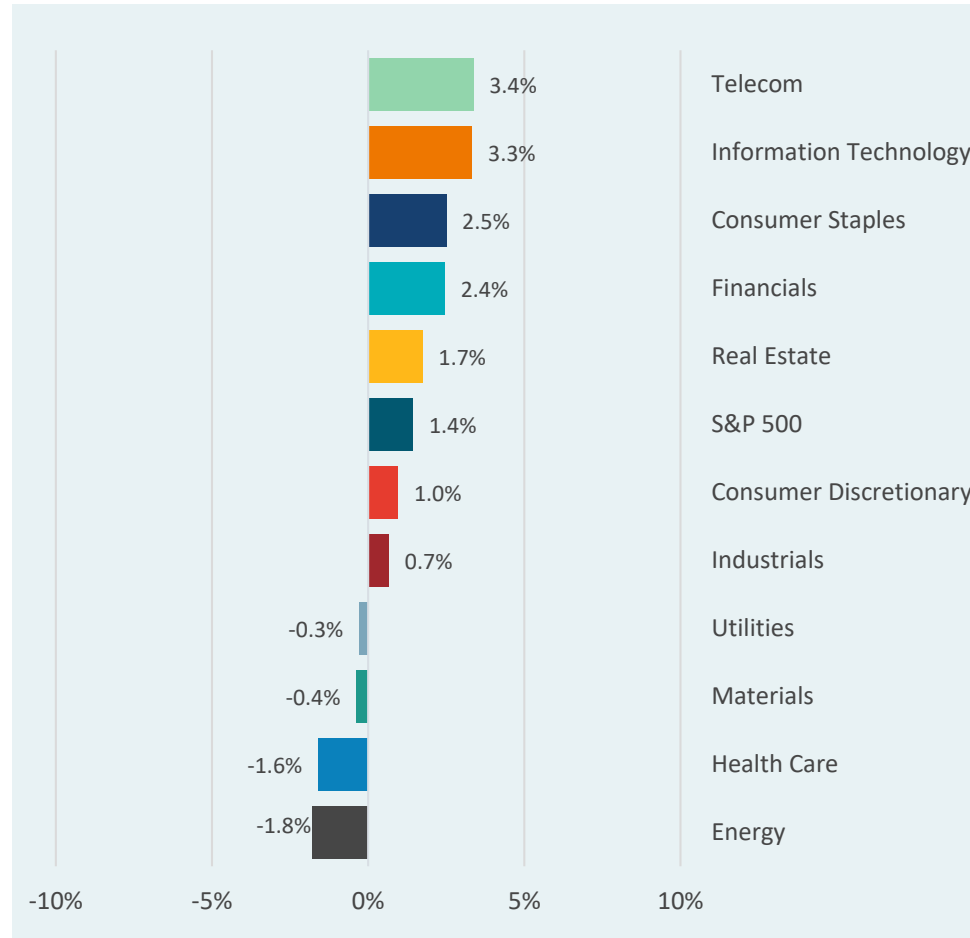
- Small Cap Growth
- International Equity
- Emerging Markets Equity
- US Bonds
- Cash

- 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 6/30/19.

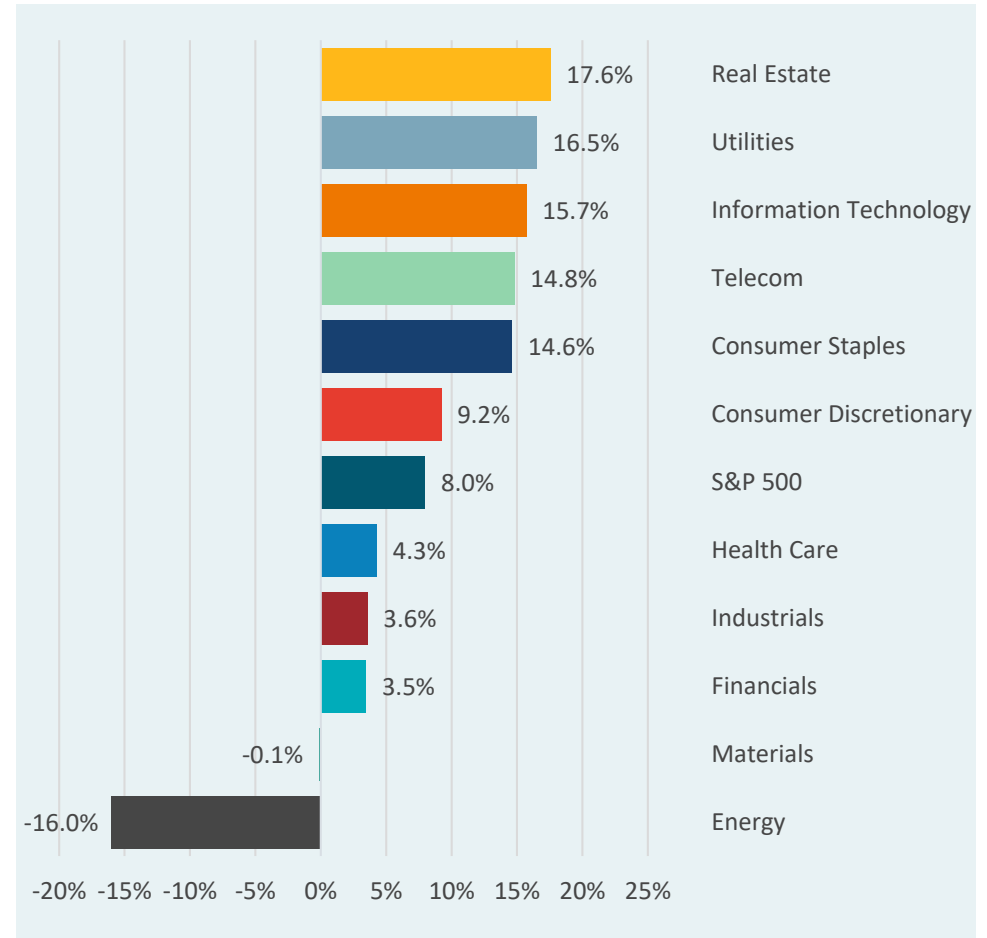
S&P 500 sector returns

QTD



Source: Morningstar, as of 7/31/19

ONE YEAR ENDING JULY



Source: Morningstar, as of 7/31/19

Detailed index returns

DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Core Index							
S&P 500	1.4	1.4	20.2	8.0	13.4	11.3	14.0
S&P 500 Equal Weighted	0.9	0.9	20.2	5.7	11.2	9.8	14.6
DJ Industrial Average	1.1	1.1	16.7	8.2	16.1	12.9	14.2
Russell Top 200	1.6	1.6	19.8	8.5	14.2	11.8	14.0
Russell 1000	1.6	1.6	20.7	8.0	13.3	11.2	14.1
Russell 2000	0.6	0.6	17.7	(4.4)	10.4	8.5	12.5
Russell 3000	1.5	1.5	20.5	7.0	13.1	11.0	14.0
Russell Mid Cap	1.4	1.4	23.1	6.7	11.0	9.6	14.3
Style Index							
Russell 1000 Growth	2.3	2.3	24.2	10.8	17.1	14.3	15.7
Russell 1000 Value	0.8	0.8	17.2	5.2	9.4	8.0	12.4
Russell 2000 Growth	1.0	1.0	21.5	(1.2)	12.7	10.2	13.7
Russell 2000 Value	0.2	0.2	13.6	(7.7)	8.0	6.7	11.2

INTERNATIONAL EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
MSCI ACWI	0.3	0.3	16.6	2.9	10.2	6.5	9.3
MSCI ACWI ex US	(1.2)	(1.2)	12.2	(2.3)	7.2	2.1	5.4
MSCI EAFE	(1.3)	(1.3)	12.6	(2.6)	6.9	2.4	5.8
MSCI EM	(1.2)	(1.2)	9.2	(2.2)	8.4	1.8	4.6
MSCI EAFE Small Cap	(0.7)	(0.7)	11.7	(7.6)	6.7	4.7	8.8
Style Index							
MSCI EAFE Growth	(0.4)	(0.4)	18.0	1.8	7.8	4.8	7.3
MSCI EAFE Value	(2.2)	(2.2)	7.1	(7.0)	5.8	(0.1)	4.3
Regional Index							
MSCI UK	(1.8)	(1.8)	10.9	(4.6)	5.3	(0.4)	5.7
MSCI Japan	0.1	0.1	7.9	(4.4)	5.9	4.4	5.4
MSCI Euro	(2.2)	(2.2)	13.6	(5.2)	7.6	1.8	4.3
MSCI EM Asia	(1.6)	(1.6)	8.0	(4.5)	8.9	3.5	6.0
MSCI EM Latin American	0.1	0.1	12.8	8.6	8.9	(0.9)	1.5

FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
BBgBarc US TIPS	0.4	0.4	6.5	5.7	1.9	1.8	3.7
BBgBarc US Treasury Bills	0.2	0.2	1.5	2.4	1.4	0.9	0.5
BBgBarc US Agg Bond	0.2	0.2	6.3	8.1	2.2	3.0	3.8
Duration							
BBgBarc US Treasury 1-3 Yr	(0.1)	(0.1)	2.4	3.9	1.3	1.2	1.2
BBgBarc US Treasury Long	0.2	0.2	11.2	14.2	0.6	5.6	6.5
BBgBarc US Treasury	(0.1)	(0.1)	5.1	7.6	1.2	2.5	3.0
Issuer							
BBgBarc US MBS	0.4	0.4	4.6	6.8	2.1	2.8	3.2
BBgBarc US Corp. High Yield	0.6	0.6	10.6	6.9	6.8	5.1	8.7
BBgBarc US Agency Interm	(0.0)	(0.0)	3.1	5.0	1.6	1.8	2.0
BBgBarc US Credit	0.5	0.5	9.9	10.1	3.5	4.0	5.4

