



Stanislaus County Employees' Retirement Association

832 12th Street, Ste. 600, Modesto, CA 95354 • PO Box 3150, Modesto, CA 95353 • www.stancera.org • 209-525-6393 • 209-558-4976 Fax

AGENDA

BOARD OF RETIREMENT

832 12th Street Ste. 600, **Wesley W. Hall Board Room**
Modesto, CA 95354

May 28, 2019
1:30 p.m.

The Board of Retirement welcomes you to its meetings, which are regularly held on the fourth Tuesday of each month. Your interest is encouraged and appreciated.

CONSENT/ACTION ITEMS: Consent matters include routine administrative actions and are identified under the Consent Items heading. All other items are considered to be action items "Action" means that the Board may dispose of any item by any action, including but not limited to the following acts: approve, disapprove, authorize, modify, defer, table, take no action, or receive and file.

PUBLIC COMMENT: Matters under jurisdiction of the Board, may be addressed by the general public before or during the regular agenda. However, California law prohibits the Board from taking action on any matter which is not on the posted agenda unless it is determined an emergency by the Board of Retirement. Any member of the public wishing to address the Board during the "Public Comment," period shall be permitted to be heard once up to three minutes. Please complete a Public Comment Form and give it to the Chair of the Board. Any person wishing to make a presentation to the Board must submit the presentation in written form, with copies furnished to all Board members. Presentations are limited to three minutes.

BOARD AGENDAS & MINUTES: Board agendas, minutes and copies of items to be considered by the Board of Retirement are customarily posted on the Internet by Friday afternoon preceding a meeting at the following website: www.stancera.org.

Materials related to an item on this Agenda submitted to the Board after distribution of the agenda packet are available for public inspection at StanCERA, 832 12th Street, Suite 600, Modesto, CA 95354, during normal business hours.

AUDIO: All Board of Retirement regular meetings are audio recorded. Audio recordings of the meetings are available after the meetings at <http://www.stancera.org/agenda>.

NOTICE REGARDING NON-ENGLISH SPEAKERS: Board of Retirement meetings are conducted in English and translation to other languages is not provided. Please make arrangements for an interpreter if necessary.

REASONABLE ACCOMMODATIONS: In compliance with the Americans with Disabilities Act, if you need special assistance to participate in this meeting, please contact the Board Secretary at (209) 525-6393. Notification 72 hours prior to the meeting will enable StanCERA to make reasonable arrangements to ensure accessibility to this meeting.

1. Call Meeting to Order
2. Roll Call
3. Announcements
4. Public Comment
5. Consent Items
 - a. Approval of the April 23, 2019 Meeting Minutes [View](#)
 - b. Monthly Staff Report [View](#)
 - c. Conference Report [View](#)
 - d. Approval of Service Retirement(s) – **Government Code Sections 31499.14, 31670, 31662.2 & 31810**
 1. Allahwerdi, Leada – CSA – Effective 01-29-19
 2. Coggins, Keith – Public Works – Effective 05-31-19
 3. Cox, Bethsue – BHRS – Effective 04-18-19
 4. Espinoza, Rosalie – CSA – Effective 05-04-19
 5. Hash, Henry – Public Works – Effective 05-01-19
 6. Keating, Thomas – City of Ceres – Effective 05-01-19 *
 7. Myers, David – Public Works – Effective 05-20-19
 8. Nevins, Diane – HSA – Effective 05-25-19

5. Consent Items (Cont.)

9. Ormonde, Janice – Sheriff – Effective 05-25-19
10. Owen, Wynn – Treasurer/Tax Coll – Effective 05-02-19
11. Sasges, Judy – Library – 05-01-19
12. Veloz, Nadine – DER – Effective 03-28-19
13. Webster, Noah – Parks and Rec – Effective 05-15-19

** Indicates Safety Personnel*

e. Approval of Deferred Retirement(s) – **Government Code Section 31700**

1. Ambita, Obed – BHRS – Effective 01-12-19
2. Burell, Danielle – CSA – Effective 04-12-19
3. Jackson, Steve – Probation – Effective 01-02-19 *
4. Montgomery, Anne-Marie – Library – Effective 05-31-18
5. Nava, Guadalupe – DCSS – Effective 02-07-19
6. Pulido, Sandra – CSA – Effective 11-21-18
7. Queirolo, Erika – Stan Reg 911 – Effective 01-29-19
8. Ringer, Kimberly – Superior Courts – Effective 02-15-19
9. Sandu, Sandip – Public Defender – Effective 11-15-18
10. Schroeder, Kelle – Ag Comm – Effective 12-28-18
11. Soito, Eric – CSA – Effective 01-04-19
12. Thomas, Susan Ann – Superior Courts – Effective 01-18-19
13. Williams, Sandra – CSA – Effective 01-18-19

** Indicates Safety Personnel*

f. Approval of Death Benefit – **Government Code Section 31781, 31781.1, 31781.3**

1. Gwen Gnapp – Behavioral Health and Recovery Services – Non-Service Connected – Effective 04-25-19

6. Verus – Investment Consultant

- a. April Flash Report [View](#)
- b. Quarterly Workplan [View](#)
- c. Investment Performance 2019 Quarter 1 [View](#)
- d. Annual Asset Allocation Analysis [View](#)

7. Investment

- a. Private Markets Approval Process Review
Agenda Item [View](#)

8. Administrative

- a. Information Technology Solutions (ITS) Project Update [View](#)
- b. Board Room Update
- c. Fiscal Year 2019-2020 Proposed Administrative Budget
Agenda Item [View](#) Attachment 1 [View](#)

8. Administrative (Cont)

- d. StanCERA Quarterly Newsletter
Agenda Item [View](#)
- e. Proposed Actuarial Audit Schedule
Agenda Item [View](#)

9. Closed Session

- a. Conference with Legal Counsel – Pending Litigation – One Case:
O'Neal et al v. Stanislaus County Employees' Retirement Association
Stanislaus County Superior Court Case No. 648469
Government Code Section 54956.9(d)(1)
- b. Conference with Legal Counsel – Pending Litigation – One Case:
Stanislaus County Employees' Retirement Association v. Buck Consultants,
LLC, Mediation Pursuant to Evidence Code Sections 1115, 1119, 1152
Government Code Section 54956.9d)(4)

10. Members' Forum (Information and Future Agenda Requests Only)

11. Adjournment



BOARD OF RETIREMENT MINUTES
April 23, 2019

1. Call Meeting to Order

Meeting called to order 1:30 p.m. by Trustee DeMartini, Chair

2. Roll Call

Trustees Present: Jim DeMartini, Darin Gharat, Sam Sharpe, Donna Riley, Mike Lynch
Michael O'Neal, Jeff Grover, and Jeff Mangar

Trustees Absent: Mandip Dhillon was present by phone and unable to vote

Alternate Trustee: Rhonda Biesemeier, Alternate Retiree Representative

Staff Present: Rick Santos, Executive Director
Natalie Elliott, Fiscal Services Manager
Kellie Gomes, Executive Board Assistant

Others Present: Fred Silva, General Legal Counsel
Ed Hoffman, VERUS-Investment Consultant, By phone

3. Announcements

4. Public Comment

None

5. Consent Items

5. Consent Items

a. Approval of the March 26, 2019 Meeting Minutes

b. Monthly Staff Report

c. StanCERA Complaint Log as of January 1 – March 31, 2019

d. Executive Director Goals Update Quarter 1 2019

e. Conference Report

f. Approval of Service Retirement(s) – **Government Code Sections 31499.14, 31670, 31662.2 & 31810**

1. Apolinar, Jeannette – CSA – Effective 04-01-19

2. Brown, Jena – HSA – Effective 04-07-19

3. Cordova, Dennis – Sheriff – Effective 08-04-18 *

4. Harris, Timothy – HSA – Effective 04-27-19

5. Higginbotham, Leonard – Probation – Effective 04-13-19 *

f. Approval of Service Retirement(s) (Cont.) – **Government Code Sections 31499.14, 31670, 31662.2 & 31810**

6. Kitcher, Keith – City of Ceres – Effective 04-15-19 *
7. Martinez, Mona – Sheriff – Effective 03-14-19
8. Selover, Katherine – DCSS – Effective 04-12-19
9. Soles, Linda – Superior Court – 04-27-19

** Indicates Safety Personnel*

g. Approval of Deferred Retirement(s) – **Government Code Section 31700**

1. Brown, Richard – Public Works – Effective 01-11-19
2. Franklin, Kyle – Sheriff – Effective 09-28-18 *
3. Higginbotham, Carissa – City of Ceres – Effective 11-30-14
4. Mahil, Avneet – Environmental Resources – Effective 02-22-19
5. Mercado, Daniel – Probation – Effective 07-17-18 *
6. Nickerson, Scott – BHRS – Effective 03-01-19
7. Quintero, Albert – DCSS – Effective 09-16-18
8. Reed, Colleen – Sheriff – Effective 03-05-19
9. Yip, Bianca – DA – Effective 12-03-18

** Indicates Safety Personnel*

h. Approval of Disability Retirement - **Government Code Section 31724**

1. Navarro, Arlindo – CSA – Non-Service Connected – Effective 01-19-19

i. Approval of Death Benefit – **Government Code Section 31781, 31781.1, 31781.3**

1. Mitchell, Stephanie – Superior Court – Non-Service Connected – Effective 04-16-19

Motion was made by Trustee Riley seconded by Trustee Sharpe accept the consent items as presented.

Motion carried unanimously

6. Investment

- a. Value Added Investment Fee Summary and Cash Flow Report December 31, 2018
- b. Auxiliary AB 2833 Investment Report December 31, 2018

7. VERUS – Investment Consultant

- a. March Flash Report

8. Administrative

- a. Direction for Voting Delegates of State Association of County Retirement Systems (SACRS) at the 2019 Spring Business Meeting.

Motion was made by Trustee O'Neal and seconded by Trustee Sharpe to accept the nominating committee recommendation as presented for voting at the 2019 Spring SACRS Board Meeting.

Motion carried unanimously

8. Administrative (Cont.)

b. Information Technology Solutions (ITS) Project Update

c. Board Room Update

10. Members' Forum (Information and Future Agenda Requests Only) (Heard Out of Order)

Various Trustees gave a recount of conferences they attended since the last board meeting

No future agenda requests were made.

Trustee O'Neal and Trustee Bieseemeier recused themselves prior to closed session 2:09 p.m.

9. Closed Session –

Motion was made by Trustee Gharat and seconded by Trustee Sharpe to go into closed session at 2:10 p.m.

Motion carried unanimously

a. Conference with Legal Counsel – Pending Litigation – One Case:
O'Neal et al v. Stanislaus County Employees' Retirement Association
Stanislaus County Superior Court Case No. 648469
Government Code Section 54956.9(d)(1)

b. Conference with Legal Counsel – Pending Litigation – One Case:
Stanislaus County Employees' Retirement Association v. Buck Consultants,
LLC, Mediation Pursuant to Evidence Code Sections 1115, 1119, 1152
Government Code Section 54956.9d)(4)

Motion was made by Trustee Sharpe and seconded by Trustee Grover to go into open session at 2:29 pm

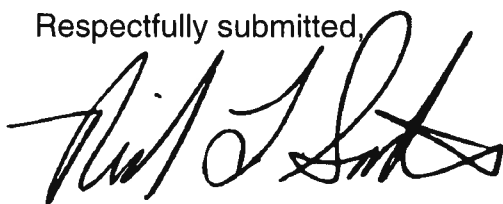
Motion carried unanimously

Nothing to read out for closed session at this time.

11. Adjournment

Meeting adjourned at 2:30 p.m.

Respectfully submitted,



Rick Santos, Executive Director

APPROVED AS TO FORM:

Fred Silva, GENERAL LEGAL COUNSEL

By: 
Fred Silva, General Legal Counsel



Stanislaus County Employees' Retirement Association

832 12th Street, Ste. 600, Modesto, CA 95354 • PO Box 3150, Modesto, CA 95353 • www.stancera.org • 209-525-6393 • 209-558-4976 Fax

May 28, 2019

Retirement Board Agenda Item

TO: Retirement Board

FROM: Rick Santos, Executive Director

I. SUBJECT: Monthly Staff Report

II. ITEM NUMBER: 5.b

III. ITEM TYPE: Information Only

IV. STAFF RECOMMENDATION: None

V. ANALYSIS:

- a) *Member & Employer Services* - During the month of April 2019, Member and Employer Services Staff processed 35 new hires (32 General and 3 Safety), 9 terminations, 32 estimate requests resulting in 75 estimate calculations, and 13 buy back requests generating 30 buy back contracts. There were 41 individual counseling sessions held over the course of the month. Additionally, staff made one presentation at the County's New Employee Orientation in April.
- b) *Investment Governance and Compliance* – In April, staff continued general training and orientation on the investment program processes including the capital call authorization process and the development of a basic cash monitoring worksheet. Introduction meetings with individual investment managers and service vendors continued as well. Of note, was a number of Bloomberg terminal training sessions. Also, as mentioned at the April meeting, staff reviewed the proposed extension request for the Raven I fund and participated in the Limited Partner Advisory Committee (LPAC) meeting. The Raven I LPAC approved a one-year extension to the fund.

Below is the monthly money transfer report:

From		To		
<u>Manager</u>	<u>Class</u>	<u>Manager</u>	<u>Class</u>	<u>Amount</u>

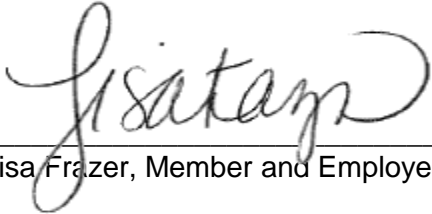
For the month of April there were no transfers to report.

Fiscal Services – Employer and employee contributions totaling \$9,358,515 were received through 13 different payroll batches and 14 service purchases in April. 17 contribution refunds and death benefit payouts totaling \$114,718 were processed. The retiree payroll for April totaled \$11,229,059 and was processed as scheduled.

Staff continues to partner with Member Services in defining the business rules for the new pension software. Tegrit has completed their testing of the import files and has handed the parallel testing over to staff. GL integration is being worked on for uploading financial information to StanCERA's financial software.

Construction on the new Board Room tenant improvements is complete and was done under budget. The audio/video system has not been completed yet as there were a couple road blocks to getting it programmed. We will have our first board meeting in the new Board Room on June 25th.

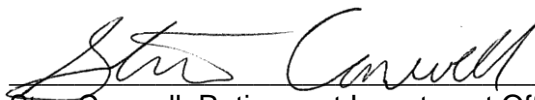
- VI. RISK: None
- VII. STRATEGIC PLAN: Strategic Objective IV: Refine StanCERA's business and policy practices in ways that enhance stakeholder awareness, the delivery of member services and the ability of the Organization to administer the System effectively and efficiently*
- VIII. ADMINISTRATIVE BUDGET IMPACT: NONE



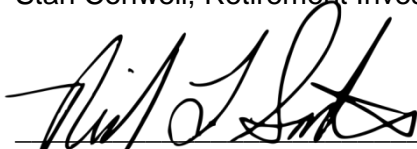
Lisa Frazer, Member and Employer Services Manager



Natalie Davis, Fiscal Services Manager



Stan Conwell, Retirement Investment Officer



Rick Santos, Executive Director



Conference Summary

1. Attendee Name: Michael O'Neil
2. Event Name: CALAPRS General Assembly
3. Event Date: March 2-5, 2019
4. Event Location: Monterey, CA
5. Describe what was good about the event:

Interesting topics, Cyber security was very good
and always scary..

Also outreach and partnering..

Interesting question to ask - what % of activists
stay in the County?
6. Would you recommend this event to other trustees/staff:

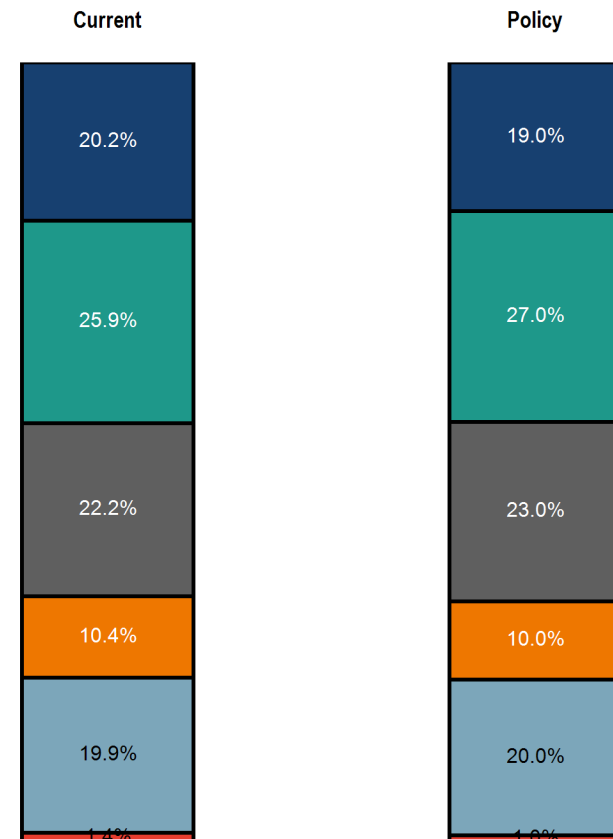
Yes. It is an opportunity to network with
non 1937 act systems and see what they are
doing for best practices.
7. Number of Education Credits: Aprox. 10 Hours

Total Fund Flash Report (Net of Fees) - Preliminary

Period Ending: April 30, 2019

	Market Value	% of Portfolio	1 Mo	YTD	Fiscal YTD
Total Fund	2,171,869,922	100.0	1.8	9.6	3.9
<i>Policy Index</i>			1.9	9.4	4.8
US Equity	438,535,783	20.2	4.3	18.4	8.1
<i>US Equity Blended</i>			3.9	18.6	7.4
<i>Russell 3000</i>			4.0	18.6	8.9
Northern Trust Russell 3000	125,402,381	5.8	4.0	18.6	--
<i>Russell 3000</i>			4.0	18.6	--
BlackRock Russell 1000 Growth	125,979,116	5.8	4.5	21.3	11.5
<i>Russell 1000 Growth</i>			4.5	21.3	11.4
BlackRock Russell 1000 Value	28,519,734	1.3	3.6	16.0	8.3
<i>Russell 1000 Value</i>			3.5	15.9	8.2
Dodge & Cox-Equity	79,491,893	3.7	4.4	14.7	6.0
<i>Russell 1000 Value</i>			3.5	15.9	8.2
Capital Prospects	79,142,659	3.6	4.4	18.5	-4.6
<i>Russell 2000 Value</i>			3.8	16.2	-4.0
International Equity	563,521,718	25.9	2.9	13.0	-0.8
<i>MSCI ACWI ex USA Gross</i>			2.7	13.4	1.3
LSV Asset Mgt	277,385,322	12.8	2.5	11.3	-2.1
<i>MSCI ACWI ex USA Gross</i>			2.7	13.4	1.3
Fidelity	286,136,396	13.2	3.3	14.7	0.6
<i>MSCI ACWI ex USA Gross</i>			2.7	13.4	1.3
US Fixed Income	483,108,310	22.2	0.3	2.8	4.4
<i>BBgBarc US Aggregate TR</i>			0.0	3.0	4.7
Insight	208,002,708	9.6	0.5	3.5	4.9
<i>BBgBarc US Govt/Credit 1-5 Yr. TR</i>			0.2	1.8	3.6
DFA	214,874,975	9.9	0.3	2.3	4.1
<i>ICE BofAML 1-5 Yrs US Corp & Govt TR</i>			0.2	1.9	3.6
Northern Trust Intermediate Gov't Bond	44,914,792	2.1	0.0	1.6	3.8
<i>BBgBarc US Govt Int TR</i>			0.0	1.6	3.8
Northern Trust Long Term Gov't Bond	15,315,835	0.7	-1.8	2.8	4.0
<i>BBgBarc US Govt Long TR</i>			-1.7	2.8	4.1

	Current	%	Policy	%
Domestic Equity	\$438,535,783	20.2%	\$412,655,285	19.0%
International Equity	\$563,521,718	25.9%	\$586,404,879	27.0%
Domestic Fixed Income	\$483,108,310	22.2%	\$499,530,082	23.0%
Real Estate	\$225,532,154	10.4%	\$217,186,992	10.0%
Alternatives	\$431,576,092	19.9%	\$434,373,984	20.0%
Cash and Equivalents	\$29,595,865	1.4%	\$21,718,699	1.0%
Total	\$2,171,869,922	100.0%	\$2,171,869,922	100.0%



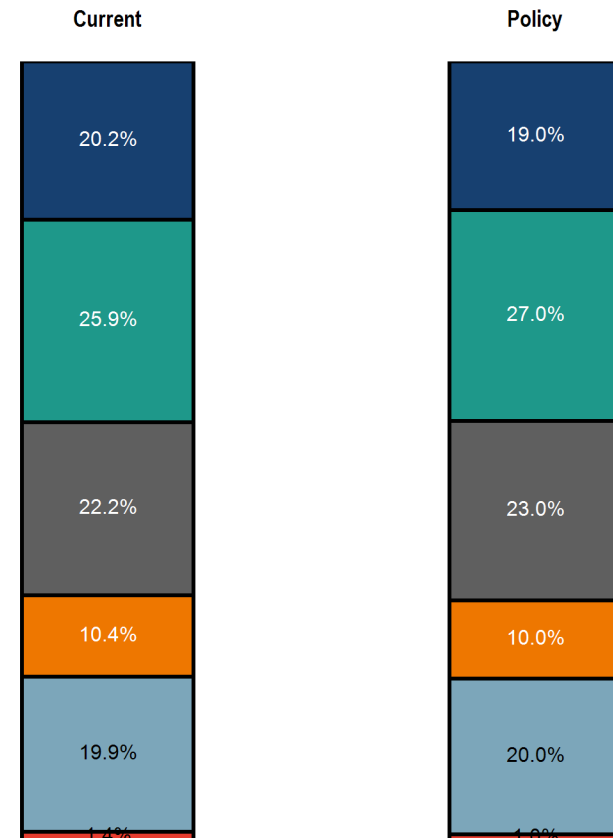
Policy Index (9/1/2018): 10% Russell 1000, 3% Russell 2000, 6% Russell 3000 + 3%, 27% MSCI ACWI ex-USA, 20% BBgBarc US Gov't/Credit 1-3 Yr, 3% BBgBarc US Treasury 7-10 Yr, 5% NCREIF Property, 5% NCREIF Property +2%, 1% CPI +5%, 6% S&P/LSTA Leveraged Loan Index + 2%, 13% 60% MSCI ACWI / 40% BBgBarc Global Aggregate, 1% Citi 1 Month T-Bills. All data is preliminary.

Total Fund Flash Report (Net of Fees) - Preliminary

Period Ending: April 30, 2019

	Market Value	% of Portfolio	1 Mo	YTD	Fiscal YTD
Real Estate	225,532,154	10.4	0.0	4.0	5.2
DJ US Select RESI			-0.2	15.5	8.7
Prime Property Fund	56,223,742	2.6	0.0	1.3	5.3
NCREIF-ODCE			0.0	1.4	5.4
American Strategic Value Realty	46,969,221	2.2	0.0	2.3	6.0
NCREIF Property Index			0.0	1.8	4.9
BlackRock US Real Estate	36,721,363	1.7	-0.2	15.5	8.6
DJ US Select RESI TR USD			-0.2	15.5	8.7
Greenfield Gap VII	12,811,238	0.6			
Greenfield Gap VIII	17,489,623	0.8			
PGIM Real Estate US Debt Fund	55,316,967	2.5			
Private Credit	93,647,792	4.3			
Medley Capital	14,043,877	0.6			
Raven Capital	13,875,008	0.6			
Raven Opportunity III	40,245,860	1.9			
White Oak Pinnacle	25,483,047	1.2			
Risk Parity	296,029,029	13.6	0.6	11.4	4.5
60% MSCI ACWI Net/40% BBgBarc Global Aggregate			1.9	10.2	4.4
AQR Global Risk Premium - EL	150,019,646	6.9	1.1	11.3	4.3
60% MSCI ACWI Net/40% BBgBarc Global Aggregate			1.9	10.2	4.4
PanAgora Risk Parity Multi Asset	146,009,383	6.7	0.1	11.6	4.7
60% MSCI ACWI Net/40% BBgBarc Global Aggregate			1.9	10.2	4.4
Infrastructure	41,899,271	1.9			
MS Infrastructure Partners II	41,899,271	1.9			
Cash Account	29,595,865	1.4	0.0	0.3	1.3

	Current	%	Policy	%
Domestic Equity	\$438,535,783	20.2%	\$412,655,285	19.0%
International Equity	\$563,521,718	25.9%	\$586,404,879	27.0%
Domestic Fixed Income	\$483,108,310	22.2%	\$499,530,082	23.0%
Real Estate	\$225,532,154	10.4%	\$217,186,992	10.0%
Alternatives	\$431,576,092	19.9%	\$434,373,984	20.0%
Cash and Equivalents	\$29,595,865	1.4%	\$21,718,699	1.0%
Total	\$2,171,869,922	100.0%	\$2,171,869,922	100.0%



Policy Index (9/1/2018): 10% Russell 1000, 3% Russell 2000, 6% Russell 3000 + 3%, 27% MSCI ACWI ex-USA, 20% BBgBarc US Gov't/Credit 1-3 Yr, 3% BBgBarc US Treasury 7-10 Yr, 5% NCREIF Property, 5% NCREIF Property +2%, 1% CPI +5%, 6% S&P/LSTA Leveraged Loan Index + 2%, 13% 60% MSCI ACWI / 40% BBgBarc Global Aggregate, 1% Citi 1 Month T-Bills. All data is preliminary.

Disclaimer

This report contains confidential and proprietary information and is subject to the terms and conditions of the Consulting Agreement. It is being provided for use solely by the customer. The report may not be sold or otherwise provided, in whole or in part, to any other person or entity without written permission from Verus Advisory, Inc., (hereinafter Verus) or as required by law or any regulatory authority. The information presented does not constitute a recommendation by Verus and cannot be used for advertising or sales promotion purposes. This does not constitute an offer or a solicitation of an offer to buy or sell securities, commodities or any other financial instruments or products.

The information presented has been prepared using data from third party sources that Verus believes to be reliable. While Verus exercised reasonable professional care in preparing the report, it cannot guarantee the accuracy of the information provided by third party sources. Therefore, Verus makes no representations or warranties as to the accuracy of the information presented. Verus takes no responsibility or liability (including damages) for any error, omission, or inaccuracy in the data supplied by any third party. Nothing contained herein is, or should be relied on as a promise, representation, or guarantee as to future performance or a particular outcome. Even with portfolio diversification, asset allocation, and a long-term approach, investing involves risk of loss that the investor should be prepared to bear.

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

StanCERA Investment Program Quarterly Plan

	Time	Notes
May, 2019	1:05	
Flash report and 12-month workplan	0:05	
Quarterly investment performance report	0:30	
2019 asset allocation review	0:30	
June, 2019	0:10	
Flash report and 12-month workplan	0:05	
Update IPS for approved asset allocation (if needed)	0:05	
July, 2019	0:05	
Flash report and 12-month workplan	0:05	
August, 2019	0:35	
Flash report and 12-month workplan	0:05	
Quarterly investment performance report	0:30	



PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS



1st QUARTER 2019

Investment Performance Review for

Stanislaus County Employees' Retirement Association

Table of Contents



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

SEATTLE 206-622-3700

LOS ANGELES 300-297-1777

SAN FRANCISCO 415-362-3484

Investment Landscape

TAB I

Investment Performance
Review

TAB II



**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**

2ND QUARTER 2019
Investment Landscape

Recent Verus research

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

Sound thinking

FOUR RULES OF OUTSOURCING

The choice to use the services of an Outsourced Chief Investment Officer (OCIO) provider is one of the most significant decisions that a board is likely to make. This piece is focused on the four most important rules that Verus believes investors should understand, and OCIO providers should deliver upon.

Annual outlooks

CAPITAL MARKET ASSUMPTIONS

Verus held the first Capital Market Assumptions Webinar. On the call, we discussed:

- How market shifts of 2018 have affected our long-term outlook
- Why the current environment continues to indicate modest long-term performance across most asset classes
- The important differences between shorter-term and longer-term forecasting exercises

ACTIVE MANAGEMENT ENVIRONMENT

Our work on active management addresses some shortfalls of the traditional analysis, which uses the median product to describe the active management universe as a whole. These improvements and insights have allowed us to better understand product behavior and may allow for more informed selection in the future.

Table of Contents



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

SEATTLE 206-622-3700

LOS ANGELES 310-297-1777

SAN FRANCISCO 415-362-3484

Economic environment	6
----------------------	---

Fixed income rates & credit	18
-----------------------------	----

Equity	27
--------	----

Other assets	39
--------------	----

Appendix	42
----------	----

1st quarter summary

THE ECONOMIC CLIMATE

- Real GDP growth continued at 3.0% YoY - on pace with the third quarter (2.2% quarterly annualized rate). Forecasts for 2019 U.S. growth have weakened. The U.S. economy is expected to grow at a 2.4% pace in 2019, according to the Survey of Professional Forecasters, while the Federal Reserve expects 2.1% growth this year. [p. 8](#)
- In March, negotiations resumed between U.S. and Chinese trade delegations. The dialogue was viewed as constructive, and optimism picked up for a trade resolution being reached in the near-to-intermediate future. The two sides have yet to agree on a formal timeline. [p. 16](#)

PORTFOLIO IMPACTS

- The Federal Open Market Committee reiterated its “patient” approach to policy, leaving rates unchanged, helping to push asset prices upward. Chairman Powell announced that starting in May the balance sheet runoff would slow from \$50 to \$30 billion a month, and would end in September. [p. 19](#)
- Risk assets exhibited strong performance over the quarter. U.S. equities delivered the greatest gains (S&P 500 +13.6%, MSCI ACWI +12.2%), reversing U.S. underperformance in Q4 2018 (S&P 500 -13.5%, MSCI ACWI -12.8%). This was followed by riskier credit with high single-digit returns, and safer credit and government bonds with low single-digit returns. [p. 46](#)

THE INVESTMENT CLIMATE

- The first quarter was nearly a mirror image of 2018 Q4, as many assets retraced losses of the prior quarter. [p. 38](#)
- Declining long-term Treasury yields following the Fed meeting in March briefly caused the yield curve to invert, meaning that short-term yields (3-month) were higher than long-term yields (10-year). Investors have expressed concerns that this may signal a near term recession. We believe these concerns are overblown. [p. 21](#)
- The House of Commons in the British Parliament briefly took control of their government’s legislative agenda, but failed to reach a majority vote on a path forward. On April 10th, British Prime Minister Theresa May and the European Council agreed to extend the Brexit deadline from April 12th to October 31st. [p. 17](#)

ASSET ALLOCATION ISSUES

- All major asset classes delivered positive performance in Q1, a refreshing change of pace from broad-based losses experienced in 2018. [p. 46](#)
- Economic conditions around the world have exhibited a weakening trend, leading to the question of whether a turn in the economic cycle is near. The first quarter was more mixed with strength in places, easing some concern. We remain watchful of this weakening trend, but believe the economy and market may have more room to run. [p. 17](#)

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

What drove the market in Q1?

"Central banks take to stage as dovish outlooks spread"

MARKET EXPECTATIONS FOR 1-YEAR CHANGE IN FED FUNDS RATE (BPS)

Oct	Nov	Dec	Jan	Feb	Mar
62	48	10	-10	-5	-31

Article Source: Bloomberg, February 16th, 2019

"Slowing earnings growth, gloomy forecasts add to stock market's woes"

S&P 500 INDEX 12-MONTH FORWARD EPS ESTIMATE (\$)

Oct	Nov	Dec	Jan	Feb	Mar
175	175	174	171	171	172

Article Source: Wall Street Journal, January 13th, 2019

"Part of the yield curve inverts as 3-month yield tops 10-year rate"

10-YEAR MINUS 3-MONTH TREASURY YIELD SPREAD (BPS)

Oct	Nov	Dec	Jan	Feb	Mar
82	65	33	25	28	2

Article Source: CNBC, March 22nd, 2019

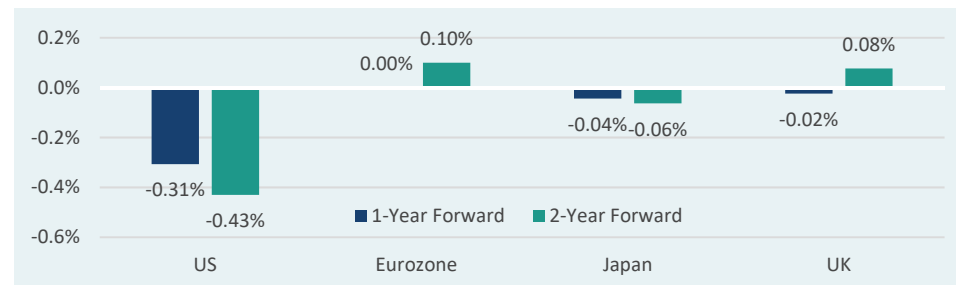
"World markets hit 2019 high amid trade war optimism"

NUMBER OF GOOGLE NEWS ARTICLES WITH 'TRADE OPTIMISM' IN TITLE

Oct	Nov	Dec	Jan	Feb	Mar
5	24	31	92	116	96

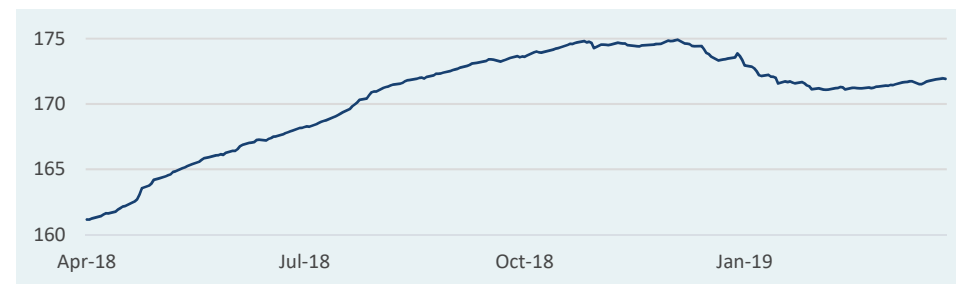
Article Source: The Guardian, February 18th, 2019

MARKET EXPECTATIONS FOR CHANGES IN SHORT-TERM RATES



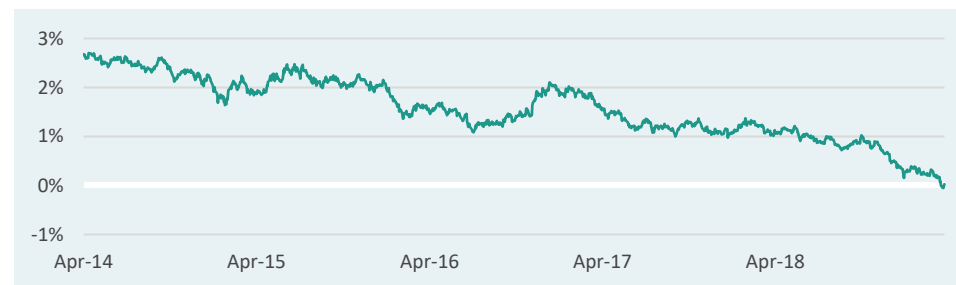
Source: Bloomberg, as of 4/2/19

S&P 500 INDEX 12-MONTH FORWARD EPS ESTIMATE



Source: Bloomberg, as of 3/31/19

10-YEAR MINUS 3-MONTH TREASURY YIELD SPREAD



Source: Bloomberg, as of 3/31/19

Economic environment

U.S. economics summary

- Real GDP growth continued at 3.0% YoY, on pace with the third quarter (2.2% on a quarterly annualized rate).
- Forecasts for 2019 U.S. growth have weakened. The U.S. economy is expected to grow at a 2.4% pace in 2019, according to the Survey of Professional Forecasters, while the Federal Reserve expects 2.1% growth this year.
- In March, negotiations resumed between U.S. and Chinese trade delegations. The dialogue was viewed as constructive, and optimism picked up for a formal trade resolution being reached in the near future.
- U.S. inflation remained near the 2.0% Fed target. After dipping to 1.5% YoY in February, headline inflation recovered to 1.9% in March, resulting in no change over the quarter.
- Average hourly earnings grew 3.2% YoY in March, missing expectations of 3.3%. A slight tick up in the average non-farm private workweek from 34.4 to 34.5 hours likely contributed to the cooler wage data.
- The labor market remained strong in Q1. U-3 unemployment fell to 3.8% from 3.9% in December, though the labor force participation rate weakened from 63.1% to 63.0% during the period.
- The Federal Open Market Committee reiterated its “patient” approach to policy, leaving rates unchanged. Expectations for 2019 GDP growth and rate hikes were cut, and markets rallied. Chairman Powell announced that starting in May the balance sheet runoff would slow from \$50 billion per month to \$30 billion, and would end in September.

	Most Recent	12 Months Prior
GDP (YoY)	3.0% 12/31/18	2.5% 12/31/17
Inflation (CPI YoY, Core)	2.0% 3/31/19	2.1% 3/31/18
Expected Inflation (5yr-5yr forward)	2.0% 3/31/19	2.2% 3/31/18
Fed Funds Target Range	2.25 – 2.50% 3/31/19	1.50 – 1.75% 3/31/18
10 Year Rate	2.4% 3/31/19	2.7% 3/31/18
U-3 Unemployment	3.8% 3/31/19	4.0% 3/31/18
U-6 Unemployment	7.3% 3/31/19	7.9% 3/31/18

GDP growth

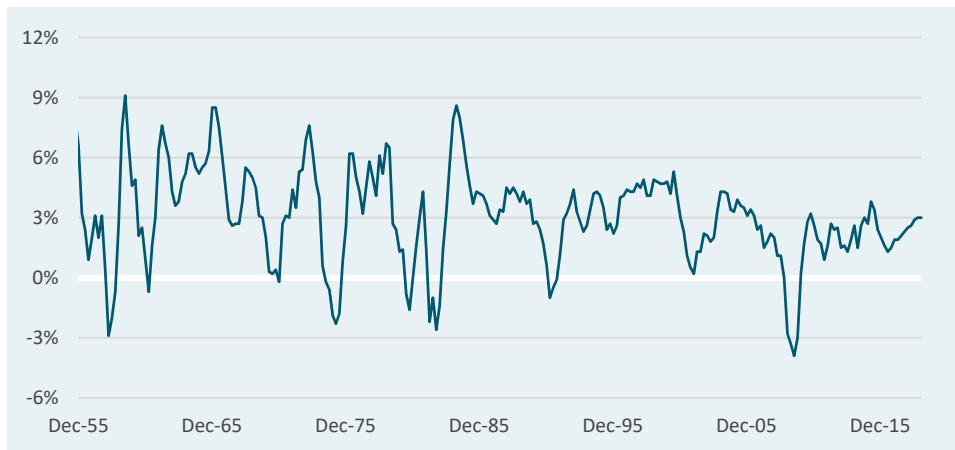
Real GDP growth continued at 3.0% YoY, on pace with growth in the third quarter (2.2% on a quarterly annualized rate). Consumption was the greatest contributor to real GDP growth.

The U.S. economy faces multiple headwinds, including the broad impacts of slowing global growth, fading of 2018 fiscal stimulus, and a tight labor market which constrains further upside from employment gains. While the U.S. is in a strong position relative to other developed nations, the economy is expected to grow at a 2.4% pace in 2019 according to a

survey of professional forecasters. The Federal Reserve expects 2.1% growth this year.

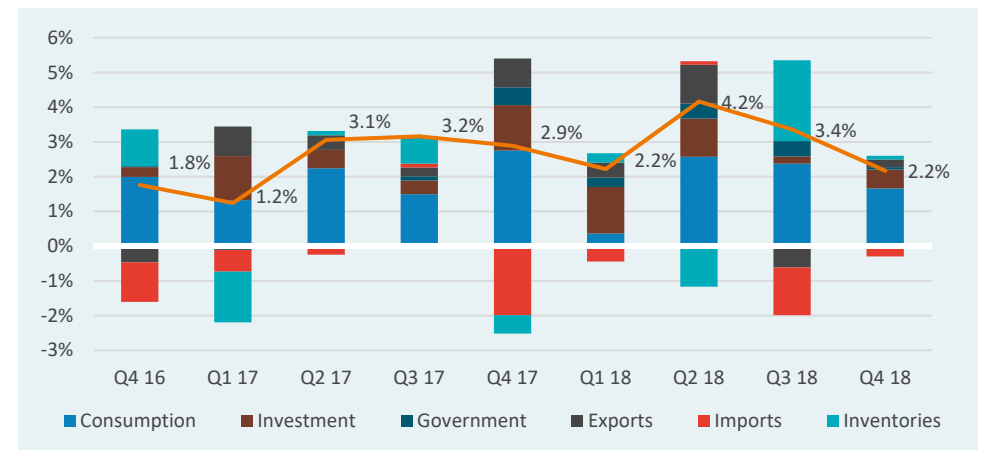
The Trump administration appears to have succeeded in reaching its 3% U.S. growth target during 2018. The Tax Cuts & Jobs Act helped stimulate the economy in the form of reduced taxes for individuals, which increased after-tax incomes and greatly reduced corporate tax burdens. These changes likely had positive impacts on worker wages and spurred recent capital investment.

U.S. REAL GDP GROWTH (YOY)



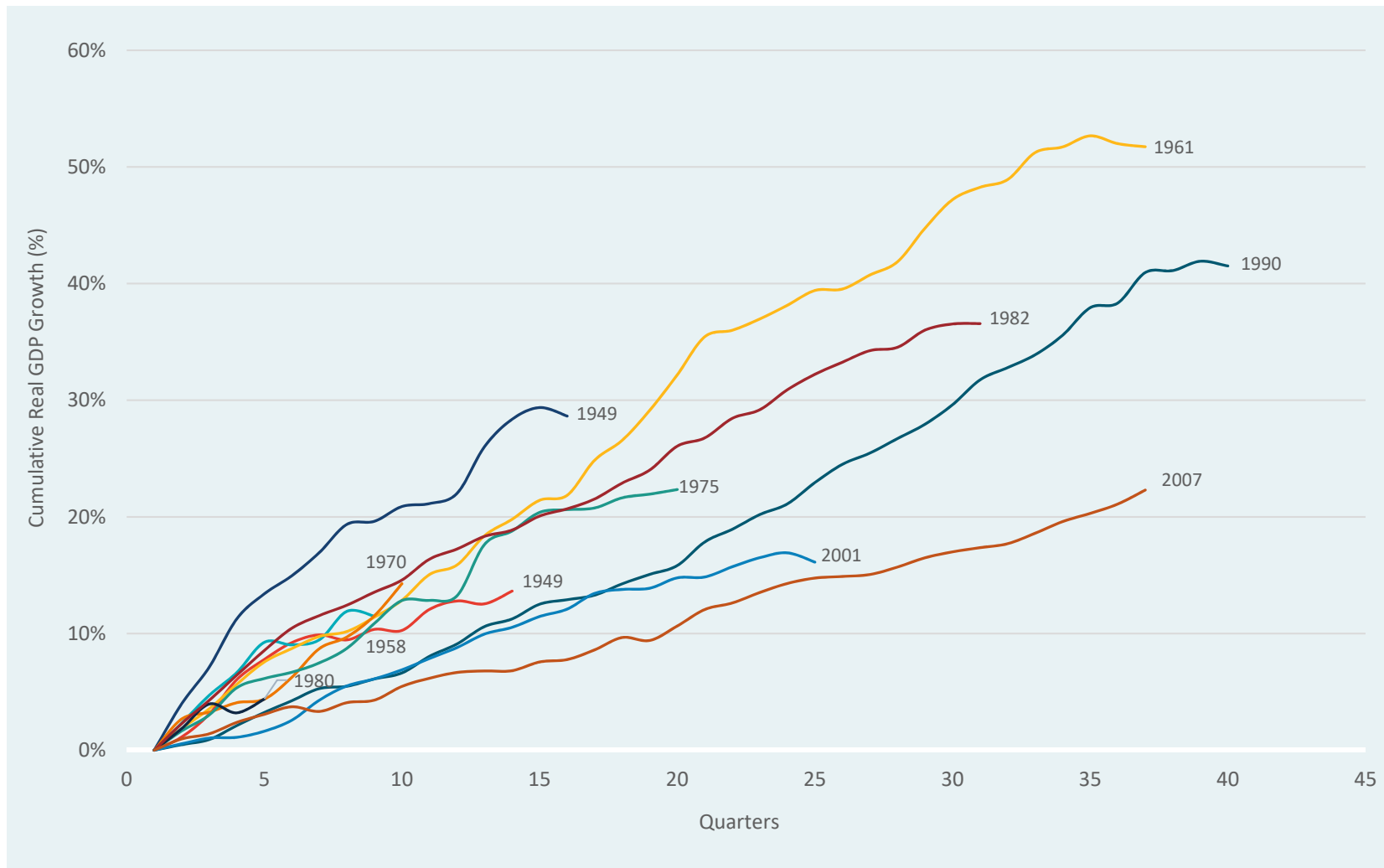
Source: Bloomberg, as of 12/31/18

U.S. GDP GROWTH ATTRIBUTION



Source: BEA, annualized quarterly rate, as of 12/31/18

A long but moderate expansion



The current economic cycle is just three quarters shy of matching the longest expansion on record

Source: FRED, Verus, as of 12/31/18 – each expansion is labeled with the starting year of expansion

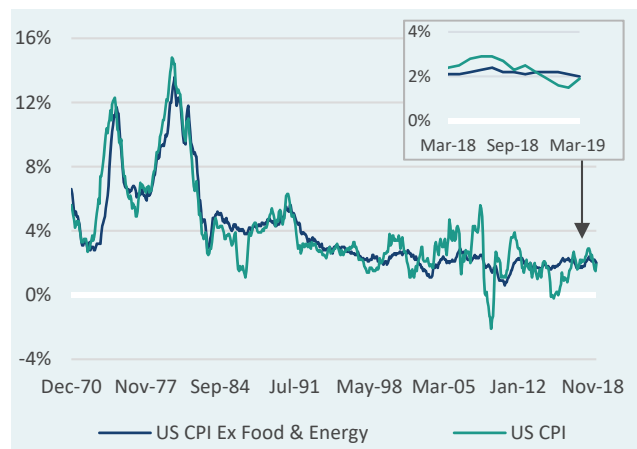
Inflation

U.S. inflation remained near the Federal Reserve's 2.0% target. After dipping to 1.5% YoY in February, headline CPI recovered to 1.9% in March, unchanged over the quarter. Core CPI, which removes the impact of energy and food prices, continued to ease, falling to 2.0% YoY at quarter-end. Moderate inflation around 2% has helped justify the Fed's recent pause in monetary tightening and has allowed for a patient approach. A material shift in either direction might place Fed officials in a difficult position, and should be watched closely.

Inflation in services was the sole contributor to the year-over-year growth in CPI as goods prices were unchanged during the period. Within services, shelter prices (+3.4% YoY) continued to be the main driver of inflation.

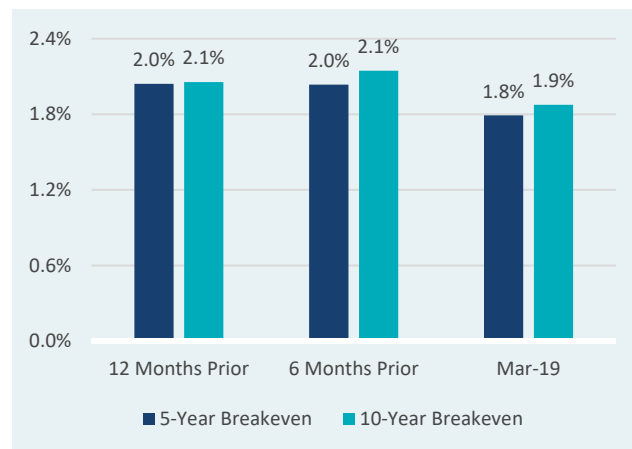
Market participants' expectations for future inflation recovered from depressed levels after falling sharply last quarter. The 10-year TIPS breakeven inflation rate rose 22 bps to 1.93%. Meanwhile, consumers' view of future inflation moderated from 2.7% to 2.5% as indicated by the University of Michigan survey.

U.S. CPI (YOY)



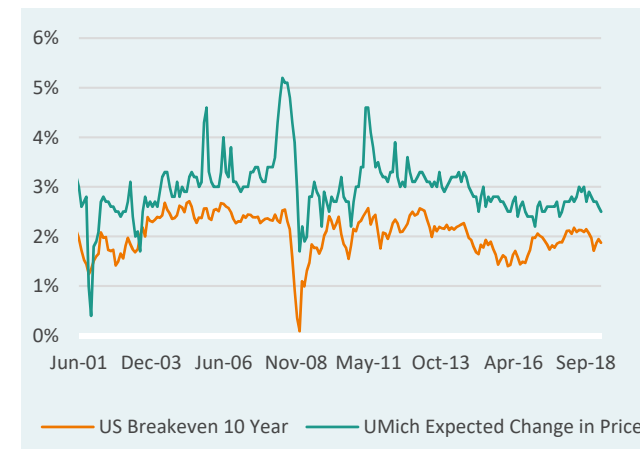
Source: Bloomberg, as of 3/31/19

BREAKEVEN INFLATION RATES



Source: FRED, as of 3/31/19

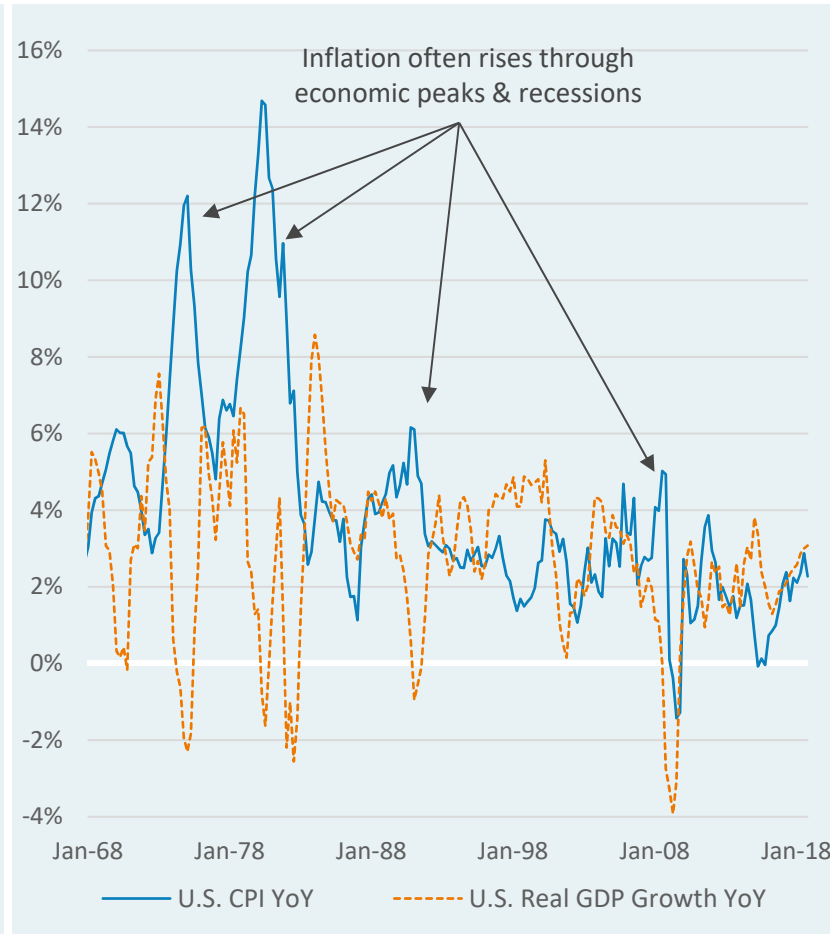
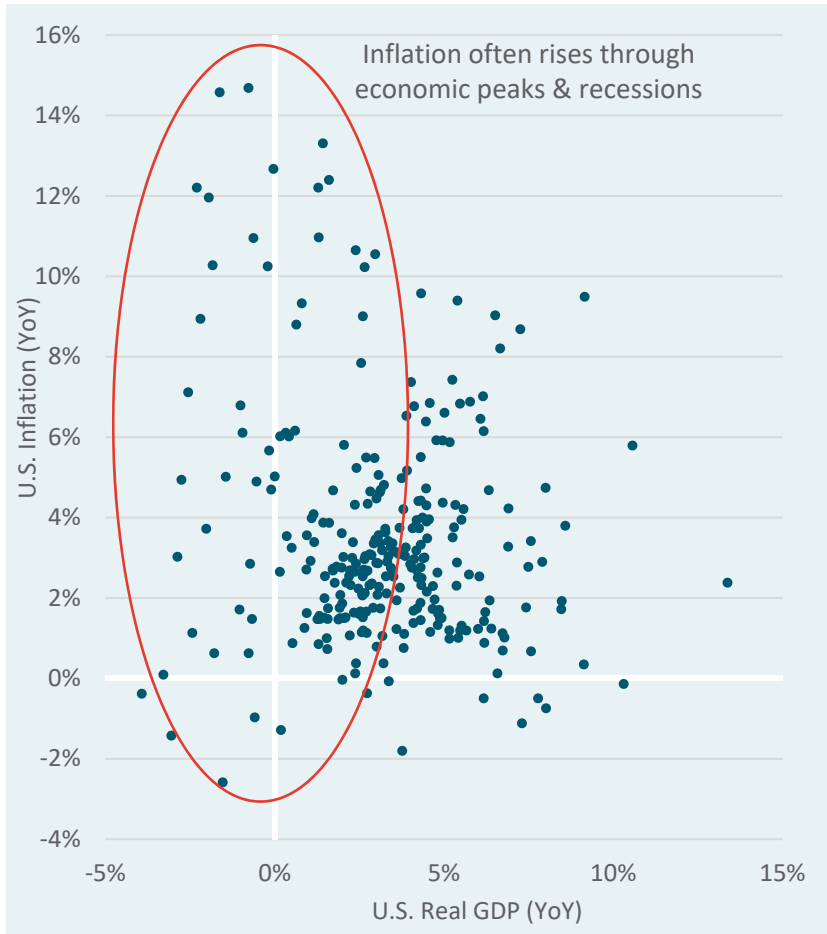
INFLATION EXPECTATIONS



Source: Bloomberg, as of 3/31/19

Relationship – inflation & growth

Inflation risk has been more acute during late cycle & recession



History suggests inflation risks are still present at the later stage of the economic cycle

Source: FRED, Verus

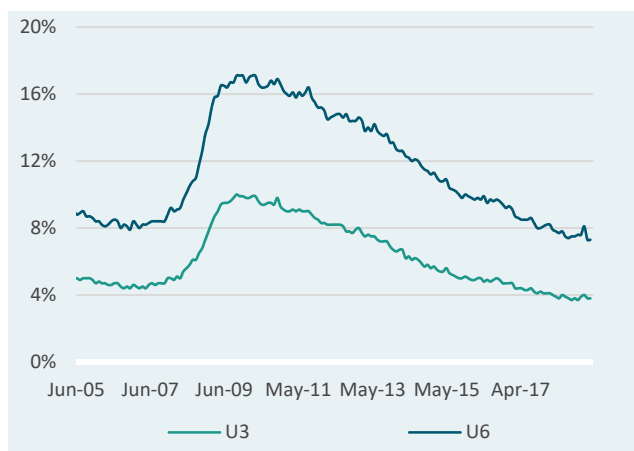
Labor market

Although there was some month-to-month volatility in job growth during the quarter, net additions to non-farm payrolls averaged 180,000 per month. Meanwhile, the U-3 unemployment rate fell slightly from 3.9% to 3.8%, just above the cycle low of 3.7%. The U-6 unemployment rate, which includes underemployed and discouraged workers, fell to a cycle low of 7.3%. The spread between the U-6 and U-3 unemployment rates compressed from 3.7% to 3.5%, the smallest difference since 2006. The decline in underemployed and discouraged workers indicates a further tightening of the labor market.

Wages continued to grow at a modest pace, but not fast enough to warrant concern over corporate margin deterioration or a flow through to general price inflation. In March, average hourly earnings rose 3.2% from 12 months ago.

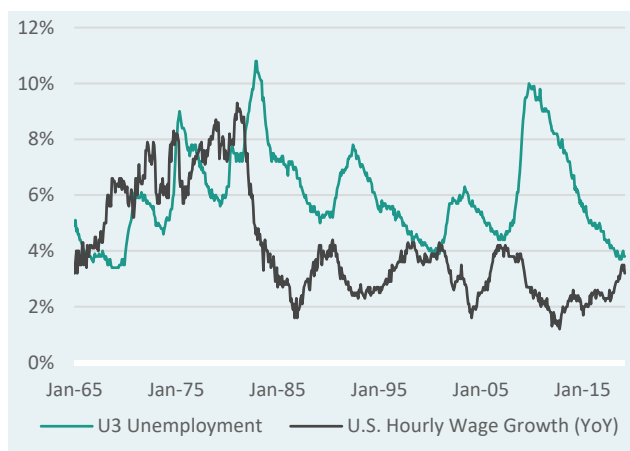
Given the relatively few number of unemployed persons and high percentage of companies reporting that jobs are hard to fill, we believe it may be difficult for job growth to continue at its recent strong rate.

UNEMPLOYMENT RATE



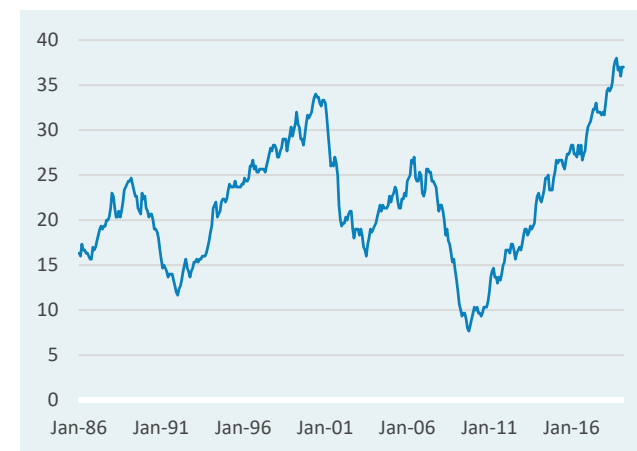
Source: FRED, as of 3/31/19

LONG-TERM EMPLOYMENT & WAGE GROWTH



Source: Bloomberg, as 3/31/19

NFIB: JOBS HARD TO FILL (3-MONTH AVG)



Source: NFIB, as of 3/31/19, net % of small businesses reporting that open positions are hard to fill

The consumer

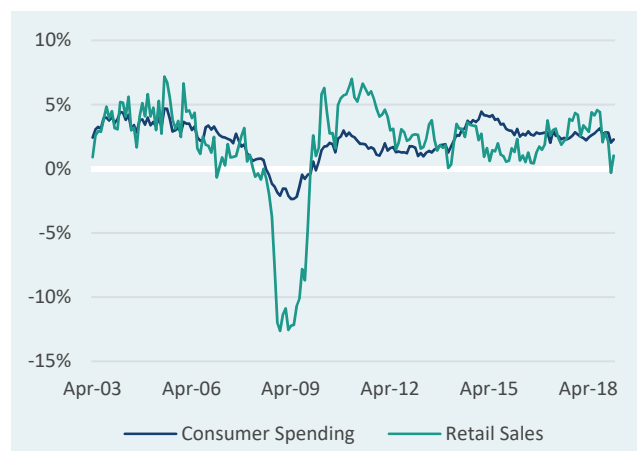
February retail sales grew 2.2% year-over-year, rebounding from a sharp slowdown in the fourth quarter. Real consumer spending continued along at a modest 1.8% pace from the previous year.

Further labor market strength, wage gains, and low interest rates would likely provide support for spending. Consumer behavior remains conservative relative to past cycles, as indicated by broad spending and borrowing patterns. While consumer credit growth has been fairly muted, other specific spending areas such as auto sales were very strong in recent

years – perhaps as consumers played catch-up from restrained purchases during the global financial crisis.

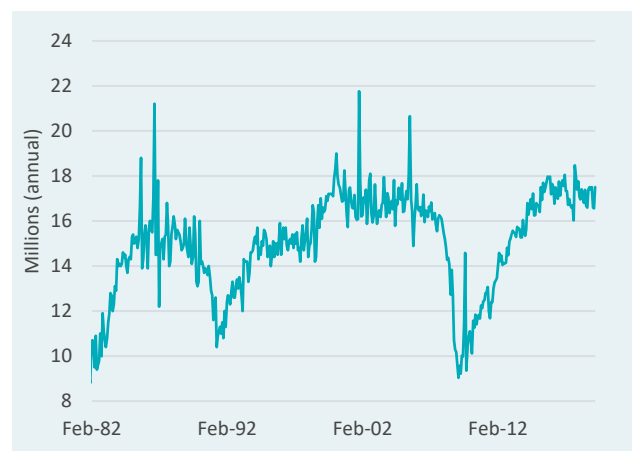
In 2018, there were rising concerns that higher interest rates would squeeze budgets and lead to a slowdown in spending and business activity. These fears have subsided as interest rates have fallen back to previous levels and the Federal Reserve is not expected to raise rates in the near future.

REAL CONSUMER SPENDING & RETAIL SALES GROWTH (YOY)



Source: Bloomberg, as of 1/31/19

AUTO SALES



Source: FRED, as of 3/31/19

CONSUMER CREDIT OUTSTANDING (YOY)



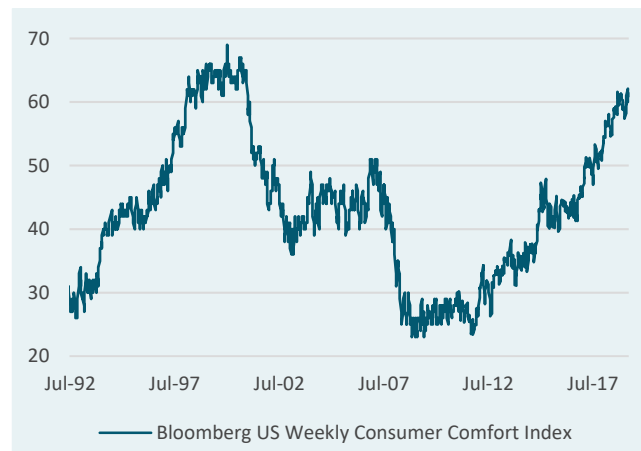
Source: Federal Reserve, as of 2/28/19

Sentiment

Consumer sentiment indicators fell sharply in January before rebounding in February and March. The fall in sentiment early in the year was driven by more muted consumer expectations of future growth, influenced by the sell-off in global equity markets and the extended U.S. government shutdown. However, the University of Michigan Consumer Sentiment Index finished the quarter at 98.4, slightly above its December reading and the Bloomberg Consumer Comfort Index was at a cycle high.

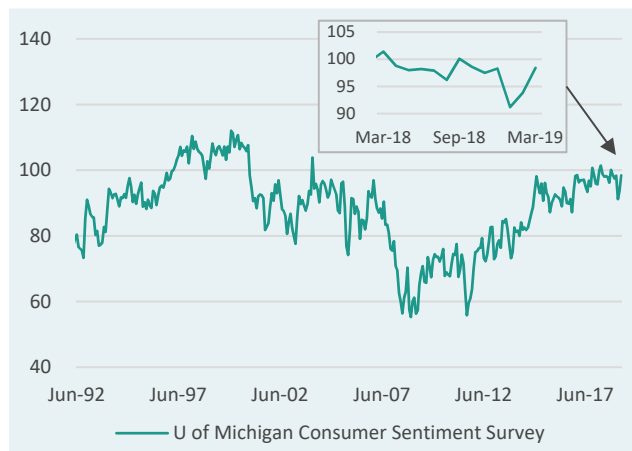
Small business sentiment continued to trend lower from historically strong levels. The NFIB Small Business Optimism Index dipped from 104.4 in December to 101.8 in March. The March reading of 101.8 ranked in the 79th percentile based on 45 years of history. Small business owners' expectations of future economic conditions moderated further in the first quarter. A net 11% of small businesses expected the economy to improve, down from 16% at the end of last year and 50% at the end of 2016.

CONSUMER COMFORT INDEX



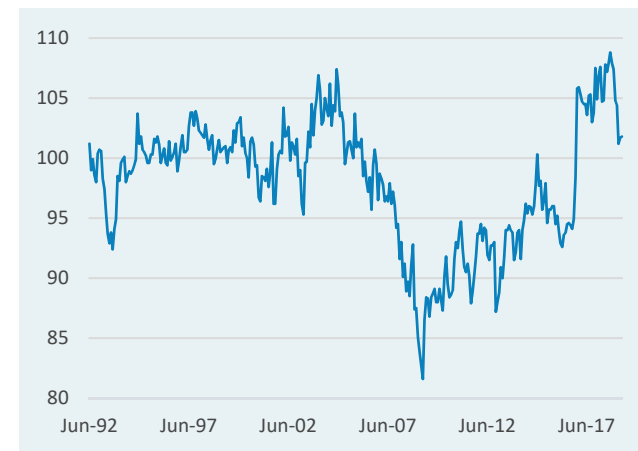
Source: Bloomberg, as of 3/24/19 (see Appendix)

CONSUMER SENTIMENT



Source: University of Michigan, as of 3/31/19 (see Appendix)

NFIB SMALL BUSINESS OPTIMISM INDEX



Source: NFIB, as of 3/31/19 (see Appendix)

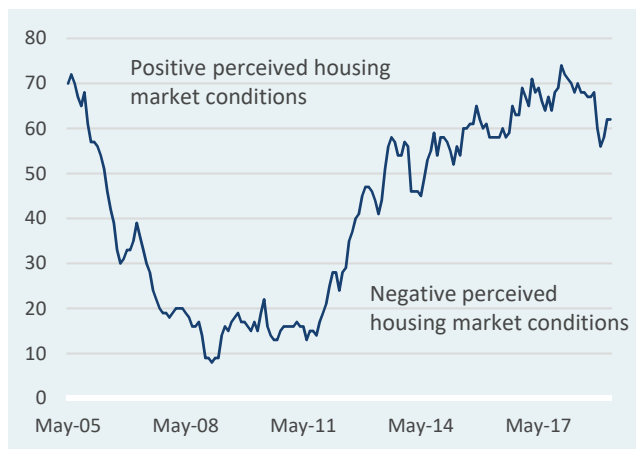
Housing

The U.S. housing market remains strong, though higher prices have dampened affordability and led to less demand. Rising interest rates in the fourth quarter generated fear of a housing slowdown, as borrowing costs have a large impact on home purchase activity. However, a reversal of monetary policy from expected tightening to expected neutrality (or easing) has placed downward pressure on the 30-year fixed mortgage rate. Given the importance of borrowing costs on housing demand, the move from 4.95% borrowing rates (peak reached in Q4) to 4.05% at the end of Q1 should ease concerns of a slowdown and bolster buying activity.

The National Association of Homebuilders (NAHB) Housing Market Index, based on a monthly survey of NAHB members designed to take the pulse of the single-family housing market, improved from 56 to 62 – above the neutral level of 50.

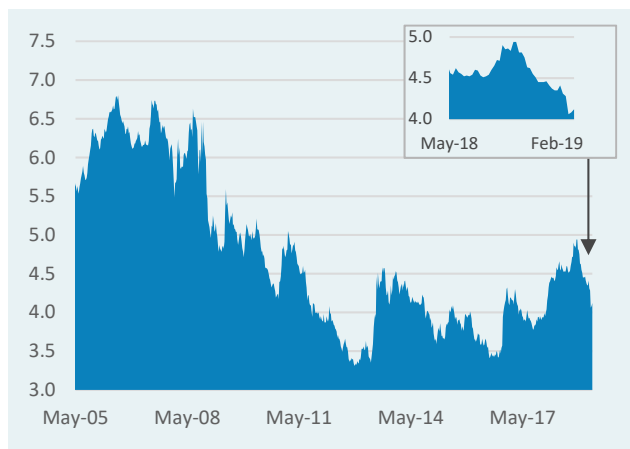
Home prices have faltered a bit, with the median U.S. home sales price falling -6.1% year-over-year in Q4. As is often the case, home price trends can vary significantly from city to city, which makes annual summary statistics difficult to interpret on a local level.

NAHB HOUSING MARKET INDEX



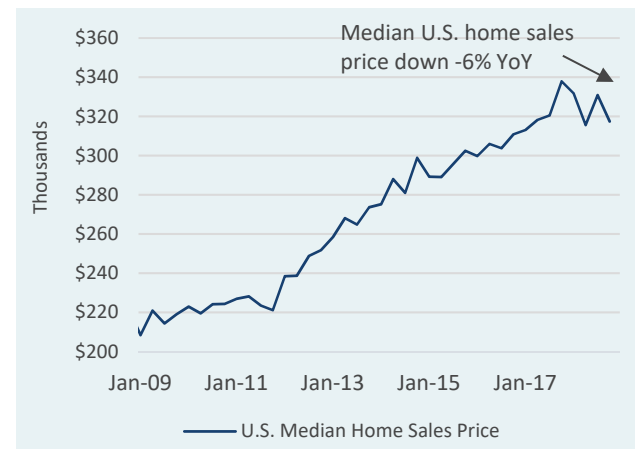
Source: Bloomberg, NAHB, as of 3/31/19 (see appendix)

30-YEAR FIXED MORTGAGE RATE



Source: FRED, as of 3/31/19

MEDIAN U.S. HOME SALES PRICE



Source: FRED, as of 12/31/18

International economics summary

- Global growth expectations for the next two years were revised materially lower in Q1. The OECD's global GDP growth forecast for 2019 and 2020 fell from 3.5% to 3.3%, and from 3.5% to 3.4%, respectively.
- In March, negotiations resumed between high-level U.S. and Chinese trade delegations. The dialogue was viewed as constructive, and optimism picked up for some sort of formal trade resolution being reached in the near-to-intermediate future, although the two sides have yet to agree on a formal timeline.
- The German Manufacturing PMI fell from 47.6 to 44.1 in March, falling further into the contractionary territory below 50. New orders and export sales data came in weaker than expected which contributed to a more pessimistic outlook for German manufacturing activity.
- The House of Commons in the British Parliament briefly took control of their government's legislative agenda, but failed to reach a majority vote on a path forward. On April 10th, British Prime Minister Theresa May and the European Council agreed to extend the Brexit deadline from April 12th to October 31st.
- The spread between the JP Morgan Global Services and Manufacturing PMIs rose to 3.1 in March. Last March, the spread was at 0.0, indicating that over the past year the outlook for global manufacturing activity has weakened relative to the outlook for global services activity. Typically, services activity is more resilient to a worsening economic backdrop.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	3.0% 12/31/18	1.5% 2/28/19	3.8% 3/31/19
Eurozone	1.1% 12/31/18	1.4% 3/31/19	7.8% 2/28/19
Japan	0.3% 12/31/18	0.2% 2/28/19	2.3% 2/28/19
BRICS Nations	5.8% 12/31/18	2.4% 3/31/19	5.3% 12/31/18
Brazil	1.1% 12/31/18	3.9% 2/28/19	12.2% 3/31/19
Russia	2.7% 12/31/18	5.3% 3/31/19	4.9% 2/28/19
India	7.2% 12/31/18	2.6% 2/28/19	8.5% 12/31/17
China	6.4% 12/31/18	1.5% 2/28/19	3.8% 12/31/18

International economics

Global economic growth trended lower over the past quarter. Most of the world experienced a deceleration in inflation, while labor markets showed moderate improvement. Global central banks took a more dovish stance in response to these conditions, which contributed to a sharp decline in global sovereign yields in March.

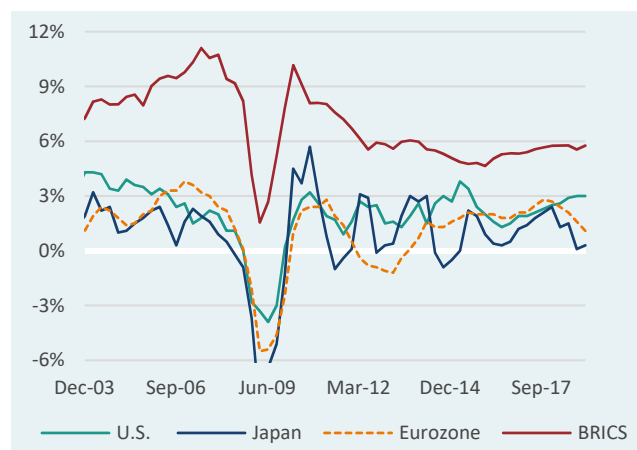
Real GDP in the Eurozone decelerated in Q4 from 1.6% to 1.1% YoY as the region continued to show weakness. Uncertainty surrounding Brexit, and the dependence of European economies on China likely factored into the regional outlook. Additionally, Europe faces significant

structural issues which are important to monitor, though perhaps not immediate in nature. As the ECB begins to discuss a tiered, sub-zero interest rate regime, the inability of EU members to pursue their own fiscal and monetary policies could prolong economic slowdowns and undermine subsequent recoveries.

Global growth forecasts were revised lower

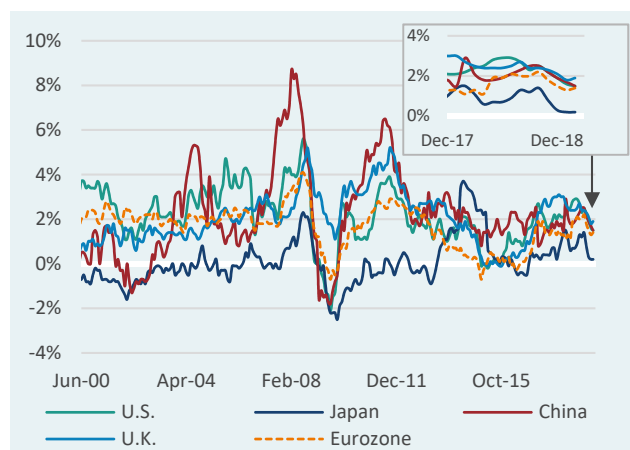
Following the failure of the House of Commons in British Parliament to agree on a Brexit strategy through “indicative votes”, Prime Minister Theresa May negotiated an extension of the Brexit deadline from April 12th to October 31st.

REAL GDP GROWTH (YOY)



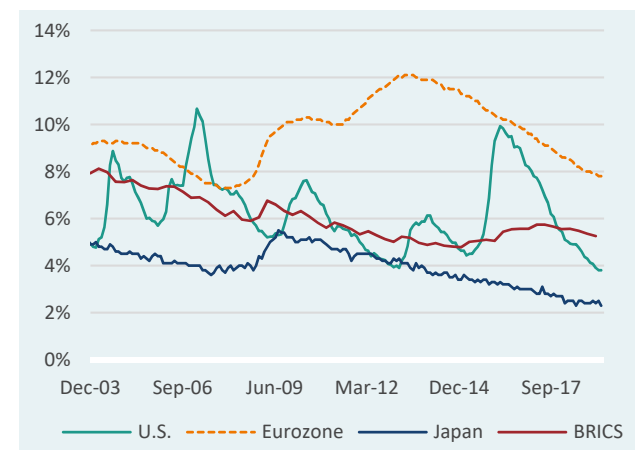
Source: Bloomberg, as of 12/31/18

INFLATION (CPI YOY)



Source: Bloomberg, as of 2/28/19

UNEMPLOYMENT RATE



Source: Bloomberg, as of 2/28/19 or most recent release

Fixed income rates & credit

Interest rate environment

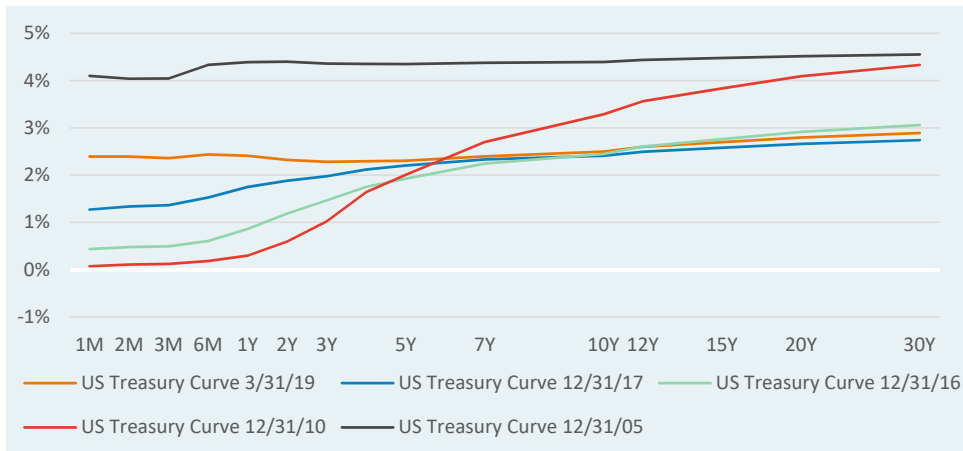
- The Federal Reserve held the fed funds rate unchanged over the quarter, and communicated a much more dovish stance on monetary policy amid slower growth expectations and stable inflation near 2%.
- Fed officials lowered their collective expectations for rate hikes in 2019 from two to zero, and announced that the balance sheet unwind would conclude in September, much earlier than previously anticipated.
- More dovish expectations for monetary policy and concerns over economic growth likely helped push long-term Treasury yields lower. The 10-year yield fell 28 bps to just above 2.4%.
- Falling long-term yields and stable short-term yields led to a brief inversion of the Treasury curve between the 10-year and 3-month yields.
- While widely considered a bearish signal for the economy and risk markets, the timing between curve inversion and bearish economic and market environments has varied widely. Additionally, Fed asset purchases of long-term Treasuries has artificially lowered yields and muddled the information conveyed by the yield curve.
- The ECB also pivoted to a more dovish stance as officials announced that deposit rates will be on hold through at least the end of the year.
- The 10-year German bund yield dipped back into negative territory for the first time since late 2016.
- Emerging market local bonds offer attractive yields relative to developed markets, even after adjusting for inflation. The JPM GBI-EM Index yielded 7% at the end of March.

Area	Short Term (3M)	10-Year
United States	2.39%	2.41%
Germany	(0.53%)	(0.07%)
France	(0.54%)	0.32%
Spain	(0.40%)	1.10%
Italy	(0.20%)	2.49%
Greece	0.87%	3.73%
U.K.	0.80%	1.00%
Japan	(0.17%)	0.08%
Australia	1.68%	1.77%
China	2.08%	3.07%
Brazil	6.31%	8.97%
Russia	7.35%	8.41%

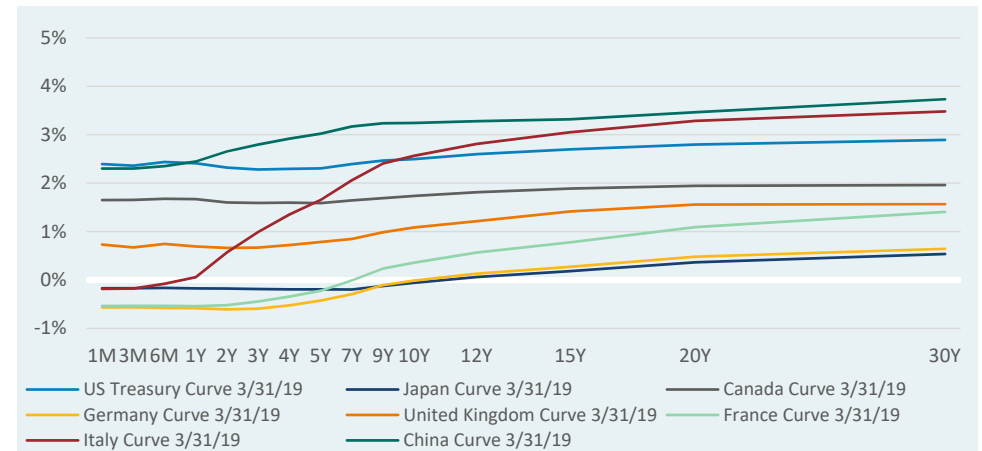
Source: Bloomberg, as of 3/31/19

Yield environment

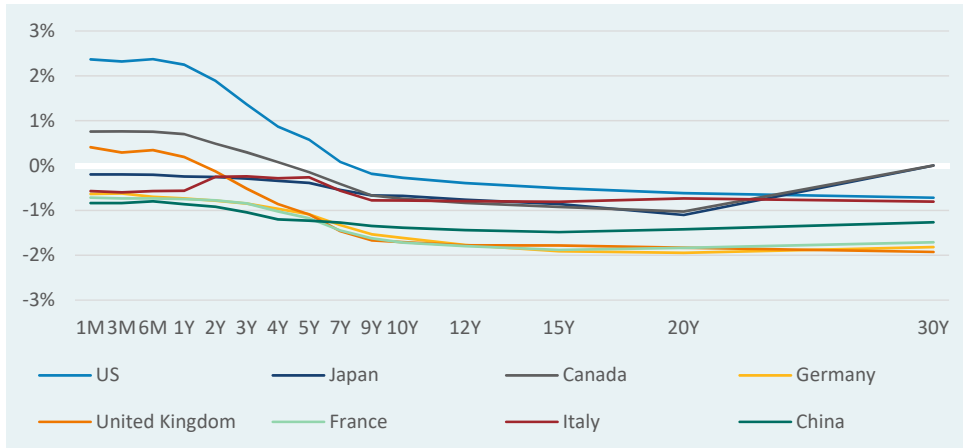
U.S. YIELD CURVE



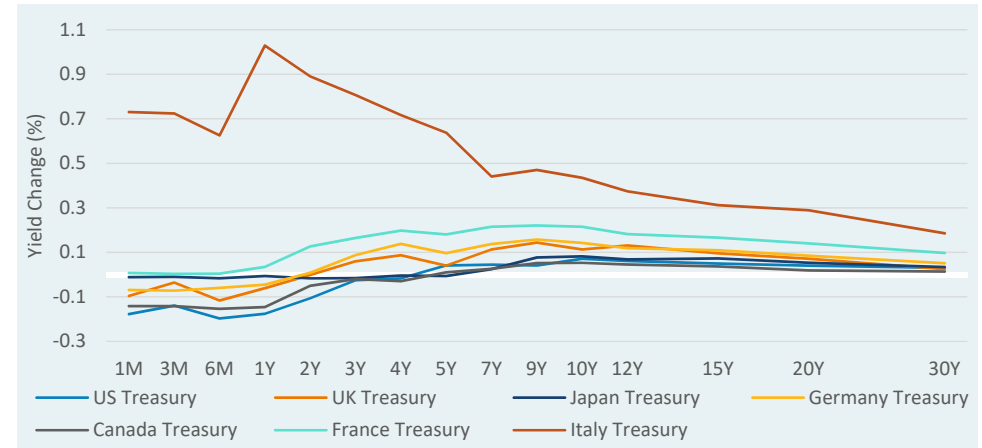
GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 3/31/19

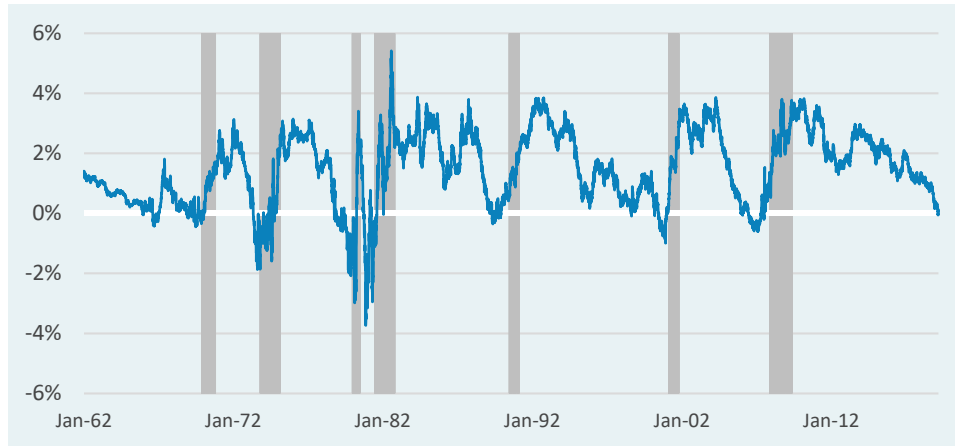
Yield curve inversion

The drop in long-term Treasury yields following the Fed meeting in March briefly caused the yield curve to invert, meaning that short-term yields (3-month) were higher than long-term yields (10-year). Investors have widely considered yield curve inversion as a sign that the economic cycle is coming to an end. At a high level, the shape of the yield curve tells investors something about what the market is expecting. All else equal, when the curve is steep, markets are expecting a positive growth environment and when the curve is flat or inverted, markets are expecting a negative growth environment.

While we have previously noted that the wide range of timing between curve inversion and recession has made the signal less useful, it is also important to note that the Fed's purchases of Treasuries has artificially lowered long-term yields. Therefore, Fed policy has obscured the market's expectation of future growth that is embedded in the shape of the yield curve. Although we are always wary of "this time is different" arguments, we believe that the recent yield curve inversion is not signaling an imminent recession.

The information conveyed by the shape of the yield curve has been obscured by Fed asset purchases

10-YEAR MINUS 3-MONTH TREASURY YIELD CURVE



Source: Bloomberg, as of 3/31/19, recessions are shaded with the dates defined by NBER

TIME FROM CURVE INVERSION TO THE NEXT RECESSION

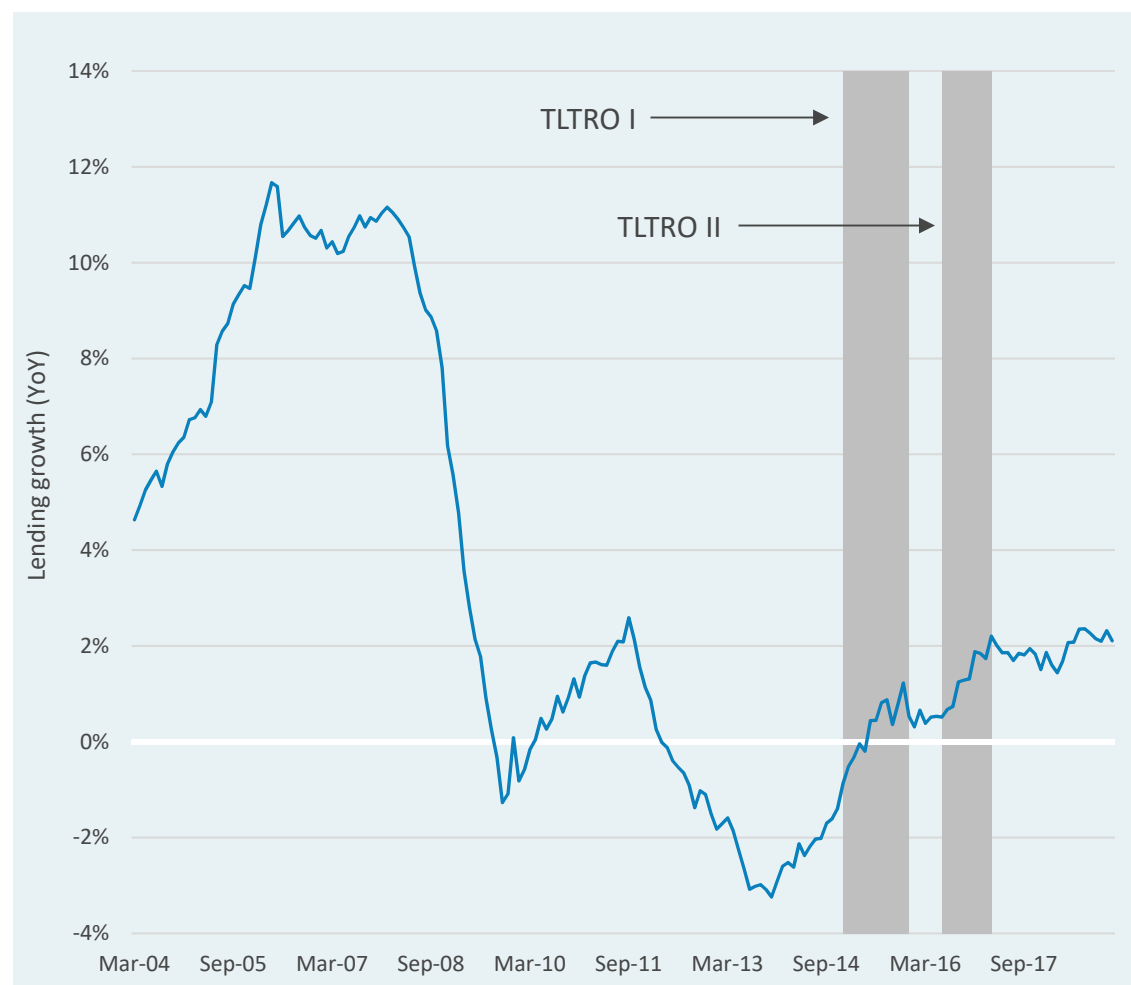
Start of Curve Inversion	Beginning of Next Recession	Months From Inversion to Recession
Jan-66	Dec-69	23
Dec-68	Dec-69	12
Jun-73	Nov-73	5
Nov-78	Jan-80	14
Oct-80	Jul-81	9
Mar-89	Jul-90	15
Jul-00	Mar-01	8
Jan-06	Dec-07	23
Average		13.6

Source: Bloomberg, recession dates defined by NBER

Eurozone monetary policy

- The European Central Bank (ECB) followed the Fed by pivoting to a more dovish monetary policy stance amid expectations of slower economic growth and muted inflation. ECB officials' latest growth forecasts show they expect only 1.1% real GDP growth in 2019.
- To counteract a potential growth slowdown, the ECB announced a third round of targeted long-term refinancing operations (TLTRO) and that it will keep deposit rates on hold through at least the end of the year. In the TLTRO program, the ECB gives out cheap short-term financing to banks with incentives for them to lend this money out to corporations and households.
- A total of €739 billion were lent out in the first two rounds of TLTROs, which helped lead to a modest pick up in bank lending growth. While this round of TLTROs may lead to banks rolling over previous loans, it is not likely to result in a significant increase in lending as the Eurozone already has ample liquidity and credit demand remains weak.
- Despite these recent steps, the ECB has limited ability to effectively ease. This puts the region at risk of a self-reinforcing downturn if conditions were to worsen, particularly since countries also have little room to provide fiscal stimulus.

EUROZONE BANK LENDING TO HOUSEHOLDS & CORPORATES



Source: Bloomberg, as of 1/31/19

Credit environment

High yield bond yields fell in March, impacted by the Fed's pause in the hiking cycle. Anticipation of an easier policy, which could potentially lengthen the credit cycle, has strengthened sentiment for risk assets. BB-rated bonds outperformed both CCC- and B-rated bonds in March. High yield bonds returned 7.3% YTD which is the strongest start to a calendar year on record for the asset class since 2003.

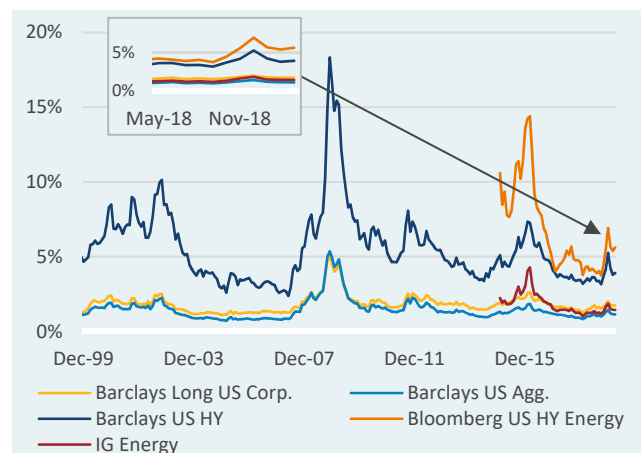
Leveraged loan prices declined during March as the asset class deals with outflows and a pause in the Fed's hiking cycle. The outflows have exceeded \$30 billion over the past two quarters

which represents 20% of assets under management, according to J.P. Morgan. Leveraged loans have returned 3.8% 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.

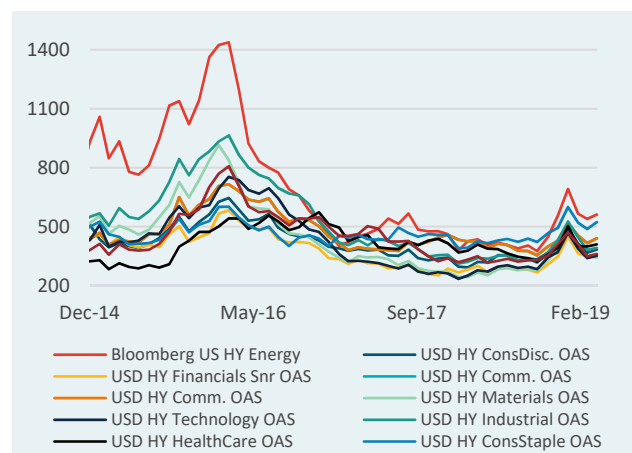
Credit spreads widened due to concerns over slowing global growth and broader risk-off behavior

SPREADS



Source: Barclays, Bloomberg, as of 3/31/19

HIGH YIELD SECTOR SPREADS (BPS)



Source: Bloomberg, as of 3/31/19

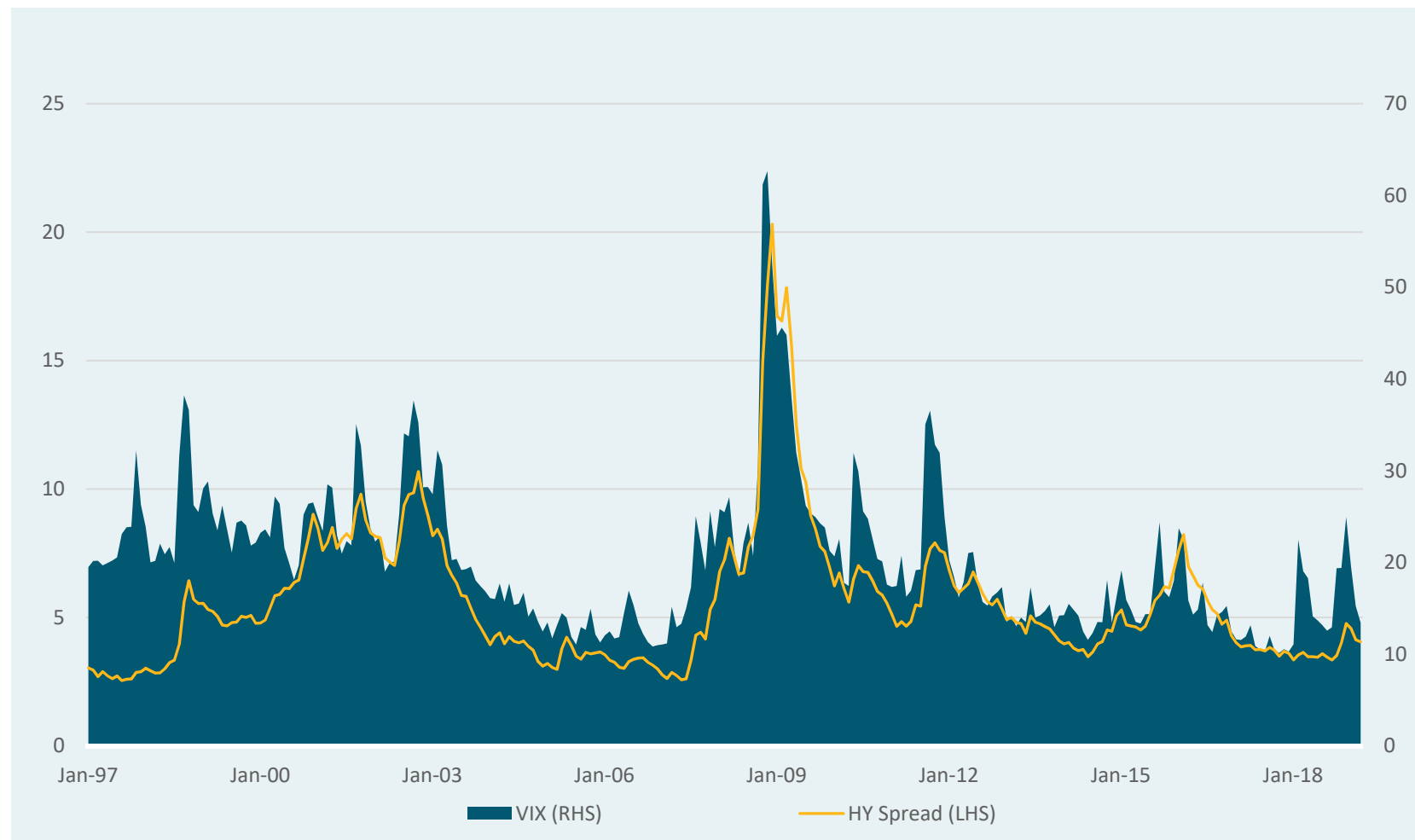
Market	Credit Spread (OAS)	
	3/31/19	3/31/18
Long U.S. Corp	1.7%	1.5%
U.S. Agg Corp	1.2%	1.1%
U.S. High Yield	3.9%	3.5%
U.S. Bank Loans*	4.4%	3.9%

Source: Barclays, Credit Suisse, Bloomberg, as of 3/31/19

*Discount margin (4-year life)

Credit is sensitive to equity volatility

HIGH YIELD BOND SPREADS & VOLATILITY



When volatility rises, higher risk credit typically experiences losses

Source: Cboe, FRED, as of 3/31/19

Default & issuance

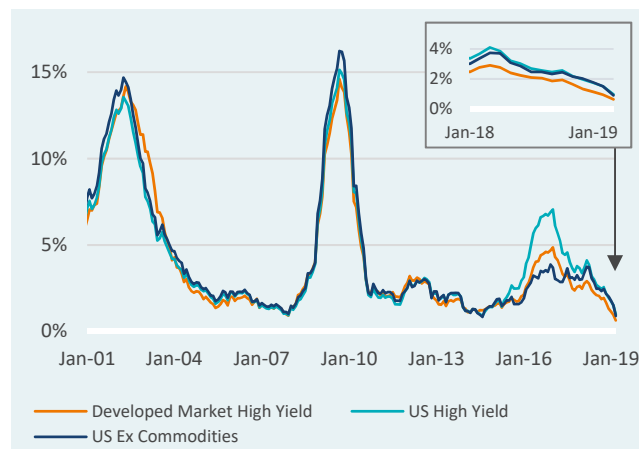
Default activity has been low and stable in the U.S. credit market, despite volatility in spreads. The par-weighted default rate declined to 0.9% and remains below its long-term average range of 3.0-3.5%. For loans, the par-weighted default rate at the end of March was 1.0%, its lowest level since April 2012 (0.8%), according to data from JPMorgan. Sectors that have been more prone to defaults include: consumer, retail, telecom, and automotive. The 2018 loan par-weighted default rate was 1.6%.