OTHER

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Index							
Bloomberg Commodity	(0.7)	(0.7)	4.4	(5.4)	(0.7)	(8.3)	(4.1)
Wilshire US REIT	1.6	1.6	19.8	11.6	3.2	8.2	14.7
CS Leveraged Loans	0.8	0.8	6.2	4.1	5.2	4.0	5.9
Alerian MLP	(0.5)	(0.5)	17.2	(1.7)	(0.8)	(5.9)	7.7
Regional Index							
JPM EMBI Global Div	1.2	1.2	12.7	11.0	5.3	5.5	7.6
JPM GBI-EM Global Div	0.9	0.9	9.7	8.0	4.4	(0.1)	3.0
Hedge Funds							
HFRI Composite	0.7	0.7	8.0	1.6	4.5	3.2	4.5
HFRI FOF Composite	0.7	0.7	6.9	1.7	4.0	2.4	3.1
Currency (Spot)							
Euro	(2.2)	(2.2)	(2.6)	(4.8)	(0.1)	(3.6)	(2.4)
Pound	(3.8)	(3.8)	(3.9)	(6.7)	(2.7)	(6.2)	(3.0)
Yen	(0.8)	(0.8)	1.0	3.1	(1.9)	(1.1)	(1.3)

Source: Morningstar, HFR, as of 7/31/19

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Date: August 26, 2019

To: Board of Trustees

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

Agenda Item 9: ESG Investment Criteria – Current Investment Managers

Recommendation:

Review and discuss the attached Verus presentation on the ESG Investment Criteria in place for the Pension Trust's existing investment managers and direct staff as necessary.

Discussion:

At the May 20, 2019 Board of Trustees meeting the Pension Trust's investment consultant – Scott Whalen of Verus – made an educational presentation on Environmental, Social, and Governance (ESG) investment criteria. Based on Trustee interest, Verus has conducted an analysis of the application of ESG investment criteria by the Pension Trust's existing investment managers.

Respectfully submitted

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**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**



AUGUST 2019

ESG Review

San Luis Obispo County Pension Trust

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ESG refresher

Defining the terms

Investing with an intent that goes beyond generating financial returns

Socially Responsible Investing

SRI is investing with one's values, screening out or not investing in certain companies or industries (negative screens), or only investing in particular companies because they exhibit desirable traits (positive screens).

Environmental, Social and/or Governance (ESG)

ESG investments are made with the goal of positively impacting the environment, the social order and the company's own governance issues, such as executive compensation, board structures and actions that affect the interests of shareholders (e.g. proxy votes, shareholder activism).

Active Ownership

Investing with the purpose of encouraging companies to manage non-financial risks and run sustainable businesses in order to create long-term shareholder value. This can be exercised through shareholder advocacy or shareholder engagement, proxy voting and corporate resolutions.

Economically Targeted Investing

ETIs target a financial return to the fund as well as economic growth or some other ancillary benefit in areas related to beneficiaries.

Impact Investing

Investing with the intent to create measurable social or environmental benefit in addition to financial return.

While there are multiple ways to implement a responsible investment strategy, there is overlap amongst the various methodologies.

Many different focus areas



Source: UNPRI Sustainable Development Goals

Mapped within broader ESG categories



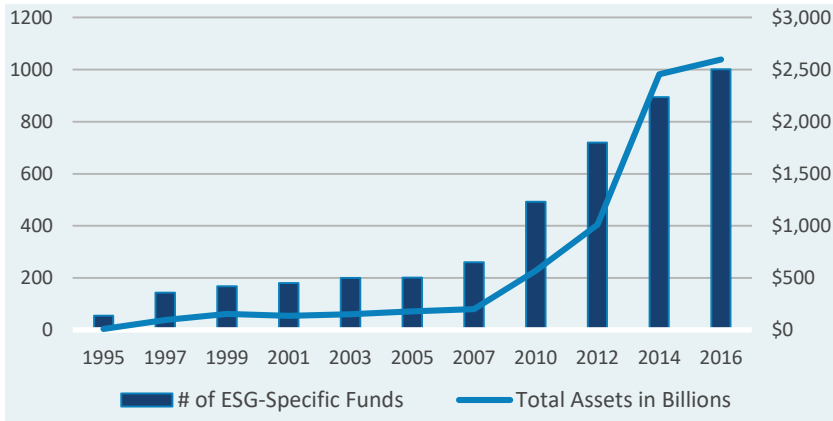
Source: UNPRI

Growth of ESG

There has been growth across the ESG spectrum

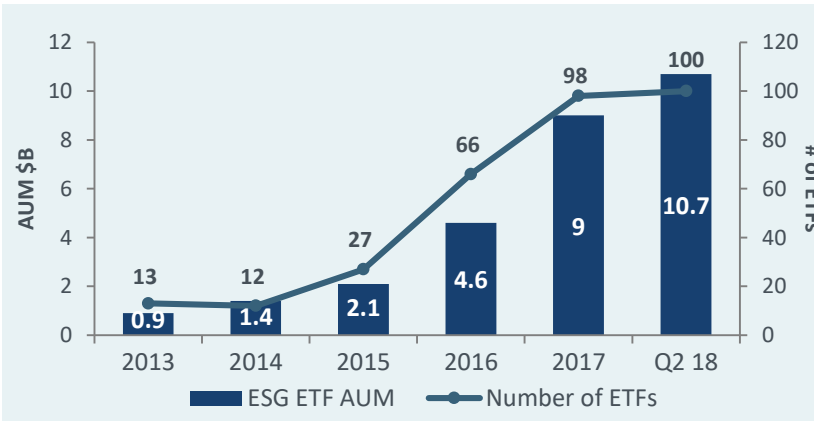
- Counting the number of ESG-specific funds is a more clear-cut exercise than counting the number of funds which incorporate ESG factors into their process.
- However, the integration of ESG into the investment process is becoming more formalized at many investment firms.
- Firms which do not have ESG-specific products will, oftentimes, have an ESG Committee and/or dedicated resources.

NUMBER OF ESG-SPECIFIC FUNDS



Source: Social Investment Forum Foundation

NUMBER OF ETF'S TRACKING MSCI ESG INDICES

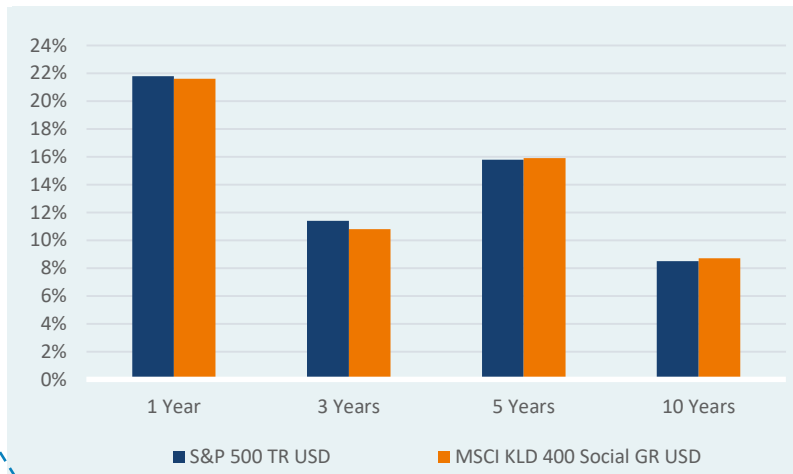


Source: MSCI

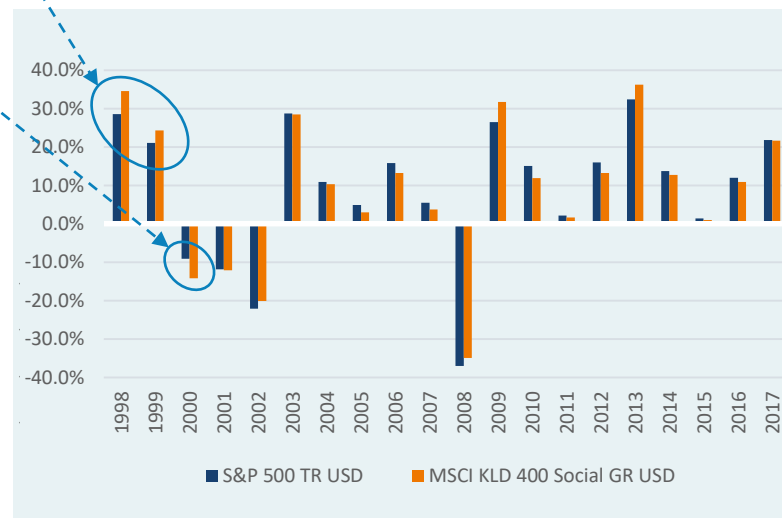
Performance

- Performance impact of ESG screens over the long term has been difficult to discern. However, performance may differ significantly over short time frames, primarily due to sector differences.
- Over short time periods, screens can either benefit or hurt performance.
- During the technology bull market of the late 1990's, there was a performance benefit for funds which had an underweight to energy and an overweight to technology.
- However, that same exposure hurt performance in 2000.

ANNUALIZED PERFORMANCE AS OF 12/31/2017



CALENDAR YEAR PERFORMANCE



Source: Social Investment Forum Foundation

Source: MPI

The difference is sector weights

The evidence of performance impact from negative screens

The MSCI KLD 400 Social Index is based on the methodology used by MSCI for index construction and maintenance.

First step: The index screens out companies involved in:

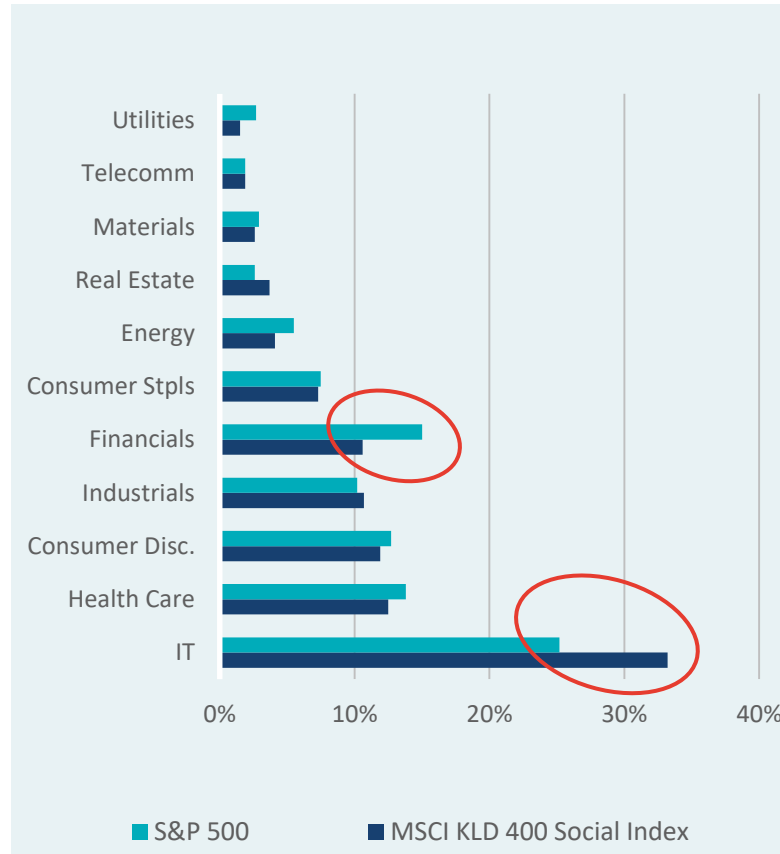
- Nuclear Power
- Tobacco
- Alcohol
- Gambling
- Military Weapons
- Civilian Firearms
- GMOs
- Adult Entertainment.

Second step: Additions are made from the list of eligible companies based on considerations of ESG performance, sector alignment and size representation.

The MSCI KLD 400 Social Index is designed to maintain similar sector weights as the MSCI USA Index and targets a minimum of 200 large and mid-cap constituents.

Companies that are not existing constituents of The MSCI KLD 400 Social Index must have an MSCI ESG Rating above 'BB' and an Impact Monitor Score greater than 2 to be eligible.

SECTOR COMPARISON 12/31/2015



The performance impact will be most observable during periods of strong positive or negative sector performance where the greatest over and under weights exist.

More cyclical, or value-oriented, sectors are generally underweighted.

On September 1, 2010 the FTSE KLD indexes transitioned to the MSCI ESG Indexes. The former KLD indexes had multiple third-party index calculators over time. Consequently the MSCI ESG index histories have been aggregated and compiled to create a continuous time series from a variety of sources—sources which may have followed different index calculation methodologies in some instances. The MSCI ESG Indexes use ratings and other data supplied by MSCI ESG Research Inc, a subsidiary of MSCI Inc.

Broad description of implementation

Criteria used for the strategies within the Foundation's portfolios

No, or minimal, ESG integration

- Investment strategies which do not have an ESG policy.

Formalized integration of ESG

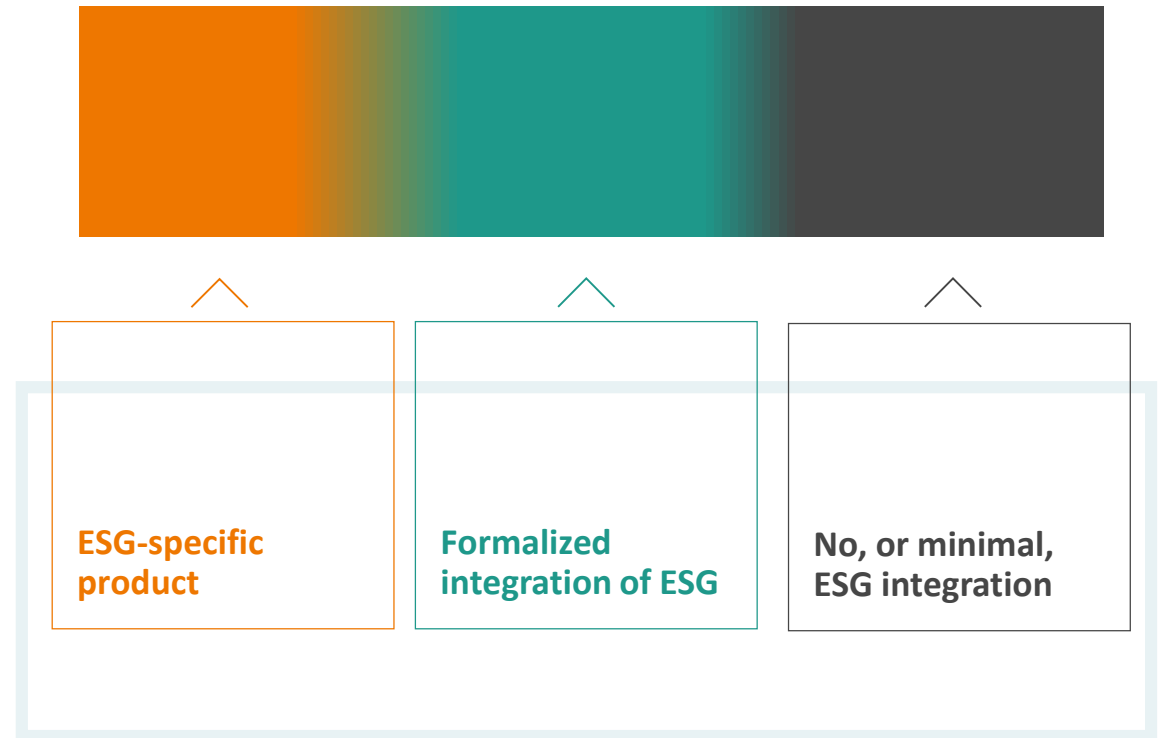
- Investment strategies which have a formalized written ESG policy and can explain how it is incorporated into their investment process.

ESG-specific product

- An additional step beyond the integration of ESG.
- The investment strategy will incorporate values-based exclusion criteria and may incorporate ESG/Sustainability themes into the portfolio construction process.

Quantitative and index strategies

- ESG can be incorporated into proxy voting and potentially into quantitative risk factors.



Two primary approaches

INTEGRATION/VALUE/RISK-BASED

Incorporates ESG value-oriented evaluation into the investment process.

- ESG factors are used to identify financial or headline risk
- ESG factors are used to identify financial opportunities
- ESG factors are considered when determining the appropriate valuation for a security
- May hold “ESG-ugly” securities if the manager believes the valuation reflects the risks
- May focus on engagement, rather than exclusion

THEME BASED/VALUES/ESG-SPECIFIC

Incorporates ESG values-oriented exclusions/screening and evaluation into the investment and portfolio construction process.

- Reducing carbon emissions
- Lessening, or solving, water stress
- Investing inline with religious beliefs
- Support increasing diversity
- Support for affordable housing
- Investing inline with environmental beliefs
- Excluding firearms

Overview of roles and processes

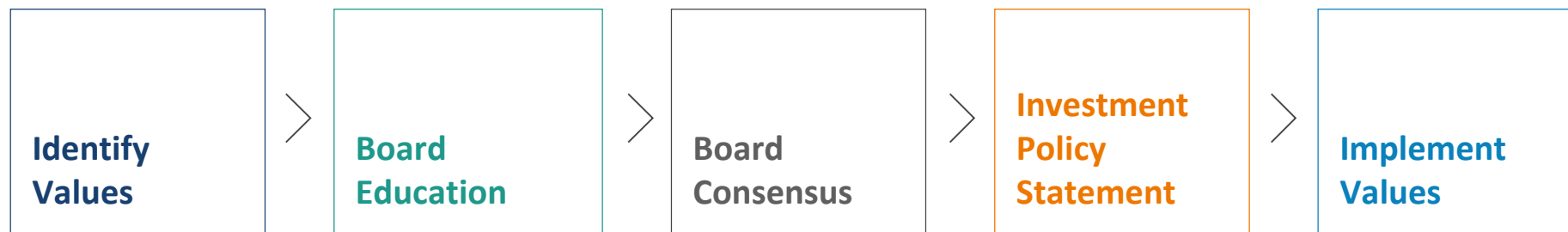
It is helpful to understand the roles and the overall process as an institution evaluates ESG/impact investing.

Roles

- Board/Staff: Identify values
- Investment Consultant: Education
- Board: Approve investment policy statement (IPS) with specific approach/criteria
- Board/Investment Committee: Implement

Process

- There are a number of appropriate steps to be taken prior to implementation of a specific ESG/Impact Investing program as shown below



SLOCPT manager policies

SLOCPT's investment strategies

Level of ESG implementation



- None

Formalized ESG integration

- Loomis Sayles Large Cap Growth
- Boston Partners Disciplined Value
- Dodge & Cox International Stock
- WCM International Growth
- BlackRock Core Bond
- Dodge & Cox Income
- Brandywine Global Fixed Income
- Ashmore EM Debt
- JP Morgan Core Real Estate
- ARA Strategic Value
- HarbourVest Partners
- Pathway Private Equity
- TSSP Private Credit

No-to-minimal ESG integration

- PIMCO RAE Fundamental PLUS
- Atlanta Capital Management
- Pacific Asset Corporate Loan
- Gresham MTAP Commodity Builder

Most of SLOCPT's 17 active managers have formally integrated ESG principles into their investment process to some degree.

PIMCO RAE Fundamental PLUS

Although Research Affiliates has an ESG policy and several ESG-specific investment strategies, the RAE Fundamental PLUS strategy utilized by SLOCPT does not utilize specific ESG criteria in its investment process.