Senior loan and high yield markets have essentially

recovered from a wave of defaults seen in 2015-2016 that were generated from the energy and metals/mining sectors. High yield bond recovery rates have improved significantly since that time.

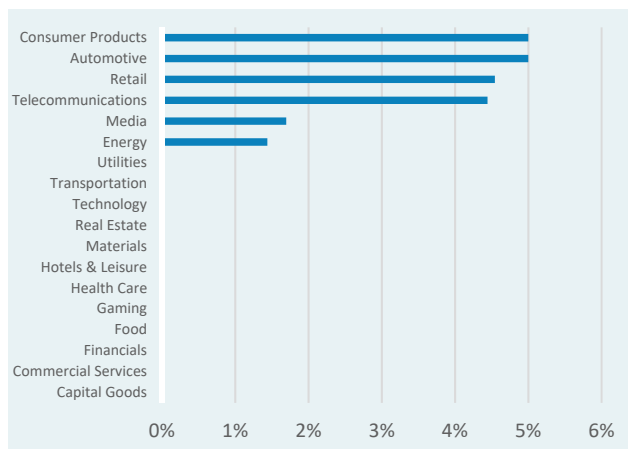
Gross high yield issue activity increased in March to the highest level seen since March of 2018. Loan market issuance is significantly behind last year's pace, likely influenced by a lower demand for floating rate securities now that the Fed has paused monetary tightening.

HY DEFAULT RATE (ROLLING 1-YEAR)



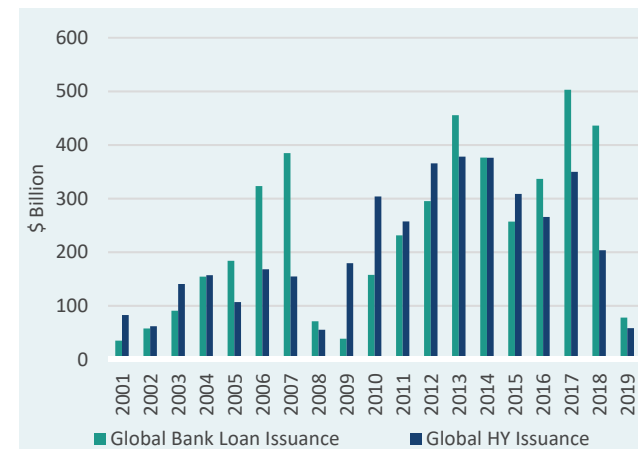
Source: BofA Merrill Lynch, as of 3/31/19

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



Source: BofA Merrill Lynch, as of 3/31/19 – par weighted

GLOBAL ISSUANCE (\$ BILLIONS)



Source: Bloomberg, BofA Merrill Lynch, as of 3/31/19

Private credit

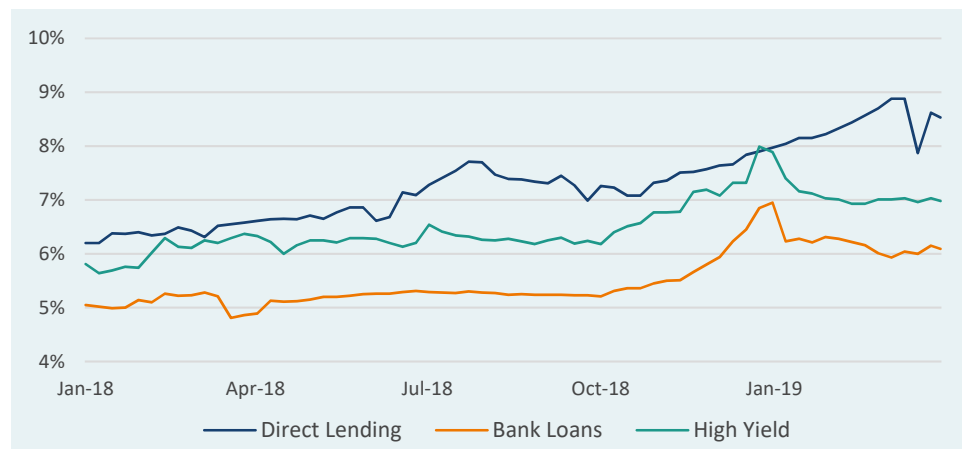
Fundraising in the private credit market slowed through year-end 2018. A total of 163 funds closed on \$110 billion during the year, which was down from 189 funds and \$129 billion in 2017. Direct lending, mezzanine, and distressed debt were the most active strategies, raising \$45 billion, \$31 billion, and \$21 billion, respectively. Even with slower fundraising, dry powder in private credit is at record levels. Private debt dry powder at the end of 2018 was \$280 billion, which beat the 2017 record of \$246 billion.

Yields for loans made by direct lending funds finished March at 8.5%. While yields have been aided by slightly higher LIBOR rates, which grew from 2.3% to 2.6% year-to-date, spreads increased from 4.3% to 5.9% year-to-date.

Credit spreads expanded in the first quarter, along with the debt multiples for borrowers. Borrowers now average debt totaling 5.9x EBITDA at the end of March, a 0.4x increase from one year prior.

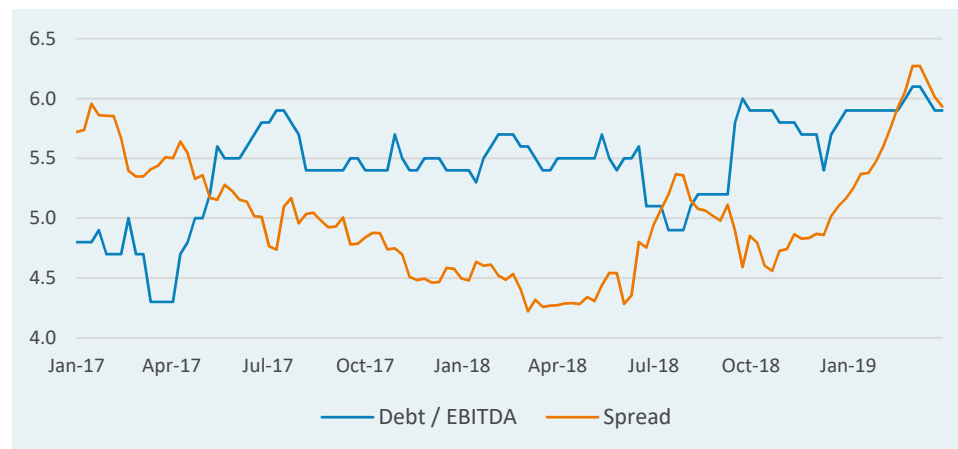
Fundraising slowed in private credit last year

YIELDS FOR DIRECT LENDING, BANK LOANS & HIGH YIELD



Source: The Lead Left, Middle Market, EBITDA < \$50MM; S&P LSTA US Leveraged Loan Index; ICE BofAML US High Yield Master II, as of 3/31/19

DIRECT LENDING LEVERAGE MULTIPLES (DEBT / EBITDA) & SPREAD



Source: The Lead Left, Middle Market Credit Stats, as of 3/31/19

Equity

Equity environment

- U.S. equities experienced a 13.6% total return (S&P 500 Index) in Q1, nearly a mirror image of Q4 2018. The first quarter has indeed been one of the strongest quarters recently, but was simply a bounce back in lost performance from the prior quarter. At the end of March, the S&P 500 price index was just 3.2% below its high watermark that was reached in September.
- Currency movement had little impact on unhedged international equity over the quarter, though currencies on a 1-year basis have had a substantially negative effect. An unhedged investment in international developed equities (MSCI EAFE) lost 8.9% of portfolio value due to currency movement.
- First quarter earnings growth for S&P 500 companies is expected to be negative for the first time since Q2 2016. If corporate earnings expectations continue to be downgraded, this will likely hold back markets around the world. The greatest determinant of medium and long-term equity performance is typically the underlying trend of corporate earnings.
- The risk-on quarter drove small cap equities forward. The Russell 2000 Index posted a 14.6% return, compared to the 13.8% return of the Russell 1000 Index.
- Value equities underperformed growth equities over the quarter (Russell 1000 Value +11.7%, Russell 1000 Growth +16.0%). Performance over the quarter reversed value's gains from Q4 2018.
- After spiking in the fourth quarter, U.S. equity volatility returned to muted levels.

	QTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (Russell 1000)	13.8%		8.7%	
US Small Cap (Russell 2000)	14.6%		2.1%	
US Large Value (Russell 1000 Value)	11.7%		4.9%	
US Large Growth (Russell 1000 Growth)	16.0%		12.3%	
International Large (MSCI EAFE)	10.0%	11.3%	(3.7%)	5.2%
Eurozone (Euro Stoxx 50)	10.6%	12.9%	(6.3%)	5.8%
U.K. (FTSE 100)	9.5%	10.1%	(0.2%)	9.6%
Japan (NIKKEI 225)	6.8%	7.6%	(3.4%)	2.9%
Emerging Markets (MSCI Emerging Markets)	9.9%	9.8%	(7.4%)	(2.1%)

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 3/31/19

Domestic equity

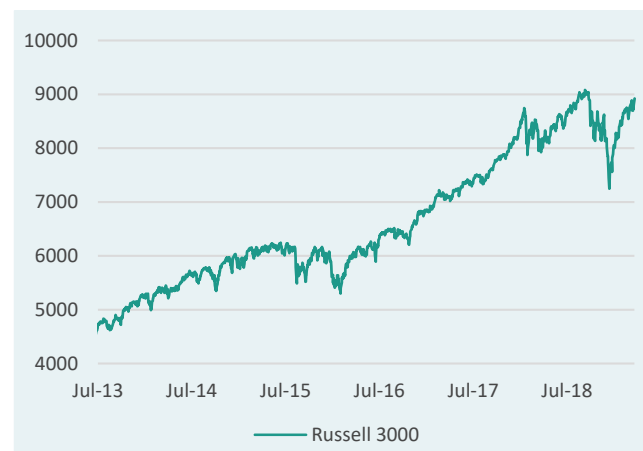
U.S. equities experienced a 13.6% total return (S&P 500 Index) in the first quarter, rebounding from the sharp sell-off in the prior quarter. At the end of March, the S&P 500 price index was just 3.2% below its high watermark that was reached in September. The bounce back in equity prices was driven by better than expected/feared Q1 corporate earnings, improving sentiment toward a U.S.-China trade deal, and the Fed's pivot to a more patient approach to monetary policy. The fall and subsequent rise in equities was primarily reflected in valuation changes. After dropping to a low of 13.6 in December, the forward 12-month P/E ratio on the S&P 500 finished the

quarter at 16.7, essentially unchanged over the past six months.

Now 10 years removed from the bottom of the financial crisis, it is worth noting that U.S. equities have experienced one of their best decades of performance ever. The S&P 500 had a compound price return of 14.2% per year, and over 75% of this was due to profit margin and valuation expansion. With both of these measures at above average levels, we do not think that it is reasonable to expect this level of performance to continue moving forward.

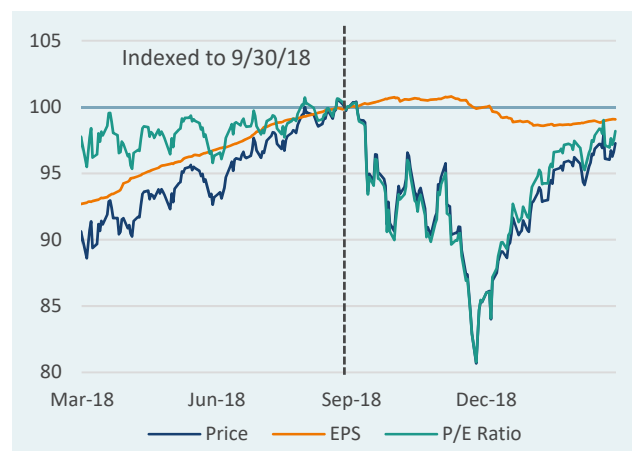
We maintain a neutral view on U.S. equities

U.S. EQUITIES



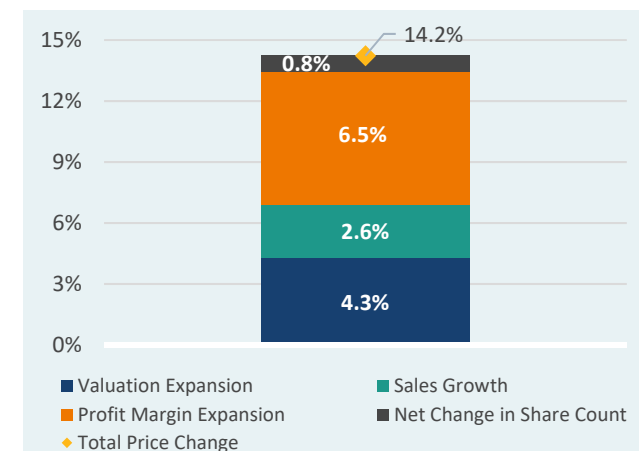
Source: Russell Investments, as of 3/31/19

S&P 500 PRICE MOVEMENT ATTRIBUTION



Source: Bloomberg, as of 3/31/19

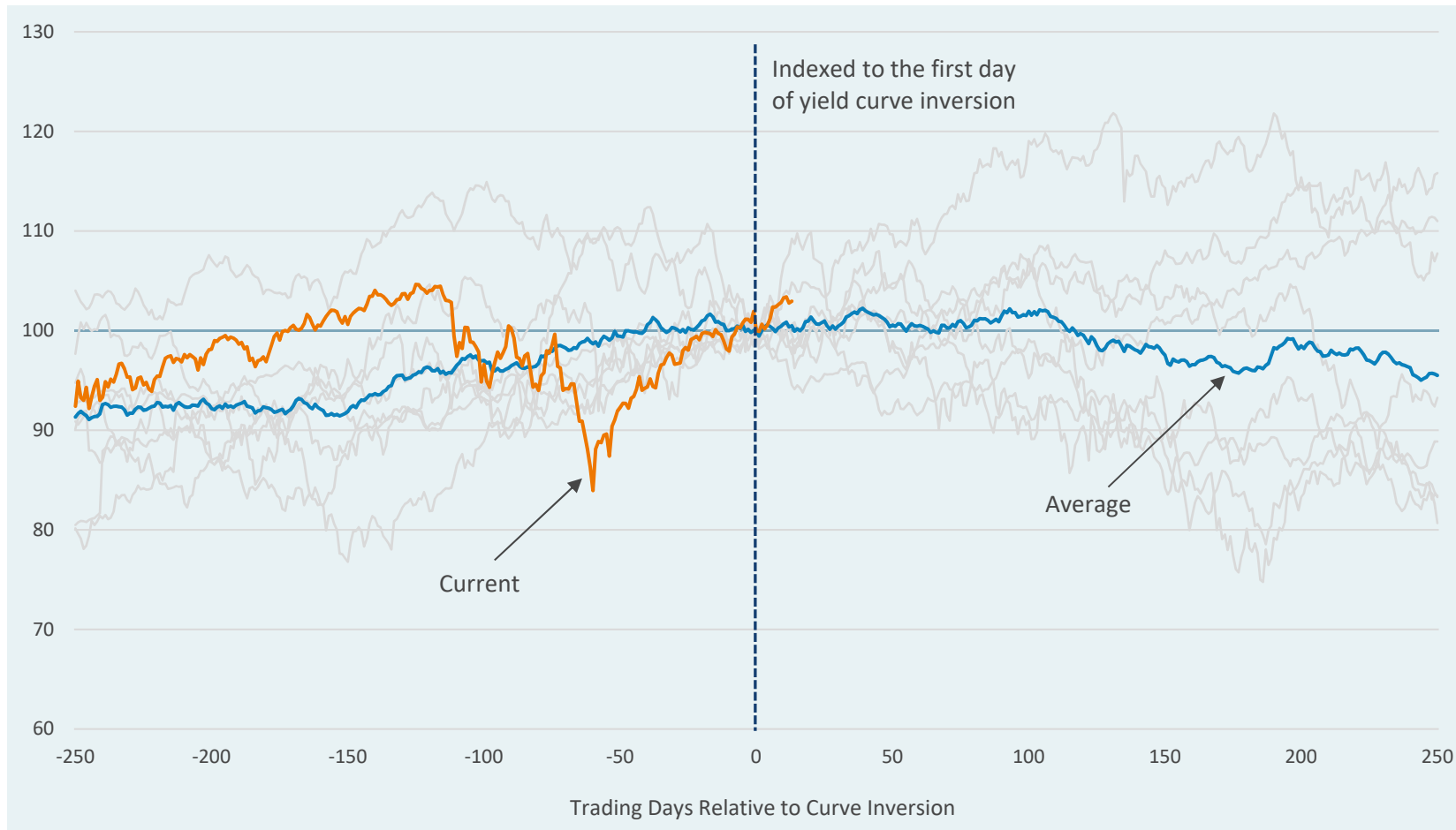
S&P 500 10-YR PRICE RETURN ATTRIBUTION



Source: Verus, Bloomberg, as of 3/31/19

Equity markets and yield curve inversions

EQUITY PERFORMANCE AROUND CURVE INVERSIONS



Equity performance has varied widely following yield curve inversion

Source: Bloomberg, Verus, as of 3/31/19 – equities are represented by the S&P 500 Index and the yield curve is defined as the difference between the 10-year and 3-month Treasury yield; see page 23 for the dates of yield curve inversion

U.S. equity & the economic cycle



A material short-term relationship exists between equity performance and economic growth

An investor's views on the economy cycle should therefore impact equity positioning

Source: Standard & Poor's, data since 1948

Domestic equity size & style

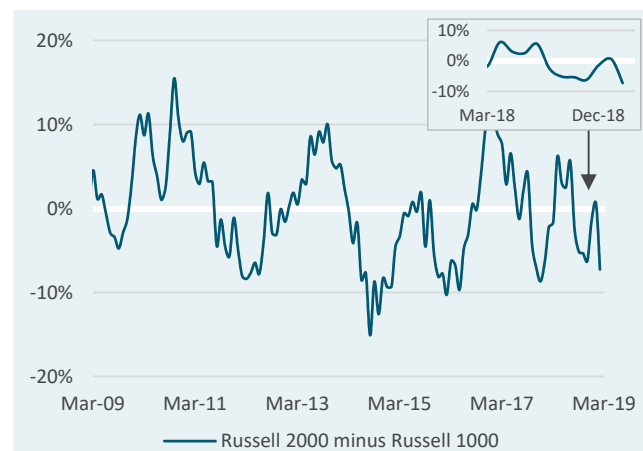
Small cap equities (Russell 2000 +14.6%) slightly outperformed large cap equities (Russell 1000 +14.0%) during the quarter. Meanwhile, growth stocks outperformed value stocks by a wide margin (Russell 1000 Growth +16.1% vs. Russell 1000 Value +11.9%).

The impact of sector performance on the value premium was more nuanced in Q1, as Materials (+10.3%) and Financials (+8.6%) underperformed the overall index (S&P 500 +13.6%), but Energy (+16.4%) outperformed. Information Technology,

the top performing sector, continued to deliver outsized returns (+19.9%).

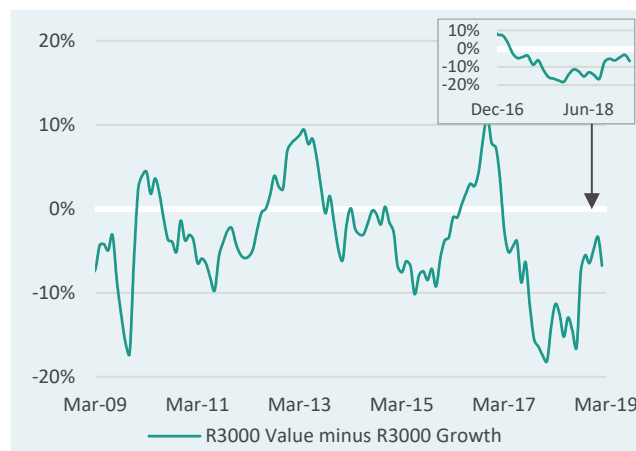
Both the small cap premium and value premium have struggled to deliver positive risk premiums over the past 10 years. It can be difficult to endure longer periods of factor underperformance, but similar to the equity premium in general, these periods do exist and investors should expect this on occasion.

SMALL CAP VS LARGE CAP (YOY)



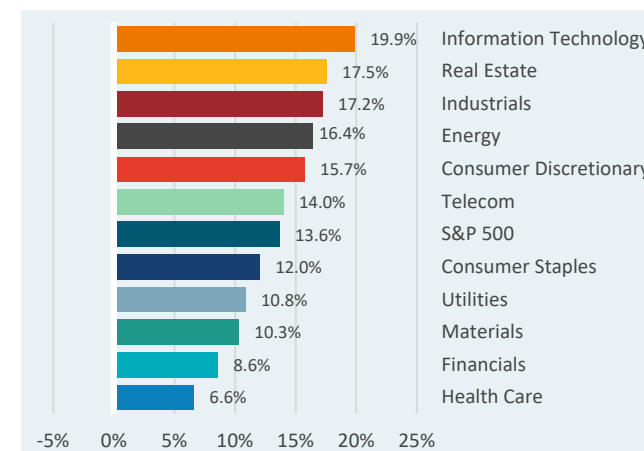
Source: FTSE, as of 3/31/19

VALUE VS GROWTH (YOY)



Source: FTSE, as of 3/31/19

Q1 S&P 500 SECTOR RETURNS



Source: Morningstar, as of 3/31/19

International developed equity

Like U.S. equities, international developed equities erased most of the losses they suffered in the prior quarter. After posting a return of -12.5% in Q4, the MSCI EAFE Index returned +10.2% in Q1. Currency losses were a mild detractor from unhedged U.S. dollar performance. On a currency hedged basis, EAFE equities returned 11.3%. From a country perspective, Swiss, French and UK equities outperformed, while Japanese and German equities lagged the overall index. While most markets are back near record highs, German equities (MSCI Germany) finished the quarter 17% below the previous high watermark. Underperformance in German equities has likely been influenced by a greater

sensitivity to global growth and trade as well as concerns over a slowing domestic economy.

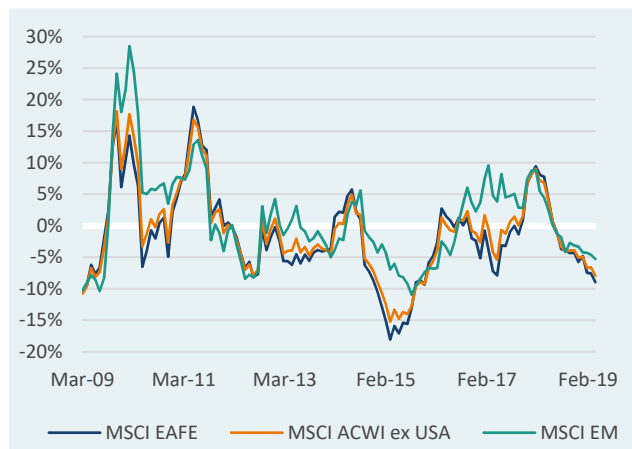
International developed equity markets are still cheap on both an absolute and relative basis at 13.3x forward earnings, but we believe there are good reasons for this pricing in certain markets. Within equity allocations, we are pessimistic on EAFE equities primarily due to a negative view on the Eurozone. We believe slowing economic growth, rising political risks, and the lacking ability of the ECB to meaningfully ease policy presents material headwinds to equity performance.

INTERNATIONAL DEVELOPED EQUITIES



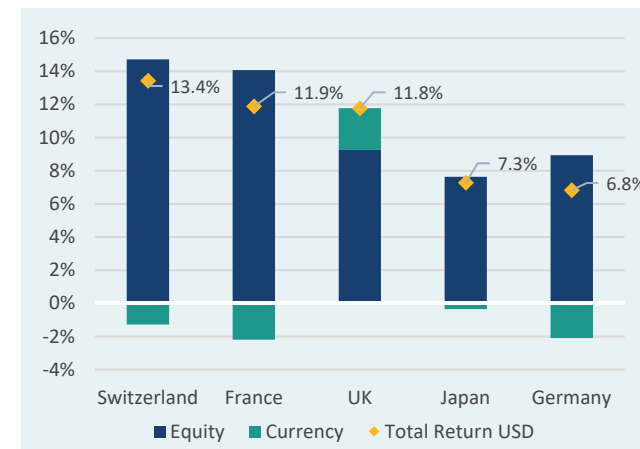
Source: MSCI, as of 3/31/19

EFFECT OF CURRENCY (1-YEAR ROLLING)



Source: MSCI, as of 3/31/19

Q1 COUNTRY PERFORMANCE



Source: MSCI, largest five country exposures shown above

Emerging market equity

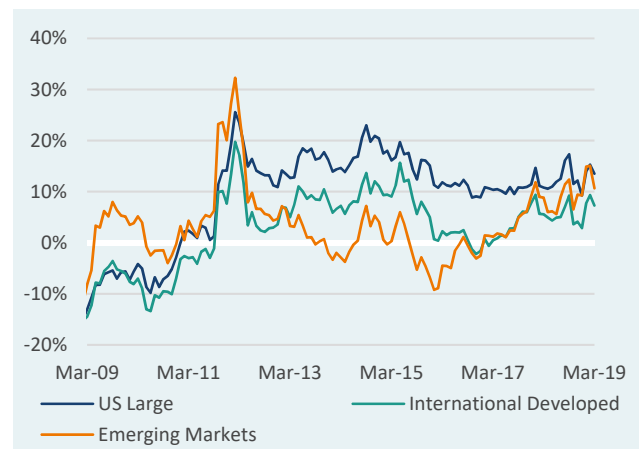
Emerging market equity performance was in-line with international developed markets in the first quarter, while U.S. equities outperformed. Currencies in these markets continued to show stability (MSCI EM +9.9%, MSCI EM Hedged +9.8%). Business sentiment across emerging market economies indicates expanding conditions, and fears of a sharp China slowdown have subsided. Moderating conditions may bolster emerging market returns throughout the year.

Equity multiples rebounded in the first quarter and are near

the long-term average. The divide between domestic and emerging equities remains wide.

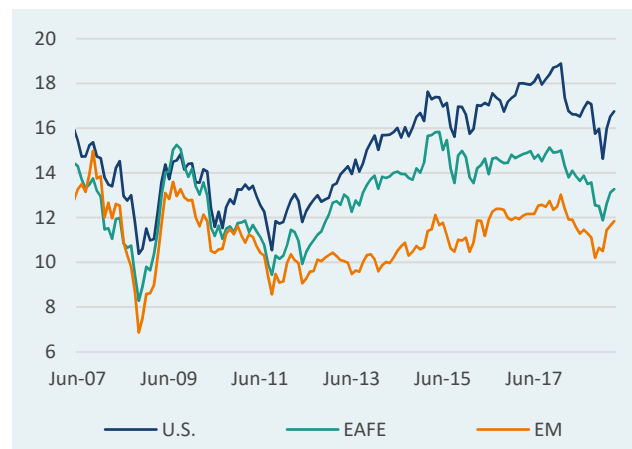
Decelerating global growth and rising probability of recession do present unique risks to emerging markets, as these markets typically exhibit a higher beta during market downside and upside moves. However, emerging markets can also deliver robust performance in times of moderate growth and easy monetary policy when investors seek growth and higher yields.

EQUITY PERFORMANCE (3-YR ROLLING)



Source: Standard & Poor's, MSCI, as of 3/31/19

FORWARD P/E



Source: MSCI, as of 3/31/19

PURCHASING MANAGERS' INDEX (PMI)

	18-Dec	19-Jan	19-Feb	19-Mar
Manufacturing				
Global	51.4	50.8	50.6	50.6
Developed	52.3	51.8	50.4	50.0
US	54.3	56.6	54.2	55.3
EM	50.3	49.5	50.6	51.0
Services				
Global	53.0	52.6	53.3	53.7
Developed	52.8	52.5	53.7	53.7
US	58.0	56.7	59.7	56.1
EM	53.6	52.9	52.1	53.6

Source: Markit, Institute for Supply Management (ISM)

Equity valuations

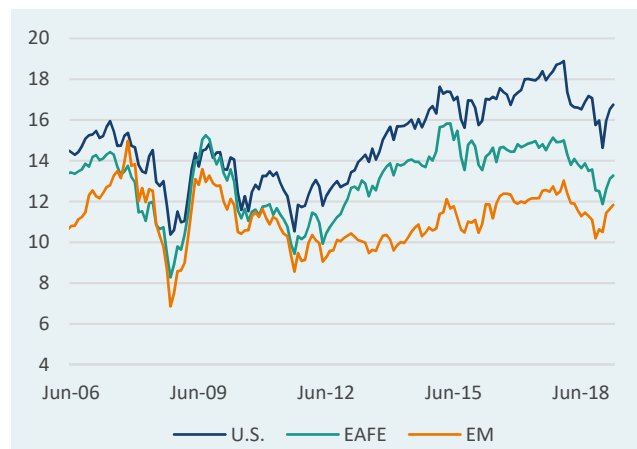
The fall and subsequent rise in global equity prices was primarily driven by changes in valuations. The recovery in Q1 brought most broad equity market valuations back to September 2018 levels, but below recent cycle highs. In the U.S., equities commanded a forward P/E multiple of 16.7x after hitting a multi-year low in December at 14.6x.

International equity valuations also recovered, but are still cheap on a relative basis, particularly when compared to the U.S. At the end of March, the MSCI EAFE and EM Indexes had forward P/E multiples of 13.3x and 11.8x, respectively. U.S. equities currently trade at a 25% forward premium to EAFE

equities, which is the largest gap over the past 15 years. While we believe there are reasons that EAFE equity markets command cheap valuations, particularly in Europe, it is worth noting that barring a significant change in the earnings environment, these markets should have a strong valuation support.

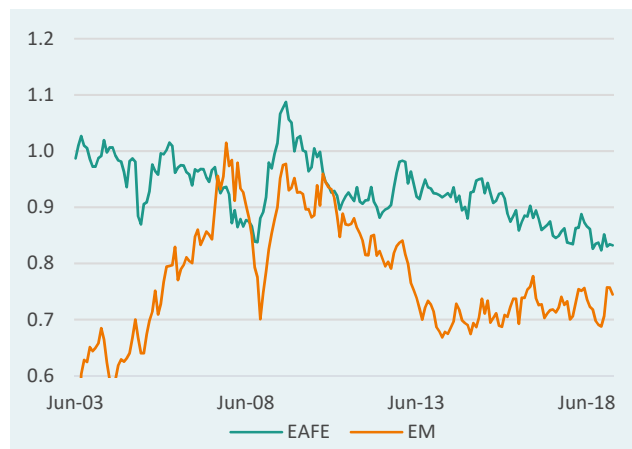
Over the long-term, valuations have had a material relationship with forward equity returns. Given this relationship, we are wary of extrapolating out the recent strong outperformance in U.S. equities.

FORWARD P/E RATIOS



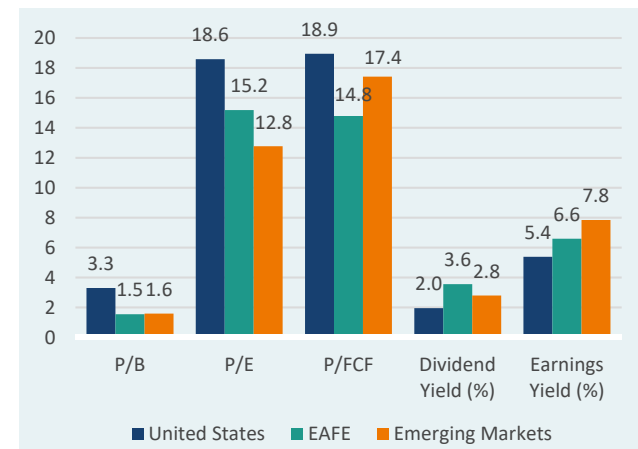
Source: MSCI, as of 3/31/19

P/E MULTIPLES RELATIVE TO U.S. EQUITIES



Source: Verus, MSCI, as of 3/31/19

VALUATION METRICS (3-MONTH AVERAGE)



Source: Bloomberg, MSCI as of 3/31/19 - trailing P/E

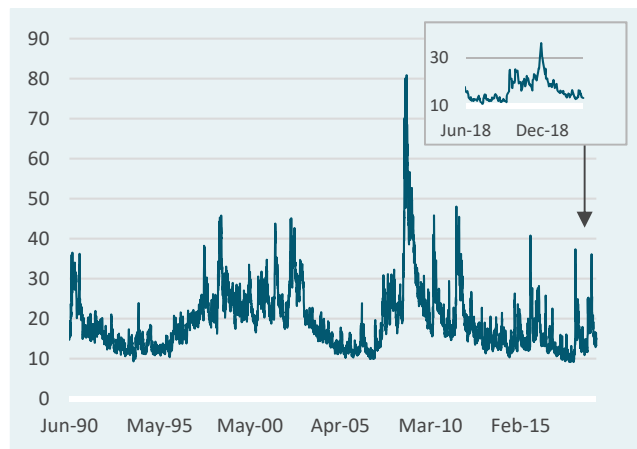
Equity volatility

Equity volatility spiked in the fourth quarter of 2018 but returned to low levels in Q1. The VIX Index ended March at 13.7, which ranked in the 26th percentile dating back to 1990 (volatility was this low 26% of the time). Low volatility is somewhat normal during later stages of the market cycle as the economy expands and business conditions hold steady. However, some investors have questioned the lack of price movement, given seemingly heightened geopolitical and economic risks present around the world today.

One-year volatility picked up after a tumultuous fourth quarter. U.S. markets have shown higher volatility than international markets for the first time since 2008, with a trailing 1 year volatility of 16%.

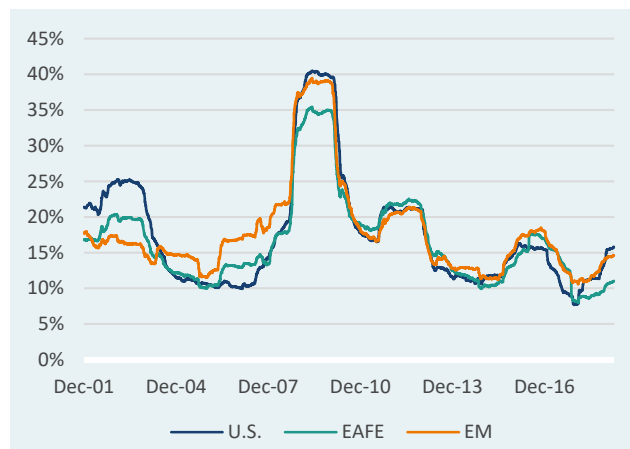
Equity performance around the world in Q1 was nearly a mirror image of 2018 Q4. The first quarter has indeed been one of the strongest quarters of recent decades, but this was mostly a bounceback in lost performance from the prior quarter.

U.S. IMPLIED VOLATILITY (VIX)



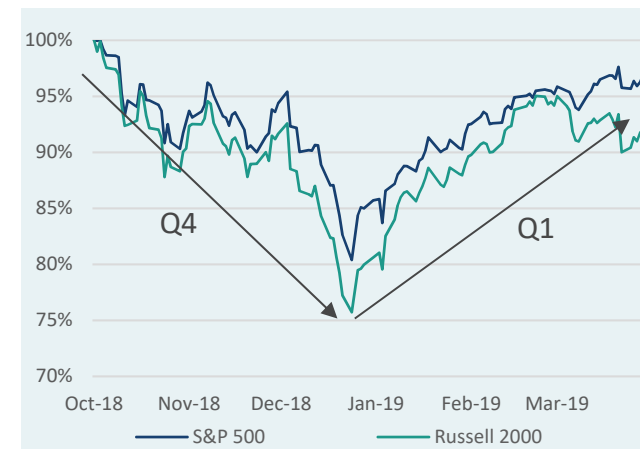
Source: CBOE, as of 3/31/19

REALIZED 1-YEAR ROLLING VOLATILITY



Source: Bloomberg, as of 3/31/19

2019 Q1 PERFORMANCE BOUNCE BACK



Source: Bloomberg, as of 3/31/19

Private equity

Venture capital fundraising and deal volumes continued to set records. \$55 billion of venture capital was raised in the U.S. in 2018, an increase of 63% over the previous year. Similarly, the amount of venture deals were up 58%. Venture deal volume in 2018 of \$131 billion exceeded the record of \$82 billion that was set in 2017.

Buyout activity continued to increase in 2018. Through the fourth quarter, buyouts were up 29% and 5% when measured by dollar value and number of transactions, respectively. The size of the average buyout, \$155 million, increased from \$133 million in 2017. Unlike deal flow, fund capital raising has slowed from the peaks of 2017. Only 186

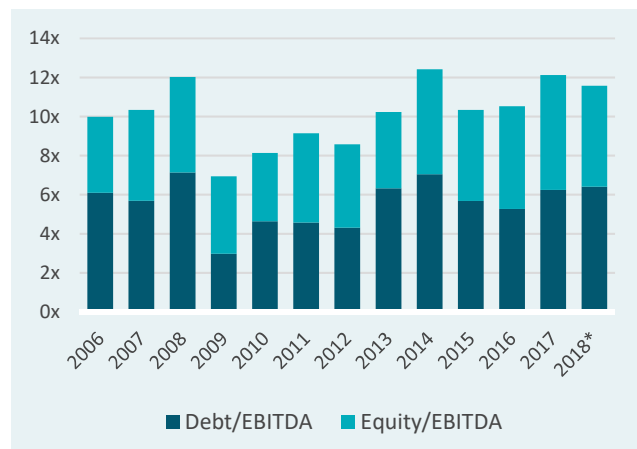
buyout funds representing \$166 billion closed in 2018, down from 235 funds representing a record \$225 billion in 2017.

Buyout multiples decreased slightly from 2017. Average EV/EBITDA was 11.6x through December 31, 2018 (down from 11.9x in 2017) with debt multiples averaging 6.2x through the fourth quarter. Debt as a percentage of transaction value hovered around 54%.

Balancing high deal multiples and a growing number of deals against a slowdown in fundraising, we advocate selectivity in fund investments.

Deals increased in buyouts and venture; multiples are steady; buyout fundraising has slowed

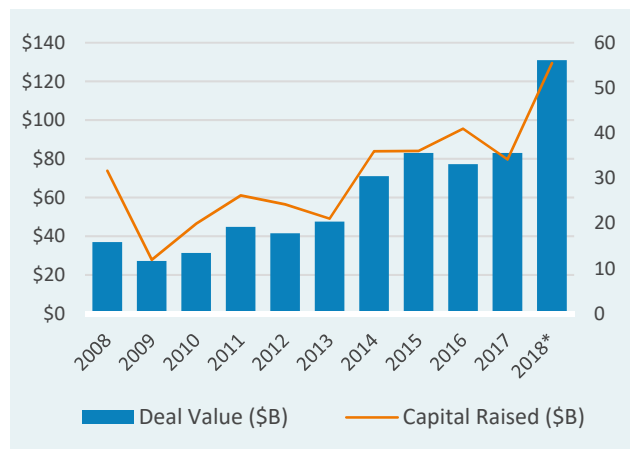
TRANSACTION MULTIPLES



Source: PitchBook, as of 12/31/18

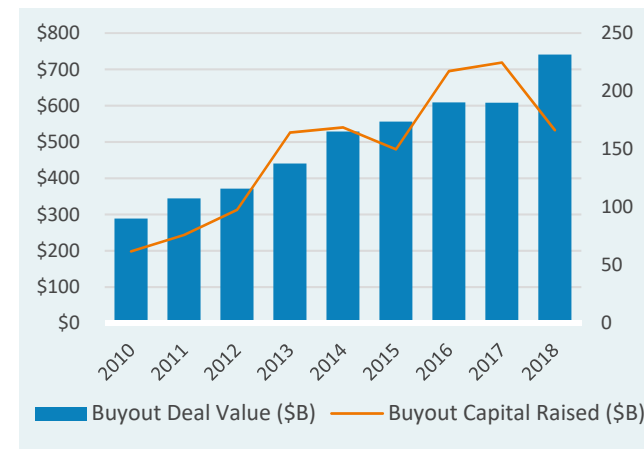
*2018 figures are estimates and are subject to change

VENTURE DEAL VOLUME & FUNDRAISING



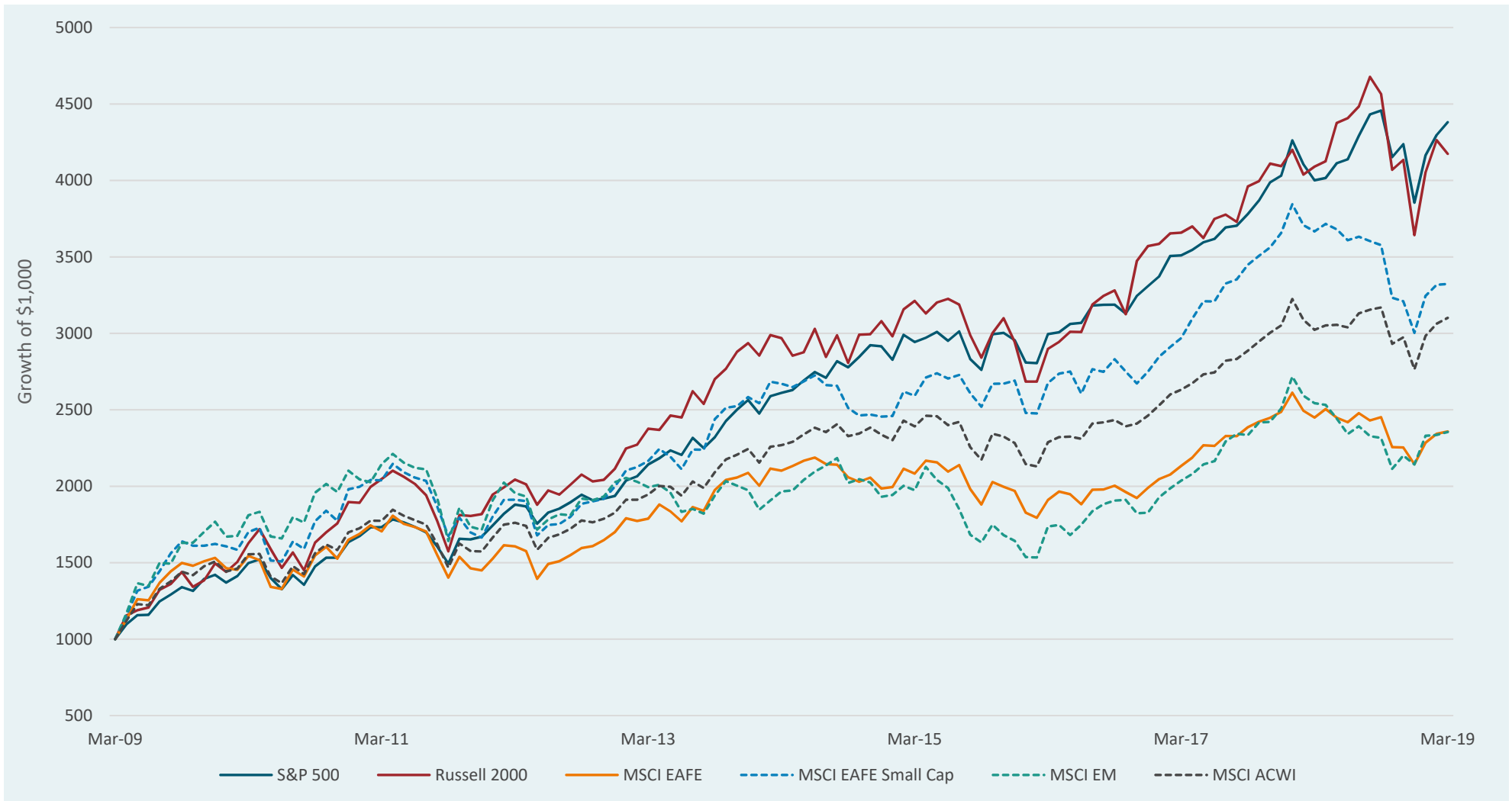
Source: PitchBook, as of 12/31/18

BUYOUTS DEAL VOLUME & CAPITAL RAISED



Source: PitchBook, as of 12/31/18

Long-term equity performance



Source: Morningstar, as of 3/31/19

Other assets

Currency

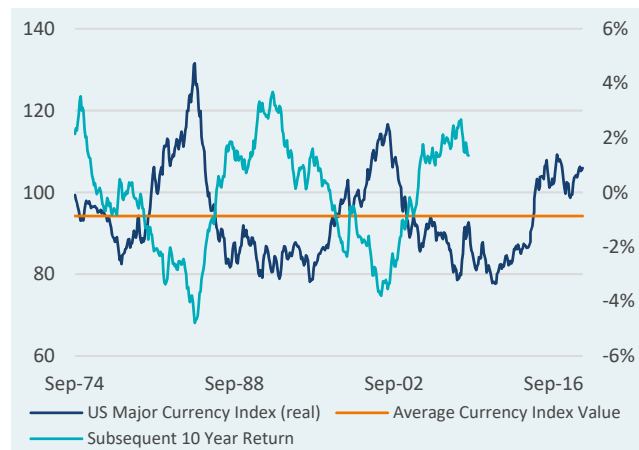
The U.S. dollar failed to gain traction in either direction during the first quarter, and remained near cycle highs. The Major Trade Weighted U.S. Dollar Index fell 0.3% over the period, but was 12.5% above its long-term average dating back to 1974 at the end of March. Expectations for a more accommodative Fed and weaker relative U.S. economic growth (from strong levels in 2018) has led many investors to call for U.S. dollar depreciation, but this has not occurred thus far. This may in part be because other developed central banks have followed the Fed's lead in moving away from monetary tightening.

Emerging market currencies were relatively stable versus the dollar for a second consecutive quarter. The JPMorgan Emerging Market Currency Index gained 0.4%. EM currencies have yet to stage a major comeback after falling more than 15% in the middle of last year.

The U.S. dollar remained near a cycle high

Despite some high-profile Brexit related volatility in the British pound, the global FX market has been relatively quiet. The trailing 1-year volatility of the Bloomberg Dollar Spot Index was 5.2% at the end of the quarter, the lowest level since 2014.

U.S. DOLLAR TRADE WEIGHTED INDEX



Source: Federal Reserve, Verus, as of 3/31/19

JPM EMERGING MARKET CURRENCY INDEX



Source: Bloomberg, JPMorgan, as of 3/31/19

BLOOMBERG DOLLAR SPOT INDEX VOLATILITY



Source: Bloomberg, as of 3/31/19, trailing 12-month vol shown

Hedge funds

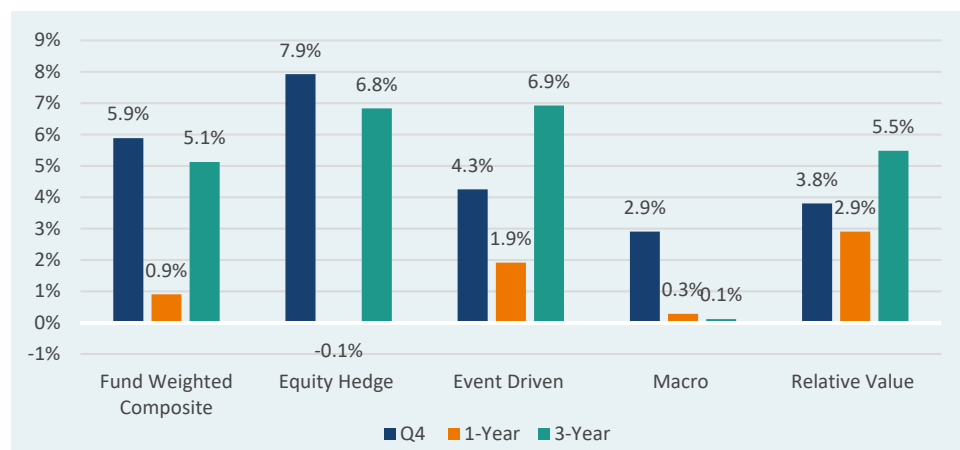
Hedge funds consistently advanced alongside the broad markets and enjoyed the best first calendar quarter result since 2006 (Hedge Fund Weighted Composite (FWC) +5.9% in 2019Q1; +0.9% trailing 12-months). While gains were broad based across strategy types, funds with greater equity market sensitivity earned the highest results. Within the equity hedge strategy set, funds with higher beta exposure rallied strongly.

According to Hedge Fund Research, growth-oriented managers (+9.3%) narrowly outperformed value-oriented (9%) peers. Healthcare focused funds (+13.2%) also stood out as winners. Activists (+8.3%) largely rebounded from a dismal Q4 last year.

For managers trading fixed income securities, funds focused on convertible arbitrage (+5.5%) and credit arbitrage (+5.1%) fared well as those markets bounced back this quarter. Asset backed (+1.7%) and fixed income multi-strategy managers (+2%) posted more muted gains.

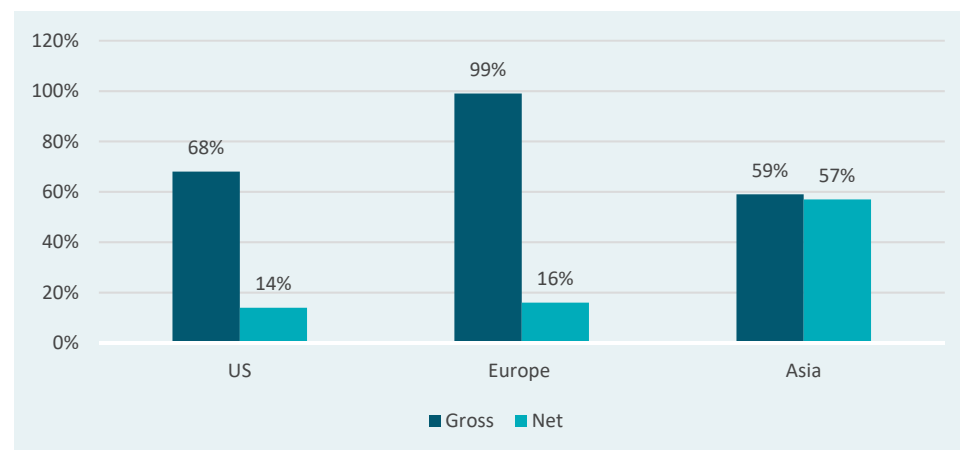
Hedge funds responded to the Q4 sell-off last year by cutting gross and net exposure levels to relatively low levels by year end. Gross leverage has since largely rebounded while net exposure, with the exception of Asia, remains below pre-sell off levels.

HFRI HEDGE FUND STYLE PERFORMANCE



Source: HFRI, as of 3/31/19

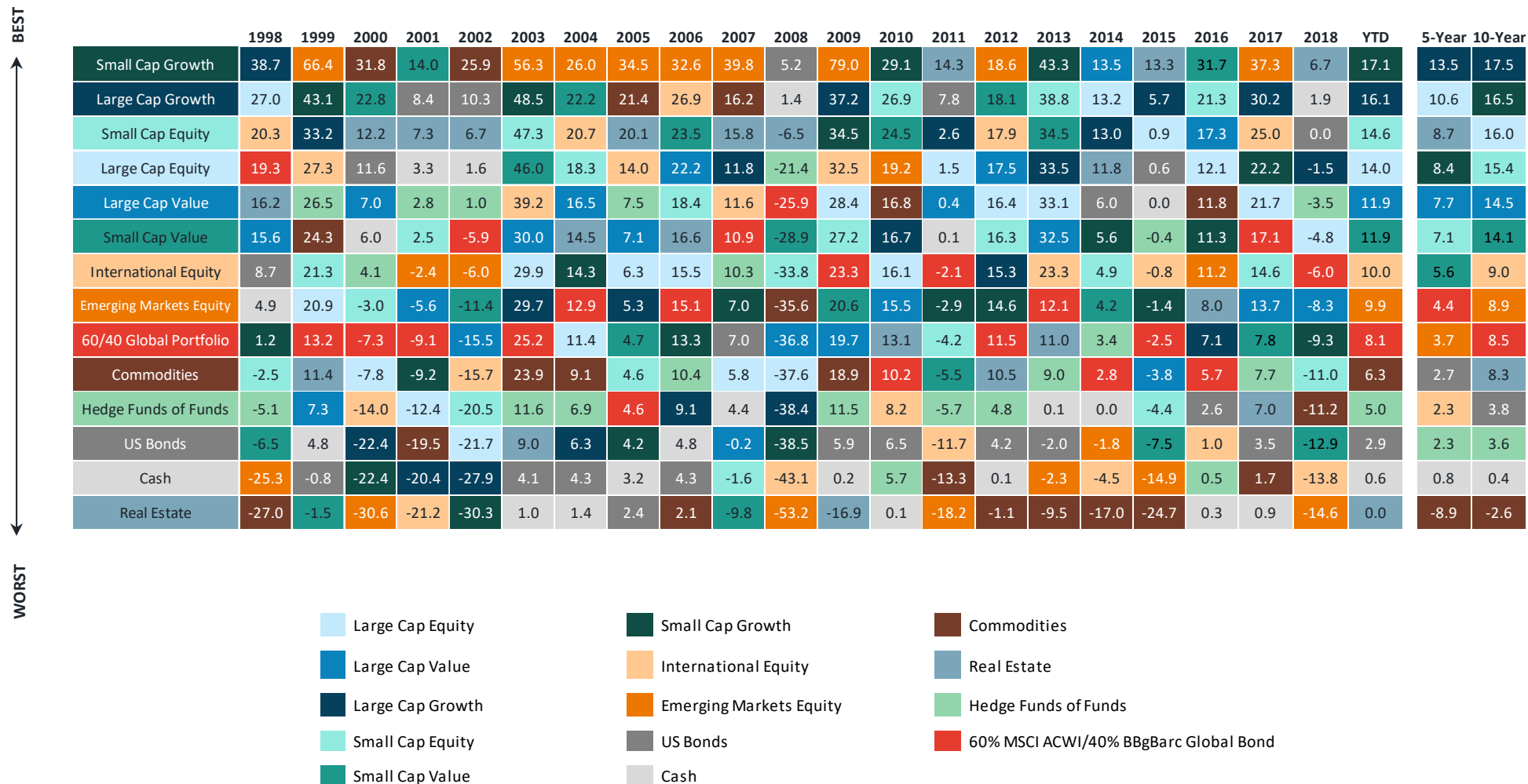
HEDGE FUND LEVERAGE LEVELS BY REGION



Source: Morgan Stanley, as of 3/31/19

Appendix

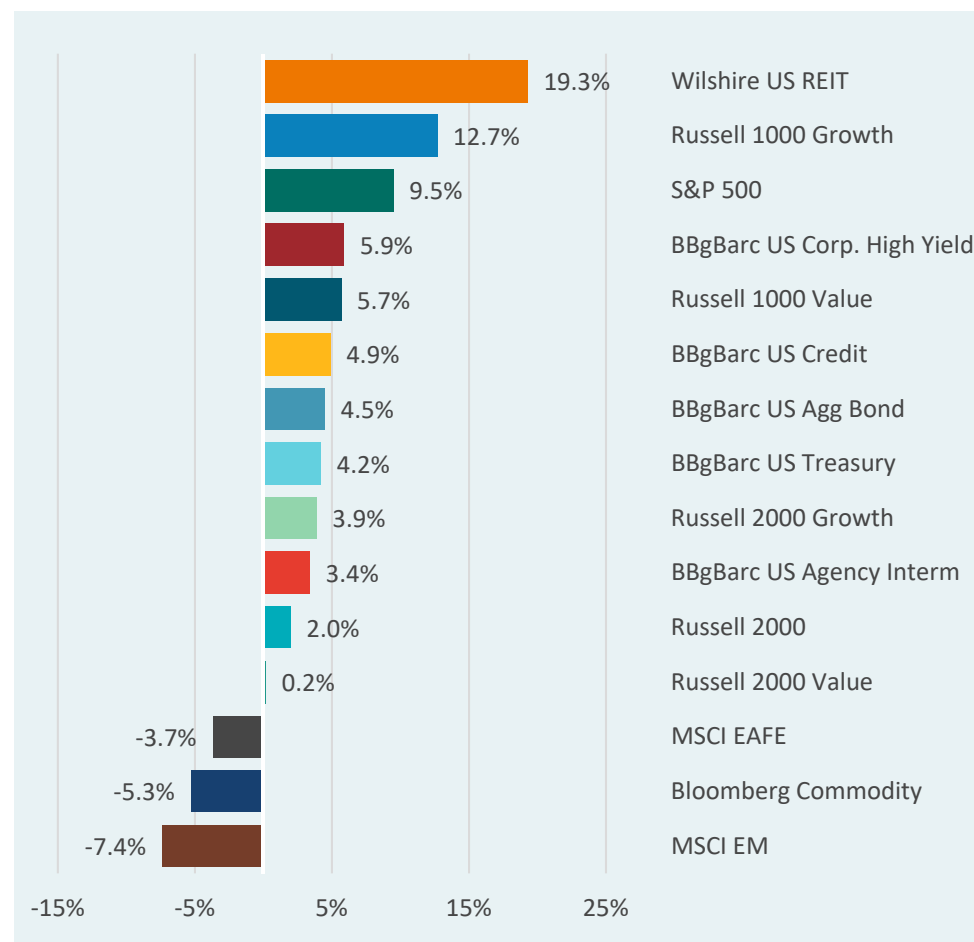
Periodic table of returns



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 12/31/18.

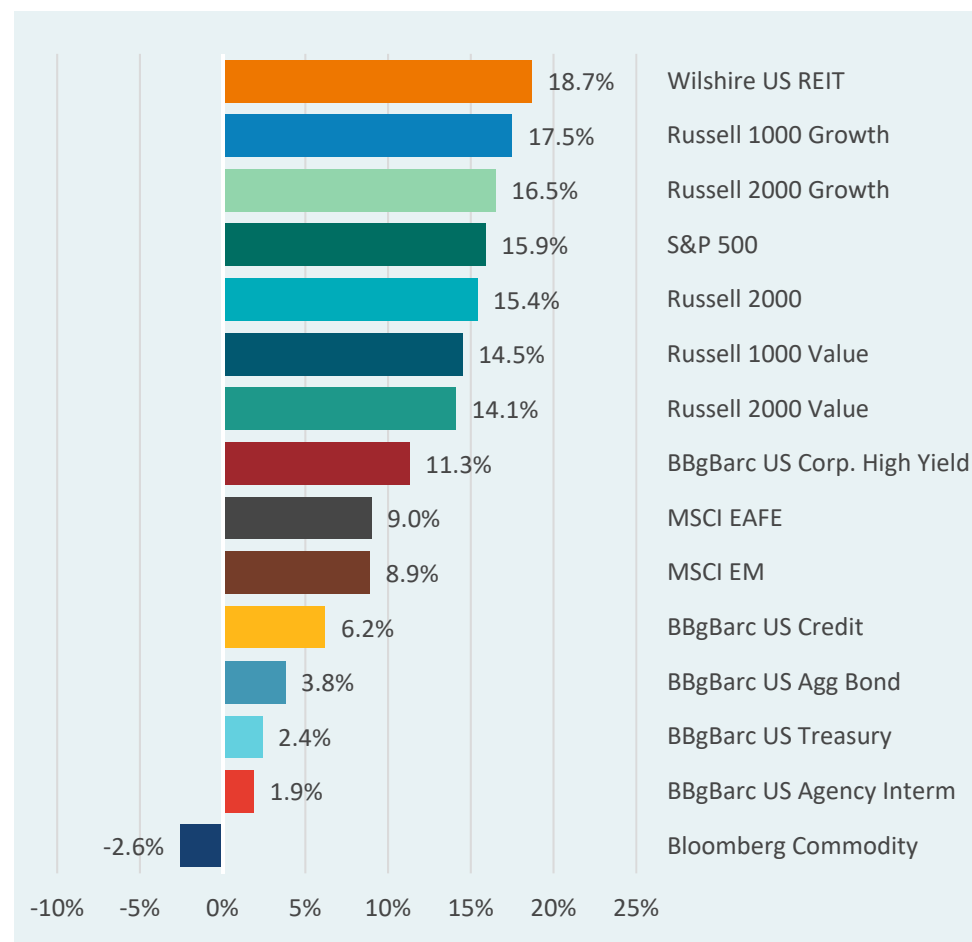
Major asset class returns

ONE YEAR ENDING MARCH



Source: Morningstar, as of 3/31/19

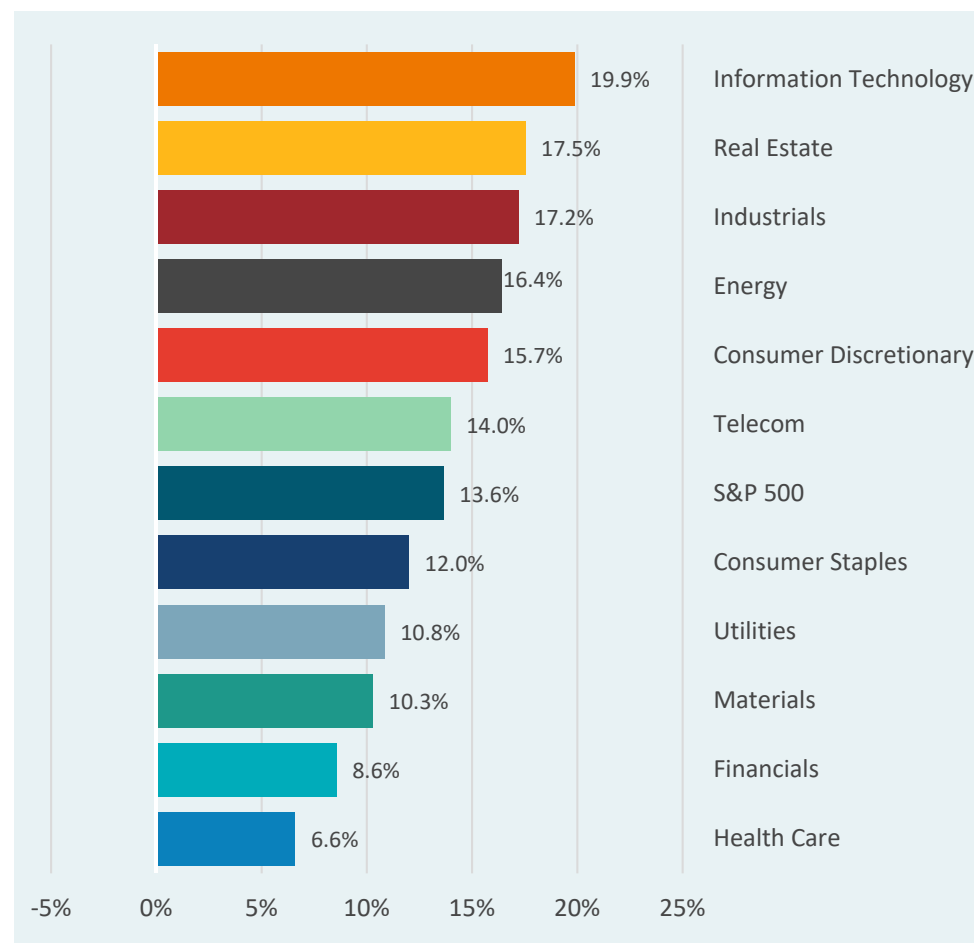
TEN YEARS ENDING MARCH



Source: Morningstar, as of 3/31/19

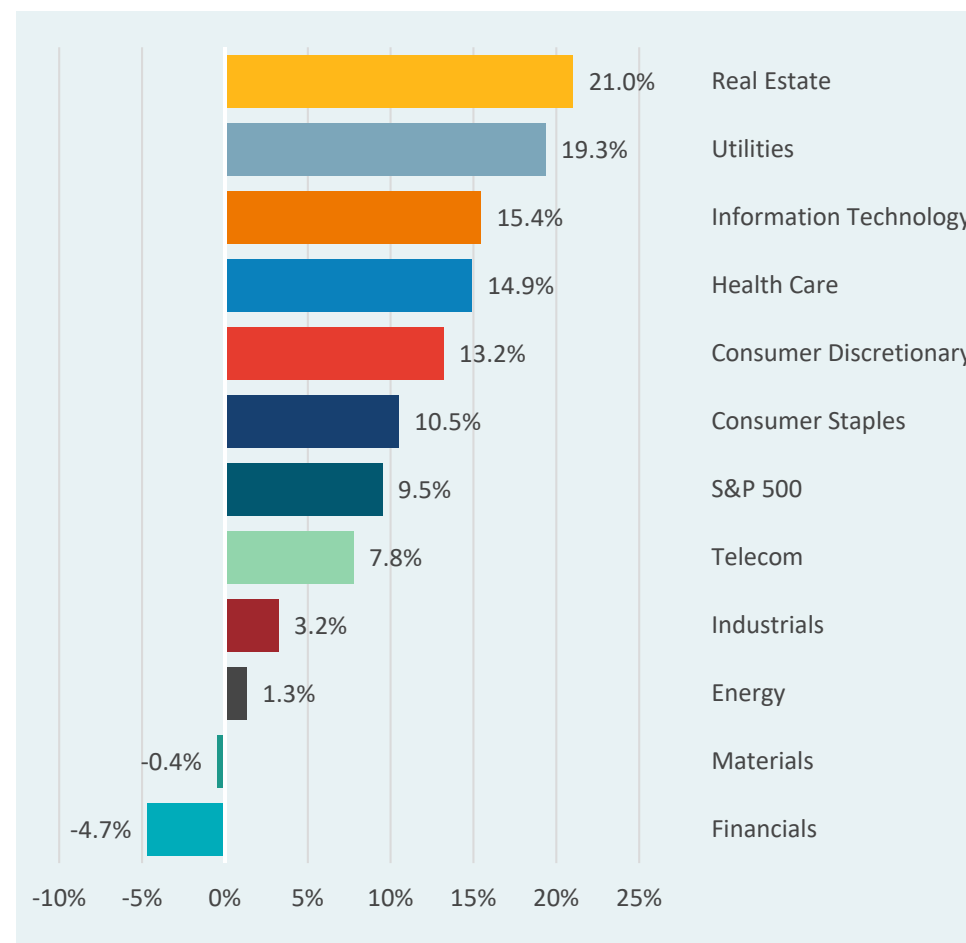
S&P 500 sector returns

QTD



Source: Morningstar, as of 3/31/19

ONE YEAR ENDING MARCH



Source: Morningstar, as of 3/31/19

Detailed index returns

DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Core Index							
S&P 500	1.9	13.6	13.6	9.5	13.5	10.9	15.9
S&P 500 Equal Weighted	0.9	14.9	14.9	7.2	12.0	9.5	17.8
DJ Industrial Average	0.2	11.8	11.8	10.1	16.4	12.2	16.0
Russell Top 200	2.1	13.1	13.1	10.4	14.2	11.4	15.7
Russell 1000	1.7	14.0	14.0	9.3	13.5	10.6	16.0
Russell 2000	(2.1)	14.6	14.6	2.0	12.9	7.1	15.4
Russell 3000	1.5	14.0	14.0	8.8	13.5	10.4	16.0
Russell Mid Cap	0.9	16.5	16.5	6.5	11.8	8.8	16.9
Style Index							
Russell 1000 Growth	2.8	16.1	16.1	12.7	16.5	13.5	17.5
Russell 1000 Value	0.6	11.9	11.9	5.7	10.5	7.7	14.5
Russell 2000 Growth	(1.4)	17.1	17.1	3.9	14.9	8.4	16.5
Russell 2000 Value	(2.9)	11.9	11.9	0.2	10.9	5.6	14.1

INTERNATIONAL EQUITY

Broad Index							
MSCI ACWI	1.3	12.2	12.2	2.6	10.7	6.5	12.0
MSCI ACWI ex US	0.6	10.3	10.3	(4.2)	8.1	2.6	8.8
MSCI EAFE	0.6	10.0	10.0	(3.7)	7.3	2.3	9.0
MSCI EM	0.8	9.9	9.9	(7.4)	10.7	3.7	8.9
MSCI EAFE Small Cap	0.2	10.7	10.7	(9.4)	7.5	4.5	12.8
Style Index							
MSCI EAFE Growth	1.8	12.0	12.0	(1.3)	7.6	3.9	9.7
MSCI EAFE Value	(0.5)	7.9	7.9	(6.1)	6.9	0.7	8.1
Regional Index							
MSCI UK	1.1	11.9	11.9	(0.1)	6.3	0.7	9.3
MSCI Japan	0.6	6.7	6.7	(7.8)	8.1	5.6	8.0
MSCI Euro	0.0	9.8	9.8	(7.8)	6.5	0.6	7.5
MSCI EM Asia	1.8	11.1	11.1	(6.8)	11.8	6.2	10.8
MSCI EM Latin American	(2.5)	7.9	7.9	(6.7)	11.1	(0.3)	5.3

FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
BBgBarc US TIPS	1.8	3.2	3.2	2.7	1.7	1.9	3.4
BBgBarc US Treasury Bills	0.2	0.6	0.6	2.2	1.2	0.8	0.5
BBgBarc US Agg Bond	1.9	2.9	2.9	4.5	2.0	2.7	3.8
Duration							
BBgBarc US Treasury 1-3 Yr	0.6	1.0	1.0	2.7	1.0	1.0	1.0
BBgBarc US Treasury Long	5.3	4.7	4.7	6.2	1.5	5.4	5.1
BBgBarc US Treasury	1.9	2.1	2.1	4.2	1.0	2.2	2.4
Issuer							
BBgBarc US MBS	1.5	2.2	2.2	4.4	1.8	2.6	3.1
BBgBarc US Corp. High Yield	0.9	7.3	7.3	5.9	8.6	4.7	11.3
BBgBarc US Agency Interim	0.9	1.4	1.4	3.4	1.2	1.6	1.9
BBgBarc US Credit	2.4	4.9	4.9	4.9	3.5	3.6	6.2

OTHER

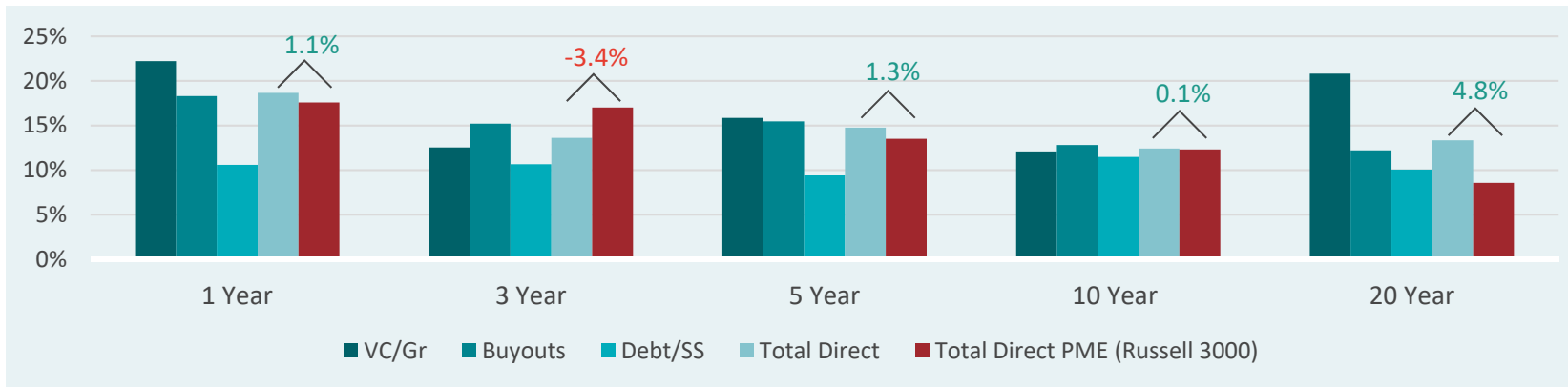
Index							
Bloomberg Commodity	(0.2)	6.3	6.3	(5.3)	2.2	(8.9)	(2.6)
Wilshire US REIT	3.2	16.0	16.0	19.3	5.5	9.0	18.7
CS Leveraged Loans	(0.1)	3.8	3.8	3.3	5.9	3.8	8.0
Alerian MLP	3.8	17.4	17.4	16.8	5.9	(4.2)	11.1
Regional Index							
JPM EMBI Global Div	1.4	7.0	7.0	4.2	5.8	5.4	8.5
JPM GBI-EM Global Div	(1.3)	2.9	2.9	(7.6)	3.3	(0.8)	4.4
Hedge Funds							
HFRI Composite	1.0	5.9	5.9	0.9	5.1	3.1	5.5
HFRI FOF Composite	1.3	5.0	5.0	0.5	4.1	2.3	3.6
Currency (Spot)							
Euro	(1.4)	(1.8)	(1.8)	(8.7)	(0.5)	(4.0)	(1.7)
Pound	(2.0)	2.3	2.3	(7.1)	(3.2)	(4.8)	(0.9)
Yen	0.6	(0.9)	(0.9)	(3.9)	0.5	(1.4)	(1.1)

Source: Morningstar, HFR, as of 3/31/19

Private equity vs. public performance

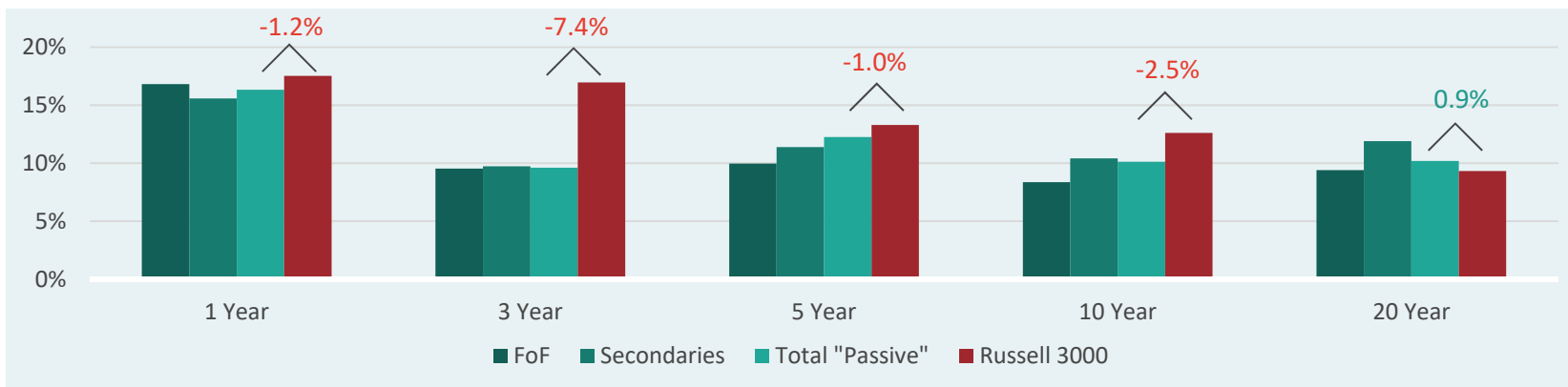
As of 9/30/2018

PUBLIC MARKET EQUIVALENT (PME) ANALYSIS - DIRECT PRIVATE EQUITY



Public market equivalent (PME) analysis shows that direct private equity has outperformed public equity over most periods

PUBLIC MARKET EQUIVALENT (PME) ANALYSIS - "PASSIVE" PRIVATE EQUITY



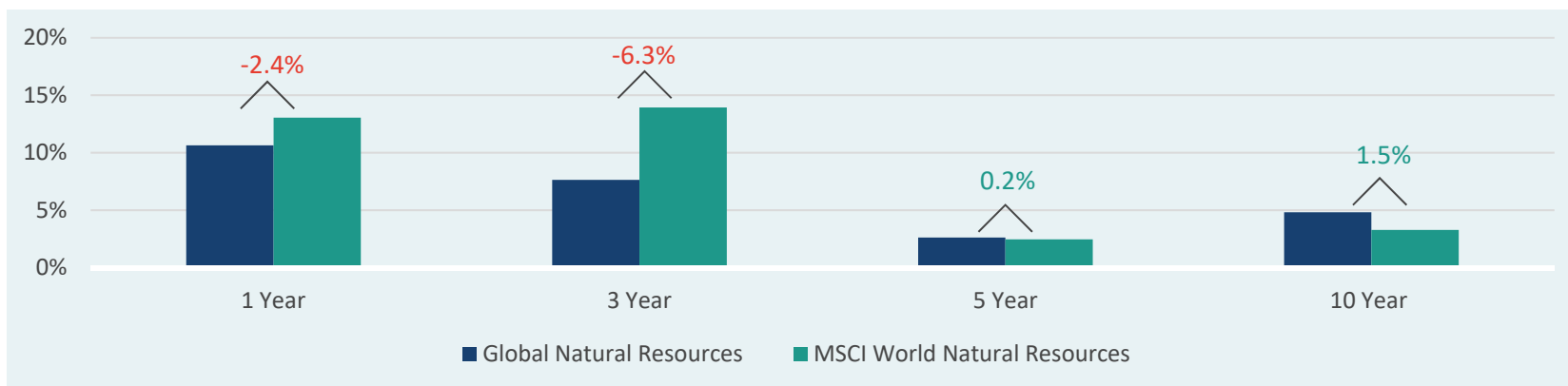
Fund-of-fund & secondary private equity investments have lagged public equities

Sources: Thomson Reuters Cambridge Universe's PME Module: U.S. Private Equity Funds sub asset classes as of September 30, 2018. Public Market Equivalent returns resulted from "Total Passive" and Total Direct's identical cash flows invested into and distributed from respective traditional asset comparable.

Private vs. liquid real assets performance

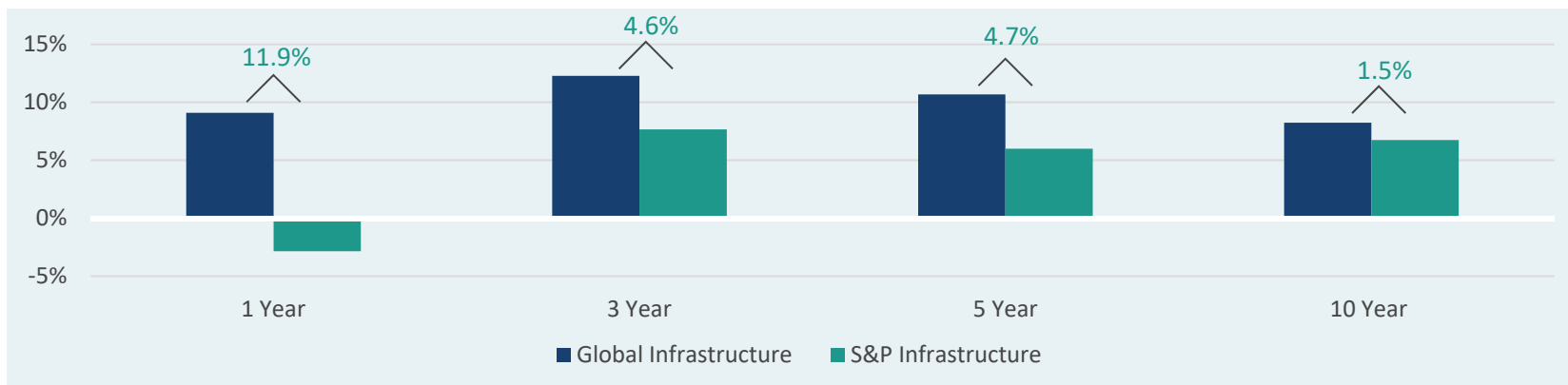
As of 9/30/2018

PUBLIC MARKET EQUIVALENT (PME) ANALYSIS - GLOBAL NATURAL RESOURCES FUNDS



Public market equivalent (PME) analysis shows that private infrastructure has recently underperformed publicly listed infrastructure

PUBLIC MARKET EQUIVALENT (PME) ANALYSIS - GLOBAL INFRASTRUCTURE FUNDS



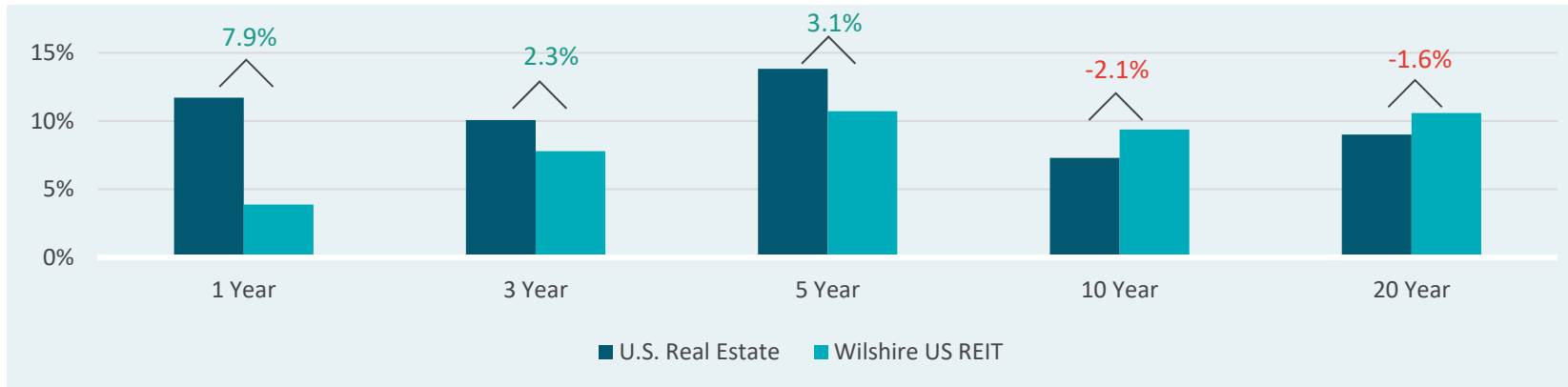
Private infrastructure has materially outperformed publicly listed infrastructure

Sources: Thomson Reuters C/A PME: Global Natural Resources (vintage 1996 and later, inception of MSCI ACWI Energy benchmark) and Global Infrastructure (vintage 2002 and later, inception of S&P Infrastructure benchmark) universes as of September 30, 2018. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real assets universes.

Private vs. liquid & core real estate performance

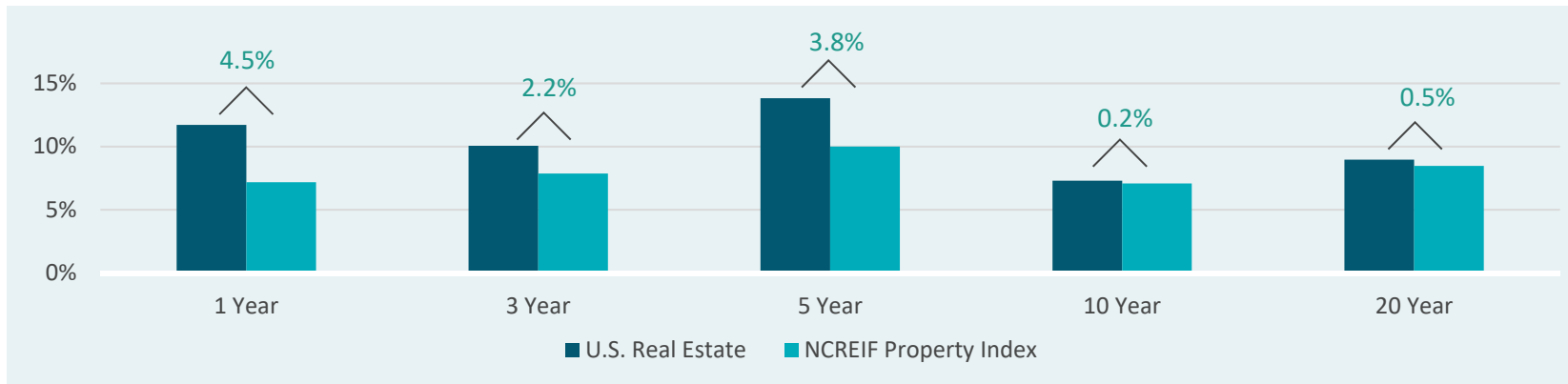
As of 9/30/2018

PUBLIC MARKET EQUIVALENT (PME) ANALYSIS - U.S. PRIVATE REAL ESTATE VS. LIQUID UNIVERSE



Public market equivalent (PME) analysis shows that U.S. private R.E. has underperformed liquid real estate over the long-term

PUBLIC MARKET EQUIVALENT (PME) ANALYSIS - U.S. PRIVATE REAL ESTATE FUNDS VS. CORE FUNDS



U.S. private R.E. has outperformed the NCREIF Property Index over each time period

Sources: Thomson Reuters C/A PME: Global and U.S. Real Estate universes as of September 30, 2018. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real estate universes.

Definitions

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

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

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

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.

Notices & disclosures

Past performance is no guarantee of future results. This report or presentation is provided for informational purposes only and is directed to institutional clients and eligible institutional counterparties only and should not be relied upon by 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. The opinions and information expressed are current as of the date provided or cited only and are subject to change without notice. This information is obtained from sources deemed reliable, but there is no representation or warranty as to its accuracy, completeness or reliability. Verus Advisory Inc. expressly disclaim any and all implied warranties or originality, accuracy, completeness, non-infringement, merchantability and fitness for a particular purpose. This report or presentation cannot be used by the recipient for advertising or sales promotion purposes.

The material may include estimates, outlooks, projections and other "forward-looking statements." Such statements can be identified by the use of terminology such as "believes," "expects," "may," "will," "should," "anticipates," or the negative of any of the foregoing or comparable terminology, or by discussion of strategy, or assumptions such as economic conditions underlying other statements. No assurance can be given that future results described or implied by any forward looking information will be achieved. Actual events may differ significantly from those presented. Investing entails risks, including possible loss of principal. Risk controls and models do not promise any level of performance or guarantee against loss of principal.

"VERUS ADVISORY" and any associated designs are the respective trademarks of Verus Advisory, Inc. Additional information is available upon request.

Stanislaus County Employees' Retirement Association

Investment Performance Review

Period Ending: March 31, 2019



VERUSINVESTMENTS.COM

SEATTLE 206-622-3700

LOS ANGELES 310-297-1777

SAN FRANCISCO 415-362-3484

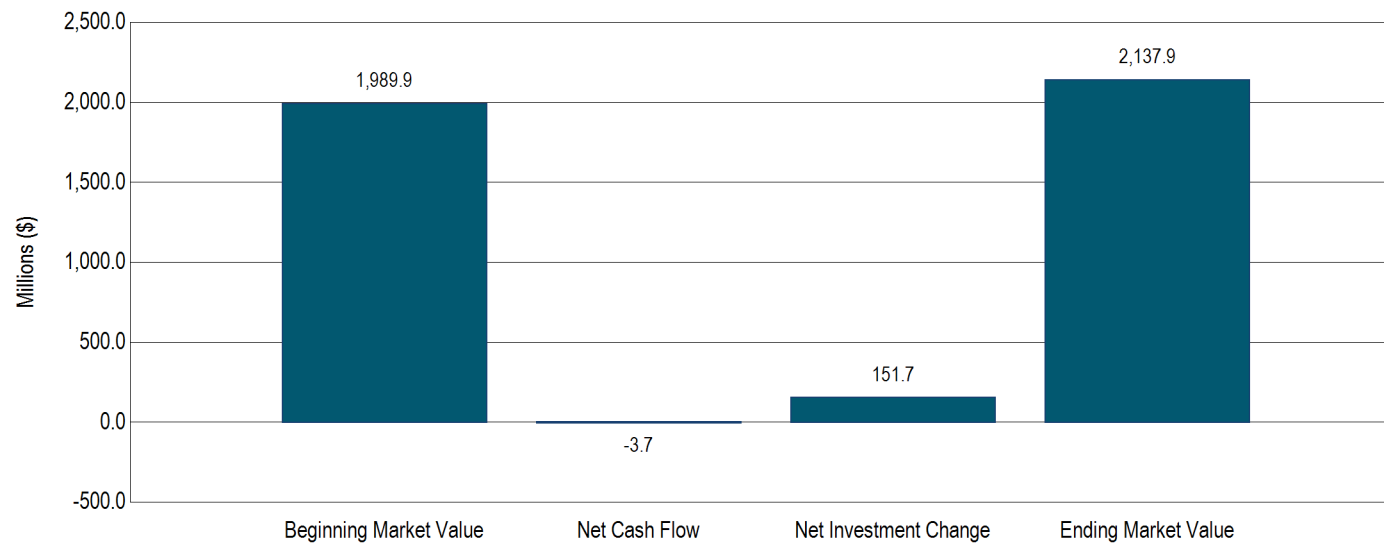
Total Fund Portfolio Reconciliation

Period Ending: March 31, 2019

Portfolio Reconciliation

	Last Three Months	Fiscal Year-To-Date	Year-To-Date
Beginning Market Value	\$1,989,872,398	\$2,114,397,932	\$1,989,872,398
Net Cash Flow	-\$3,690,346	-\$14,036,307	-\$3,690,346
Net Investment Change	\$151,713,219	\$37,533,647	\$151,713,219
Ending Market Value	\$2,137,895,271	\$2,137,895,271	\$2,137,895,271

Change in Market Value Last Three Months

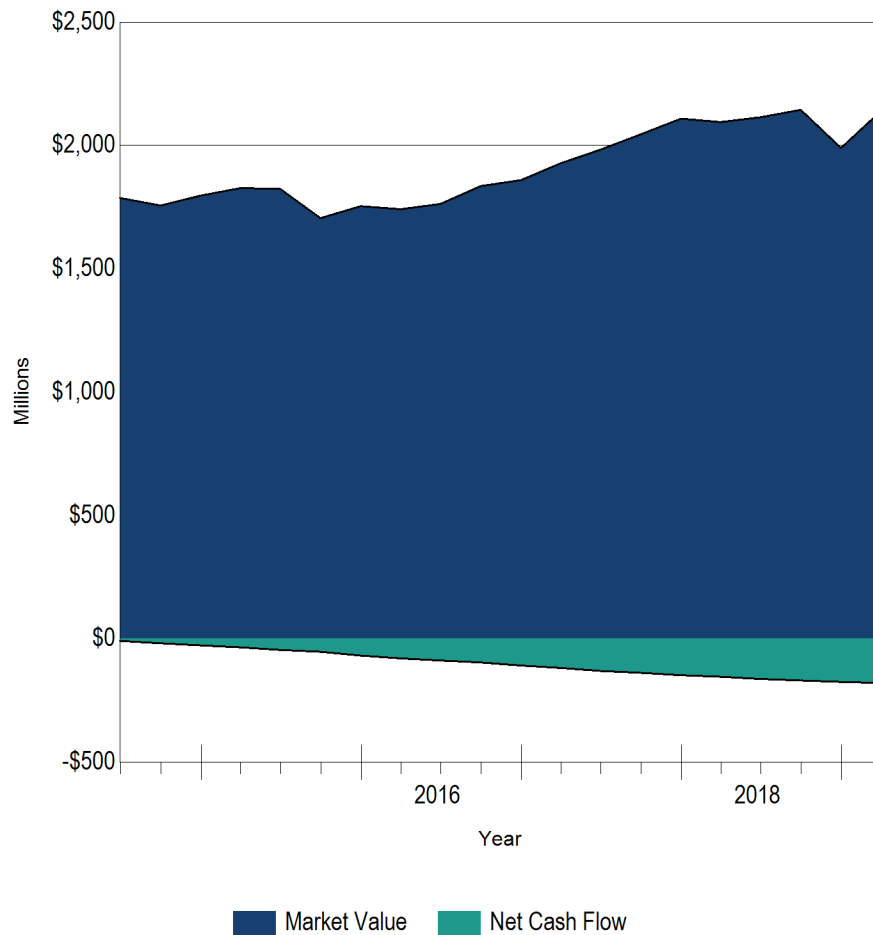


Contributions and withdrawals may include intra-account transfers between managers/funds.