Company Statement

Research Affiliates and our affiliated entities support investors who wish to promote responsible environmental management, active social engagement, and good governance practices (ESG) with their investment choices.

As an investment strategy provider, Research Affiliates is eager to offer investment strategies that meet a diverse set of investor preferences while delivering superior expected investment returns over a full investment cycle. We embrace the importance of ESG investing and contribute to this space through our own dedicated research, through the development of investment strategies that incorporate ESG factors into our investment processes, and by engaging with our partners and clients on the topic of ESG investing.

Excerpt from full policy document contained in Appendix

Loomis Sayles Large Cap Growth

Company Statement

A long investment time horizon is central to our philosophy because we approach investing as if we are buying into a private business. With an owner's mindset, we seek to develop a deep understanding of the drivers, opportunities, and limits of each company, including material ESG elements, through our disciplined and thorough bottom-up fundamental analysis. Our proprietary seven-step research framework is the cornerstone of our investment decision-making process and drives our security selection. Our valuation analysis, which is at the heart of our research and decision-making, is only as good as our ability to understand and identify high-quality companies and evaluate the sustainability of profitable growth. As with all components of our rigorous research, we seek to understand the impact of material ESG elements on the sustainability of a company's competitive advantages, its intrinsic value, and ultimately long-term investment performance. We believe our integrated approach to ESG aligns with our research framework and our fiduciary duty to our investors.

Excerpt from full policy document contained in Appendix

Boston Partners Disciplined Value

Company Statement

Boston Partners is a signatory to the United Nations Principles for Responsible Investment. Boston Partners' investment process has always stressed investment in companies with good fundamental characteristics, including sustainability, environmental, social and governance factors.

Every part of our investment process, including ESG/Sustainability considerations, is executed solely in the best interests of our clients.

Excerpt from full policy document contained in Appendix

Atlanta Capital Management

No formal policy

Company Statement

The Atlanta Capital Core Equity products are not explicitly managed as “ESG” products. However, we do believe that the high-quality companies we invest in typically have a strong and positive bias toward ESG related issues. On average, high quality businesses will typically have management teams that realize it is in the shareholders’ best interest to have strong governance standards, sound social policies, and environmental policies that can benefit long-term results while limiting potential litigation risks.

Dodge & Cox International Stock

Company Statement

Analysis of Environmental, Social, and Governance (ESG) factors has been an important element of Dodge & Cox's investment review process for many years. We analyze many factors, including ESG factors, on a company-by-company basis to determine whether they are material to a company's risk/reward profile.

Excerpt from full policy document contained in Appendix

WCM International Growth

Company Statement

Our ESG policy is driven by a commitment to our fiduciary responsibility to do everything in the best interests of our clients, and therefore also be a responsible allocator of capital. In that context, our goal of consistently outperforming benchmarks while moderating risk requires that we consider the full range of factors, including ESG, during our assessment of a company's attractiveness as a long-term portfolio partner. In particular, our insistence on finding strengthening competitive advantages (an "economic moat" with a positive "moat trajectory") coupled with effective, moat-complementary corporate cultures means that our policy is, de facto, to prefer management teams exhibiting comprehensive, balanced, and thoughtful approaches to overall business risk management, including ESG matters.

Excerpt from full policy document contained in Appendix

BlackRock Core Bond

Company Statement

At BlackRock, we define ESG integration as the practice of incorporating material environmental, social, and governance (ESG) information into investment decisions in order to enhance risk-adjusted returns. To us, integrating ESG information, or sustainability considerations, should be part of any robust investment process and means adapting our research and core investment processes to account for additional sources of risk and return that are explained by ESG information. ESG integration is relevant for all asset classes and styles of portfolio management, public and private markets, and alpha-seeking and index strategies. In alpha-seeking strategies, we can use ESG information when conducting research and due diligence on new investments, and again when monitoring investments in a portfolio. The firm's investment professionals assess a variety of economic and financial indicators, which can include ESG issues, to make investment decisions appropriate for our clients' objectives. Our approach to ESG integration is to broaden the total amount of information our investment professionals consider in order to improve investment analysis, seeking to meet or exceed economic return and financial risk targets.

Excerpt from full policy document contained in Appendix

Dodge & Cox Income

Same as Dodge & Cox International Stock

Excerpt from full policy document contained in Appendix

Pacific Asset Corporate Loan

Formal policy under development

Company Statement

While Pacific Asset Management does not have a formal ESG policy, we, along with our parent company Pacific Life, have recognized the importance of sustainable values and strong corporate governance in strategic business decisions and credit research. As a result, we are currently engaged in evaluating resources and expect to add both information and human capital in an effort to formalize firm ESG policies. This process is taking place in the second half of 2019.

Brandywine Global Fixed Income

Company Statement

Our mission first and foremost is to provide clients with investment strategies that meet their needs and deliver strong risk-adjusted, long-term performance. As fiduciaries and responsible stewards of our clients' assets, we employ a disciplined investment process that seeks to both uncover opportunities and evaluate potential risks while striving for the best possible return outcomes within our investment guidelines. Consistent with these objectives, our process includes an integrated evaluation of environmental, social, and governance (ESG) factors. We recognize that relevant and material ESG issues can meaningfully affect investment performance, and these factors are critical components of our integrated research analysis, decision-making, and ongoing monitoring.

Rather than an adjunct consideration, ESG factors are fully integrated into the investment teams' decision-making and are a central part of their research. We believe this holistic approach to assessing risk and opportunity enhances our investment process.

Excerpt from full policy document contained in Appendix

Ashmore EM Debt

Company Statement

Environmental, Social and Governance (ESG) risk analysis is explicitly integrated into our bottom up process across all our Fixed Income and Equity strategies. Our process is fundamental-driven and our issuer analysis encompasses a multitude of factors, including ESG.

Our assessment of an issuer's ability to manage ESG successfully is integral to our determination of fair value (equity) and fair spread (credit). Both governments and corporate management teams that can demonstrate strong ESG credentials are more likely to boost economic development and financial performance over time; for example by growing faster, reducing the cost of capital and generally managing risks better compared to their peers. Consequently, ESG factor analysis is integrated into our investment process in the same way as we assess macroeconomic risk, financial performance and credit metrics. It acts as both a form of risk management and a source of alpha generation. We also consider it part of our fiduciary duty as stewards of our clients' capital.

Excerpt from full policy document contained in Appendix

JP Morgan Core Real Estate

Company Statement

J.P. Morgan Asset Management – Real Estate Americas believes that continuous improvement of our assets with respect to Environmental, Social, and Governance (ESG) policies will ultimately improve the environment in which those assets exist and, more importantly, enhance their competitiveness and asset value.

We integrate ESG into every investment decision and have fully integrated these sustainability objectives into our overall business strategy. Sustainability issues are identified and quantified as part of our real estate asset investment due diligence process, not only as a prerequisite for responsible investing, but also as a tool to identify and mitigate potential risks.

Excerpt from full policy document contained in Appendix

ARA Strategic Value

Company Statement

At ARA, we believe including ESG principles improves our ability to meet commitments to our clients, as well as to align our investment activities with the broader interests of society. Our ESG program is focused on increasing the value of our portfolios, while creating healthier building environments, reducing operating costs, and minimizing resource use for the benefit of all stakeholders.

Excerpt from full policy document contained in Appendix

Gresham MTAP Commodity Builder

Commodities strategies are not conducive to ESG integration

Company Statement

General ESG criteria can be reasonably applied to the equity markets; by avoiding investments in companies that have a large carbon footprint, lack sufficient diversity, or have abusive labor practices for example. These same screens can be extended to the credit market pretty linearly with additional considerations for sovereign issuers such as human rights violations or corruption. Within commodity markets, applying the ESG lens is not as straightforward, and while the UN has raised high-level concerns around the scarcity of finite resources, climate change, and other ESG issues associated with commodity production, formulating screens based on these concerns and incorporating them into investment decisions is a particularly difficult proposition for our investment strategies.

Excerpt from full policy document contained in Appendix

HarbourVest Partners

Company Statement

HarbourVest views ESG as an integral part of its business and has sought to integrate core ESG principles across its investment processes, in ongoing monitoring and reporting to key stakeholders, and across its corporate culture globally. The Firm's ESG Policy formalizes its longstanding view of considering all stakeholders in investment and management decisions. By focusing on ESG, the Firm believes it can take a high-performing asset class – private equity – and improve it further. HarbourVest strives to ensure that it operates in an aligned and ethical fashion that considers the potential impact its investment and operational decisions could have. The Firm also has appropriate governance structures in place to help ensure consistent implementation across the organization, and to help drive better risk-adjusted returns.

Excerpt from full policy document contained in Appendix

Pathway Private Equity

Company Statement

Pathway Capital Management, LP (“Pathway” or the “Company”), is committed to a policy designed to integrate environmental, social, and governance (“ESG”) issues into its business practices where the Company can promote, influence, or implement change to create more-sustainable markets while fulfilling its fiduciary duty to its clients/investors. Pathway is committed to developing a culture of responsible investing that influences its due diligence process for evaluating investment opportunities, the decision-making process of its Investment Committee, and the active monitoring of each client/investor investment portfolio.

Excerpt from full policy document contained in Appendix

TSSP Private Credit

Company Statement

TSSP considers various Environmental, Social, and Governance (ESG) factors as part of its investment process. Sustainability issues may have a material influence on TSSP's assessments of risk, valuation, profitability, and opportunity, across its portfolio. However, given the typical nature of our investments (debt, or non-controlling equity), we will likely have limited influence over the ESG policies of a company in our portfolio. Nevertheless, we believe identifying ESG risks is an integral part of good underwriting.