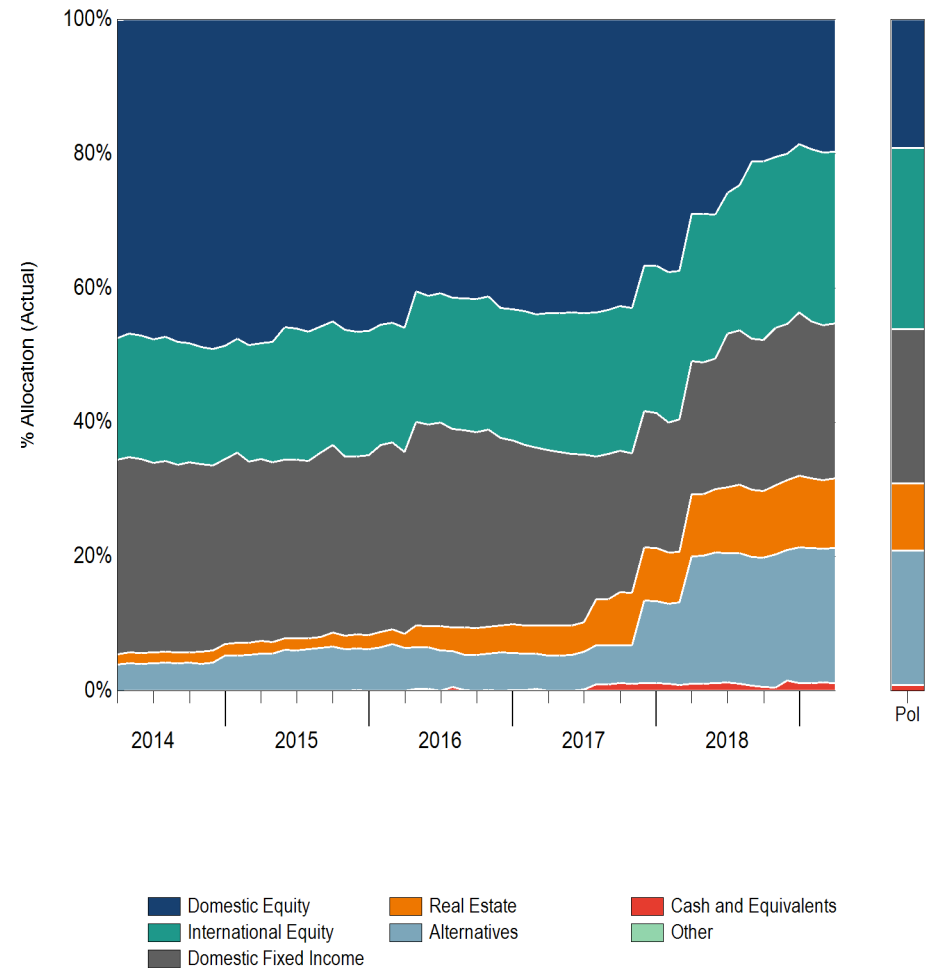
Total Fund Asset Allocation History

Period Ending: March 31, 2019

Market Value History
Cumulative Cash Flows

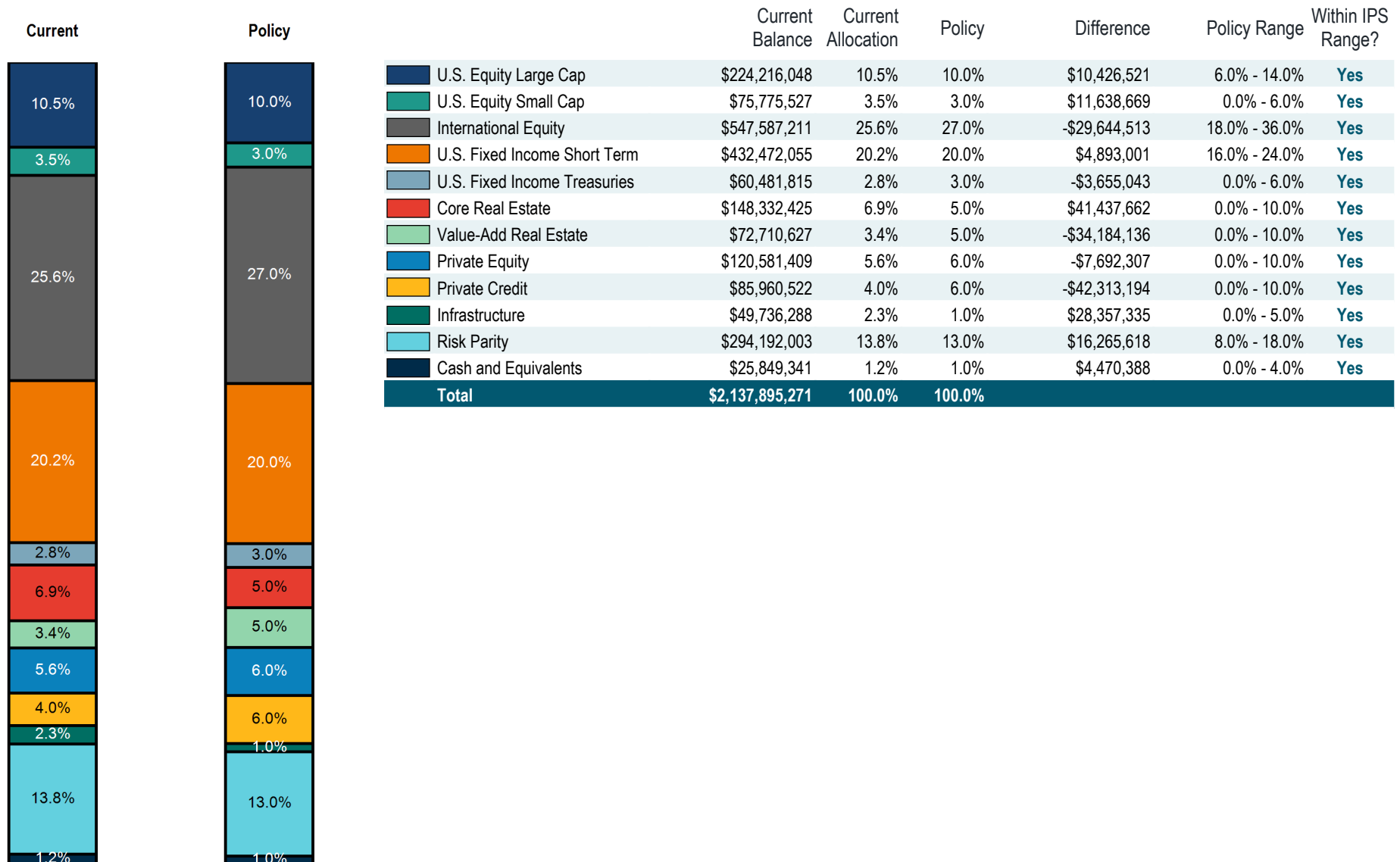


Asset Allocation History



Total Fund Asset Allocation vs. Policy

Period Ending: March 31, 2019



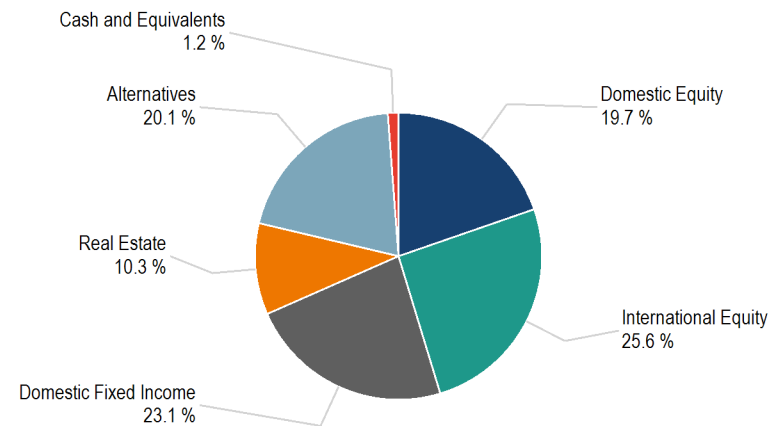
Cash Account includes cash held at Northern Trust for all closed end funds. Russell 3000 Index serving as proxy for Private Equity while capital is being called. International Equity policy target consists of 21% international developed and 6% emerging markets.

Total Fund Executive Summary (Gross of Fees)

Period Ending: March 31, 2019

	QTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
Total Fund	7.7	2.3	3.7	9.0	6.3	11.5
Policy Index	7.4	2.9	3.6	8.0	6.2	10.5
InvestorForce Public DB Gross Rank	69	78	67	23	39	5
US Equity	13.7	3.9	7.9	13.8	9.6	16.2
US Equity Blended	14.1	3.3	7.9	13.5	10.0	16.1
Russell 3000	14.0	4.7	8.8	13.5	10.4	16.0
InvestorForce All DB US Eq Gross Rank	71	48	46	25	58	23
International Equity	9.9	-3.3	-6.5	8.3	3.2	10.3
MSCI ACWI ex USA Gross	10.4	-1.4	-3.7	8.6	3.0	9.3
InvestorForce All DB ex-US Eq Gross Rank	81	71	70	46	47	22
US Fixed Income	2.5	4.2	4.5	3.4	3.4	5.7
BBgBarc US Aggregate TR	2.9	4.6	4.5	2.0	2.7	3.8
InvestorForce All DB US Fix Inc Gross Rank	80	75	54	45	42	41
Real Estate	4.2	5.7	13.4	7.4	10.6	13.3
DJ US Select RESI	15.7	8.9	19.7	5.3	8.9	15.6
Private Credit	2.2	2.7	4.3	3.6	5.4	--
9% Annual	2.2	6.7	9.0	9.0	9.0	--
Risk Parity	10.8	4.2	5.4	--	--	--
60% MSCI ACWI Net/40% BBgBarc Global Aggregate	8.1	2.5	1.6	--	--	--
Infrastructure	3.4	8.1	9.6	13.0	--	--
CPI + 5%	2.4	4.6	6.9	7.3	--	--

Current Allocation



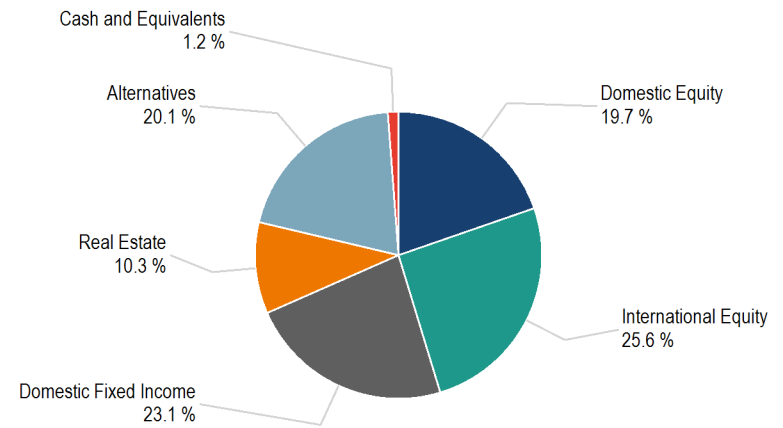
Policy Index (9/1/2018): 10% Russell 1000, 3% Russell 2000, 6% Russell 3000 + 3%, 27% MSCI ACWI ex-USA, 20% BBgBarc US Gov't / Credit 1-3 Yr, 3% BBgBarc US Treasury 7-10 Yr, 5% NCREIF Property, 5% NCREIF Property +2%, 1% CPI +5%, 6% S&P / LSTA Leveraged Loan Index + 2%, 13% 60% MSCI ACWI / 40% BBgBarc Global Aggregate, 1% Citi 1 Month T-Bills. US Equity Blended: 50% Russell 1000, 20% Russell 2000, 30% Russell 3000 + 3%.

Total Fund Executive Summary (Net of Fees)

Period Ending: March 31, 2019

	QTD	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs
Total Fund	7.6	2.0	3.3	8.6	6.0	11.1
<i>Policy Index</i>	7.4	2.9	3.6	8.0	6.2	10.5
US Equity	13.6	3.7	7.7	13.6	9.4	15.9
<i>US Equity Blended</i>	14.1	3.3	7.9	13.5	10.0	16.1
<i>Russell 3000</i>	14.0	4.7	8.8	13.5	10.4	16.0
International Equity	9.8	-3.6	-6.8	7.9	2.8	9.8
<i>MSCI ACWI ex USA Gross</i>	10.4	-1.4	-3.7	8.6	3.0	9.3
US Fixed Income	2.5	4.1	4.4	3.3	3.3	5.6
<i>BBgBarc US Aggregate TR</i>	2.9	4.6	4.5	2.0	2.7	3.8
Real Estate	4.0	5.2	12.6	6.7	9.7	12.3
<i>DJ US Select RESI</i>	15.7	8.9	19.7	5.3	8.9	15.6
Private Credit	2.0	2.2	3.6	2.6	3.9	--
<i>9% Annual</i>	2.2	6.7	9.0	9.0	9.0	--
Risk Parity	10.7	3.9	5.0	--	--	--
<i>60% MSCI ACWI Net/40% BBgBarc Global Aggregate</i>	8.1	2.5	1.6	--	--	--
Infrastructure	3.4	8.1	9.6	10.5	--	--
<i>CPI + 5%</i>	2.4	4.6	6.9	7.3	--	--

Current Allocation



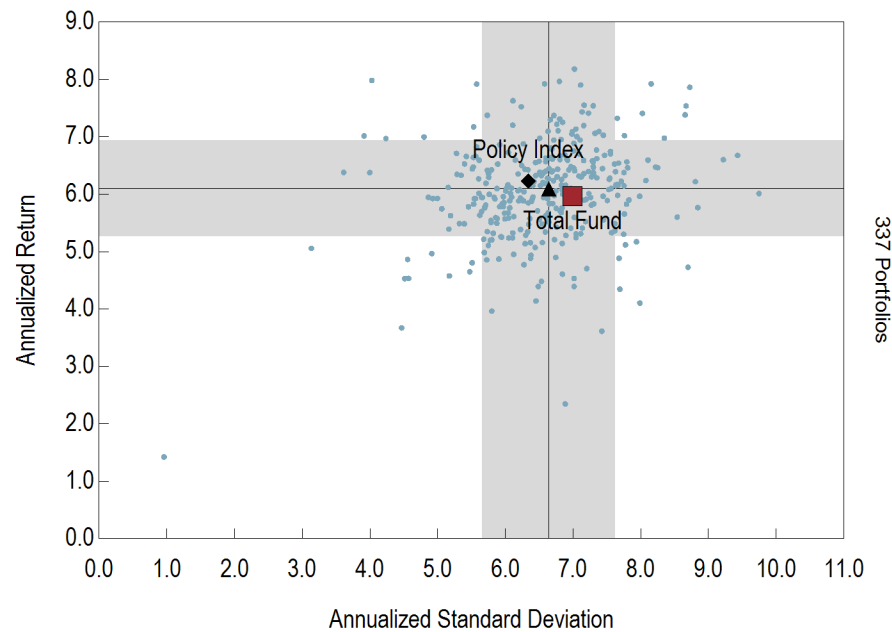
Policy Index (9/1/2018): 10% Russell 1000, 3% Russell 2000, 6% Russell 3000 + 3%, 27% MSCI ACWI ex-USA, 20% BBgBarc US Gov't / Credit 1-3 Yr, 3% BBgBarc US Treasury 7-10 Yr, 5% NCREIF Property, 5% NCREIF Property +2%, 1% CPI +5%, 6% S&P / LSTA Leveraged Loan Index + 2%, 13% 60% MSCI ACWI / 40% BBgBarc Global Aggregate, 1% Citi 1 Month T-Bills. US Equity Blended: 50% Russell 1000, 20% Russell 2000, 30% Russell 3000 + 3%.

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

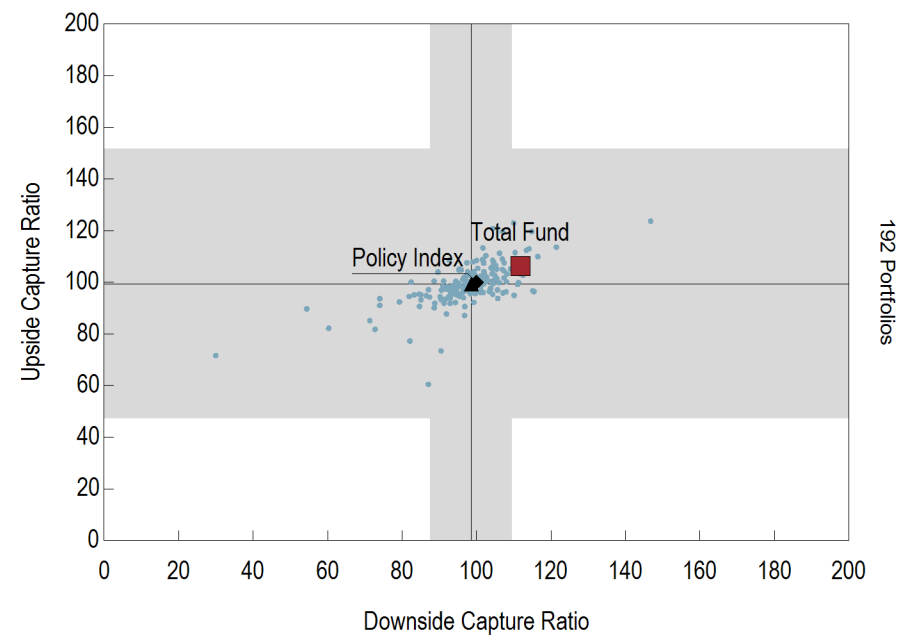
Period Ending: March 31, 2019

	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	5.97%	-0.26%	7.00%	-0.79%	1.08	1.39%	0.97	0.74	-0.19	106.17%	111.74%
Policy Index	6.23%	0.00%	6.34%	0.00%	1.00	0.00%	1.00	0.86	--	100.00%	100.00%

Risk vs. Return



Up Markets vs. Down Markets



Total Fund Performance Summary (Gross of Fees)

Period Ending: March 31, 2019

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2018	2017	2016	2015	2014	Inception	Inception Date
Total Fund	2,137,895,271	100.0	7.7	2.3	3.7	9.0	6.3	11.5	-4.1	15.7	8.3	-0.2	6.9	9.2	Dec-94
Policy Index			7.4	2.9	3.6	8.0	6.2	10.5	-3.7	14.3	8.5	0.2	7.5	8.0	Dec-94
InvestorForce Public DB Gross Rank			69	78	67	23	39	5	53	43	29	60	23		
US Equity	420,572,985	19.7	13.7	3.9	7.9	13.8	9.6	16.2	-5.0	19.7	12.4	-0.2	10.9	7.5	Jun-01
US Equity Blended			14.1	3.3	7.9	13.5	10.0	16.1	-6.0	20.3	13.9	-0.1	11.6	7.4	Jun-01
Russell 3000			14.0	4.7	8.8	13.5	10.4	16.0	-5.2	21.1	12.7	0.5	12.6	7.2	Jun-01
InvestorForce All DB US Eq Gross Rank			71	48	46	25	58	23	25	72	58	63	54		
Northern Trust Russell 3000	120,581,409	5.6	14.1	--	--	--	--	--	--	--	--	--	--	14.1	Dec-18
Russell 3000			14.0	--	--	--	--	--	--	--	--	--	--	14.0	Dec-18
eV US Large Cap Equity Gross Rank			36	--	--	--	--	--	--	--	--	--	--		
BlackRock Russell 1000 Growth	120,534,884	5.6	16.1	6.7	12.8	16.6	13.5	--	-1.5	30.2	7.2	5.7	13.1	16.6	Jun-10
Russell 1000 Growth			16.1	6.6	12.7	16.5	13.5	--	-1.5	30.2	7.1	5.7	13.0	16.5	Jun-10
eV US Large Cap Growth Equity Gross Rank			49	50	46	48	36	--	57	42	26	42	37		
BlackRock Russell 1000 Value	27,541,016	1.3	12.0	4.6	5.9	10.5	7.8	--	-8.1	13.8	17.3	-3.6	13.5	12.5	Jul-09
Russell 1000 Value			11.9	4.4	5.7	10.5	7.7	--	-8.3	13.7	17.3	-3.8	13.5	12.3	Jul-09
eV US Large Cap Value Equity Gross Rank			42	34	35	63	57	--	46	86	26	62	31		
Dodge & Cox-Equity	76,140,148	3.6	9.9	1.7	4.6	13.8	8.8	16.1	-6.3	17.1	21.4	-3.9	10.9	12.0	Dec-94
Russell 1000 Value			11.9	4.4	5.7	10.5	7.7	14.5	-8.3	13.7	17.3	-3.8	13.5	9.8	Dec-94
eV US Large Cap Value Equity Gross Rank			90	64	49	7	35	15	29	52	6	64	72		
Capital Prospects	75,775,527	3.5	13.7	-8.1	-3.0	11.7	6.5	16.0	-16.1	15.5	28.1	-7.0	5.8	13.9	Dec-08
Russell 2000 Value			11.9	-7.5	0.2	10.9	5.6	14.1	-12.9	7.8	31.7	-7.5	4.2	11.4	Dec-08
eV US Small Cap Value Equity Gross Rank			32	64	67	26	45	53	71	18	40	72	51		
International Equity	547,587,211	25.6	9.9	-3.3	-6.5	8.3	3.2	10.3	-15.5	27.9	6.0	-3.5	-4.2	5.7	Jun-01
MSCI ACWI ex USA Gross			10.4	-1.4	-3.7	8.6	3.0	9.3	-13.8	27.8	5.0	-5.3	-3.4	6.0	Jun-01
InvestorForce All DB ex-US Eq Gross Rank			81	71	70	46	47	22	63	61	21	50	70		
LSV Asset Mgt	270,659,678	12.7	8.8	-4.1	-9.1	8.3	2.9	10.6	-16.4	28.2	8.8	-5.1	-4.0	6.6	Aug-04
MSCI ACWI ex USA Gross			10.4	-1.4	-3.7	8.6	3.0	9.3	-13.8	27.8	5.0	-5.3	-3.4	6.4	Aug-04
eV ACWI ex-US Equity Unhedged Gross Rank			86	62	85	54	69	60	67	67	10	86	65		
Fidelity	276,927,533	13.0	11.1	-2.5	-3.7	8.0	3.3	9.9	-14.5	27.3	2.4	-2.0	-4.5	3.9	Apr-06
MSCI ACWI ex USA Gross			10.4	-1.4	-3.7	8.6	3.0	9.3	-13.8	27.8	5.0	-5.3	-3.4	3.4	Apr-06
eV ACWI ex-US Equity Unhedged Gross Rank			53	50	35	61	61	70	45	74	46	66	70		

Northern Trust Russell 3000 replaced Northern Trust Russell 1000 on 12/13/18. Individual closed end funds are not shown in performance summary table.

Total Fund Performance Summary (Gross of Fees)

Period Ending: March 31, 2019

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2018	2017	2016	2015	2014	Inception	Inception Date
US Fixed Income	492,953,870	23.1	2.5	4.2	4.5	3.4	3.4	5.7	1.1	3.9	5.4	0.3	6.2	5.5	Jun-01
BBgBarc US Aggregate TR			2.9	4.6	4.5	2.0	2.7	3.8	0.0	3.5	2.6	0.6	6.0	4.5	Jun-01
InvestorForce All DB US Fix Inc Gross Rank			80	75	54	45	42	41	18	68	47	42	42		
Insight	218,162,373	10.2	3.0	4.5	4.7	--	--	--	0.7	--	--	--	--	2.6	Jun-17
BBgBarc US Govt/Credit 1-5 Yr. TR			1.6	3.4	3.5	--	--	--	1.4	--	--	--	--	1.8	Jun-17
eV US Short Duration Fixed Inc Gross Rank			1	1	1	--	--	--	99	--	--	--	--		
DFA	214,309,682	10.0	2.1	3.9	4.2	--	--	--	1.3	--	--	--	--	2.0	Jul-17
ICE BofAML 1-5 Yrs US Corp & Govt TR			1.6	3.4	3.6	--	--	--	1.4	--	--	--	--	1.7	Jul-17
eV US Short Duration Fixed Inc Gross Rank			9	4	5	--	--	--	88	--	--	--	--		
Northern Trust Intermediate Gov't Bond	44,893,060	2.1	1.6	3.8	3.8	--	--	--	1.5	--	--	--	--	1.6	Jul-17
BBgBarc US Govt Int TR			1.6	3.7	3.8	--	--	--	1.4	--	--	--	--	1.6	Jul-17
eV US Government Fixed Inc Gross Rank			85	70	71	--	--	--	44	--	--	--	--		
Northern Trust Long Term Gov't Bond	15,588,755	0.7	4.6	5.9	6.3	--	--	--	-1.7	--	--	--	--	3.9	Jul-17
BBgBarc US Govt Long TR			4.6	5.9	6.2	--	--	--	-1.8	--	--	--	--	3.8	Jul-17
US Long Duration Fixed Income Rank			84	71	18	--	--	--	24	--	--	--	--		
Real Estate	221,043,052	10.3	4.2	5.7	13.4	7.4	10.6	13.3	4.8	8.2	7.6	12.1	28.3	4.6	Feb-08
DJ US Select RESI			15.7	8.9	19.7	5.3	8.9	15.6	-4.2	3.8	6.6	4.5	31.9	5.7	Feb-08
Prime Property Fund	56,223,742	2.6	1.6	6.1	8.3	9.6	--	--	9.1	9.9	10.4	--	--	9.9	Sep-15
NCREIF-ODCE			1.4	5.4	7.5	8.0	--	--	8.3	7.6	8.8	--	--	8.5	Sep-15
American Strategic Value Realty	44,729,221	2.1	2.7	6.6	10.2	11.3	--	--	10.2	11.5	13.1	21.4	--	13.8	Dec-14
NCREIF Property Index			1.8	4.9	6.8	7.1	--	--	6.7	7.0	8.0	13.3	--	8.6	Dec-14
BlackRock US Real Estate	36,791,717	1.7	15.7	8.9	19.8	5.3	8.9	--	-4.1	3.8	6.6	4.4	31.9	9.0	Sep-12
DJ US Select RESI TR USD			15.7	8.9	19.7	5.3	8.9	--	-4.2	3.8	6.6	4.5	31.9	9.0	Sep-12
eV US REIT Gross Rank			76	73	36	80	76	--	41	90	68	58	39		
Risk Parity	294,192,003	13.8	10.8	4.2	5.4	--	--	--	-6.6	--	--	--	--	3.5	Nov-17
60% MSCI ACWI Net/40% BBgBarc Global Aggregate			8.1	2.5	1.6	--	--	--	-6.0	--	--	--	--	2.1	Nov-17
AQR Global Risk Premium - EL	148,348,503	6.9	10.1	3.5	5.9	--	--	--	--	--	--	--	--	5.9	Mar-18
60% MSCI ACWI Net/40% BBgBarc Global Aggregate			8.1	2.5	1.6	--	--	--	--	--	--	--	--	1.3	Mar-18
PanAgora Risk Parity Multi Asset	145,843,500	6.8	11.5	4.9	5.0	--	--	--	-7.3	--	--	--	--	3.5	Nov-17
60% MSCI ACWI Net/40% BBgBarc Global Aggregate			8.1	2.5	1.6	--	--	--	-6.0	--	--	--	--	2.1	Nov-17

Individual closed end funds are not shown in performance summary table.

Total Fund Performance Summary (Net of Fees)

Period Ending: March 31, 2019

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2018	2017	2016	2015	2014	Inception	Inception Date
Total Fund	2,137,895,271	100.0	7.6	2.0	3.3	8.6	6.0	11.1	-4.4	15.3	7.8	-0.6	6.5	8.9	Dec-94
<i>Policy Index</i>			7.4	2.9	3.6	8.0	6.2	10.5	-3.7	14.3	8.5	0.2	7.5	8.0	Dec-94
US Equity	420,572,985	19.7	13.6	3.7	7.7	13.6	9.4	15.9	-5.2	19.4	12.1	-0.4	10.7	7.1	Jun-01
<i>US Equity Blended</i>			14.1	3.3	7.9	13.5	10.0	16.1	-6.0	20.3	13.9	-0.1	11.6	7.4	Jun-01
<i>Russell 3000</i>			14.0	4.7	8.8	13.5	10.4	16.0	-5.2	21.1	12.7	0.5	12.6	7.2	Jun-01
Northern Trust Russell 3000	120,581,409	5.6	14.1	--	--	--	--	--	--	--	--	--	--	14.1	Dec-18
<i>Russell 3000</i>			14.0	--	--	--	--	--	--	--	--	--	--	14.0	Dec-18
BlackRock Russell 1000 Growth	120,534,884	5.6	16.1	6.6	12.8	16.6	13.5	--	-1.5	30.2	7.2	5.7	13.1	16.5	Jun-10
<i>Russell 1000 Growth</i>			16.1	6.6	12.7	16.5	13.5	--	-1.5	30.2	7.1	5.7	13.0	16.5	Jun-10
BlackRock Russell 1000 Value	27,541,016	1.3	12.0	4.6	5.8	10.5	7.8	--	-8.2	13.8	17.3	-3.6	13.5	12.4	Jul-09
<i>Russell 1000 Value</i>			11.9	4.4	5.7	10.5	7.7	--	-8.3	13.7	17.3	-3.8	13.5	12.3	Jul-09
Dodge & Cox-Equity	76,140,148	3.6	9.9	1.5	4.4	13.6	8.6	15.9	-6.5	16.9	21.2	-4.0	10.7	11.8	Dec-94
<i>Russell 1000 Value</i>			11.9	4.4	5.7	10.5	7.7	14.5	-8.3	13.7	17.3	-3.8	13.5	9.8	Dec-94
Capital Prospects	75,775,527	3.5	13.5	-8.6	-3.7	10.8	5.8	15.2	-16.8	14.7	27.1	-7.5	5.2	13.1	Dec-08
<i>Russell 2000 Value</i>			11.9	-7.5	0.2	10.9	5.6	14.1	-12.9	7.8	31.7	-7.5	4.2	11.4	Dec-08
International Equity	547,587,211	25.6	9.8	-3.6	-6.8	7.9	2.8	9.8	-15.8	27.4	5.3	-3.8	-4.5	5.2	Jun-01
<i>MSCI ACWI ex USA Gross</i>			10.4	-1.4	-3.7	8.6	3.0	9.3	-13.8	27.8	5.0	-5.3	-3.4	6.0	Jun-01
LSV Asset Mgt	270,659,678	12.7	8.6	-4.5	-9.6	7.7	2.4	10.0	-16.9	27.5	8.2	-5.4	-4.2	6.0	Aug-04
<i>MSCI ACWI ex USA Gross</i>			10.4	-1.4	-3.7	8.6	3.0	9.3	-13.8	27.8	5.0	-5.3	-3.4	6.4	Aug-04
Fidelity	276,927,533	13.0	11.0	-2.6	-3.9	7.8	2.9	9.5	-14.7	27.0	1.8	-2.3	-4.9	3.4	Apr-06
<i>MSCI ACWI ex USA Gross</i>			10.4	-1.4	-3.7	8.6	3.0	9.3	-13.8	27.8	5.0	-5.3	-3.4	3.4	Apr-06
US Fixed Income	492,953,870	23.1	2.5	4.1	4.4	3.3	3.3	5.6	0.9	3.8	5.2	0.2	6.1	5.4	Jun-01
<i>BBgBarc US Aggregate TR</i>			2.9	4.6	4.5	2.0	2.7	3.8	0.0	3.5	2.6	0.6	6.0	4.5	Jun-01
Insight	218,162,373	10.2	3.0	4.4	4.6	--	--	--	0.6	--	--	--	--	2.4	Jun-17
<i>BBgBarc US Govt/Credit 1-5 Yr. TR</i>			1.6	3.4	3.5	--	--	--	1.4	--	--	--	--	1.8	Jun-17
DFA	214,309,682	10.0	2.0	3.8	4.1	--	--	--	1.2	--	--	--	--	1.9	Jul-17
<i>ICE BofAML 1-5 Yrs US Corp & Govt TR</i>			1.6	3.4	3.6	--	--	--	1.4	--	--	--	--	1.7	Jul-17
Northern Trust Intermediate Gov't Bond	44,893,060	2.1	1.6	3.7	3.8	--	--	--	1.4	--	--	--	--	1.6	Jul-17
<i>BBgBarc US Govt Int TR</i>			1.6	3.7	3.8	--	--	--	1.4	--	--	--	--	1.6	Jul-17
Northern Trust Long Term Gov't Bond	15,588,755	0.7	4.6	5.9	6.2	--	--	--	-1.7	--	--	--	--	3.8	Jul-17
<i>BBgBarc US Govt Long TR</i>			4.6	5.9	6.2	--	--	--	-1.8	--	--	--	--	3.8	Jul-17

Northern Trust Russell 3000 replaced Northern Trust Russell 1000 on 12/13/18. Individual closed end funds are not shown in performance summary table.

Total Fund Performance Summary (Net of Fees)

Period Ending: March 31, 2019

	Market Value	% of Portfolio	3 Mo	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	10 Yrs	2018	2017	2016	2015	2014	Inception	Inception Date
Real Estate	221,043,052	10.3	4.0	5.2	12.6	6.7	9.7	12.3	4.3	7.5	6.6	10.5	27.4	3.6	Feb-08
<i>DJ US Select RESI</i>			15.7	8.9	19.7	5.3	8.9	15.6	-4.2	3.8	6.6	4.5	31.9	5.7	Feb-08
Prime Property Fund	56,223,742	2.6	1.3	5.3	7.2	8.4	--	--	8.0	8.8	9.2	--	--	8.7	Sep-15
<i>NCREIF-ODCE</i>			1.4	5.4	7.5	8.0	--	--	8.3	7.6	8.8	--	--	8.5	Sep-15
American Strategic Value Realty	44,729,221	2.1	2.3	6.0	9.1	10.0	--	--	9.2	10.1	11.7	18.3	--	12.1	Dec-14
<i>NCREIF Property Index</i>			1.8	4.9	6.8	7.1	--	--	6.7	7.0	8.0	13.3	--	8.6	Dec-14
BlackRock US Real Estate	36,791,717	1.7	15.7	8.8	19.7	5.2	8.9	--	-4.2	3.7	6.6	4.4	31.9	9.0	Sep-12
<i>DJ US Select RESI TR USD</i>			15.7	8.9	19.7	5.3	8.9	--	-4.2	3.8	6.6	4.5	31.9	9.0	Sep-12
Risk Parity	294,192,003	13.8	10.7	3.9	5.0	--	--	--	-7.0	--	--	--	--	3.1	Nov-17
<i>60% MSCI ACWI Net/40% BBgBarc Global Aggregate</i>			8.1	2.5	1.6	--	--	--	-6.0	--	--	--	--	2.1	Nov-17
AQR Global Risk Premium - EL	148,348,503	6.9	10.0	3.2	5.5	--	--	--	--	--	--	--	--	5.5	Mar-18
<i>60% MSCI ACWI Net/40% BBgBarc Global Aggregate</i>			8.1	2.5	1.6	--	--	--	--	--	--	--	--	1.3	Mar-18
PanAgora Risk Parity Multi Asset	145,843,500	6.8	11.4	4.6	4.6	--	--	--	-7.6	--	--	--	--	3.1	Nov-17
<i>60% MSCI ACWI Net/40% BBgBarc Global Aggregate</i>			8.1	2.5	1.6	--	--	--	-6.0	--	--	--	--	2.1	Nov-17

Individual closed end funds are not shown in performance summary table.

Total Fund

Closed End Funds - Investment Summary

Period Ending: March 31, 2019

			Verus Internal Analysis								
Inception Date	Manager Name/Fund Name	Estimated Market Value as of 3/31/2019 ³	Total Commitment	Capital Called	% Called	Remaining Commitment	Total Distributions	Distrib./ Paid-In (DPI) ¹	Tot. Value/ Paid-In (TVPI) ²	Latest Valuation	
Real Estate											
7/31/2014	Greenfield Gap VII	\$12,777,230	\$15,000,000	\$14,335,328	96%	\$664,672	\$7,932,891	55.3%	144.5%	12/31/2018	
6/30/2018	Greenfield Gap VIII	\$15,204,176	\$40,000,000	\$14,012,404	35%	\$25,987,596	\$0	N/A	108.5%	12/31/2018	
9/30/2018	PGIM Real Estate US Debt Fund	\$55,316,967	\$54,000,000	\$54,000,000	100%	\$0	\$0	N/A	102.4%	3/31/2019	
Total Real Estate		\$83,298,373	\$109,000,000	\$82,347,732	76%	\$26,652,268	\$7,932,891	9.6%	110.8%		
% of Portfolio (Market Value)		4.2%									
Direct Lending											
5/31/2013	Medley Capital	\$15,076,539	\$30,000,000	\$29,000,453	97%	\$999,547	\$21,911,233	75.6%	127.5%	12/31/2018	
5/31/2013	Raven Capital	\$13,574,940	\$40,000,000	\$34,505,763	86%	\$5,494,237	\$23,560,780	68.3%	107.6%	12/31/2018	
7/31/2015	Raven Opportunity III	\$33,429,866	\$50,000,000	\$33,711,014	67%	\$16,288,986	\$3,158,573	9.4%	108.5%	12/31/2018	
8/31/2013	White Oak Pinnacle	\$25,020,608	\$40,000,000	\$40,000,000 ⁴	100%	\$4,530,589	\$43,348,200	108.4%	170.9%	12/31/2018	
Total Direct Lending		\$87,101,953	\$160,000,000	\$137,217,230	86%	\$27,313,359	\$91,978,787	67.0%	130.5%		
% of Portfolio (Market Value)		4.4%									
Infrastructure											
5/31/2015	MS Infrastructure Partners II	\$49,736,288	\$50,000,000	\$49,741,858	99%	\$258,142	\$7,313,875	14.7%	114.7%	12/31/2018	
Total Infrastructure		\$49,736,288	\$50,000,000	\$49,741,858	99%	\$258,142	\$7,313,875	14.7%	114.7%		
% of Portfolio (Market Value)		2.5%									

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

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

3 Last known market value + capital calls - distributions

4 Includes redeemed contributions, which are amounts withheld from distributions and applied to fulfill capital calls.

Total Fund
Closed End Funds - IRR Summary

Period Ending: March 31, 2019

Real Estate	Inception	Fund Level (G)	StanCERA (G)	Fund Level (N)	StanCERA (N)	IRR Date
Greenfield Gap VII	7/31/2014	17.7%	18.5%	14.0%	13.9%	12/31/2018
Direct Lending						
Medley Capital	5/31/2013	6.0%	4.5%	3.9%	2.2%	12/31/2018
Raven Capital	5/31/2013	6.0%	6.0%	2.3%	2.3%	12/31/2018
Raven Opportunity III	7/31/2015	11.0%	11.0%	5.0%	5.0%	12/31/2018
White Oak Pinnacle	8/31/2013	10.9%	10.8%	7.5%	7.5%	12/31/2018
Infrastructure						
MS Infrastructure Partners II	5/31/2015	21.7%	21.7%	13.7%	11.7%	12/31/2018

IRR information provided by managers.

Total Fund

Performance Analysis - 3 and 5 Years (Net of Fees)

Period Ending: March 31, 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
BlackRock Russell 1000 Growth	16.56%	0.03%	12.18%	0.05%	1.00	0.04%	1.00	1.26	0.66	100.05%	99.87%
BlackRock Russell 1000 Value	10.52%	0.07%	10.61%	0.09%	1.00	0.06%	1.00	0.88	1.25	100.20%	99.62%
Dodge & Cox-Equity	13.60%	3.15%	12.26%	2.31%	1.08	4.37%	0.88	1.01	0.72	115.68%	93.56%
Capital Prospects	10.82%	-0.03%	15.89%	0.34%	0.97	3.28%	0.96	0.60	-0.01	90.58%	90.79%
LSV Asset Mgt	7.74%	-0.87%	11.46%	-1.27%	1.05	3.06%	0.93	0.57	-0.28	102.54%	108.93%
Fidelity	7.75%	-0.85%	10.22%	-0.39%	0.95	2.27%	0.95	0.64	-0.38	90.21%	94.76%
Prime Property Fund	8.43%	0.45%	3.44%	0.05%	1.05	0.51%	0.98	2.09	0.89	106.16%	--
American Strategic Value Realty	10.02%	2.95%	3.98%	0.58%	1.34	1.45%	0.93	2.21	2.04	140.55%	--
BlackRock US Real Estate	5.24%	-0.05%	13.75%	-0.04%	1.00	0.05%	1.00	0.29	-1.04	99.66%	99.96%

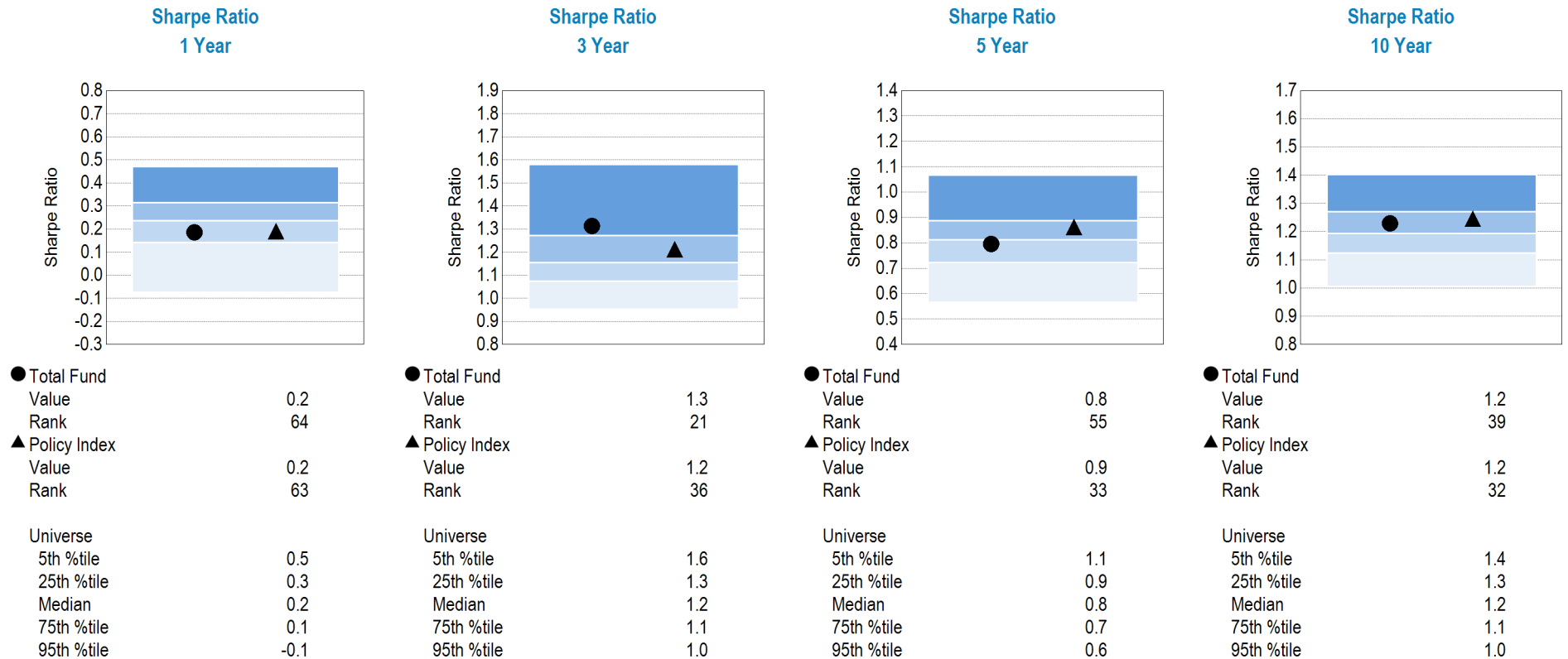
5 Years

	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
BlackRock Russell 1000 Growth	13.53%	0.03%	12.27%	0.03%	1.00	0.04%	1.00	1.04	0.66	100.15%	99.97%
BlackRock Russell 1000 Value	7.81%	0.09%	11.06%	0.10%	1.00	0.06%	1.00	0.64	1.56	100.35%	99.69%
Dodge & Cox-Equity	8.63%	0.91%	12.64%	0.25%	1.08	4.04%	0.90	0.62	0.22	110.74%	102.80%
Capital Prospects	5.80%	0.21%	15.48%	0.42%	0.96	2.97%	0.96	0.33	0.07	91.20%	94.91%
LSV Asset Mgt	2.44%	-0.61%	13.04%	-0.80%	1.06	2.74%	0.96	0.13	-0.22	107.32%	106.32%
Fidelity	2.90%	-0.14%	11.29%	0.09%	0.92	2.19%	0.97	0.19	-0.07	87.28%	93.29%
BlackRock US Real Estate	8.85%	-0.05%	14.72%	-0.04%	1.00	0.05%	1.00	0.55	-1.07	99.61%	99.98%

Performance Analysis excludes closed end funds and those funds without 3 and 5 years of performance.

Total Fund Sharpe Ratio Ranking (Gross of Fees)

Period Ending: March 31, 2019



Total Fund Investment Fund Fee Analysis

Period Ending: March 31, 2019

Name	Asset Class	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
Northern Trust Russell 3000	Domestic Equity	0.02% of Assets	\$120,581,409	\$24,116	0.02%
BlackRock Russell 1000 Growth	Domestic Equity	0.02% of Assets	\$120,534,884	\$24,107	0.02%
BlackRock Russell 1000 Value	Domestic Equity	0.02% of Assets	\$27,541,016	\$5,508	0.02%
Dodge & Cox-Equity	Domestic Equity	0.40% of First 10.0 Mil, 0.20% of Next 90.0 Mil, 0.15% Thereafter	\$76,140,148	\$172,280	0.23%
Capital Prospects	Domestic Equity	0.75% of Assets	\$75,775,527	\$568,316	0.75%
LSV Asset Mgt	International Equity	0.75% of First 25.0 Mil, 0.65% of Next 25.0 Mil, 0.55% of Next 50.0 Mil, 0.45% Thereafter	\$270,659,678	\$1,392,969	0.51%
Fidelity	International Equity	0.25% of Assets	\$276,927,533	\$692,319	0.25%
Insight	Domestic Fixed Income	0.12% of Assets	\$218,162,373	\$261,795	0.12%
DFA	Domestic Fixed Income	0.20% of First 25.0 Mil, 0.10% Thereafter	\$214,309,682	\$239,310	0.11%
Northern Trust Intermediate Gov't Bond	Domestic Fixed Income	0.05% of First 25.0 Mil, 0.04% Thereafter	\$44,893,060	\$20,457	0.05%
Northern Trust Long Term Gov't Bond	Domestic Fixed Income	0.05% of First 25.0 Mil, 0.04% Thereafter	\$15,588,755	\$7,794	0.05%
Prime Property Fund	Real Estate	0.84% of Assets	\$56,223,742	\$472,279	0.84%
American Strategic Value Realty	Real Estate	1.25% of First 10.0 Mil, 1.20% of Next 15.0 Mil, 1.10% of Next 25.0 Mil, 1.00% Thereafter	\$44,729,221	\$522,021	1.17%
BlackRock US Real Estate	Real Estate	0.09% of First 100.0 Mil, 0.07% Thereafter	\$36,791,717	\$33,113	0.09%
AQR Global Risk Premium - EL	Alternatives	0.38% of Assets	\$148,348,503	\$563,724	0.38%
PanAgora Risk Parity Multi Asset	Alternatives	0.35% of Assets	\$145,843,500	\$510,452	0.35%
Cash Account	Cash and Equivalents	0.10% of Assets	\$25,849,341	\$25,849	0.10%
Total			\$1,843,124,562	\$5,536,411	0.30%

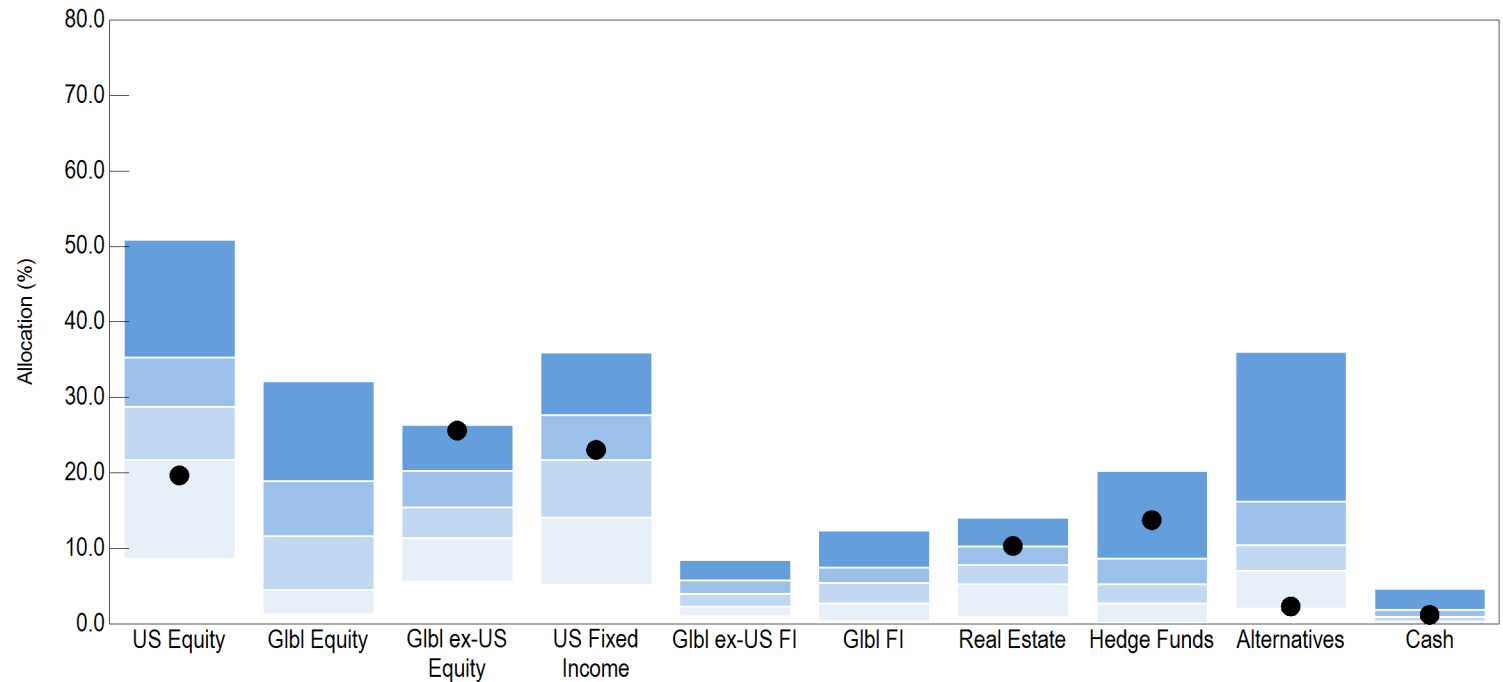
Closed end funds excluded from fee analysis. Fidelity has performance based fees which are not included in the analysis above; fee shown is the annual base fee only. Northern Trust aggregates StanCERA's Northern Trust Bond Funds.

Total Fund

Peer Universe Comparison: Asset Allocation

Period Ending: March 31, 2019

Total Plan Allocation vs. InvestorForce Public DB Gross



	Allocation (Rank)										
5th Percentile	50.9	32.2	26.4	36.0	8.5	12.4	14.1	20.3	36.1	4.6	-
25th Percentile	35.4	19.0	20.4	27.7	5.8	7.5	10.3	8.8	16.3	2.0	-
Median	28.8	11.7	15.6	21.8	4.1	5.5	7.9	5.4	10.6	1.0	-
75th Percentile	21.8	4.5	11.4	14.2	2.3	2.8	5.3	2.8	7.1	0.4	-
95th Percentile	8.8	1.3	5.7	5.2	1.1	0.4	1.0	0.3	2.1	0.0	-
# of Portfolios	188	94	224	173	54	42	183	90	174	243	-
● Total Fund	19.7	(82)	--	--	25.6	(7)	23.1	(44)	--	--	--
									10.3	(26)	
									13.8	(8)	
									2.3	(94)	
									1.2	(44)	

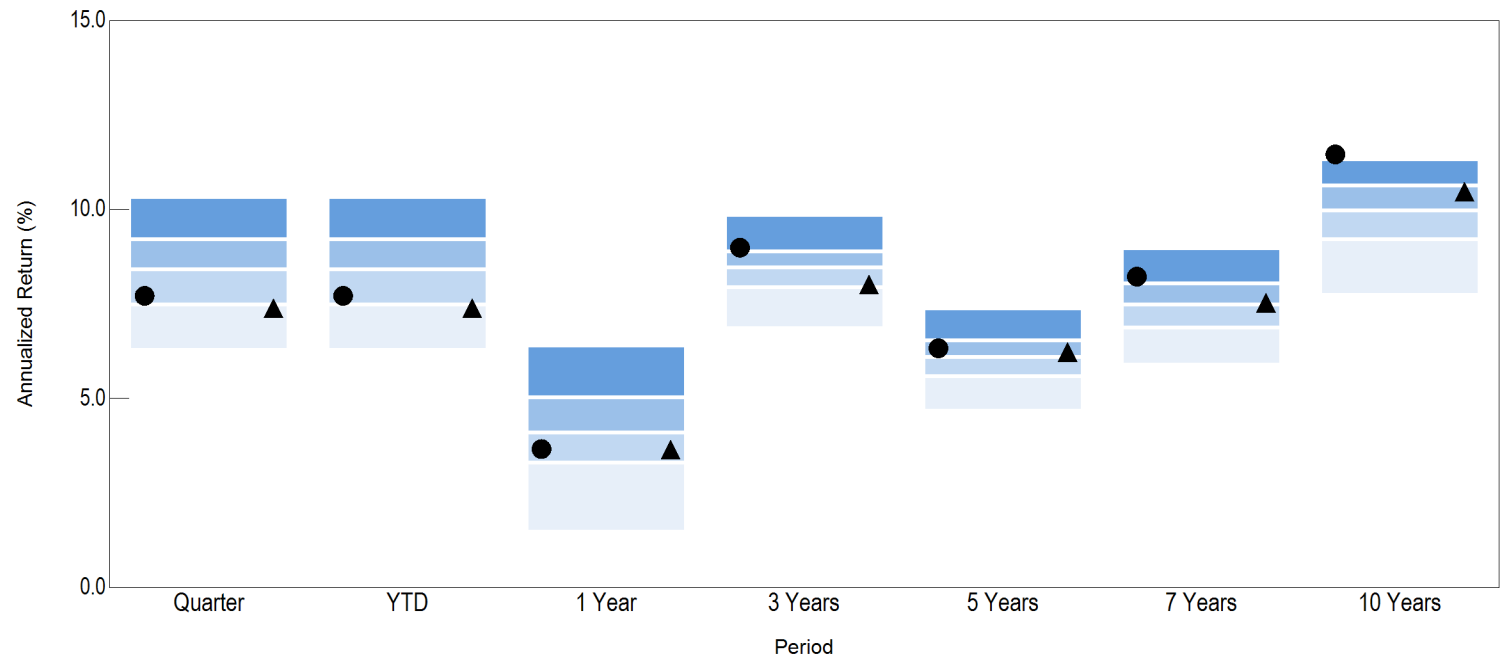
Risk Parity and Infrastructure represented by the Hedge Funds and Alternatives asset buckets, respectively. Direct Lending excluded from asset allocation.

Total Fund

Peer Universe Comparison: Cumulative Performance (Gross of Fees)

Period Ending: March 31, 2019

Total Fund Cumulative Performance vs. InvestorForce Public DB Gross



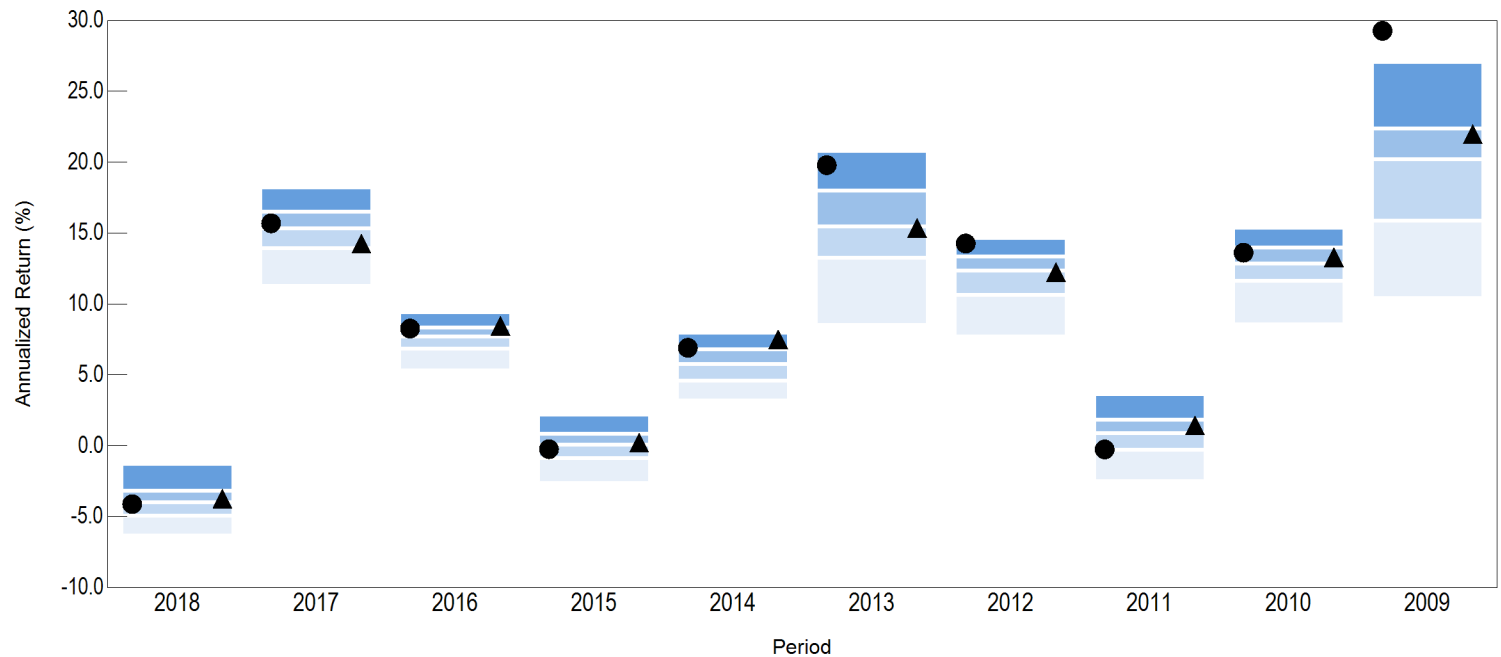
	Return (Rank)						
5th Percentile	10.3	10.3	6.4	9.9	7.4	9.0	11.3
25th Percentile	9.2	9.2	5.0	8.9	6.6	8.0	10.6
Median	8.4	8.4	4.1	8.5	6.1	7.5	10.0
75th Percentile	7.5	7.5	3.3	7.9	5.6	6.9	9.2
95th Percentile	6.3	6.3	1.5	6.9	4.7	5.9	7.8
# of Portfolios	366	366	362	351	337	322	290
● Total Fund	7.7 (69)	7.7 (69)	3.7 (67)	9.0 (23)	6.3 (39)	8.2 (19)	11.5 (5)
▲ Policy Index	7.4 (77)	7.4 (77)	3.6 (67)	8.0 (73)	6.2 (44)	7.5 (49)	10.5 (30)

Total Fund

Peer Universe Comparison: Consecutive Periods (Gross of Fees)

Period Ending: March 31, 2019

Total Fund Consecutive Periods vs. InvestorForce Public DB Gross



	Return (Rank)									
5th Percentile	-1.3	18.2	9.4	2.2	8.0	20.8	14.6	3.6	15.4	27.0
25th Percentile	-3.1	16.5	8.4	0.9	6.8	18.0	13.4	1.9	14.0	22.4
Median	-4.0	15.3	7.7	0.1	5.8	15.5	12.4	0.9	12.9	20.2
75th Percentile	-4.9	14.0	6.9	-0.9	4.6	13.3	10.7	-0.3	11.7	15.9
95th Percentile	-6.3	11.3	5.3	-2.6	3.2	8.5	7.8	-2.5	8.6	10.5
# of Portfolios	319	304	305	316	248	231	236	206	188	184
● Total Fund	-4.1 (53)	15.7 (43)	8.3 (29)	-0.2 (60)	6.9 (23)	19.8 (12)	14.3 (10)	-0.3 (75)	13.6 (35)	29.3 (1)
▲ Policy Index	-3.7 (43)	14.3 (71)	8.5 (23)	0.2 (46)	7.5 (12)	15.4 (52)	12.3 (53)	1.4 (35)	13.3 (42)	22.0 (29)

Domestic Equity Managers

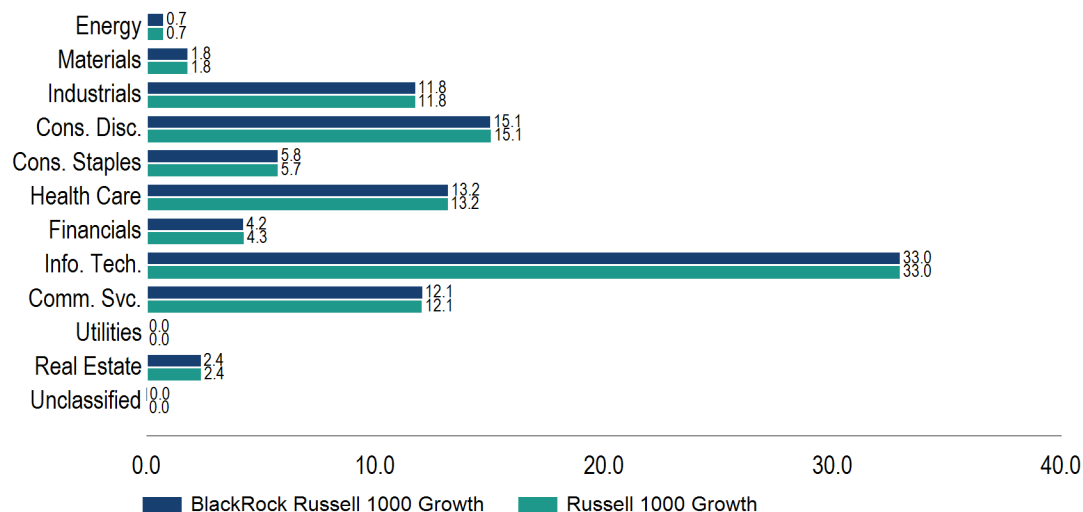
BlackRock Russell 1000 Growth Manager Portfolio Overview

Period Ending: March 31, 2019

Characteristics

	Portfolio	Russell 1000 Growth
Number of Holdings	542	545
Weighted Avg. Market Cap. (\$B)	262.25	262.28
Median Market Cap. (\$B)	11.71	11.70
Price To Earnings	24.28	24.26
Price To Book	6.92	6.92
Price To Sales	2.84	2.84
Return on Equity (%)	38.84	38.85
Yield (%)	1.28	1.28
Beta	1.00	1.00

Sector Allocation (%) vs Russell 1000 Growth



Largest Holdings

	End Weight	Return
APPLE	6.76	20.94
MICROSOFT	6.35	16.62
AMAZON.COM	5.49	18.56
FACEBOOK CLASS A	2.97	27.16
ALPHABET 'C'	2.68	13.30
ALPHABET A	2.64	12.63
VISA 'A'	2.06	18.59
UNITEDHEALTH GROUP	1.77	-0.37
HOME DEPOT	1.62	12.52
MASTERCARD	1.60	25.02

Top Contributors

	Avg Wgt	Return	Contribution
APPLE	2.16	20.94	0.45
MICROSOFT	2.10	16.62	0.35
AMAZON.COM	1.76	18.56	0.33
FACEBOOK CLASS A	0.90	27.16	0.24
MASTERCARD	0.50	25.02	0.13
VISA 'A'	0.67	18.59	0.12
ALPHABET 'C'	0.91	13.30	0.12
ALPHABET A	0.90	12.63	0.11
NETFLIX	0.32	33.21	0.11
BOEING	0.50	18.87	0.09

Bottom Contributors

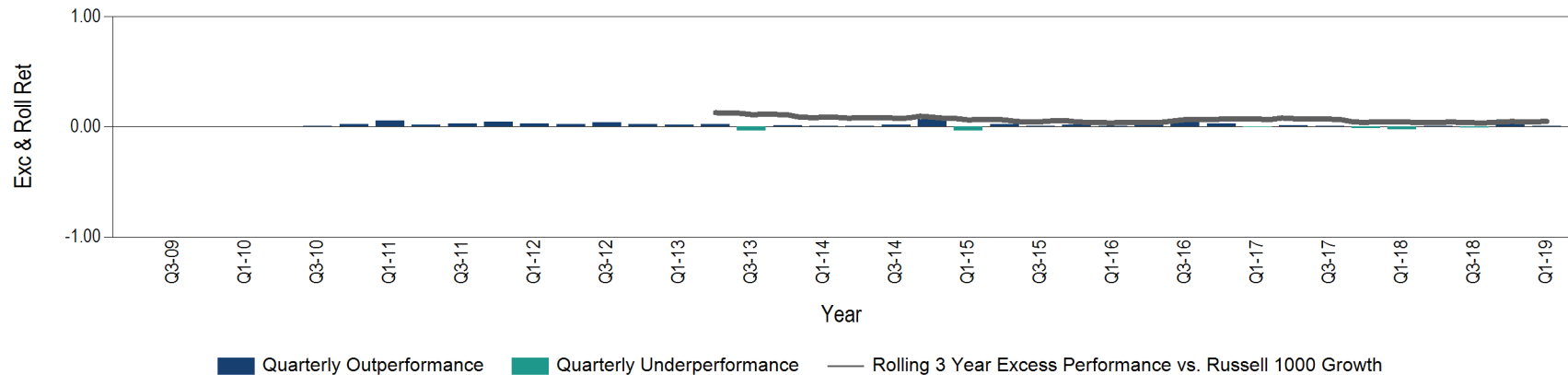
	Avg Wgt	Return	Contribution
ABBVIE	0.40	-11.48	-0.05
BIOGEN	0.17	-21.45	-0.04
TESLA	0.13	-15.91	-0.02
BRISTOL MYERS SQUIBB	0.13	-7.38	-0.01
CIGNA	0.06	-15.30	-0.01
HUMANA	0.11	-6.95	-0.01
AMGEN	0.34	-1.65	-0.01
ABIOMED	0.04	-12.14	0.00
CENTENE	0.06	-7.89	0.00
RESMED	0.05	-8.34	0.00

Unclassified sector allocation includes cash allocations.

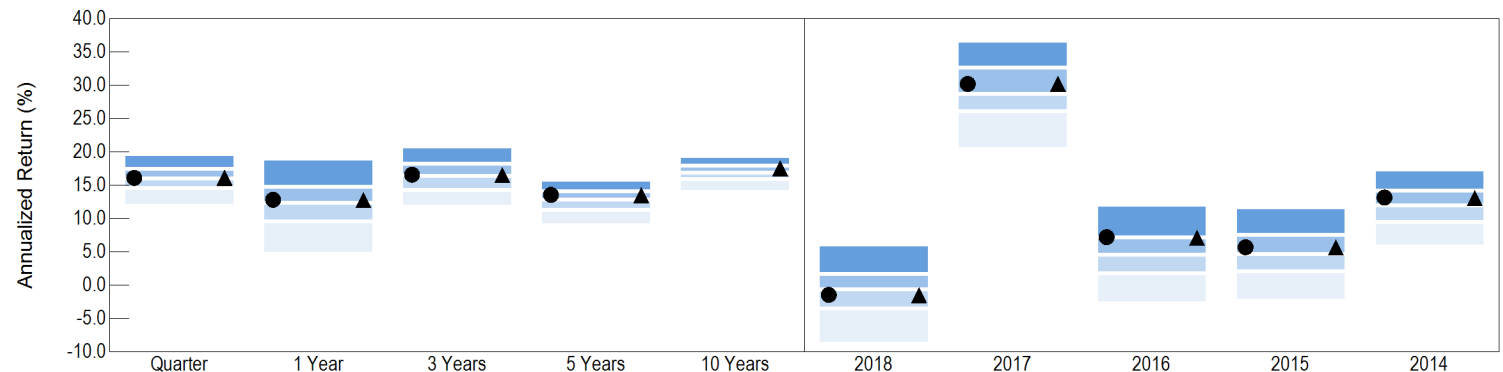
BlackRock Russell 1000 Growth Manager Performance Comparisons (Gross of Fees)

Period Ending: March 31, 2019

Rolling Annualized Excess Performance



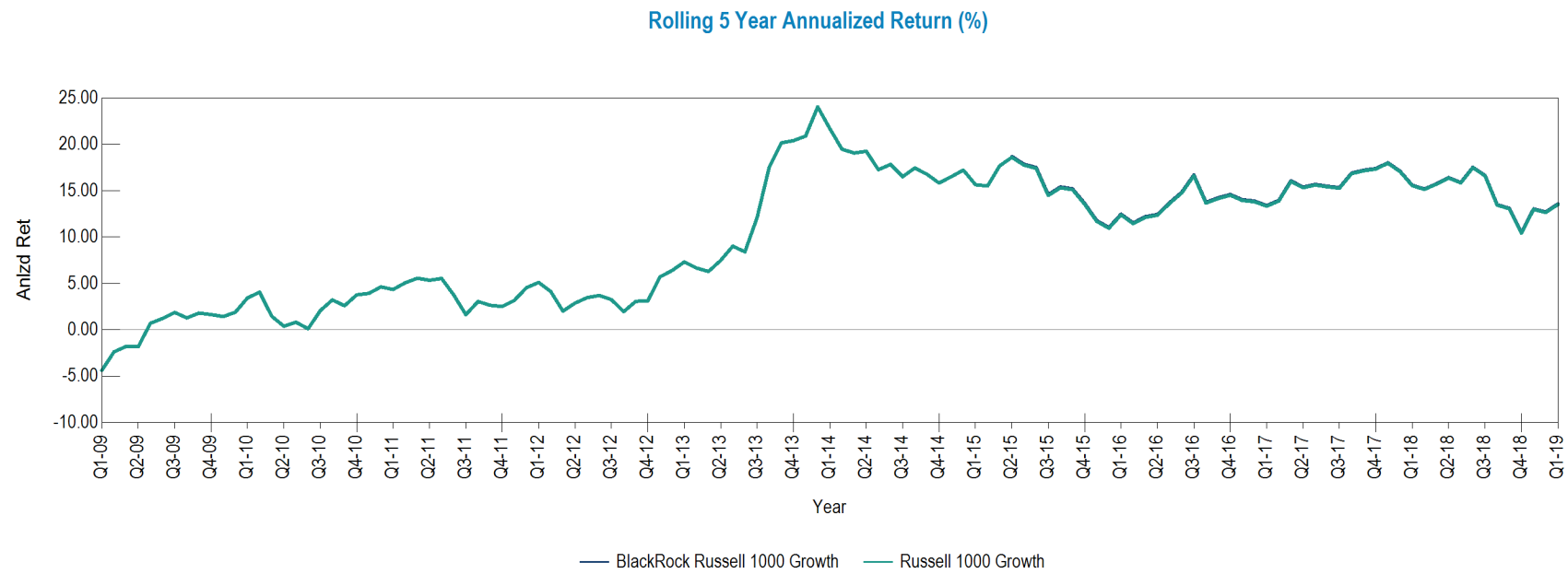
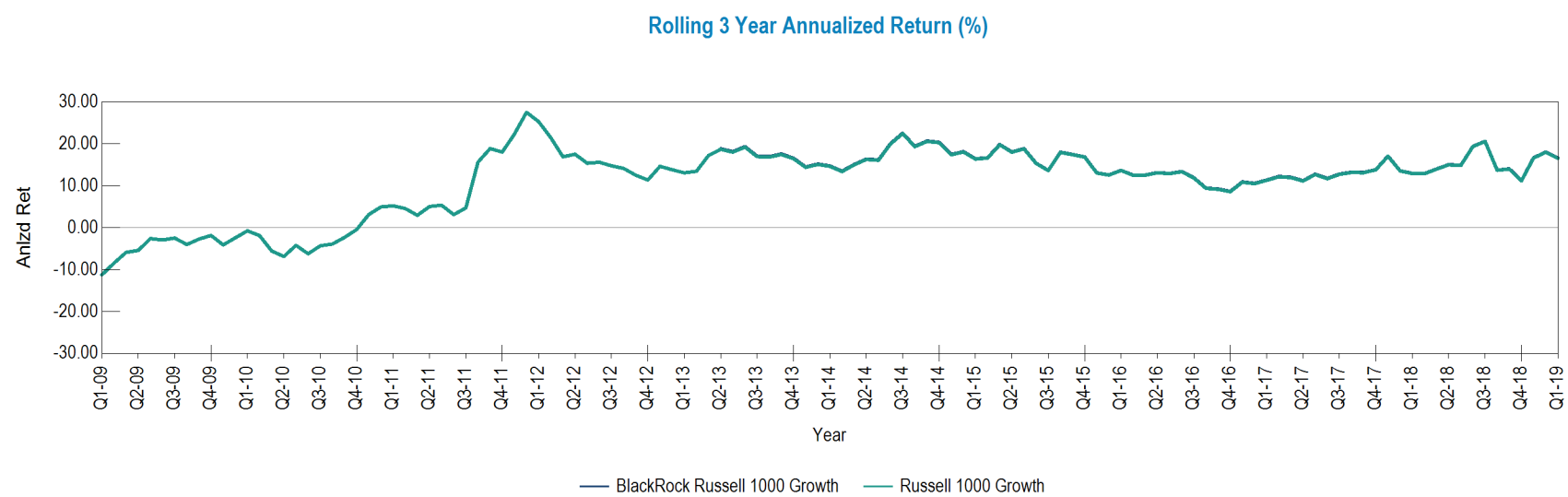
BlackRock Russell 1000 Growth vs. eV US Large Cap Growth Equity Gross Universe



	Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)	
5th Percentile	19.6		18.9		20.8		15.8		19.4		6.1		36.7		12.0		11.6	
25th Percentile	17.5		14.8		18.3		14.1		18.0		1.7		32.7		7.3		7.6	
Median	16.1		12.4		16.4		12.9		17.0		-0.6		28.8		4.6		4.7	
75th Percentile	14.6		9.6		14.3		11.4		16.0		-3.5		26.2		1.8		2.1	
95th Percentile	11.9		4.7		11.8		9.0		14.1		-8.8		20.5		-2.7		-2.4	
# of Portfolios	253		253		246		242		216		255		265		282		270	
● BlackRock Russell 1000 Growth	16.1	(49)	12.8	(46)	16.6	(48)	13.5	(36)	--	(--)	-1.5	(57)	30.2	(42)	7.2	(26)	5.7	(42)
▲ Russell 1000 Growth	16.1	(49)	12.7	(47)	16.5	(49)	13.5	(38)	17.5	(34)	-1.5	(57)	30.2	(42)	7.1	(26)	5.7	(42)

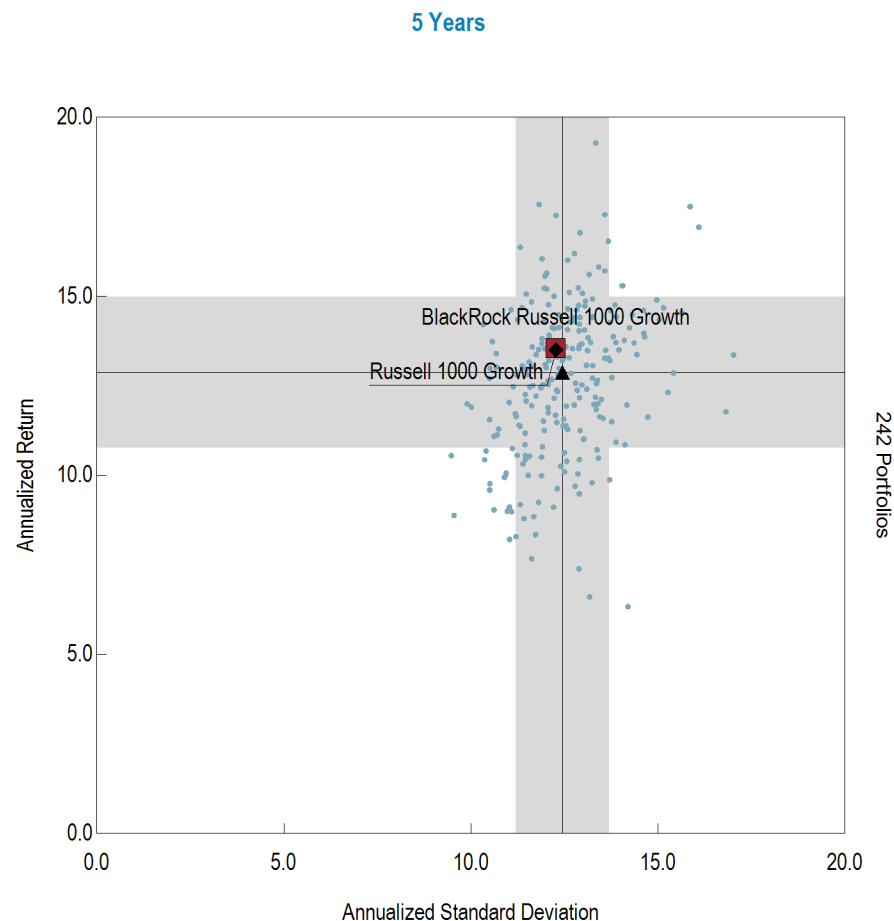
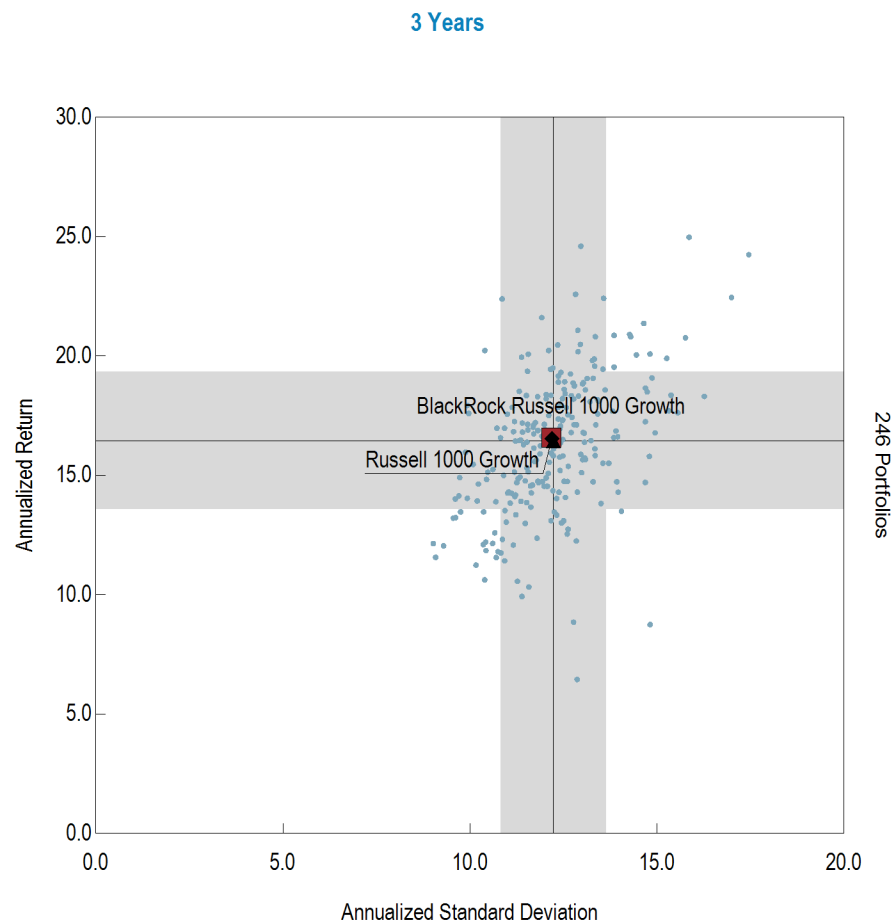
BlackRock Russell 1000 Growth
Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

Period Ending: March 31, 2019



BlackRock Russell 1000 Growth Risk vs. Return 3 & 5 Year (Gross of Fees)

Period Ending: March 31, 2019



	3 Years		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
BlackRock Russell 1000 Growth	16.58%	12.18%	1.26
Russell 1000 Growth	16.53%	12.19%	1.26
eV US Large Cap Growth Equity Gross Median	16.45%	12.23%	1.24

	5 Years		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
BlackRock Russell 1000 Growth	13.5%	12.3%	1.0
Russell 1000 Growth	13.5%	12.3%	1.0
eV US Large Cap Growth Equity Gross Median	12.9%	12.4%	1.0

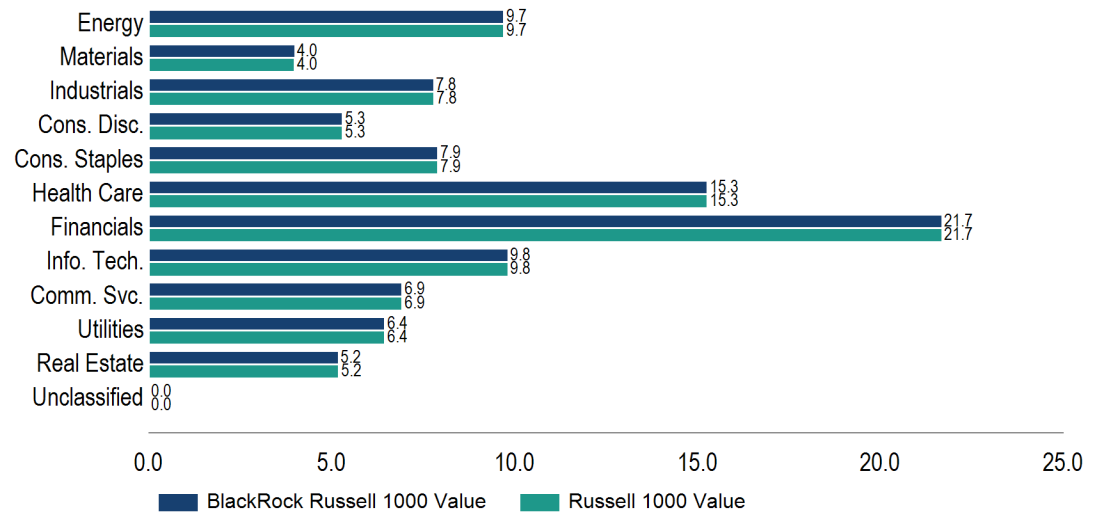
BlackRock Russell 1000 Value Manager Portfolio Overview

Period Ending: March 31, 2019

Characteristics

	Portfolio	Russell 1000 Value
Number of Holdings	718	722
Weighted Avg. Market Cap. (\$B)	120.00	119.91
Median Market Cap. (\$B)	8.89	8.86
Price To Earnings	17.33	17.33
Price To Book	2.21	2.21
Price To Sales	1.53	1.53
Return on Equity (%)	14.19	14.19
Yield (%)	2.63	2.63
Beta	1.00	1.00

Sector Allocation (%) vs Russell 1000 Value



Largest Holdings

	End Weight	Return
EXXON MOBIL	2.63	19.81
BERKSHIRE HATHAWAY 'B'	2.61	-1.61
JP MORGAN CHASE & CO.	2.57	4.55
JOHNSON & JOHNSON	2.36	9.04
PROCTER & GAMBLE	1.99	14.09
BANK OF AMERICA	1.91	12.55
CISCO SYSTEMS	1.88	25.60
VERIZON COMMUNICATIONS	1.88	6.29
PFIZER	1.87	-1.88
INTEL	1.86	15.15

Top Contributors

	Avg Wgt	Return	Contribution
EXXON MOBIL	0.82	19.81	0.16
CISCO SYSTEMS	0.56	25.60	0.14
PHILIP MORRIS INTL.	0.29	34.11	0.10
INTEL	0.61	15.15	0.09
PROCTER & GAMBLE	0.65	14.09	0.09
CHEVRON	0.59	14.37	0.08
BANK OF AMERICA	0.64	12.55	0.08
COMCAST A	0.44	17.42	0.08
CITIGROUP	0.36	20.36	0.07
JOHNSON & JOHNSON	0.80	9.04	0.07

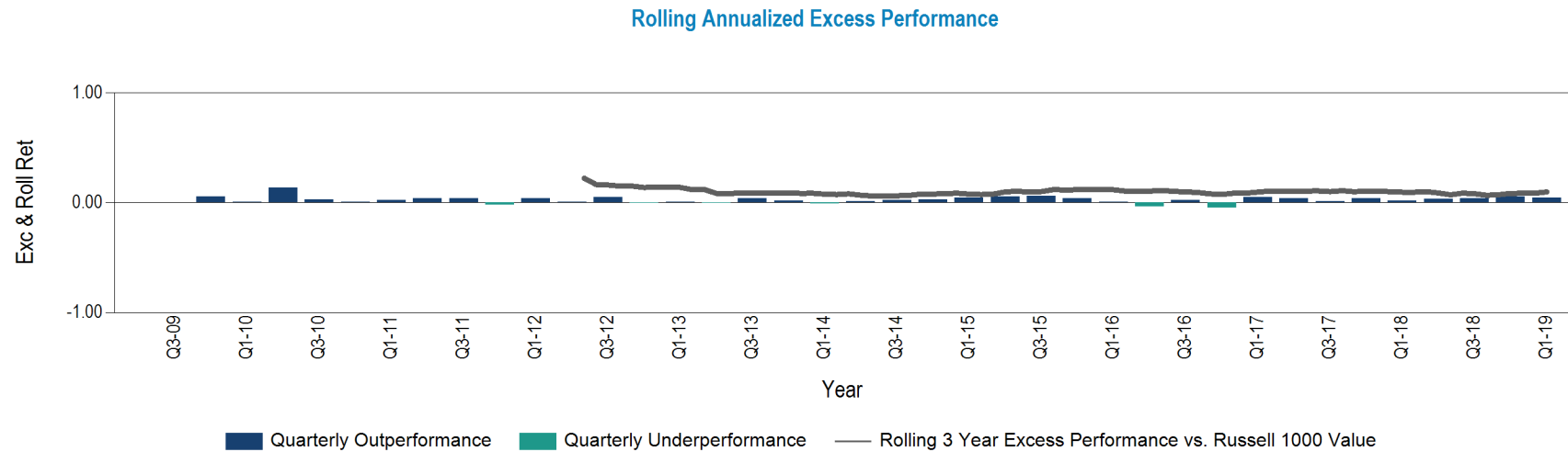
Bottom Contributors

	Avg Wgt	Return	Contribution
CVS HEALTH	0.22	-17.06	-0.04
CIGNA	0.14	-15.30	-0.02
CME GROUP	0.17	-12.13	-0.02
KRAFT HEINZ	0.07	-23.19	-0.02
BERKSHIRE HATHAWAY 'B'	0.98	-1.61	-0.02
PFIZER	0.72	-1.88	-0.01
WALGREENS BOOTS ALLIANCE	0.16	-6.84	-0.01
PG&E	0.03	-25.05	-0.01
BRISTOL MYERS SQUIBB	0.11	-7.38	-0.01
CENTURYLINK	0.04	-19.25	-0.01

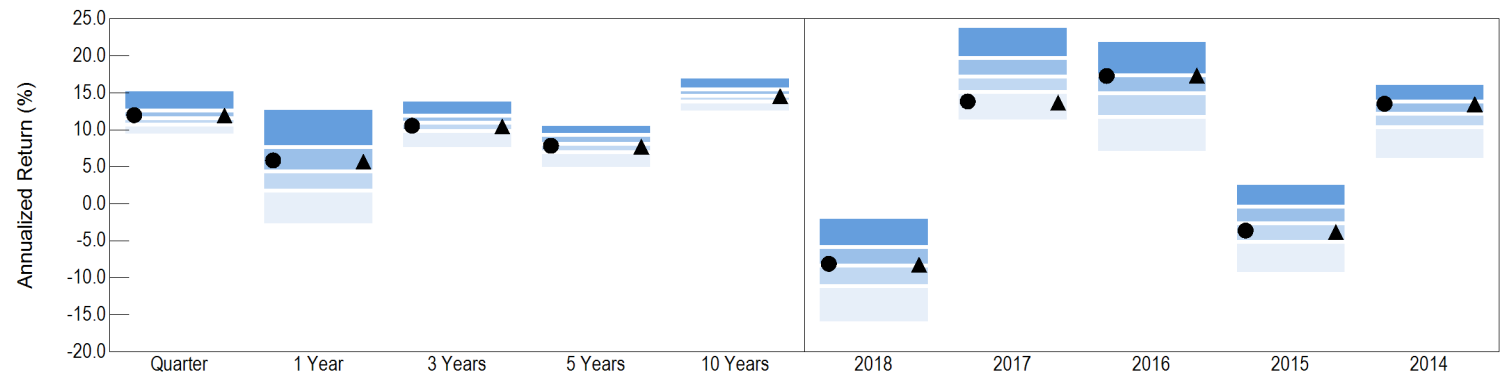
Unclassified sector allocation includes cash allocations.

BlackRock Russell 1000 Value Manager Performance Comparisons (Gross of Fees)

Period Ending: March 31, 2019



BlackRock Russell 1000 Value vs. eV US Large Cap Value Equity Gross Universe

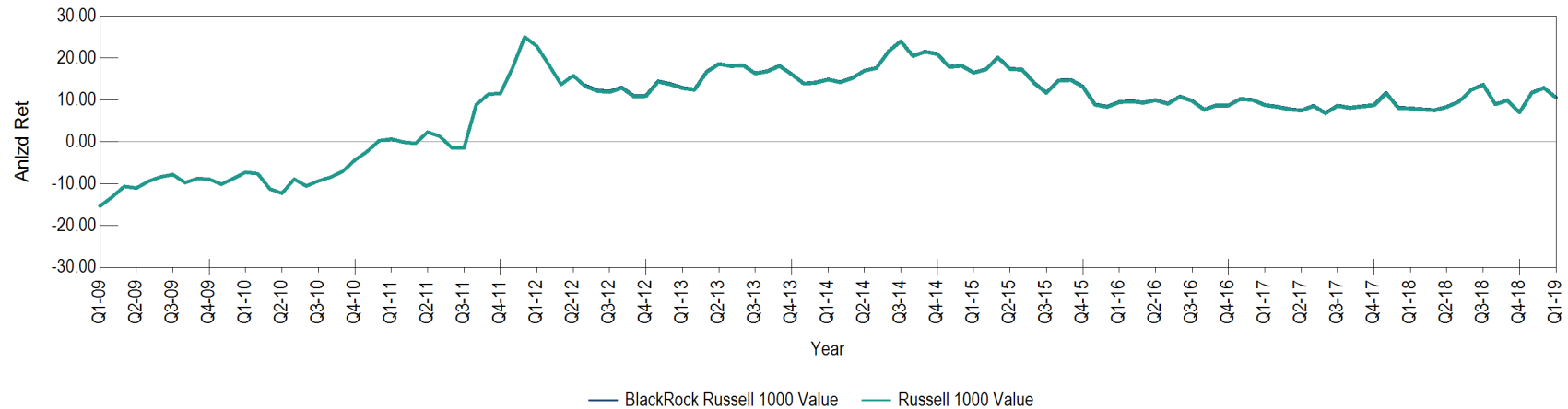


	Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)	
5th Percentile	15.4	(42)	12.9	(35)	14.0	(63)	10.7	(57)	17.1	--	-1.8	(46)	24.0	(86)	22.1	(26)	2.8	(62)
25th Percentile	12.7	(43)	7.7	(36)	11.9	(65)	9.3	(60)	15.5	(55)	-5.8	(50)	19.8	(87)	17.4	(26)	-0.4	(64)
Median	11.6		4.4		11.0		8.2		14.7		-8.3		17.2		15.0		-2.6	
75th Percentile	10.7		1.8		9.8		7.0		13.8		-11.1		15.1		11.8		-5.1	
95th Percentile	9.3		-2.9		7.4		4.7		12.4		-16.1		11.2		7.0		-9.4	
# of Portfolios	337		337		335		326		274		336		342		346		312	
● BlackRock Russell 1000 Value	12.0	(42)	5.9	(35)	10.5	(63)	7.8	(57)	--	(--)	-8.1	(46)	13.8	(86)	17.3	(26)	-3.6	(62)
▲ Russell 1000 Value	11.9	(43)	5.7	(36)	10.5	(65)	7.7	(60)	14.5	(55)	-8.3	(50)	13.7	(87)	17.3	(26)	-3.8	(64)

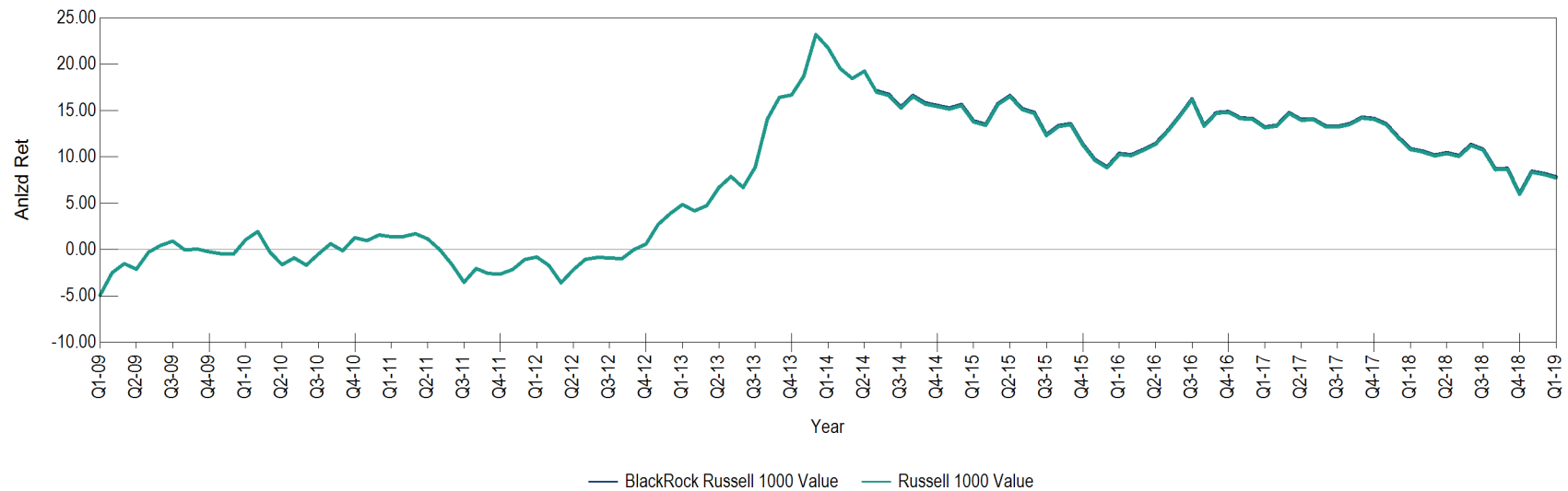
BlackRock Russell 1000 Value Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

Period Ending: March 31, 2019

Rolling 3 Year Annualized Return (%)



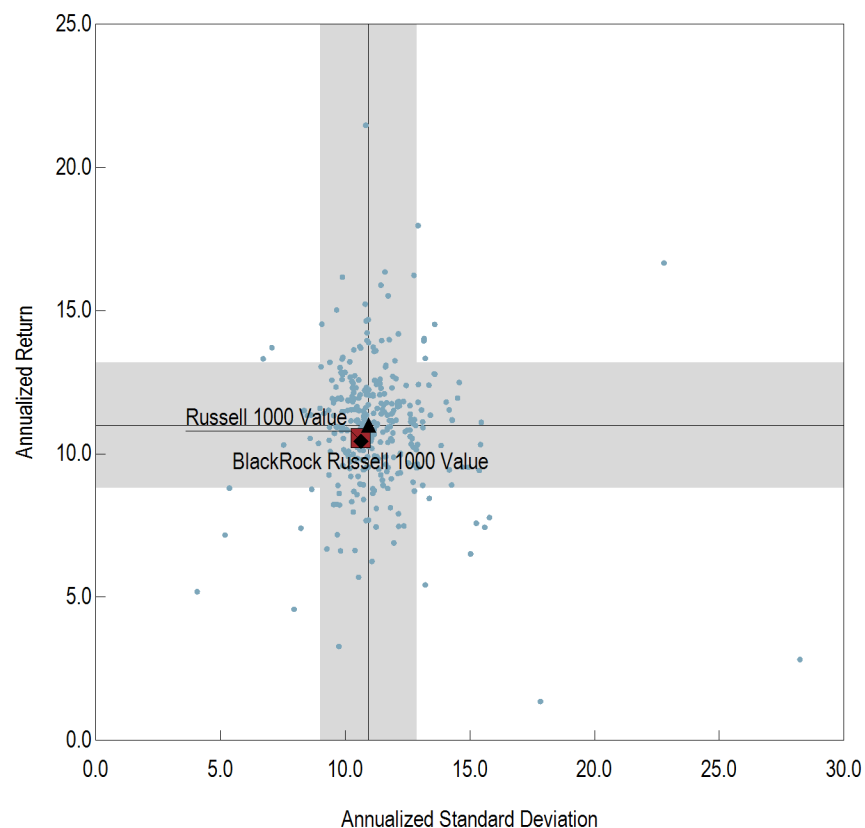
Rolling 5 Year Annualized Return (%)



BlackRock Russell 1000 Value Risk vs. Return 3 & 5 Year (Gross of Fees)