Excerpt from full policy document contained in Appendix

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Board of Trustees

1000 Mill Street
San Luis Obispo, CA 93408
Phone: (805) 781-5465
Fax: (805) 781-5697
www.SLOPensionTrust.org



Date: August 26, 2019

To: Board of Trustees

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

Agenda Item 10: Private Markets – Program Review and 2019 Commitment Recommendation

Recommendation:

Review and discuss the attached Verus presentation on the Private Markets (Private Equity and Private Credit).

Approve an additional \$20 million commitment to Private Equity to the Pathway Fund 10 (2019) private equity fund-of-funds.

Discussion:

The attached presentation from Verus is the annual review of private equity and private credit. A steady annual addition to private market allocations is necessary to move the actual portfolio allocation close to the Strategic Asset Allocation Policy targets (5% Private Equity and 5% Private Credit).

Private Equity - This recommendation is to make an added \$20 million commitment to private equity in 2019 with the Pathway Fund 10. The Pension Trust has an existing commitment from 2017 to the Pathway Fund 9 so this commitment is an extension of that strategy.

Private Credit – Maintain the current commitment to the TPG – Diversified Credit Program custom fund-of-funds.

Respectfully submitted

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**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**



AUGUST 2018

Private markets program review

San Luis Obispo County Pension Trust

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VERUSINVESTMENTS.COM

SEATTLE 206-622-3700

LOS ANGELES 310-297-1777

SAN FRANCISCO 415-362-3484

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Private Equity **PAGE 8**

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***Past performance is no guarantee of future results.** This document is provided for informational purposes only and is directed to institutional clients and eligible institutional counterparties only and is not intended for retail investors. Nothing herein constitutes investment, legal, accounting or tax advice, or a recommendation to buy, sell or hold a security or pursue a particular investment vehicle or any trading strategy. This document may include or imply estimates, outlooks, projections and other “forward-looking statements.” No assurance can be given that future results described or implied by any forward looking information will be achieved. Investing entails risks, including possible loss of principal. Verus Advisory Inc. and Verus Investors, LLC (“Verus”) file a single form ADV under the United States Investment Advisors Act of 1940, as amended. Additional information about Verus Advisory, Inc. and Verus Investors, LLC is available on the SEC’s website at www.adviserinfo.sec.gov. Verus – also known as Verus Advisory™ or Verus Investors™.*

Executive summary

Private Equity

- SLOCPT's private equity program comprises 2.8% of the total fund relative to its 5% policy target.
- The program utilizes two managers (HarbourVest and Pathway) in a multi-series global fund structure to gain sector, geographic, and vintage year diversification.
- The program has performed well since inception.
- Cash flow projections indicate additional capital commitment to private equity is appropriate.

Private Credit

- SLOCPT's private credit program comprises 3.8% of the total fund relative to its 5% policy target.
- The private credit program was initiated through a single-platform, multi-fund structure.
- The program began with a \$75million commitment to three separate funds in 2016. An additional commitment of \$20million to a fourth fund was approved in late 2018.
- The fund has ramped up quickly and has exceeded performance expectations.
- Due to the evergreen nature of the program new commitments are not necessary, although roll-forward commitments are recommended.

I. Overview

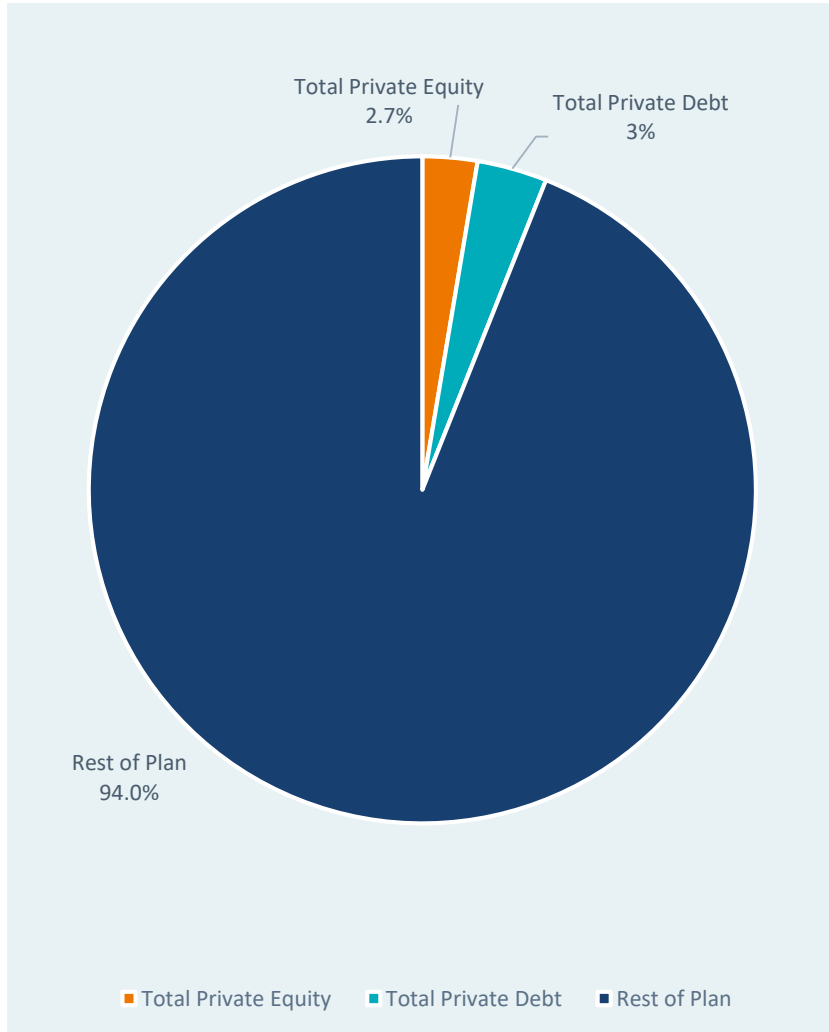
Portfolio allocation

Asset Class	Policy	Current (3/31/18)
Domestic Equity	20%	20.4%
International Equity	20%	22.0%
Core Plus Fixed Income	15%	14.6%
Bank Loans	5%	5.5%
Global Fixed Income	5%	4.9%
Emerging Markets Debt	5%	5.3%
Core Real Estate	10%	12.5%
Value-Add Real Estate	5%	2.4%
Commodities	5%	3.3%
Private Equity	5%	2.8%
Private Credit	5%	3.8%
Opportunistic	0%	0.3%
Cash	0%	1.8%

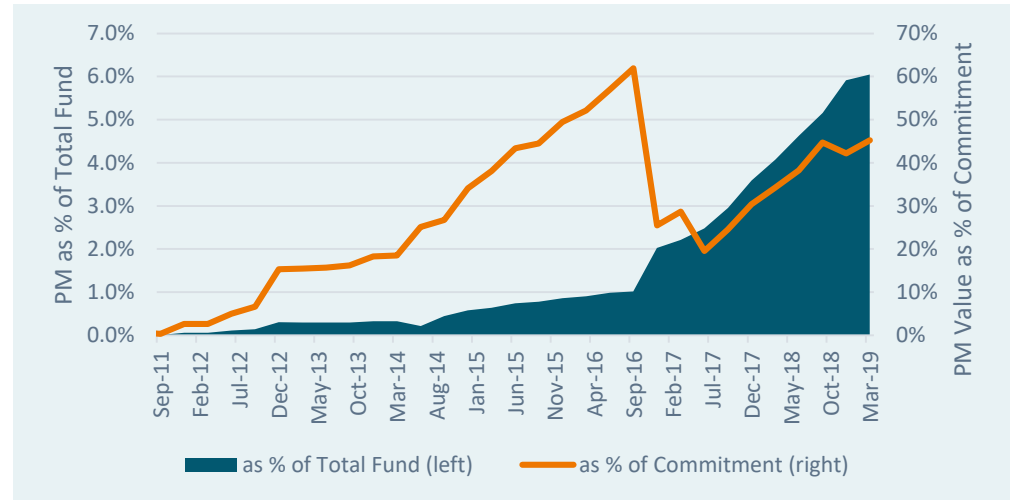
**Opportunistic is composed of KKR Mezzanine and PIMCO DCF, Cash also includes cash overlay manager Parametric Clifton*

Private markets program at a glance

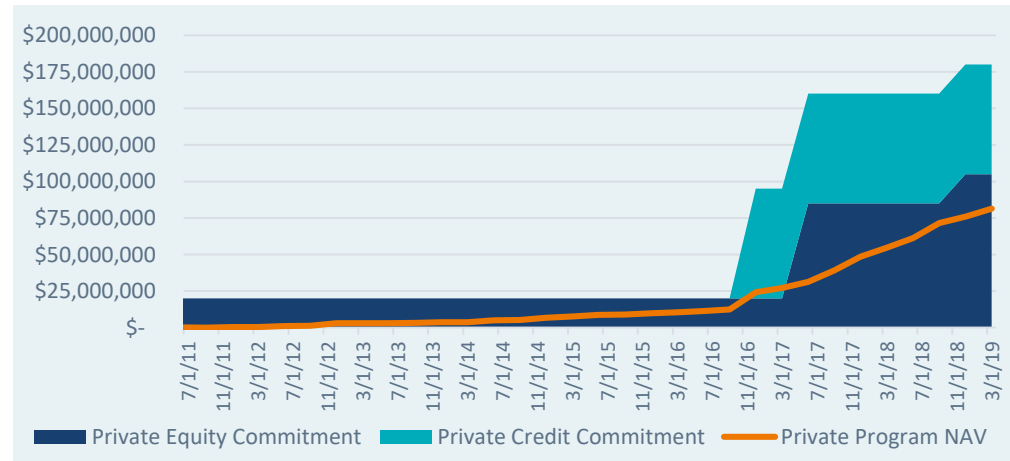
PRIVATE MARKETS AS % OF TOTAL FUND



PRIVATE MARKETS VALUE AS % OF COMMITMENT AND TOTAL FUND



PRIVATE MARKETS TOTAL COMMITMENT AND CURRENT VALUE



As of 3/31/19

Current private markets holdings

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.	\$14,866,449	\$20,000,000	\$16,550,000	83%	\$3,450,000	\$11,534,181	\$14,722,927	69.7%	159.5%	17.9%	3/31/19
2018	HarbourVest Partners 2018 Global Fund L.P.	\$1,427,318	\$20,000,000	\$1,400,000	7%	\$18,600,000	-	-	-	-	-	-
2010	KKR Mezzanine Partners I L.P. ⁶	\$4,348,928	\$20,000,000	\$20,000,000	100%	\$0	\$29,566,840	\$4,348,928	147.8%	169.6%	8.2%	3/31/19
2010	PIMCO Distressed Credit Fund ⁴	\$102,221	\$20,000,000	\$20,000,000	100%	\$0	\$27,950,093	\$102,221	139.8%	140.3%	12.3%	3/31/19
2016	TPG Diversified Credit Program	\$52,277,257	\$75,000,000	\$50,546,852	67%	\$24,453,148	\$4,551,021	\$47,249,704	9.0%	112.4%	9.2%	3/31/19
2017	Pathway Private Equity Fund Investors 9 L.P.	\$22,698,714	\$65,000,000	\$22,990,704	35%	\$42,009,296	\$243,599	-	1.1%	99.8%	-	-
Total Alternative Illiquids		\$95,720,887	\$220,000,000	\$131,487,556	60%	\$88,512,444	\$73,845,734	\$66,423,780	50.5%	106.7%		
% of Portfolio (Market Value)		6.9%										

	Management Fee	Admin Fee	Interest Expense	Other Expense	Total Expense ⁷
HarbourVest Partners IX-Buyout Fund L.P.	\$49,795	\$0	\$0	\$16,544	\$66,339
HarbourVest Partners 2018 Global Fund L.P.	\$23,500	\$0	\$0	\$13,525	\$37,025
KKR Mezzanine Partners I L.P.	\$15,688	\$0	\$0	\$7,596	\$23,284
PIMCO Distressed Credit Fund ⁴	\$0	\$0	\$0	\$1,496	\$1,496
TPG Diversified Credit Program	\$31,754	\$0	\$0	\$0	\$31,754
Pathway Private Equity Fund Investors 9 L.P.	\$66,250	\$0	\$0	\$0	\$66,250
	\$186,987	\$0	\$0	\$39,161	\$226,148

¹(DPI) is equal to (capital returned / capital called)

²(TVPI) is equal to (market value + capital returned) / capital called

³Last known market value + capital calls - distributions

⁴Investment period ended, no further capital to be called.

⁵Net 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.

⁶KKR: As of 2Q2019, 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

⁷All fees and expenses are for 1Q 2019, except for Pathway, for which 4Q18 fees are shown.

Excerpt from SLOOPT'S 6/30/19 performance report. Private equity holdings data are reported on a lagged cycle and are reflective of the last known values at the time of the report.

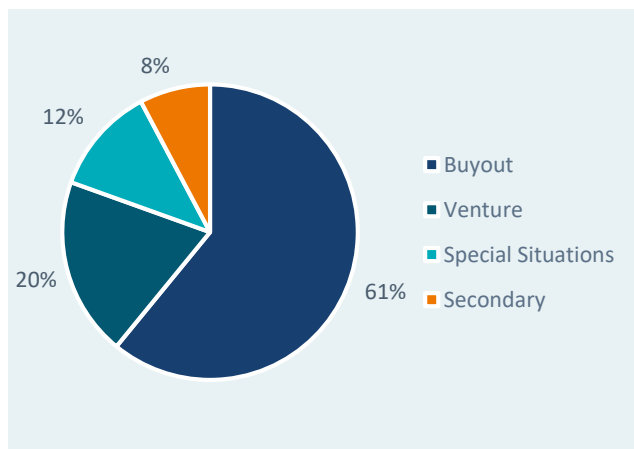
KKR Mezzanine, PIMCO DCF are categorized as Opportunistic within SLOOPT's investment policy and are not part of this study.

II. Private equity

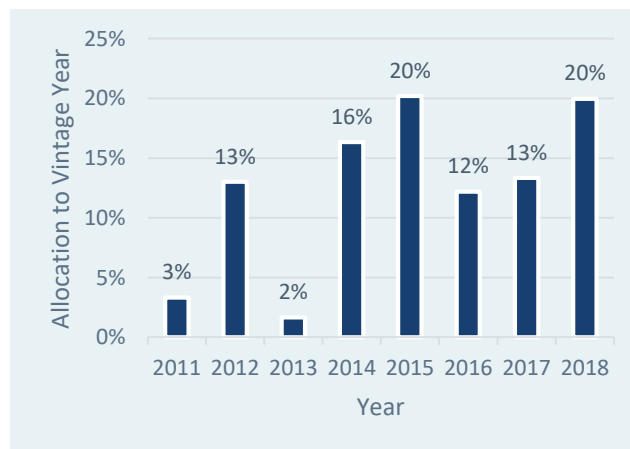
Diversification within the PE program

- The program is diversified across three funds, two managed by HarbourVest and one by Pathway.
- Currently, the largest allocation is to Pathway Fund 9.
- The program currently spans 8 vintage years with the highest concentration in year 2015 (a function of HarbourVest deploying a large allocation into funds) and 2018 (a function of Pathway deploying the bulk of its funds).
- Leveraged Buyouts make up most of the program, with a caveat. Underlying secondary investments can actually be categorized as buyout, venture, credit, etc. We include secondaries as a strategy/stage type because fund managers will allocate to second-hand deals to mitigate the j-curve or to pick up an undervalued asset with high upside potential.