Period Ending: March 31, 2019

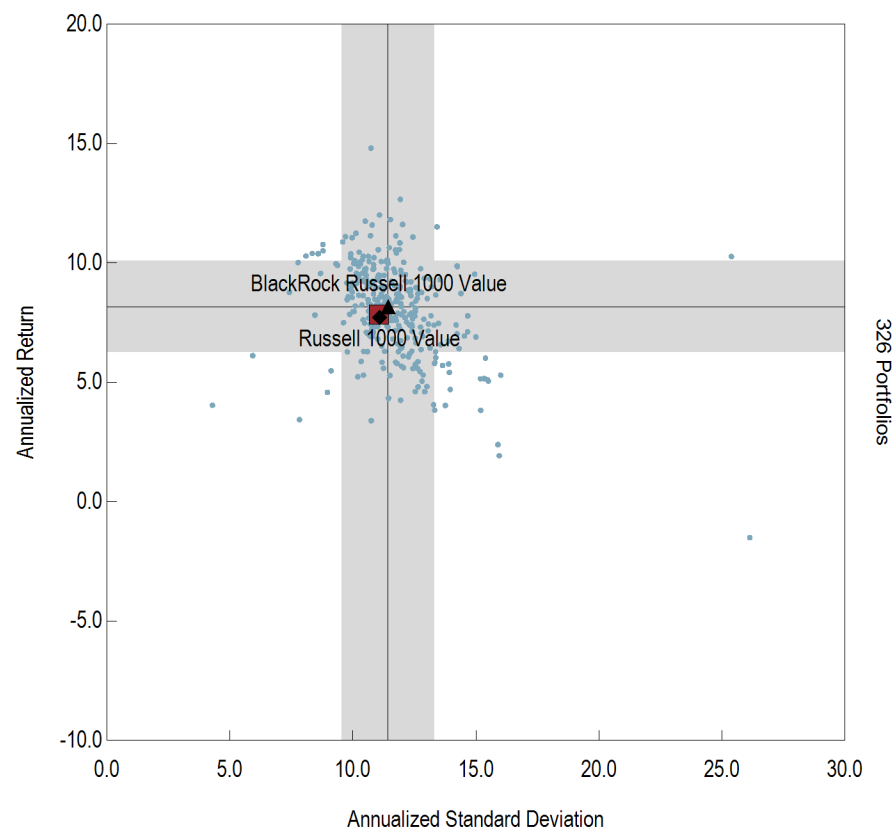
3 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
BlackRock Russell 1000 Value	10.5%	10.6%	0.9
Russell 1000 Value	10.5%	10.6%	0.9
eV US Large Cap Value Equity Gross Median	11.0%	10.9%	0.9

5 Years



5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
BlackRock Russell 1000 Value	7.8%	11.1%	0.6
Russell 1000 Value	7.7%	11.1%	0.6
eV US Large Cap Value Equity Gross Median	8.2%	11.4%	0.6

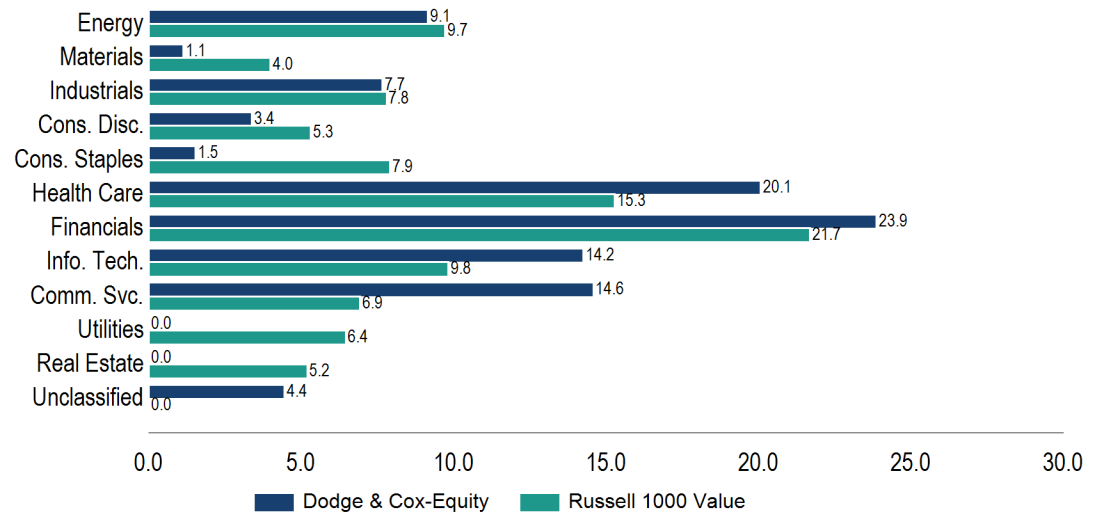
Dodge & Cox-Equity Manager Portfolio Overview

Period Ending: March 31, 2019

Characteristics

	Portfolio	Russell 1000 Value
Number of Holdings	72	722
Weighted Avg. Market Cap. (\$B)	107.10	119.91
Median Market Cap. (\$B)	36.88	8.86
Price To Earnings	15.77	17.33
Price To Book	2.34	2.21
Price To Sales	1.46	1.53
Return on Equity (%)	15.39	14.19
Yield (%)	2.49	2.63
Beta	1.03	1.00

Sector Allocation (%) vs Russell 1000 Value



Largest Holdings

	End Weight	Return
COMCAST A	4.46	17.42
CHARTER COMMS.CL.A	3.48	21.74
WELLS FARGO & CO	3.40	5.83
ALPHABET 'C'	3.08	13.30
FEDEX	2.93	12.87
SANOFI ADR 2:1 (XSC)	2.91	2.00
CHARLES SCHWAB	2.88	3.34
NOVARTIS 'B' SPN.ADR 1:1	2.84	15.60
CAPITAL ONE FINL.	2.74	8.63
BANK OF AMERICA	2.69	12.55

Top Contributors

	Avg Wgt	Return	Contribution
COMCAST A	4.22	17.42	0.74
CHARTER COMMS.CL.A	3.32	21.74	0.72
JOHNSON CONTROLS INTL.	1.96	25.49	0.50
CISCO SYSTEMS	1.77	25.60	0.45
APACHE	1.31	33.07	0.43
MICRO FOCUS	0.77	53.38	0.41
INTL.SPN.ADR 1:1	0.77	53.38	0.41
NOVARTIS 'B' SPN.ADR 1:1	2.62	15.60	0.41
ALPHABET 'C'	2.97	13.30	0.39
BAKER HUGHES A	1.29	29.88	0.38
AMERICAN EXPRESS	2.50	15.15	0.38

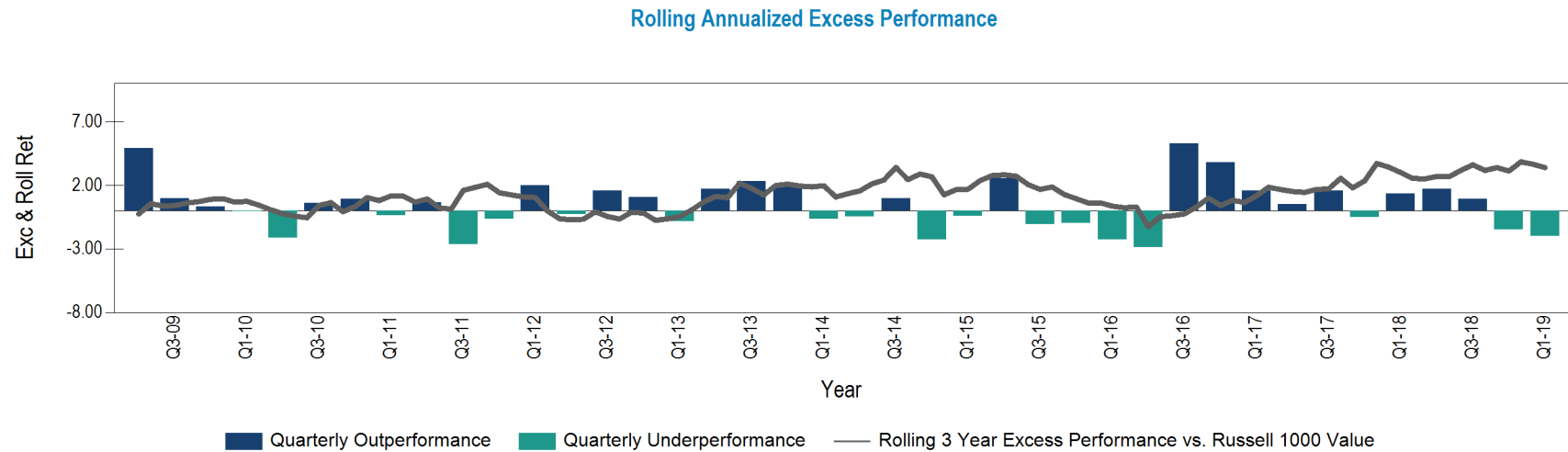
Bottom Contributors

	Avg Wgt	Return	Contribution
CIGNA	2.28	-15.30	-0.35
QURATE RETAIL SERIES A	0.92	-18.14	-0.17
BRISTOL MYERS SQUIBB	1.95	-7.38	-0.14
HP	1.56	-4.24	-0.07
SPRINT	0.53	-2.92	-0.02
JUNIPER NETWORKS	0.91	-0.94	-0.01
UNITEDHEALTH GROUP	1.42	-0.37	-0.01
MEDTRONIC	0.52	0.68	0.00
WEATHERFORD INTL.	0.02	24.87	0.01
GAP	0.35	2.61	0.01

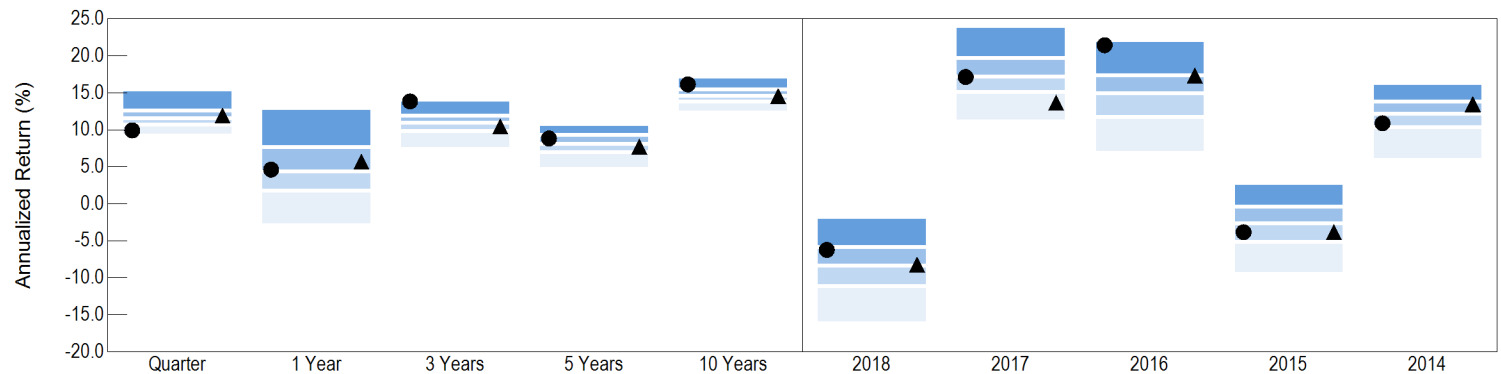
Unclassified sector allocation includes cash allocations.

Dodge & Cox-Equity Manager Performance Comparisons (Gross of Fees)

Period Ending: March 31, 2019

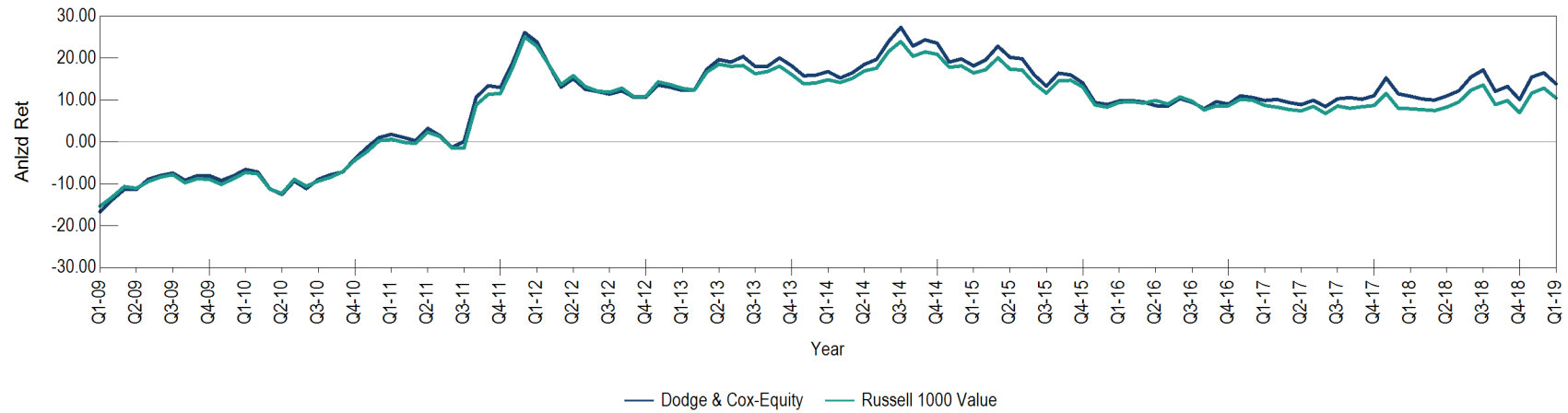


Dodge & Cox-Equity vs. eV US Large Cap Value Equity Gross Universe

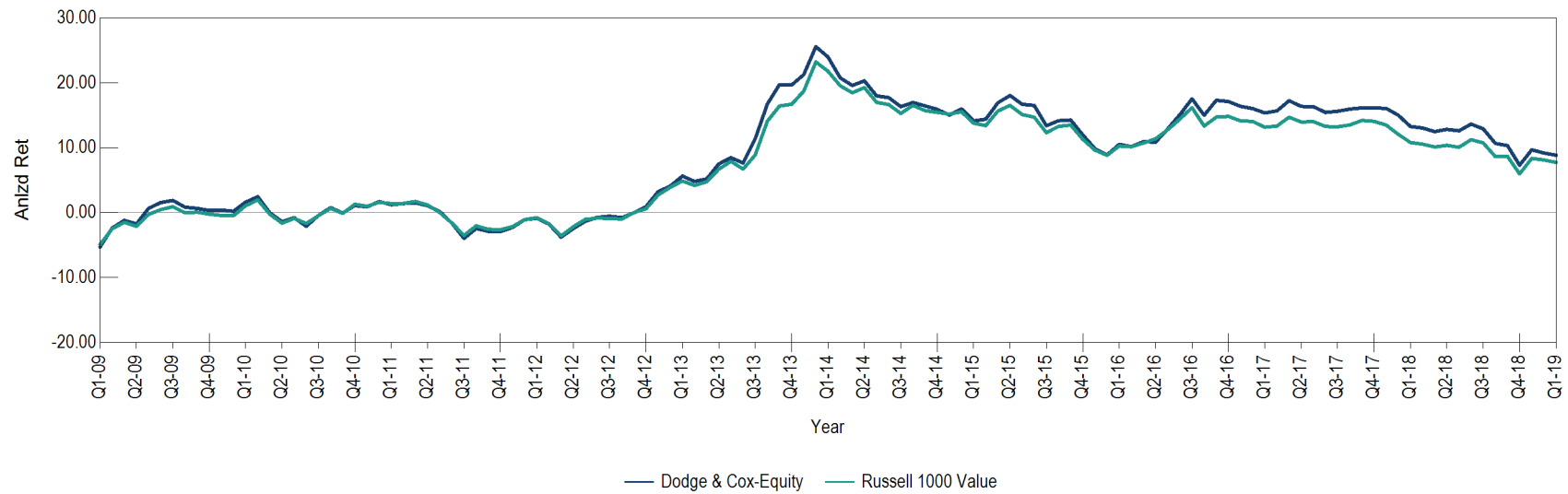


		Return (Rank)																	
5th Percentile		15.4	12.9	14.0	10.7	17.1	-1.8	24.0	22.1	2.8	16.3								
25th Percentile		12.7	7.7	11.9	9.3	15.5	-5.8	19.8	17.4	-0.4	13.9								
Median		11.6	4.4	11.0	8.2	14.7	-8.3	17.2	15.0	-2.6	12.2								
75th Percentile		10.7	1.8	9.8	7.0	13.8	-11.1	15.1	11.8	-5.1	10.4								
95th Percentile		9.3	-2.9	7.4	4.7	12.4	-16.1	11.2	7.0	-9.4	5.9								
# of Portfolios		337	337	335	326	274	336	342	346	312	307								
●	Dodge & Cox-Equity	9.9 (90)	4.6 (49)	13.8 (7)	8.8 (35)	16.1 (15)	-6.3 (29)	17.1 (52)	21.4 (6)	-3.9 (64)	10.9 (72)								
▲	Russell 1000 Value	11.9 (43)	5.7 (36)	10.5 (65)	7.7 (60)	14.5 (55)	-8.3 (50)	13.7 (87)	17.3 (26)	-3.8 (64)	13.5 (33)								

Rolling 3 Year Annualized Return (%)

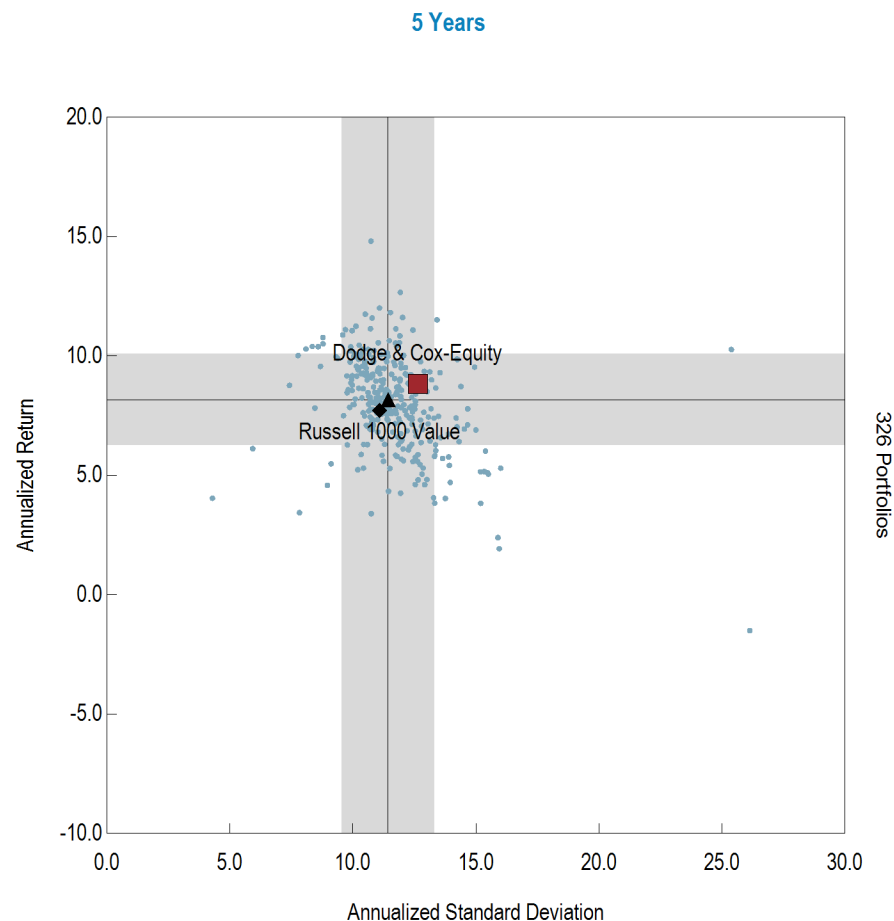
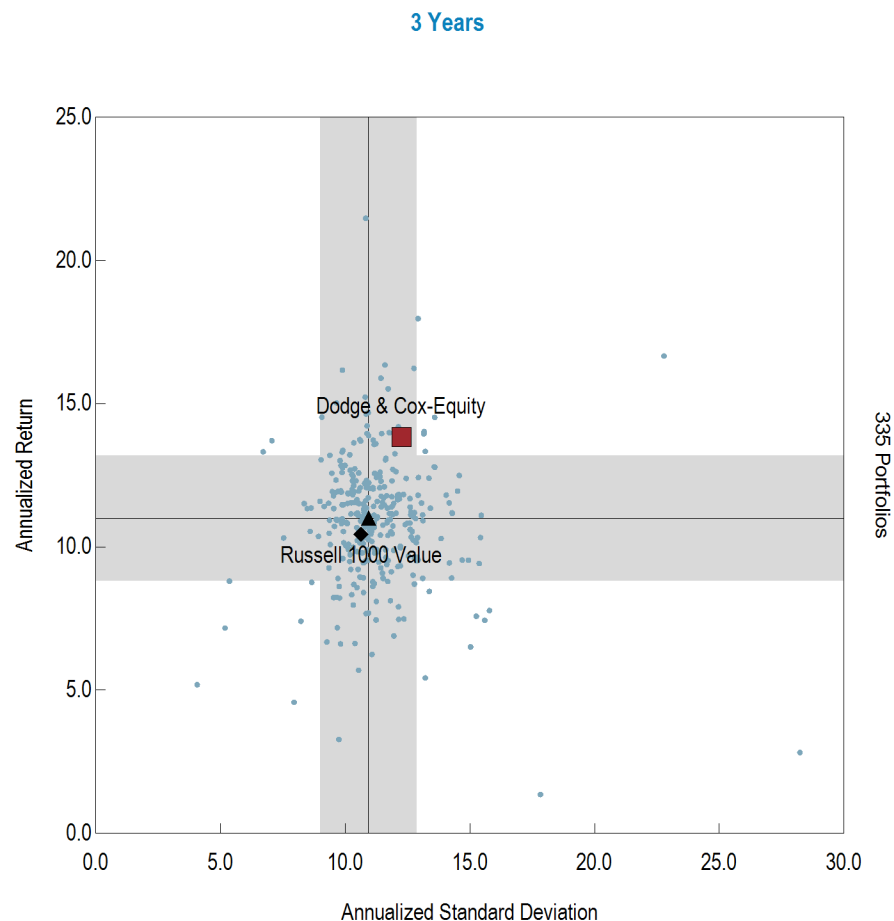


Rolling 5 Year Annualized Return (%)



Dodge & Cox-Equity Risk vs. Return 3 & 5 Year (Gross of Fees)

Period Ending: March 31, 2019



	3 Years		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Dodge & Cox-Equity	13.8%	12.3%	1.0
Russell 1000 Value	10.5%	10.6%	0.9
eV US Large Cap Value Equity Gross Median	11.0%	10.9%	0.9

	5 Years		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Dodge & Cox-Equity	8.8%	12.6%	0.6
Russell 1000 Value	7.7%	11.1%	0.6
eV US Large Cap Value Equity Gross Median	8.2%	11.4%	0.6

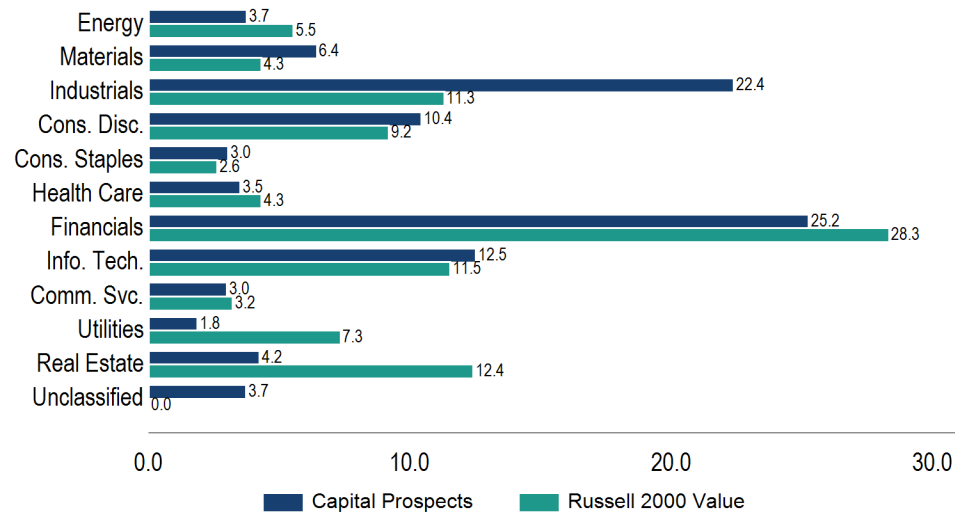
Capital Prospects Manager Portfolio Overview

Period Ending: March 31, 2019

Characteristics

	Portfolio	Russell 2000 Value
Number of Holdings	286	1,366
Weighted Avg. Market Cap. (\$B)	2.47	2.06
Median Market Cap. (\$B)	1.34	0.68
Price To Earnings	15.53	15.60
Price To Book	1.95	1.61
Price To Sales	0.92	0.92
Return on Equity (%)	11.71	6.04
Yield (%)	1.86	2.22
Beta	1.03	1.00

Sector Allocation (%) vs Russell 2000 Value



Largest Holdings

	End Weight	Return
VERSO 'A'	1.22	-4.37
ARCONIC	1.20	13.73
LITTELFUSE	1.18	6.66
OFG BANCORP	1.15	20.66
CROWN HDG.	1.05	31.27
AIR LEASE	1.04	14.14
HOSTESS BRANDS CL.A	0.95	14.26
HILLENBRAND	0.93	10.02
VERINT SYSTEMS	0.89	41.48
MEREDITH	0.87	7.47

Top Contributors

	Avg Wgt	Return	Contribution
PCM	0.62	108.01	0.67
VERSUM MATERIALS	0.45	81.89	0.37
VERINT SYSTEMS	0.73	41.48	0.30
CROWN HDG.	0.97	31.27	0.30
EPAM SYSTEMS	0.59	45.79	0.27
OFG BANCORP	1.13	20.66	0.23
DMC GLOBAL	0.55	41.40	0.23
KNOWLES	0.69	32.46	0.22
MODINE	0.76	28.31	0.22
MANUFACTURING	0.71	29.49	0.21

Bottom Contributors

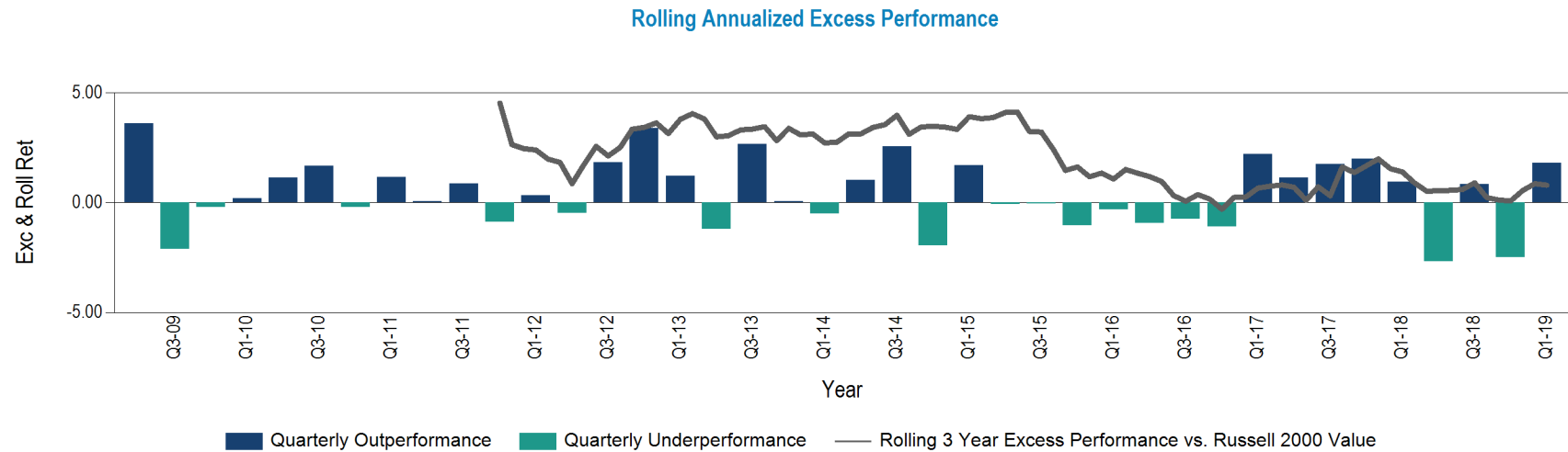
	Avg Wgt	Return	Contribution
ATLAS FINANCIAL (NAS)	0.19	-69.59	-0.13
HOLDINGS	0.53	-15.66	-0.08
TOWER INTERNATIONAL	0.56	-11.25	-0.06
VERSO 'A'	1.32	-4.37	-0.06
HOUGHTON MIFFLIN HARCT.	0.27	-17.95	-0.05
NEW HOME	0.54	-8.99	-0.05
CRH MEDICAL	0.34	-13.66	-0.05
MSG NETWORKS	0.55	-7.68	-0.04
ALLD.MOTION TECHS.	0.17	-23.00	-0.04
CSS INDS.	0.11	-31.28	-0.04

Unclassified sector allocation includes cash allocations.

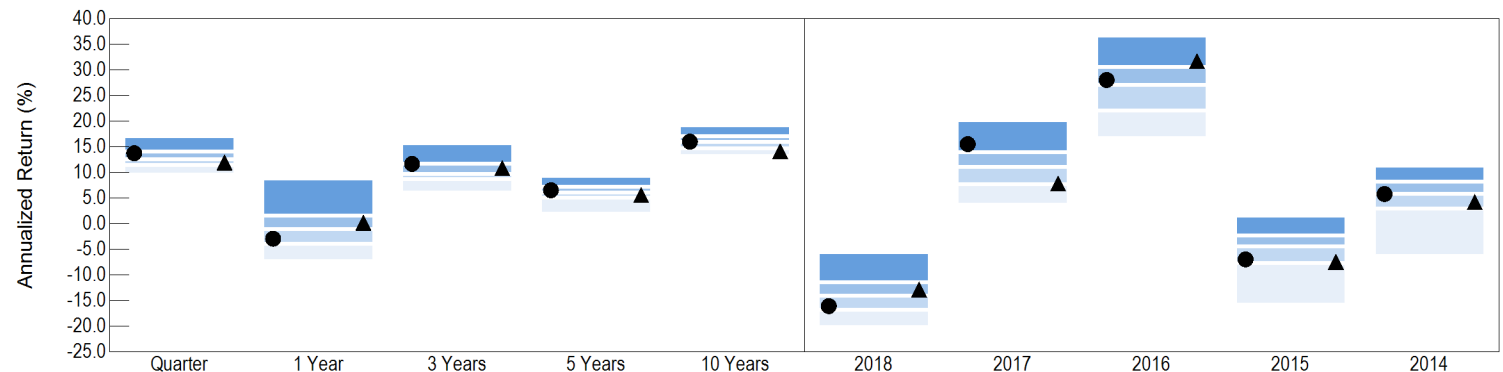
Capital Prospects

Manager Performance Comparisons (Gross of Fees)

Period Ending: March 31, 2019



Capital Prospects vs. eV US Small Cap Value Equity Gross Universe



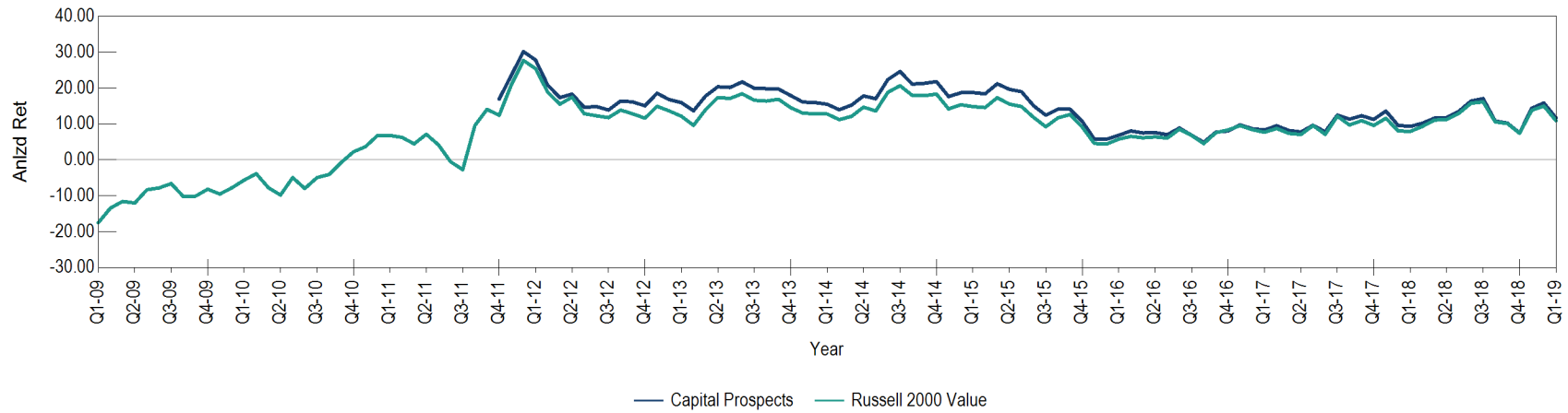
	Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)		Return (Rank)	
5th Percentile	17.0	(32)	8.8	(67)	15.6	(26)	9.3	(45)	19.1	(53)	-5.7	(71)	20.2	(18)	36.7	(40)	1.5	(72)
25th Percentile	14.2	(69)	1.6	(39)	11.7	(33)	7.3	(66)	17.2	(88)	-11.4	(39)	14.1	(75)	30.7	(17)	-2.2	(74)
Median	12.7		-1.0		9.7		6.2		16.1		-14.0		11.1		27.2		-4.3	
75th Percentile	11.5		-3.9		8.8		5.1		14.8		-16.7		7.8		22.2		-7.7	
95th Percentile	9.6		-7.3		6.1		2.0		13.2		-20.2		3.7		16.8		-15.8	
# of Portfolios	216		216		211		202		176		220		224		222		212	
Capital Prospects	13.7	(32)	-3.0	(67)	11.7	(26)	6.5	(45)	16.0	(53)	-16.1	(71)	15.5	(18)	28.1	(40)	-7.0	(72)
Russell 2000 Value	11.9	(69)	0.2	(39)	10.9	(33)	5.6	(66)	14.1	(88)	-12.9	(39)	7.8	(75)	31.7	(17)	-7.5	(74)

Capital Prospects

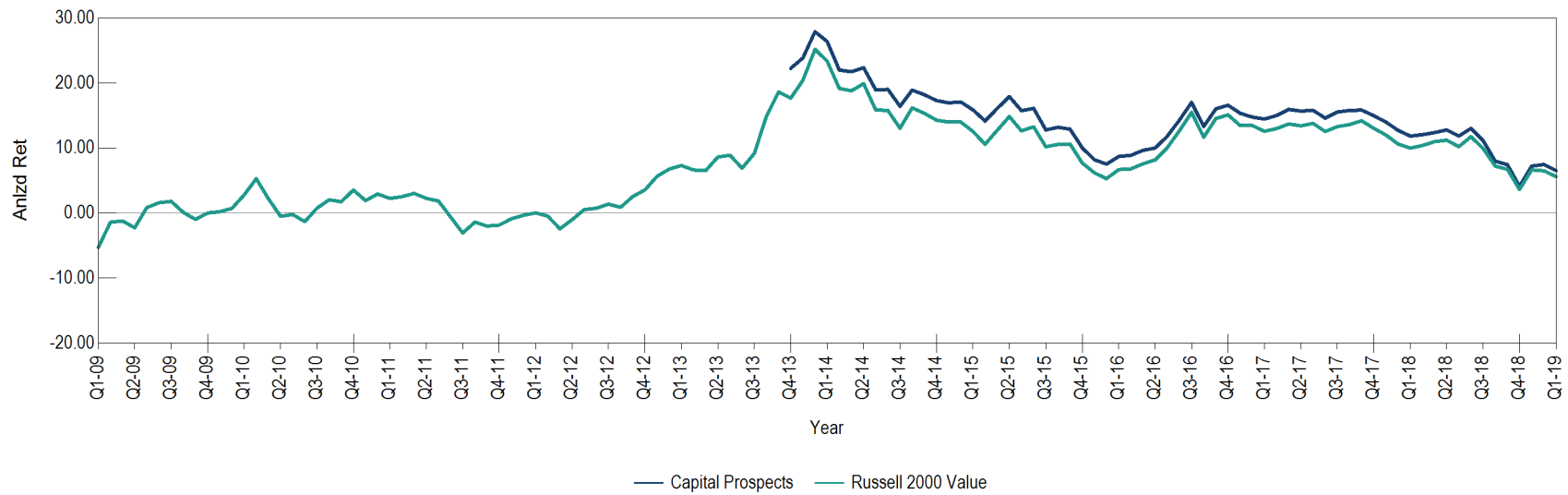
Manager Performance - Rolling 3 & 5 Year (Gross of Fees)

Period Ending: March 31, 2019

Rolling 3 Year Annualized Return (%)



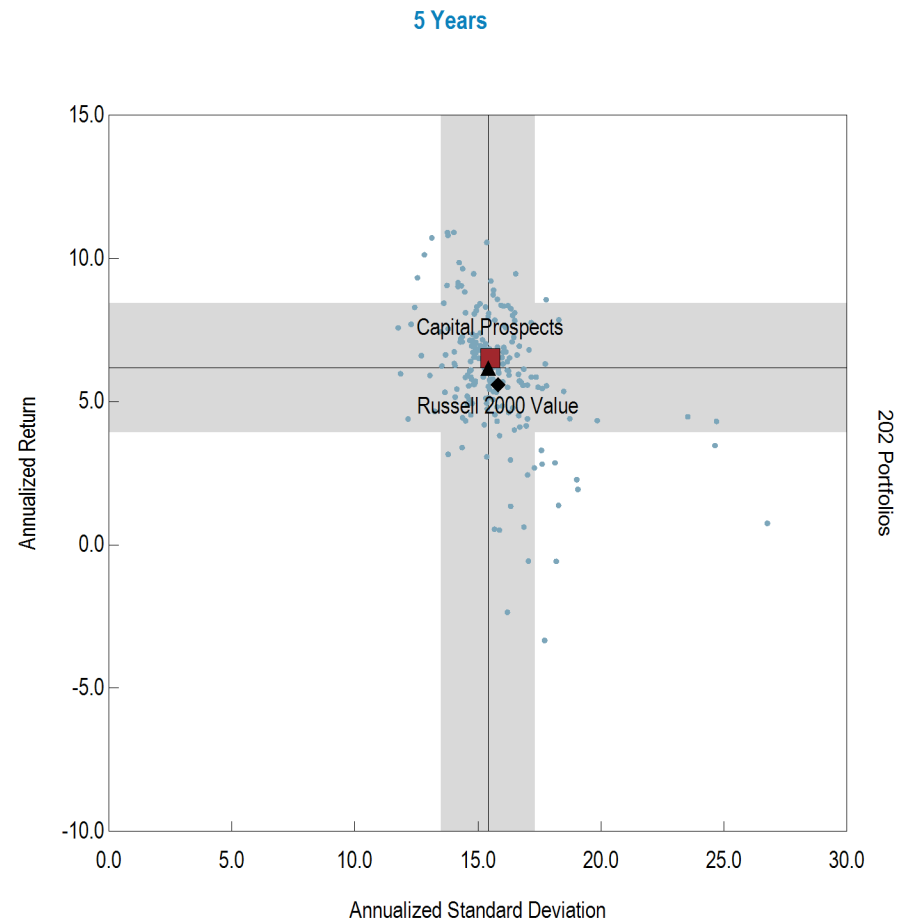
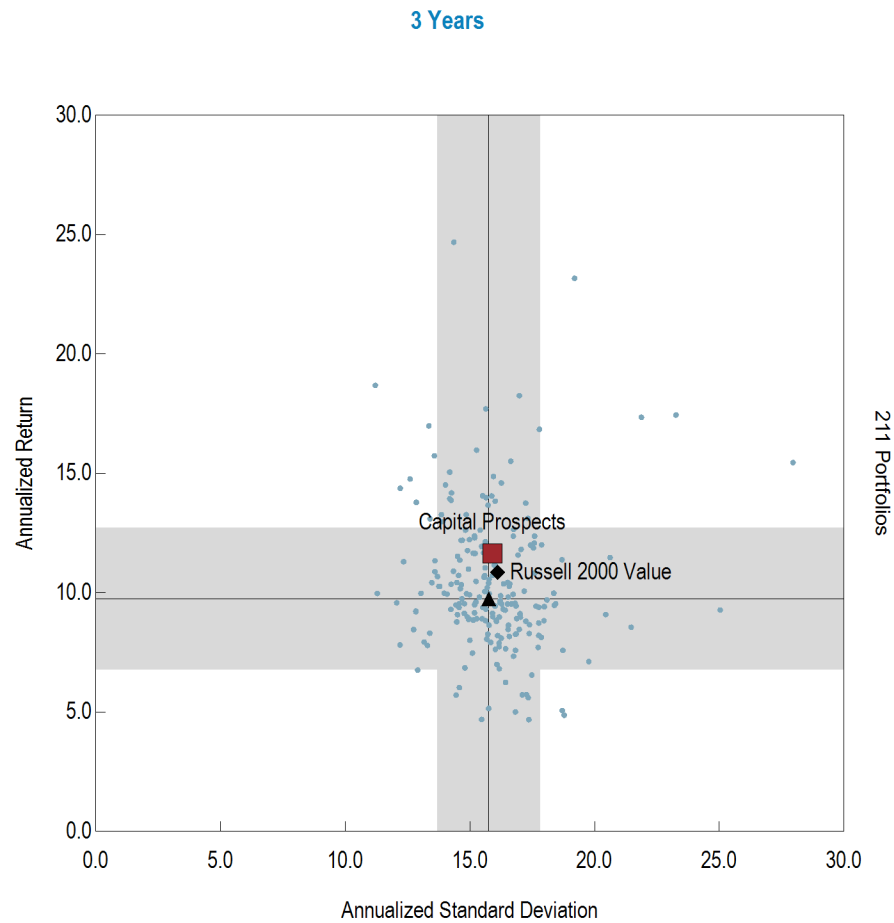
Rolling 5 Year Annualized Return (%)



Capital Prospects

Risk vs. Return 3 & 5 Year (Gross of Fees)

Period Ending: March 31, 2019



	3 Years		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Capital Prospects	11.7%	15.9%	0.7
Russell 2000 Value	10.9%	16.1%	0.6
eV US Small Cap Value Equity Gross Median	9.7%	15.8%	0.6

	5 Years		
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Capital Prospects	6.5%	15.5%	0.4
Russell 2000 Value	5.6%	15.8%	0.3
eV US Small Cap Value Equity Gross Median	6.2%	15.4%	0.4

International Equity Managers

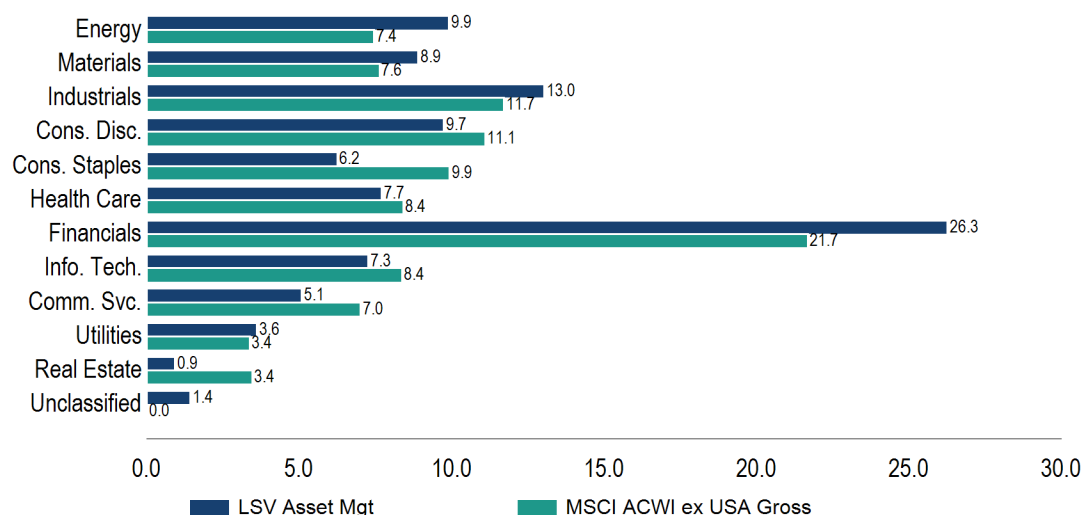
LSV Asset Mgt Manager Portfolio Overview

Period Ending: March 31, 2019

Characteristics

	Portfolio	MSCI ACWI ex USA Gross
Number of Holdings	263	2,145
Weighted Avg. Market Cap. (\$B)	35.81	64.41
Median Market Cap. (\$B)	6.50	7.67
Price To Earnings	9.81	14.55
Price To Book	1.54	2.24
Price To Sales	0.63	1.18
Return on Equity (%)	13.84	15.45
Yield (%)	4.40	3.21
Beta	1.04	1.00

Sector Allocation (%) vs MSCI ACWI ex USA Gross



Largest Holdings

	End Weight	Return
ROCHE HOLDING	2.43	15.14
ROYAL DUTCH SHELL B	1.94	7.75
SANOFI	1.86	2.22
SAMSUNG ELECTRONICS	1.73	13.41
TOTAL	1.45	6.64
SWISS LIFE HOLDING	1.38	14.65
KONINKLIJKE AHOLD DELHAIZE	1.35	5.57
ENEL	1.33	14.08
GLAXOSMITHKLINE	1.32	11.20
BP	1.26	16.92

Top Contributors

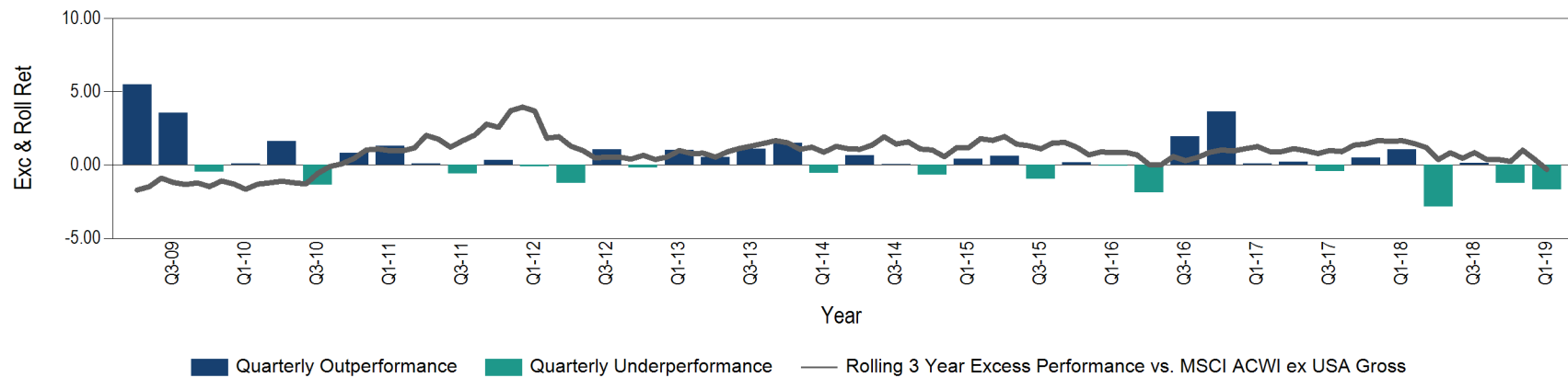
	Avg Wgt	Return	Contribution
ROCHE HOLDING	2.26	15.14	0.34
SAMSUNG ELECTRONICS	1.72	13.41	0.23
SINOTRUK (HONG KONG)	0.54	41.15	0.22
BP	1.20	16.92	0.20
SWISS LIFE HOLDING	1.32	14.65	0.19
LUKOIL OAO SPN.ADR 1:1	0.74	25.33	0.19
FORTESCUE METALS GP.	0.21	79.70	0.17
AIR CHINA 'H'	0.39	41.27	0.16
ENEL	1.16	14.08	0.16
VOLVO B	0.86	18.71	0.16

Bottom Contributors

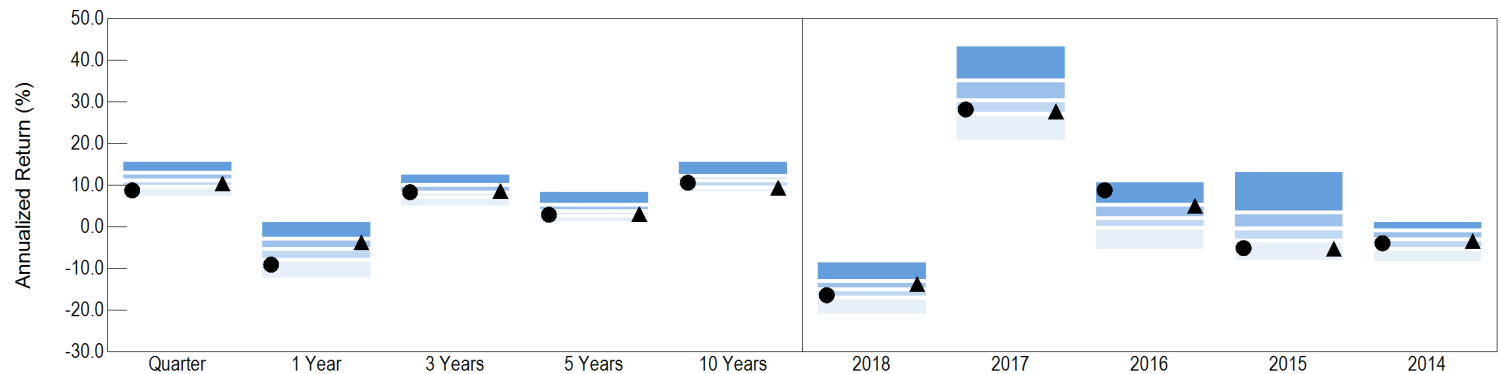
	Avg Wgt	Return	Contribution
KDDI	1.24	-8.04	-0.10
LEONI	0.22	-43.52	-0.09
ST BARBARA	0.32	-26.95	-0.09
CHINA RESOURCES POWER	0.38	-21.85	-0.08
INDOFOOD SUKSES MAKMUR	0.37	-13.59	-0.05
SK TELECOM	0.60	-8.27	-0.05
RESONA HOLDINGS	0.51	-8.13	-0.04
AUTONEUM HOLDING	0.14	-22.91	-0.03
CASCADES	0.20	-16.26	-0.03
SAINSBURY J	0.34	-9.00	-0.03

Unclassified sector allocation includes cash allocations.