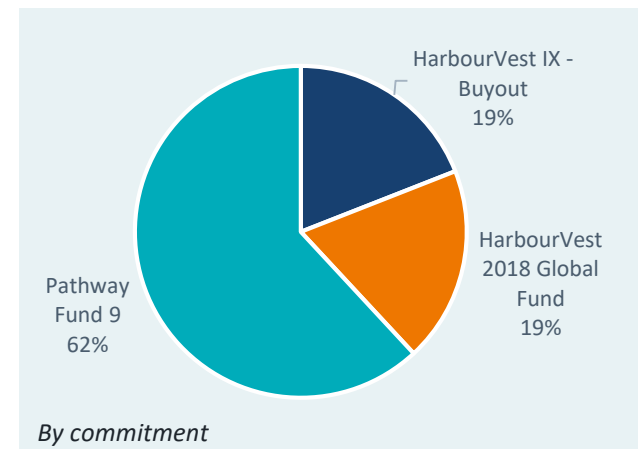
STRATEGY/STAGE DIVERSIFICATION



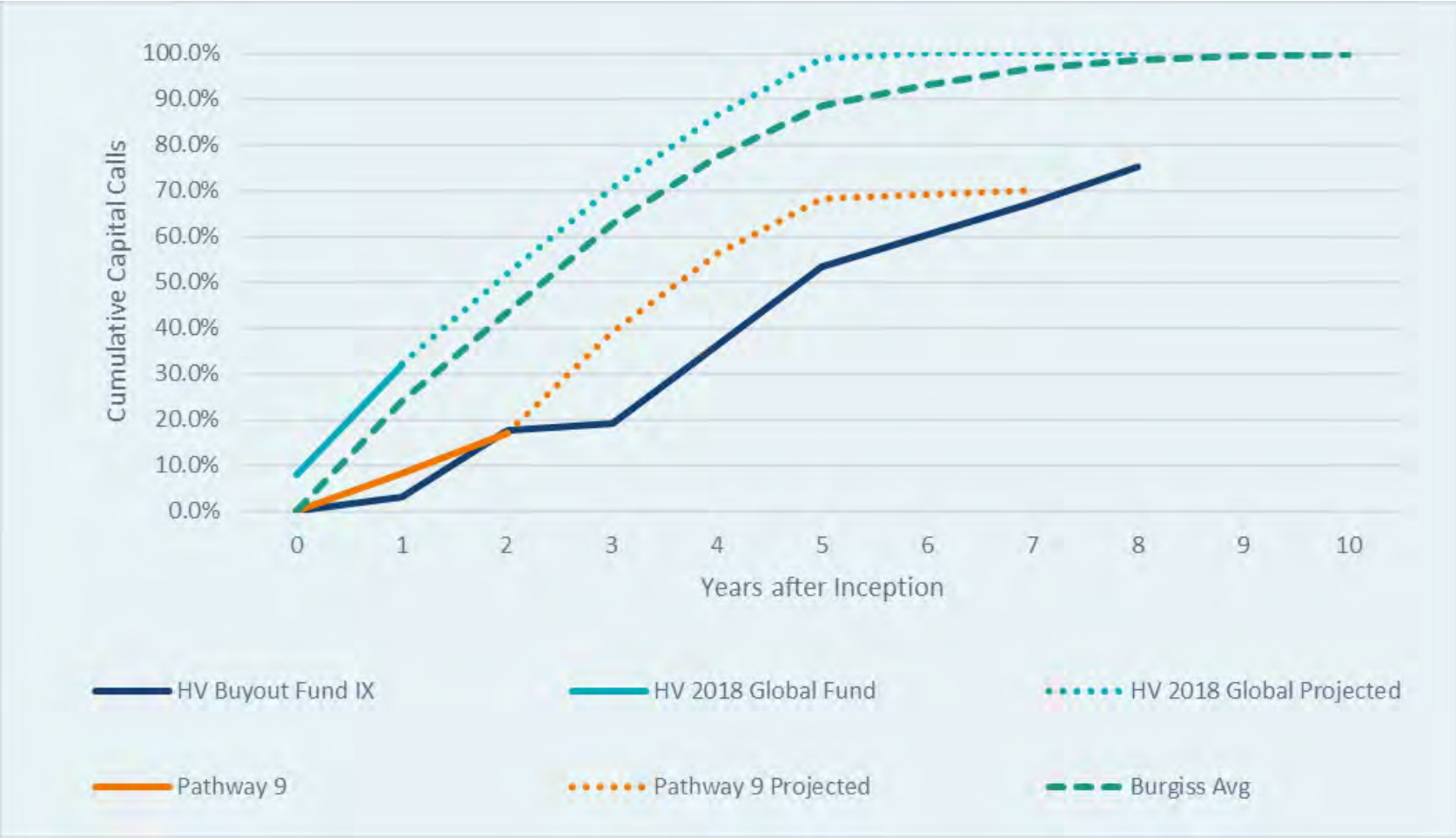
VINTAGE YEAR DIVERSIFICATION



MANAGER DIVERSIFICATION



Capital call pace



Projected figures based on capital call projections as of 3/31/19

Program fees

	HarbourVest Fund IX Buyout	Pathway 9	HarbourVest 2018 Global Fund
Commitment	\$20,000,000	\$65,000,000	\$20,000,000
Vintage Year	2011	2017	2018
Year 1	0.25%	0.15%	0.45%
Year 2	0.50%	0.35%	0.66%
Year 3	0.75%	0.55%	0.88%
Year 4	1.00%	0.77%	0.88%
Year 5	1.00%	0.82%	0.88%
Year 6	1.00%	0.82%	0.88%
Year 7	1.00%	0.82%	0.88%
Year 8	1.00%	0.82%	0.88%
Year 9	1.00%	0.75%	0.66%
Year 10	1.00%	0.67%	0.45%
Year 11	0.90%	0.59%	0.22%
Year 12	0.81%	0.51%	0.13%
Average	0.85%	0.63%	0.65%

Total lifetime private equity program costs average to about 67 bps¹

1. Calculation is cap-weighted based on commitment amounts of current funds.

Private equity performance as of 3/31/19

Fund	Net IRR	PME Return	PME Benchmark
HarbourVest Fund IX – Buyout	17.0%	10.4%	S&P 500
		9.1%	Russell 2000
Pathway 9	4.8%*	8.9%	S&P 500
		5.4%	MSCI World

Public Market Equivalent – This information represents adjusted model performance of each index as if the respective index had been purchased and sold at the time of the limited partners’ capital calls and distributions, with the remainder held at the date noted. Dividends are not reinvested. Under this methodology, the capital calls for the purchase of the public market index are the same as the capital calls for the Fund(s). The distributions for the sales of the public market index are scaled to represent the same proportion of the Fund’s NAV at the time of the distribution. For example, if the Fund distributes 5% of NAV, then 5% of the index NAV is distributed. Thus, the index returns presented are not actual index returns, but adjusted model returns. In certain instances, the comparison is based on the PME+ (public market equivalent) method as described in an article titled, “Beating the Public Market,” by Christophe Rouvinez, as published in the Private Equity International in December 2003 / January 2004. When using this methodology, both the Fund and the adjusted index are assumed to have the same ending NAV. The ending NAV for the adjusted index is derived by scaling the distributions by a constant scaling factor, while preserving the overall cash flow pattern.

Source: Harbourvest, Pathway

Note: Pathway’s returns are not meaningful this early in the fund’s life

Private equity projections

Fund	Vintage Year	Commitment	Remaining Commitment	Cumulative To Date	(Contributions) / Distributions							
					2019	2020	2021	2022	2023	2024	2025	
HarbourVest IX Buyout	2011	\$20.00	\$3.95									
Contributions (%)				(80%)	(12%)	(5%)	(3%)					
Distributions (%)				28%	20%	25%	23%	22%	17%	14%	8%	
Contributions (\$)				(\$16.1)	(\$2.4)	(\$1.0)	(\$0.6)					
Distributions (\$)				\$5.6	\$4.0	\$5.0	\$4.6	\$4.5	\$3.5	\$2.9	\$1.6	
Net Cash Flow					\$1.6	\$4.0	\$4.0	\$4.5	\$3.5	\$2.9	\$1.6	
NAV				\$13.7	\$14.8	\$12.7	\$10.2	\$7.0	\$4.5	\$2.2	\$0.8	
HarbourVest 2018 Global Fund	2018	\$20.00	\$18.60									
Contributions (%)				(7.0%)	(24.3%)	(19.6%)	(18.9%)	(15.7%)	(12.5%)	(1.0%)		
Distributions (%)				0.0	4.2%	6.7%	10.6%	15.3%	25.0%	35.0%	19.8%	
Contributions (\$)				(\$1.4)	(\$4.9)	(\$3.9)	(\$3.8)	(\$3.1)	(\$2.5)	(\$0.2)		
Distributions (\$)				\$0.0	\$0.8	\$1.3	\$2.1	\$3.1	\$5.0	\$7.0	\$4.0	
Net Cash Flow					(\$4.0)	(\$2.6)	(\$1.7)	(\$0.1)	\$2.5	\$6.8	\$4.0	
NAV				\$1.4	\$5.6	\$9.0	\$12.1	\$14.0	\$13.7	\$9.0	\$6.4	
Pathway 9	2017	\$65.00	\$42.86									
Contributions (%)				(34.1%)	(9.0%)	(22.0%)	(17.0%)	(12.0%)	(1.0%)	(1.0%)	(1.0%)	
Distributions (%)				3.3%	3.0%	6.0%	9.0%	12.0%	19.4%	19.4%	19.4%	
Contributions (\$)				(\$22.1)	(\$5.9)	(\$14.3)	(\$11.1)	(\$7.8)	(\$0.6)	(\$0.6)	(\$0.6)	
Distributions (\$)				\$2.2	\$2.0	\$3.9	\$5.9	\$7.8	\$12.6	\$12.6	\$12.6	
Net Cash Flow					(\$3.9)	(\$10.4)	(\$5.2)	\$0.0	\$12.0	\$12.0	\$12.0	
NAV				\$20.7	\$26.6	\$39.5	\$48.4	\$53.0	\$46.1	\$38.4	\$30.1	
PE Balance		\$105.00	\$65.41	\$35.78	\$46.93	\$61.16	\$70.75	\$74.10	\$64.23	\$49.63	\$37.37	
% of Total Assets				2.7%	3.1%	3.7%	4.1%	4.0%	3.2%	2.3%	1.7%	
Total Plan Assets				\$1,345	\$1,532	\$1,634	\$1,744	\$1,861	\$1,985	\$2,118	\$2,260	

As of 3/31/19

Note: Assumptions for this model are detailed in the appendix.

Pathway Private Equity Fund Investors 10

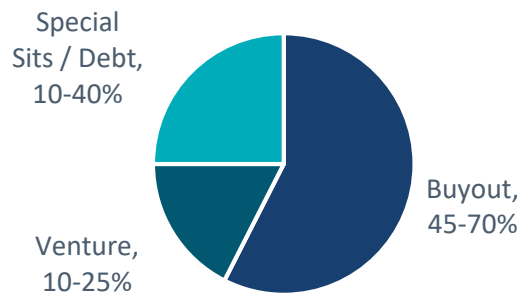
— Investment focus:

- Broadly diversified portfolio of primary, secondary, and direct co-investments
- Investing across all geographies with a focus on North America and Europe

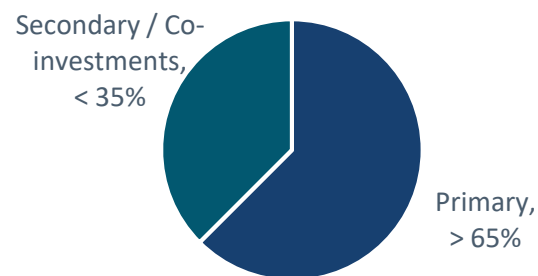
— Fees:

- Estimated average base annual management fee of 64 basis points
- Renewal credit will reduce average annual fee to approximately 60 basis points

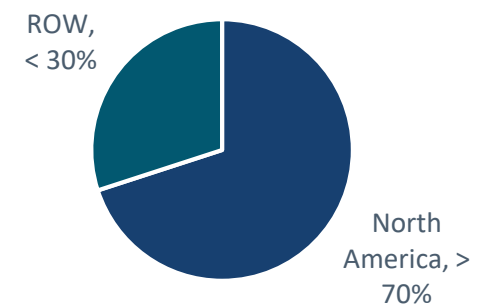
STAGE TARGET ALLOCATION



STRATEGY TARGET ALLOCATION



GEOGRAPHICAL TARGET ALLOCATION



Source: Pathway

Recommendation – Private Equity

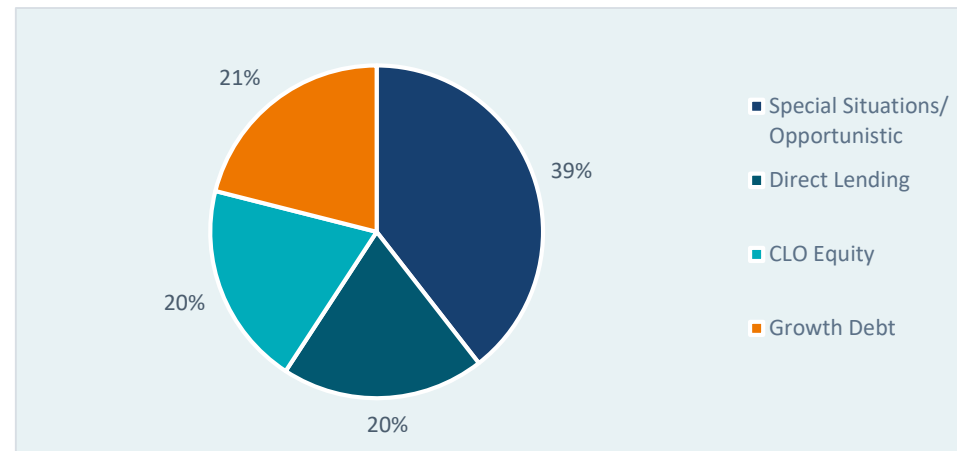
- Commit \$20million to PPEF Investors 10 to maintain vintage year diversification and continue progress to full funding

III. Private credit

Diversification within the PC program

- The private credit program is diversified across 4 TPG platforms including their flagship fund, TAO (broad special situation), TSOE (European lending), TICP (CLO) and TCS (Growth Debt).
- Currently, the private credit program is managed through TPG, with a commitment of \$95,000,000.
- The private credit program is a quasi-evergreen structure where commitments are rolled over into subsequent funds automatically.
- The private credit program was implemented in December 2016 with a commitment of \$75,000,000. An additional \$20,000,000 commitment was added on April 9, 2019 which was allocated to TCS fund, a growth debt strategy

STRATEGY DIVERSIFICATION



Fund descriptions

TAO - focuses on the entire set of credit opportunities generated across the TSSP platform. It is TSSP's most flexible investment vehicle and can house any investment that meets the firm's broad investment criteria.

TSLE - focuses on direct loans to middle-market companies, primarily in Europe.

TICP - focuses on investments in the floating-rate leveraged loan and structured credit markets.

TCS - focuses on providing flexible financing solutions to growth companies (i.e., companies growing faster than the economy that require a high level of investment capital for continued expansion).

Commitment Vintage	Total TSSP \$ 95,000,000		TSLE ^{3,4} \$ 18,750,000 2015		TAO 3.0 ¹ \$ 37,500,000 2016		TICP II ² \$ 18,750,000 2016		TCS ^{3,5} \$20,000,000 2018	
	Unused/ Committed ⁶	Invested	Committed ⁶	Invested ⁶	Unused	Invested	Unused	Invested	Unused	Invested
Year 1	0.76%	1.20%	1.50%	1.50%	0.65%	1.35%	0.00%	0.30%	1.00%	1.50%
Year 2	0.76%	1.20%	1.50%	1.50%	0.65%	1.35%	0.00%	0.30%	1.00%	1.50%
Year 3	0.76%	1.20%	1.50%	1.50%	0.65%	1.35%	0.00%	0.30%	1.00%	1.50%
Year 4	0.76%	1.20%	1.50%	1.50%	0.65%	1.35%	0.00%	0.30%	1.00%	1.50%
Year 5	0.63%	1.15%	0.85%	1.25%	0.65%	1.35%	0.00%	0.30%	1.00%	1.50%
Year 6	0.26%	1.15%	0.00%	1.25%	0.65%	1.35%	0.00%	0.30%	0.00%	1.50%
Year 7	0.00%	1.15%	0.00%	1.25%	0.00%	1.35%	0.00%	0.30%	0.00%	1.50%
Year 8	0.00%	1.15%	0.00%	1.25%	0.00%	1.35%	0.00%	0.30%	0.00%	1.50%
Year 9	0.00%	1.15%	0.00%	1.25%	0.00%	1.35%	0.00%	0.30%	0.00%	1.50%
Year 10	0.00%	1.15%	0.00%	1.25%	0.00%	1.35%	0.00%	0.30%	0.00%	1.50%
Year 11	0.00%	0.53%			0.00%	1.35%				
Average	0.36%	1.12%	0.69%	1.35%	0.35%	1.35%	0.00%	0.30%	0.50%	1.50%

Note: For illustrative purposes only. Commitment periods are based on TSSP's views and are subject to change. Furthermore, the above table is a simplification. Please refer to fund documentation for the complete terms and definitions.

1 Assumes termination of TAO 3.0 after Minimum Commitment Period of 5.5 years, with subsequent wind down of portfolio lasting 5 years.

2 Assumes 10 year fund life for TICP II.

3 Assumes wind down of portfolio lasts 5 years.

4 TSLE Year 5 includes adjustment for one year commitment period extension.

5 DCP commitment to TCS was made in April 2019, analysis above shows all fund commitments beginning in "Year 1".

6 During TSLE commitment period (before 1 year extension), management fees are calculated based on LP fund commitments. To accurately represent fees for DCP, we have included them in Total TSSP for both the unused/committed and invested columns.

Private credit performance

TSSP Vehicle	Net IRR	PME Return	PME Benchmark ¹
TAO 3.0	10.8%	3.0%	S&P/LSTA Lev Loan ³
		3.3%	Credit Suisse Lev Loan ⁴
TICP II ⁵	8.0%	3.7%	S&P/LSTA Lev Loan
		3.9%	Credit Suisse Lev Loan
TSLE	14.6%	2.9%	S&P/LSTA Lev Loan
		3.2%	Credit Suisse Lev Loan
TCS (A)	3.9%	0.2%	S&P/LSTA Lev Loan
		0.6%	Credit Suisse Lev Loan

Note: Unless otherwise noted, all performance numbers are as of 3/31/19. Past performance does not guarantee future results, which may vary.

1. The benchmark numbers above are presented as a Public Market Equivalent ("PME") analysis based on the actual timing of net cash flows in the TSSP vehicles. For TAO 3.0 and TSLE, the investor's individual net cash flows were used. For the remaining TSSP vehicles, net cash flows for the fund since inception were used. Index performance has been adjusted to include 75bps impact from management fees, as these indices cannot be accessed directly. Please refer to the disclaimers at the beginning of this presentation for additional disclosure regarding the use of benchmark indices.

2. For TAO 3.0, the Gross IRR calculation is based on the investor's individual returns. For the remaining TSSP vehicles, Gross IRR represents fund-level returns.

3. S&P/LSTA Leveraged Loan Total Return Index (Bloomberg Finance).

4. Credit Suisse Leveraged Loan Total Return Index (Bloomberg Finance).

5. Performance numbers for TICP II are as of 6/30/19.

Source: TSSP

Private credit program projections

TSSP Vehicle	Vintage Year	Commitment	(Contributions) / Distributions				
			2H2019	2020	2021	2022	2023
TSLE ²	2015	\$18.75					
Net (Contributions)/Distributions			12.5%	35.0%	22.5%	12.5%	5.0%
High			15.0%	37.5%	25.0%	15.0%	7.5%
Low			10.0%	32.5%	20.0%	10.0%	2.5%
TAO 3.0 ¹	2016	\$37.50					
Net (Contributions)/Distributions			(7.0)%	(5.0)%	(2.5)%	0.0%	1.0%
High			(12.0)%	(10.0)%	(5.0)%	(2.5)%	(1.5)%
Low			(2.0)%	0.0%	0.0%	2.5%	3.5%
TICP II ²	2016	\$18.75					
Net (Contributions)/Distributions			0.0%	15.0%	15.0%	15.0%	40.0%
High			2.5%	17.5%	17.5%	17.5%	45.0%
Low			(2.5)%	12.5%	12.5%	12.5%	30.0%
TCS ¹	2018	\$20.00					
Net (Contributions)/Distributions			(10.0)%	(25.0)%	(25.0)%	(10.0)%	30.0%
High			(15.0)%	(30.0)%	(30.0)%	(15.0)%	25.0%
Low			(5.0)%	(20.0)%	(20.0)%	(5.0)%	35.0%

High/Low represents the range of the net contributions/distributions estimated.

¹ - Represents % of committed capital

² - No incremental capital to be called. Represents % of remaining fund NAV as of 6/30/19

Note: Estimates above are illustrative cash flows that represent TSSP's current estimate based on a number of subjective judgements and current market conditions that are subject to change. No assurance can be given that actual cash flows will not differ from these estimates.

Recommendation – Private Credit

- Continue program by rolling commitments forward for TSLE II and TICP III, as they become available later this year.

Appendix

Assumptions for private equity cash flow model

- Asset Values are represented in millions.
- This is a hypothetical model based on reasonable assumptions and does not reflect actual timing and should not be interpreted as predicting the future.
- Hypothetical cash flows provided by each respective manager with the following exceptions:
- Pathway provided 4 years of projections.
 - The remaining contributions are allocated evenly over six years after Pathway's provided forecast.
 - Remaining distributions calculated assuming the fund returns a total of ~1.5x to investors. The balance of distributions in excess of Pathway's estimate is distributed evenly over six years following the provided forecast.
- IRR over each fund's entire life will be different
- Total Plan assets are assumed to grow at 6.7% per annum based on the May 2019 Asset Allocation study.
- Current MVs are based on last known valuation.
- NAV at future dates are estimated based on cash flows and implied remaining life IRR.
- Cash flows occur at year end.
- NAV at future dates are estimated based on cash flows and growth rates

Board of Trustees

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Date: August 26, 2019

To: Board of Trustees

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

Agenda Item 11: Asset Allocation August 2019

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.

The Pension Trust received the July 15th Employer prefunding of FY19-20 pension contributions, net of credits for unallocated FY18-19 prefunded contributions, of \$55.4. Of this amount, \$25 million was retained for benefit liquidity reserves temporarily increasing the reserves from the required 3 months of benefits to 6 months of benefits. The remaining \$30 million was transferred to the Pension Trust's investment custodian bank. \$6 million was retained for 3Q19 capital calls and \$24 million is being allocated to rebalance closer to target asset mix. The rebalancing transactions were reviewed by Verus and consist of -

Public equities – domestic	+ \$3m to Loomis Sayles + \$3m to Boston Partners + \$2m to PIMCO-Research Affiliates
Public equities – international	+ \$3m to Dodge & Cox Intl. + \$3m to WCM Global
Core Fixed Income	+ \$5m to Dodge & Cox Income + \$5m to BlackRock Core+ Fixed Income

No Board action is planned at this point.

Respectfully submitted

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