Rolling Annualized Excess Performance

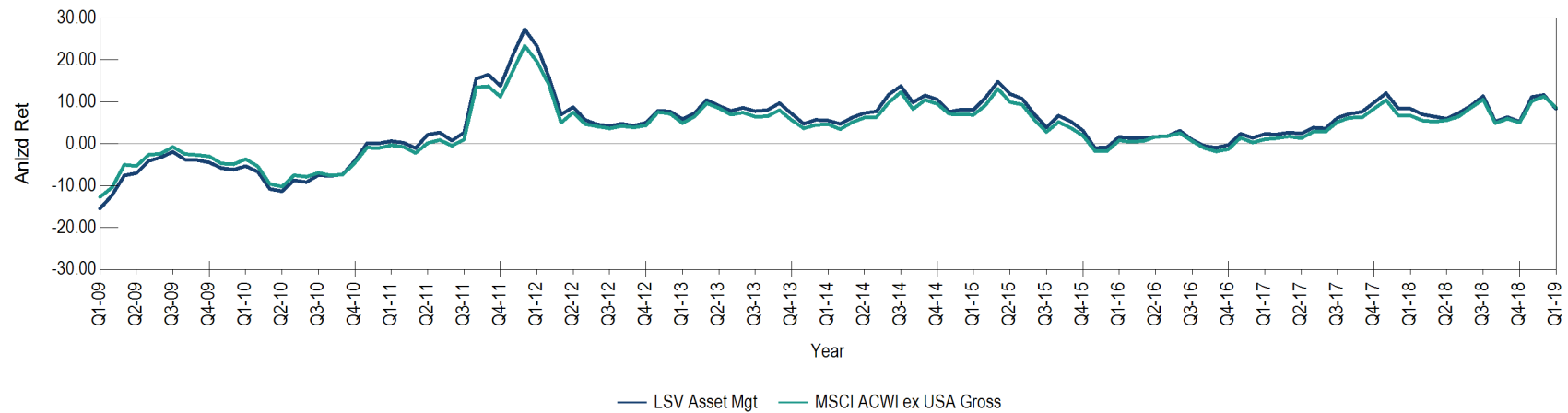


LSV Asset Mgt vs. eV ACWI ex-US Equity Unhedged Gross Universe

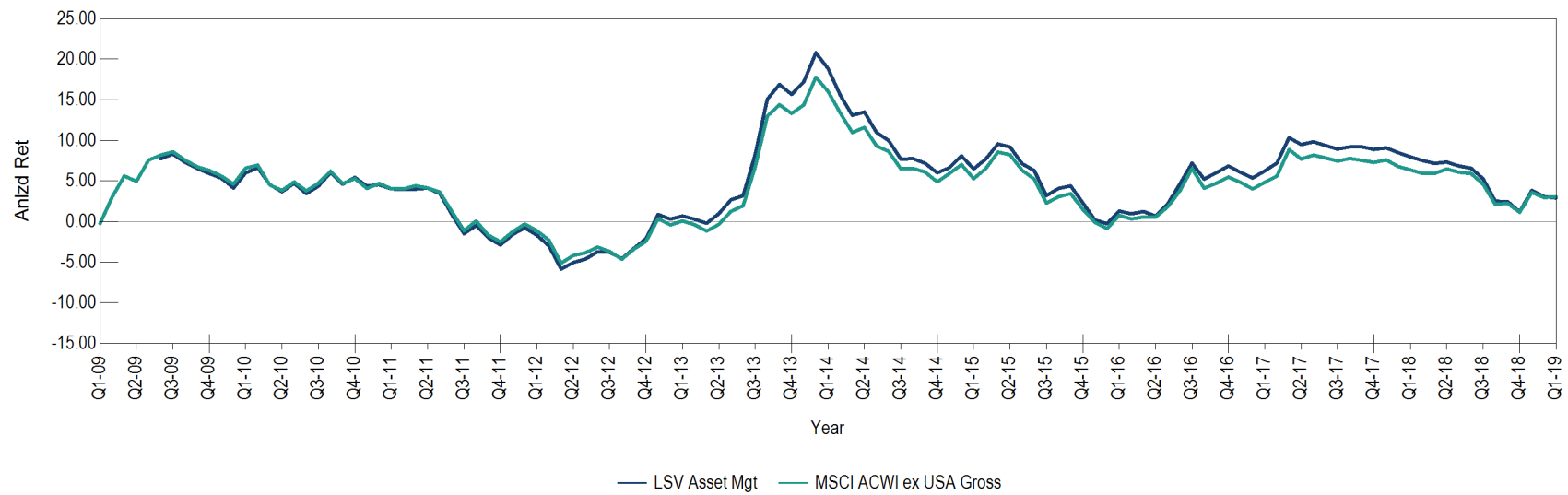


	Return (Rank)																	
5th Percentile	16.0		1.6		12.9		8.8		16.1		-8.1		43.8		11.1		13.5	
25th Percentile	13.1		-2.7		10.2		5.4		12.3		-12.9		35.2		5.3		3.5	
Median	11.2		-5.2		8.4		3.9		11.3		-15.0		30.6		2.1		-0.3	
75th Percentile	9.6		-7.8		7.2		2.7		9.6		-17.0		27.2		-0.2		-3.3	
95th Percentile	7.1		-12.7		4.8		0.8		8.1		-21.3		20.5		-5.8		-8.3	
# of Portfolios	261		261		253		219		146		258		254		238		179	
● LSV Asset Mgt	8.8	(86)	-9.1	(85)	8.3	(54)	2.9	(69)	10.6	(60)	-16.4	(67)	28.2	(67)	8.8	(10)	-5.1	(86)
▲ MSCI ACWI ex USA Gross	10.4	(65)	-3.7	(36)	8.6	(47)	3.0	(64)	9.3	(79)	-13.8	(35)	27.8	(71)	5.0	(27)	-5.3	(87)

Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)

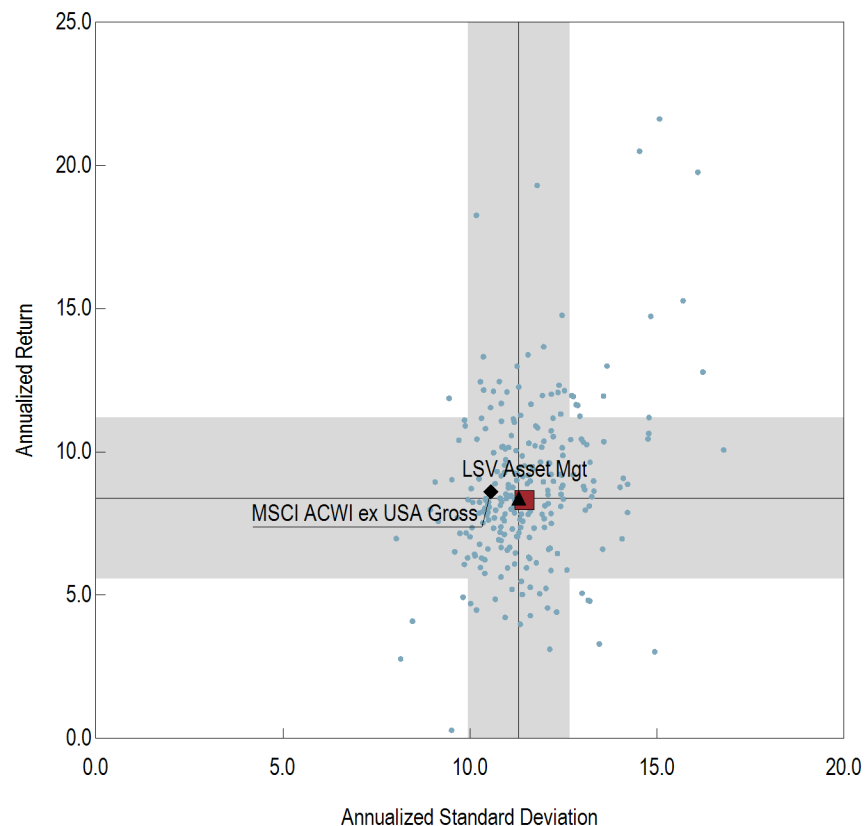


LSV Asset Mgt

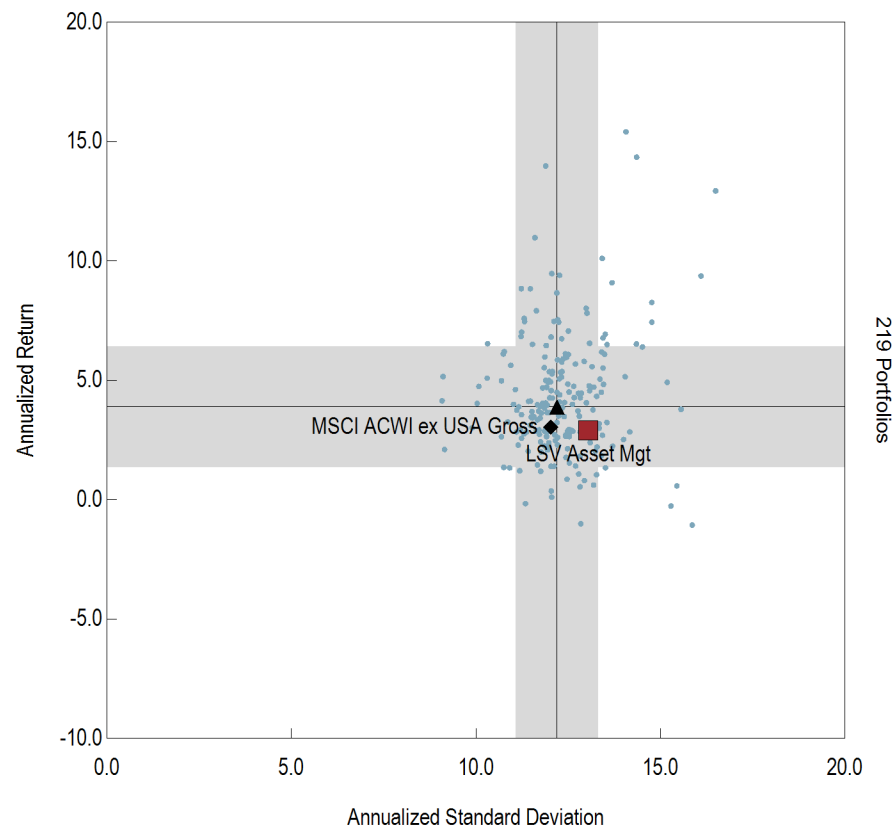
Risk vs. Return 3 & 5 Year (Gross of Fees)

Period Ending: March 31, 2019

3 Years



5 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
LSV Asset Mgt	8.3%	11.5%	0.6
MSCI ACWI ex USA Gross	8.6%	10.6%	0.7
eV ACWI ex-US Equity Unhedged Gross Median	8.4%	11.3%	0.6

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
LSV Asset Mgt	2.9%	13.0%	0.2
MSCI ACWI ex USA Gross	3.0%	12.0%	0.2
eV ACWI ex-US Equity Unhedged Gross Median	3.9%	12.2%	0.3

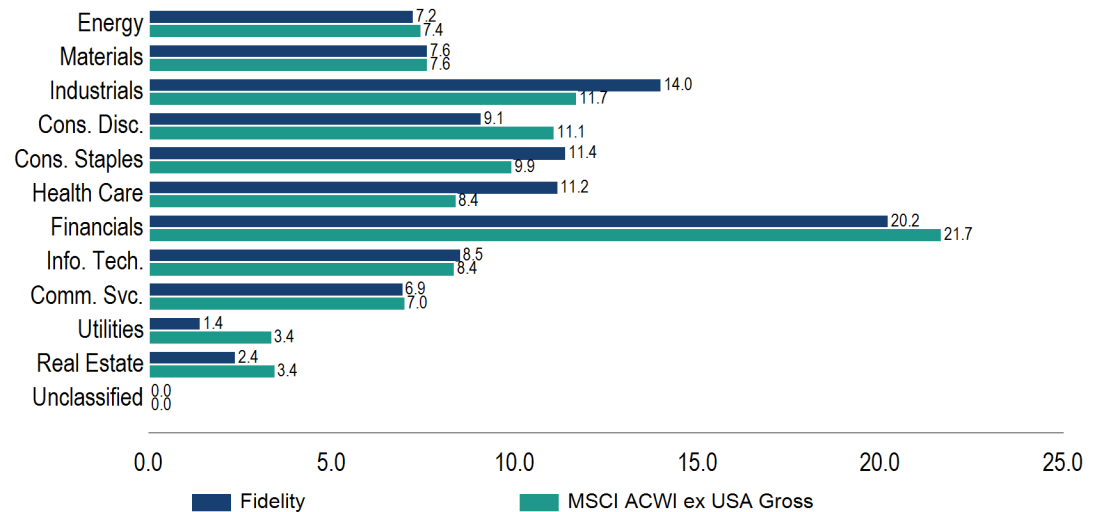
Fidelity Manager Portfolio Overview

Period Ending: March 31, 2019

Characteristics

	Portfolio	MSCI ACWI ex USA Gross
Number of Holdings	225	2,145
Weighted Avg. Market Cap. (\$B)	61.02	64.41
Median Market Cap. (\$B)	12.79	7.67
Price To Earnings	16.36	14.55
Price To Book	2.53	2.24
Price To Sales	1.35	1.18
Return on Equity (%)	17.67	15.45
Yield (%)	2.67	3.21
Beta	1.01	1.00

Sector Allocation (%) vs MSCI ACWI ex USA Gross



Largest Holdings

	End Weight	Return
AIA GROUP	2.22	19.91
TENCENT HOLDINGS	1.87	14.67
NESTLE 'R'	1.86	17.72
SAP	1.67	15.92
ROCHE HOLDING	1.57	15.14
ROYAL DUTCH SHELL A	1.48	8.75
TECHTRONIC INDS.	1.30	26.47
TAIWAN SEMICON.MNFG.	1.28	8.57
SOFTBANK GROUP	1.25	46.10
BP	1.22	16.92

Top Contributors

	Avg Wgt	Return	Contribution
SOFTBANK GROUP	1.06	46.10	0.49
AIA GROUP	1.72	19.91	0.34
NESTLE 'R'	1.79	17.72	0.32
TECHTRONIC INDS.	1.16	26.47	0.31
SAP	1.58	15.92	0.25
ROCHE HOLDING	1.61	15.14	0.24
KEYENCE	1.04	22.97	0.24
BRITISH AMERICAN TOBACCO	0.70	32.80	0.23
FRESENIUS MED.CARE	0.88	25.27	0.22
BP	1.21	16.92	0.21

Bottom Contributors

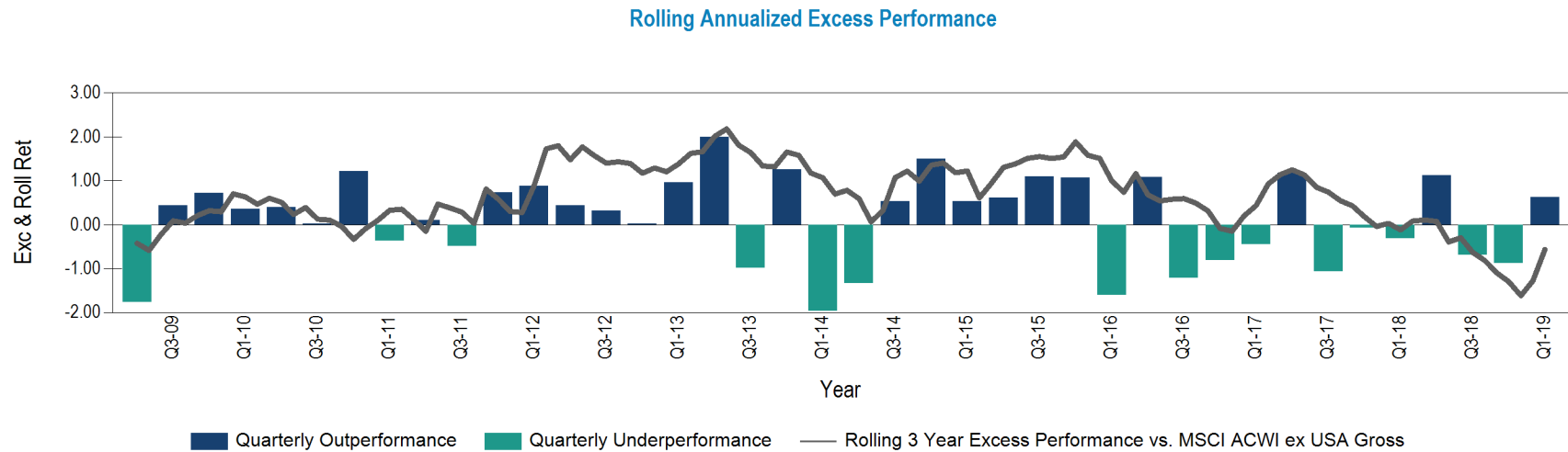
	Avg Wgt	Return	Contribution
SONY	1.27	-13.19	-0.17
ILIAD	0.33	-28.32	-0.09
SUZUKI MOTOR	0.61	-12.15	-0.07
BAYER	0.58	-6.95	-0.04
CHALLENGER	0.37	-10.05	-0.04
UNITED INTERNET	0.17	-16.27	-0.03
NMC HEALTH	0.19	-14.59	-0.03
PUBLICIS GROUPE	0.39	-6.38	-0.03
TAIYO NIPPON SANOS	0.35	-6.29	-0.02
HYUNDAI MARINE & FIRE IN.	0.24	-9.24	-0.02

Unclassified sector allocation includes cash allocations.

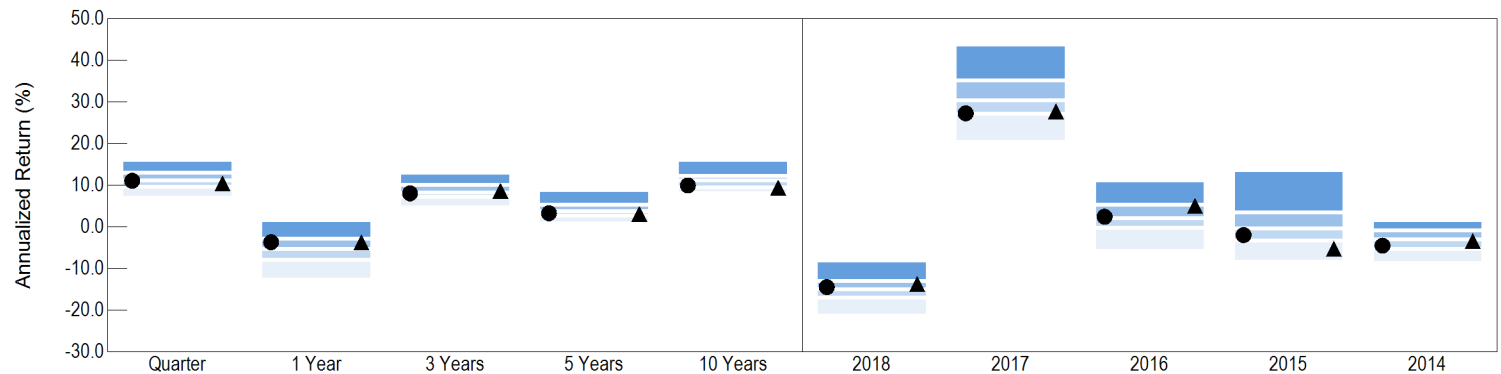
Fidelity

Manager Performance Comparisons (Gross of Fees)

Period Ending: March 31, 2019

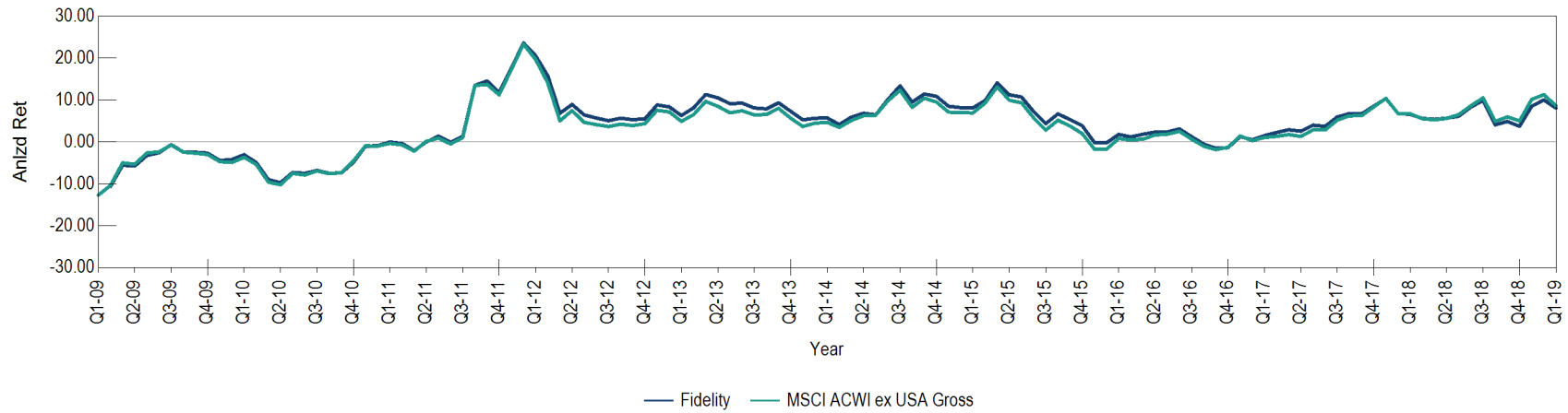


Fidelity vs. eV ACWI ex-US Equity Unhedged Gross Universe

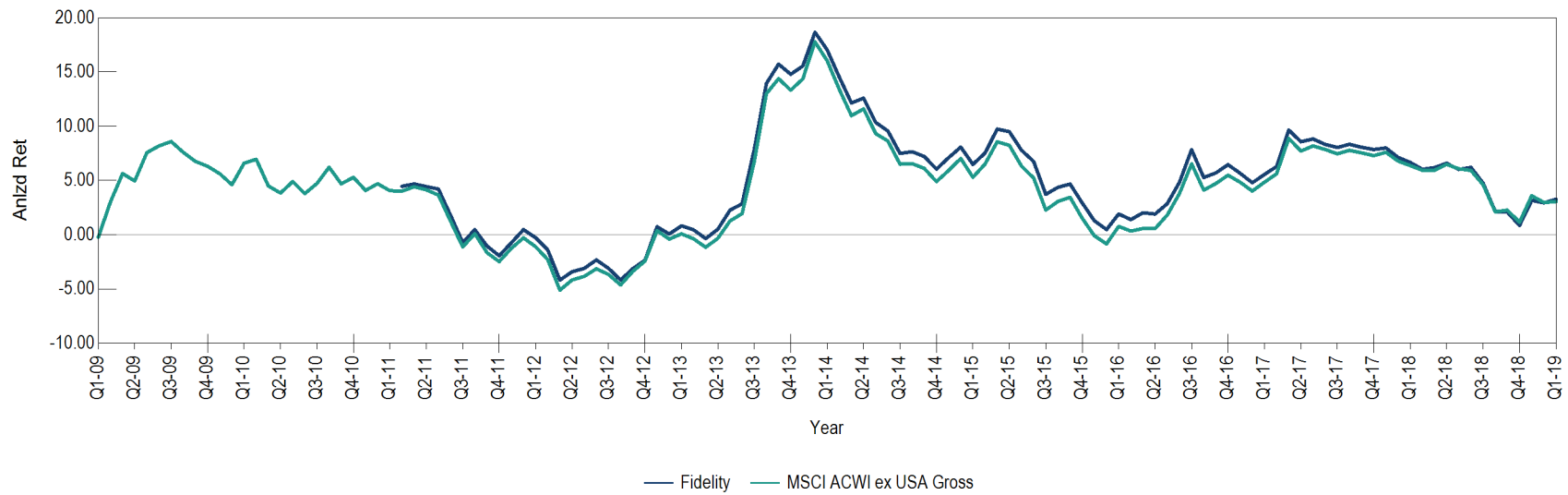


	Return (Rank)																	
5th Percentile	16.0		1.6		12.9		8.8		16.1		-8.1		43.8		11.1		13.5	
25th Percentile	13.1		-2.7		10.2		5.4		12.3		-12.9		35.2		5.3		3.5	
Median	11.2		-5.2		8.4		3.9		11.3		-15.0		30.6		2.1		-0.3	
75th Percentile	9.6		-7.8		7.2		2.7		9.6		-17.0		27.2		-0.2		-3.3	
95th Percentile	7.1		-12.7		4.8		0.8		8.1		-21.3		20.5		-5.8		-8.3	
# of Portfolios	261		261		253		219		146		258		254		238		179	
● Fidelity	11.1	(53)	-3.7	(35)	8.0	(61)	3.3	(61)	9.9	(70)	-14.5	(45)	27.3	(74)	2.4	(46)	-2.0	(66)
▲ MSCI ACWI ex USA Gross	10.4	(65)	-3.7	(36)	8.6	(47)	3.0	(64)	9.3	(79)	-13.8	(35)	27.8	(71)	5.0	(27)	-5.3	(87)

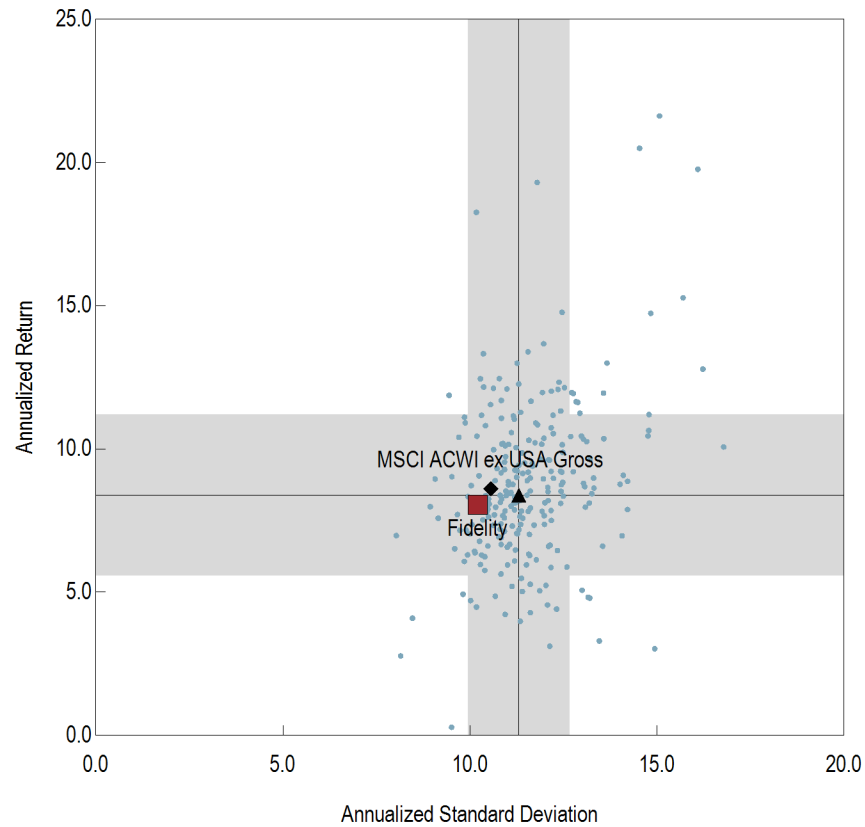
Rolling 3 Year Annualized Return (%)



Rolling 5 Year Annualized Return (%)



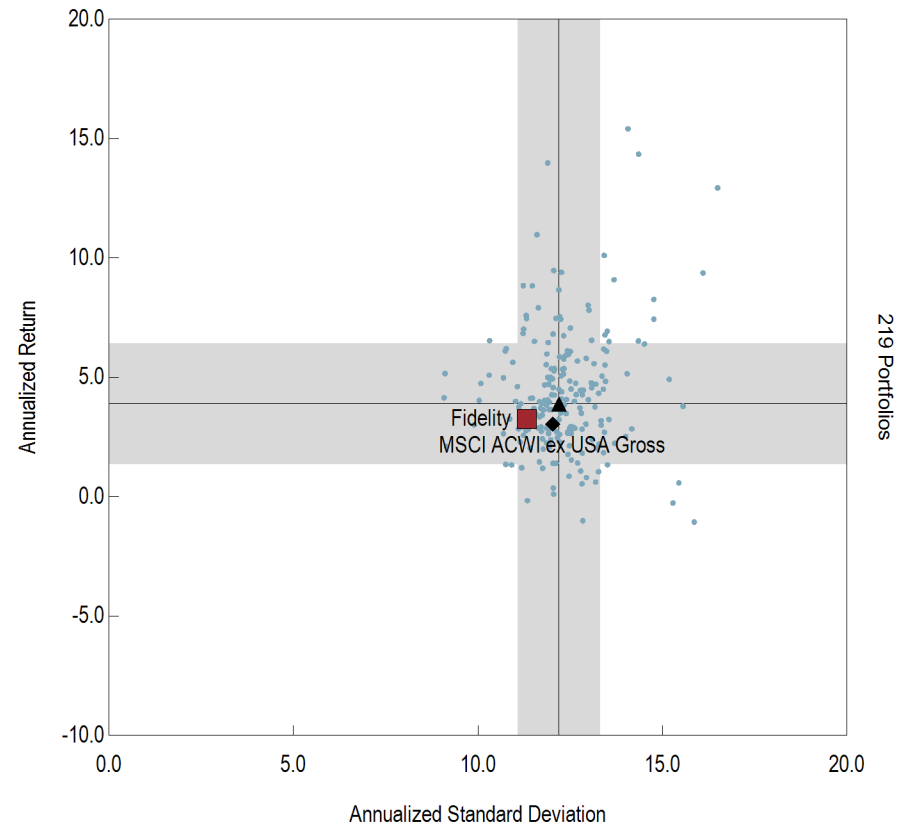
3 Years



3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Fidelity	8.0%	10.2%	0.7
MSCI ACWI ex USA Gross	8.6%	10.6%	0.7
eV ACWI ex-US Equity Unhedged Gross Median	8.4%	11.3%	0.6

5 Years



5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Fidelity	3.3%	11.3%	0.2
MSCI ACWI ex USA Gross	3.0%	12.0%	0.2
eV ACWI ex-US Equity Unhedged Gross Median	3.9%	12.2%	0.3

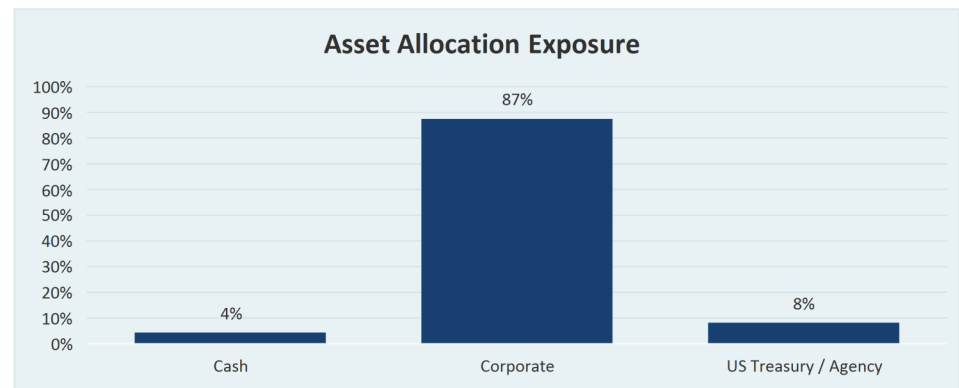
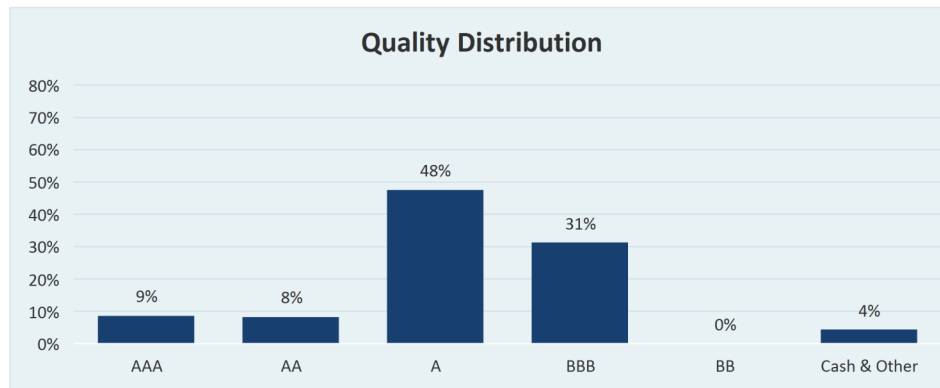
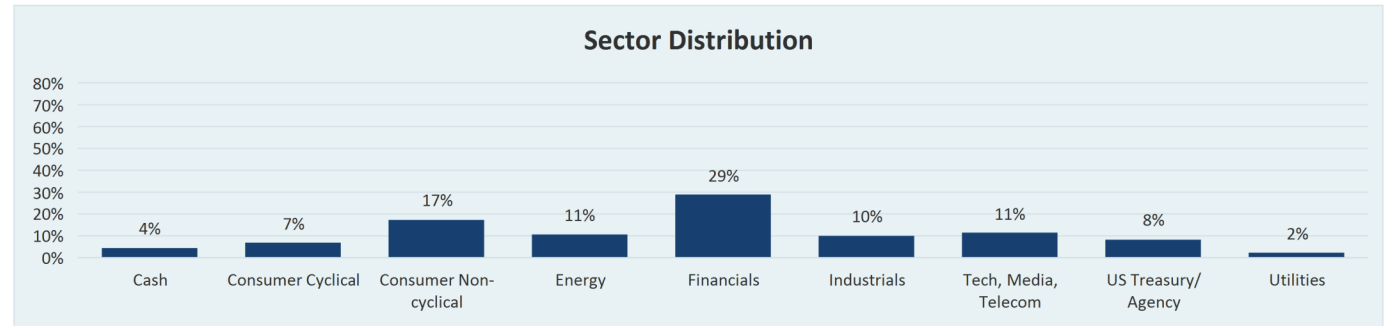
Domestic Fixed Income Managers

Insight

Manager Portfolio Overview

Period Ending: March 31, 2019

Summary	Portfolio
Average Quality	A
Effective duration (years)	3.11
Average Coupon	3.50%
Yield to Worst	3.08%

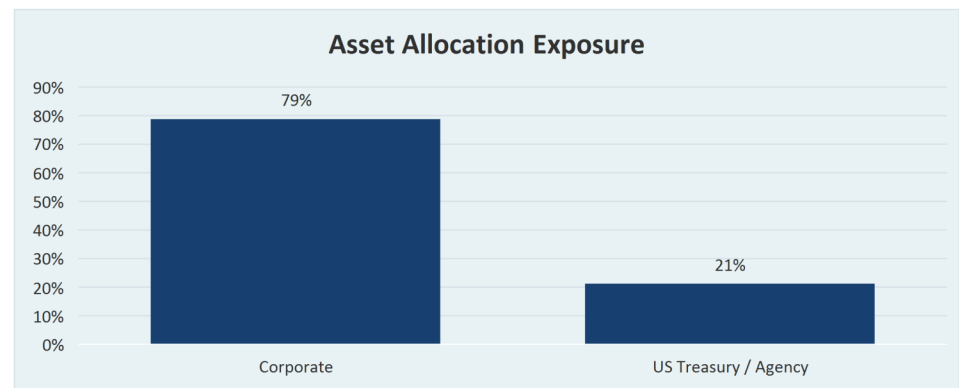
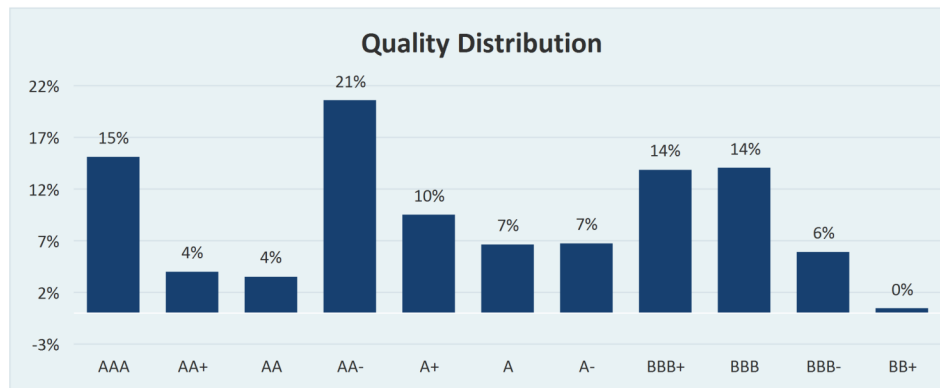
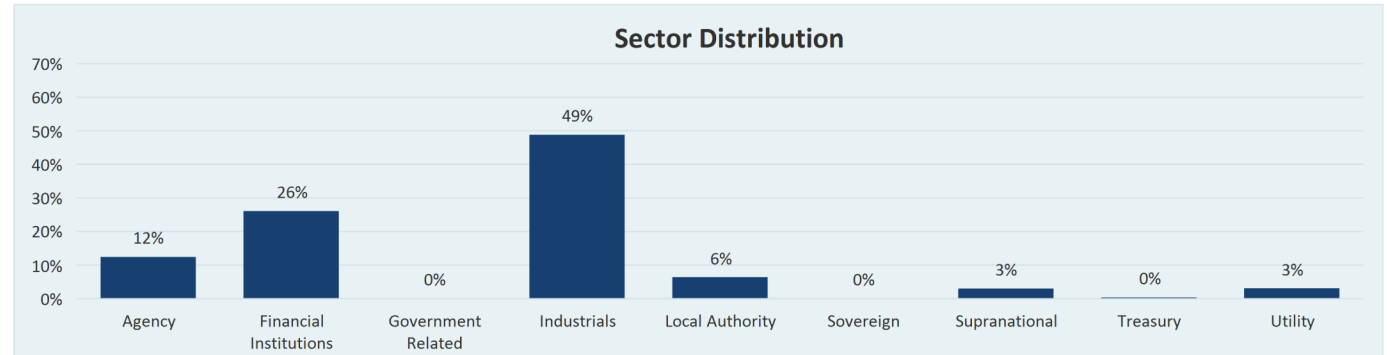


DFA

Manager Portfolio Overview

Period Ending: March 31, 2019

Summary	Portfolio
Average Quality	A
Effective duration (years)	2.27
Average Coupon	2.84%
Yield to Worst	3.34%



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

<u>Manager</u>	<u>Fund Incepted</u>	<u>Data Source</u>	<u>Manager</u>	<u>Fund Incepted</u>	<u>Data Source</u>
Northern Trust Russell 3000	12/31/2018	Northern Trust	Prime Property Fund	9/30/2015	Prime Property
BlackRock Russell 1000 Growth	6/30/2010	BlackRock	American Strategic Value Realty	12/31/2014	American Realty
BlackRock Russell 1000 Value	7/31/2009	BlackRock	BlackRock US Real Estate	9/30/2012	BlackRock
Dodge & Cox - Equity	12/31/1994	Northern Trust	Greenfield Gap	7/31/2014	Greenfield
Capital Prospects	12/31/2008	Northern Trust	Medley Capital	5/31/2013	Medley Capital
LSV Asset Mgt	8/31/2004	Northern Trust	Raven Capital	5/31/2013	Raven Capital
Fidelity	4/30/2006	Northern Trust	Raven Opportunity III	7/31/2015	Raven Capital
Insight	6/29/2017	Northern Trust	White Oak Pinnacle	8/31/2013	White Oak
DFA	7/31/2017	Northern Trust	PanAgora Risk Parity Multi Asset	11/30/2017	PanAgora
Northern Trust Intermediate Gov't Bond	7/31/2017	Northern Trust	AQR Global Risk Premium - EL	3/5/2018	AQR
Northern Trust Long Term Gov't Bond	7/31/2017	Northern Trust	MS Infrastructure	5/31/2015	Morgan Stanley
			PGIM Real Estate US Debt Fund	9/28/2018	Prudential

Policy & Custom Index Composition

Policy Index (9/01/2018): 10% Russell 1000, 3% Russell 2000, 6% Russell 3000 + 3%, 27% MSCI ACWI ex-USA, 20% BBgBarc US Gov't/Credit 1-3 Yr, 3% BBgBarc US Treasury 7-10 Yr, 5% NCREIF Property, 5% NCREIF Property +2%, 1% CPI +5%, 6% S&P/LSTA Leveraged Loan Index + 2%, 13% 60% MSCI ACWI / 40% BBgBarc Global Aggregate, 1% Citi 1 Month T-Bills.

US Equity Blended: 50% Russell 1000, 20% Russell 2000, 30% Russell 3000 + 3%.

Prior Policy Index: 18.5% Russell 1000, 5.5% Russell 2000, 24% MSCI ACWI ex-USA, 19% BBgBarc US Gov't/Credit 1-3 Yr, 3% BBgBarc US Treasury 7-10 Yr, 7.7% NCREIF Property, 1.7% NCREIF Property +2%, 0.6% CPI +5%, 5% BBgBarc US High Yield +2%, 14% 60% MSCI ACWI / 40% BBgBarc Global Aggregate, 1% Citi 1 Month T-Bills.

Other Disclosures

Fiscal Year End: 6/30

Cash Account includes cash held at Northern Trust for all closed end funds and cash held by BlackRock.

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.

All data prior to 6/30/2015 provided by the previous consultant.

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.

Disclaimer

This report contains confidential and proprietary information and is subject to the terms and conditions of the Consulting Agreement. It is being provided for use solely by the customer. The report may not be sold or otherwise provided, in whole or in part, to any other person or entity without written permission from Verus Advisory, Inc., (hereinafter Verus) or as required by law or any regulatory authority. The information presented does not constitute a recommendation by Verus and cannot be used for advertising or sales promotion purposes. This does not constitute an offer or a solicitation of an offer to buy or sell securities, commodities or any other financial instruments or products.

The information presented has been prepared using data from third party sources that Verus believes to be reliable. While Verus exercised reasonable professional care in preparing the report, it cannot guarantee the accuracy of the information provided by third party sources. Therefore, Verus makes no representations or warranties as to the accuracy of the information presented. Verus takes no responsibility or liability (including damages) for any error, omission, or inaccuracy in the data supplied by any third party. Nothing contained herein is, or should be relied on as a promise, representation, or guarantee as to future performance or a particular outcome. Even with portfolio diversification, asset allocation, and a long-term approach, investing involves risk of loss that the investor should be prepared to bear.

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



PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS



MAY 2019

Annual Asset Allocation Analysis

Stanislaus County Employees' Retirement Association

Table of Contents



VERUSINVESTMENTS.COM

SEATTLE 206-622-3700

LOS ANGELES 310-297-1777

SAN FRANCISCO 415-362-3484

Asset Allocation Analysis 3

Appendix 15

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™.

Asset Allocation Analysis

Executive summary

- Per StanCERA’s IPS approved in January 2017, “the Board will review capital market expectations annually. The result of this review will be used to update the Investment Resolutions as needed.”
 - The Board’s last review took place in July 2018 resulting in the adoption of the “Mix A” as the long-term target.
 - Because of the time needed to fully commit to private markets, a Phase 1 interim-target reflects proxy strategies for those private market targets.
- The objective of the annual review process is not to make large changes to the asset allocation, but rather to:
 1. Adjust the size of the Liquidity sub-portfolio; and
 2. Make adjustment to the Growth & Risk Diversifying sub-portfolios based on updated Capital Market Assumptions and/or changes to the Liquidity sub-portfolio.
- Based on this year’s review, the following options are presented:
 - Mix A: reduces short-term fixed income, increases infrastructure, and introduces international small cap equity.
 - Mix B: reduces both short-term fixed income and international equity and increases both domestic equity and infrastructure.
 - Risk Parity has been reclassified from the Risk Diversifying sub-portfolio to the Growth sub-portfolio and the DFA allocation been reclassified from the Liquidity sub-portfolio to the Risk-Diversifying sub-portfolio.
 - The target allocation for the Liquidity sub-portfolio is now based on 9 years of net benefit payments instead of 6 years.
- Because the risk and return targets of the long-term policy and Mix B are similar, either mix is acceptable.

Sizing the Liquidity sub-portfolio

The size of the Liquidity sub-portfolio is estimated to be 11% of total plan assets based on the discounted projected benefit payments (net of contributions) as a percent of the Total Fund:

A	Total Fund Market Value (3/31/2019)	\$2,137,895,271
B	Present Value of Net Cash Flows Next 9 Years	\$226,760,128
C	Size of the Liquidity sub-portfolio = (B)/(A)	10.6%

Year	Present Value of Annual Net Cash Flows
1	\$27,852,409
2	\$22,319,017
3	\$23,426,874
4	\$25,500,783
5	\$25,936,835
6	\$25,977,459
7	\$25,612,255
8	\$25,278,835
9	\$24,855,661
Total	\$226,760,128

Asset allocation

	Current (3/31/2019)	Phase 1 Targets	Long-Term Targets	Alt. Mix A	Alt. Mix B	Return (10-Yr)	Standard Deviation	Sharpe Ratio
Growth	75.8	77	76	77	77			
Domestic Equity	19.7	24	19	19	23			
US Large	16.2	18.5	10	10	14	5.8	15.6	0.31
US Small	3.5	5.5	3	3	3	5.4	21.3	0.25
Private Equity	-	-	6	6	6	8.8	25.6	0.37
International Equity	25.6	24	27	27	23			
International Developed	19.2	18	21	14	18	7.7	17.8	0.39
International Developed Small	-	-	-	5	-	6.5	22.4	0.30
Emerging Markets	6.4	6	6	8	5	8.6	26.1	0.36
Private Credit	4.0	5	6	6	6	7.7	10.2	0.60
Core Real Estate	6.7	7.7	5	5	5	6.1	12.9	0.37
Value Add Real Estate	2.0	1.7	5	5	5	8.1	19.4	0.40
REITs	1.7	-	-	-	-	6.1	19.3	0.30
Infrastructure	2.3	0.6	1	2	2	7.9	18.2	0.40
Risk Parity	13.8	14	13	13	13	7.1	9.5	0.55
Liquidity	11.4	11	11	12	12			
Short-Term Gov't/Credit (Insight)	10.2	10	10	11	11	2.8	3.6	0.22
Cash	1.2	1	1	1	1	2.1	1.2	-
Risk Diversifying	12.8	12	13	11	11			
US Treasury	2.8	3	3	3	3	2.7	6.7	0.12
Short-Term Gov't/Credit (DFA)	10.0	9	10	8	8	2.8	3.6	0.22
Total	100	100	100	100	100			

Based on Verus' 2019 Capital Market Assumptions

Asset allocation analysis

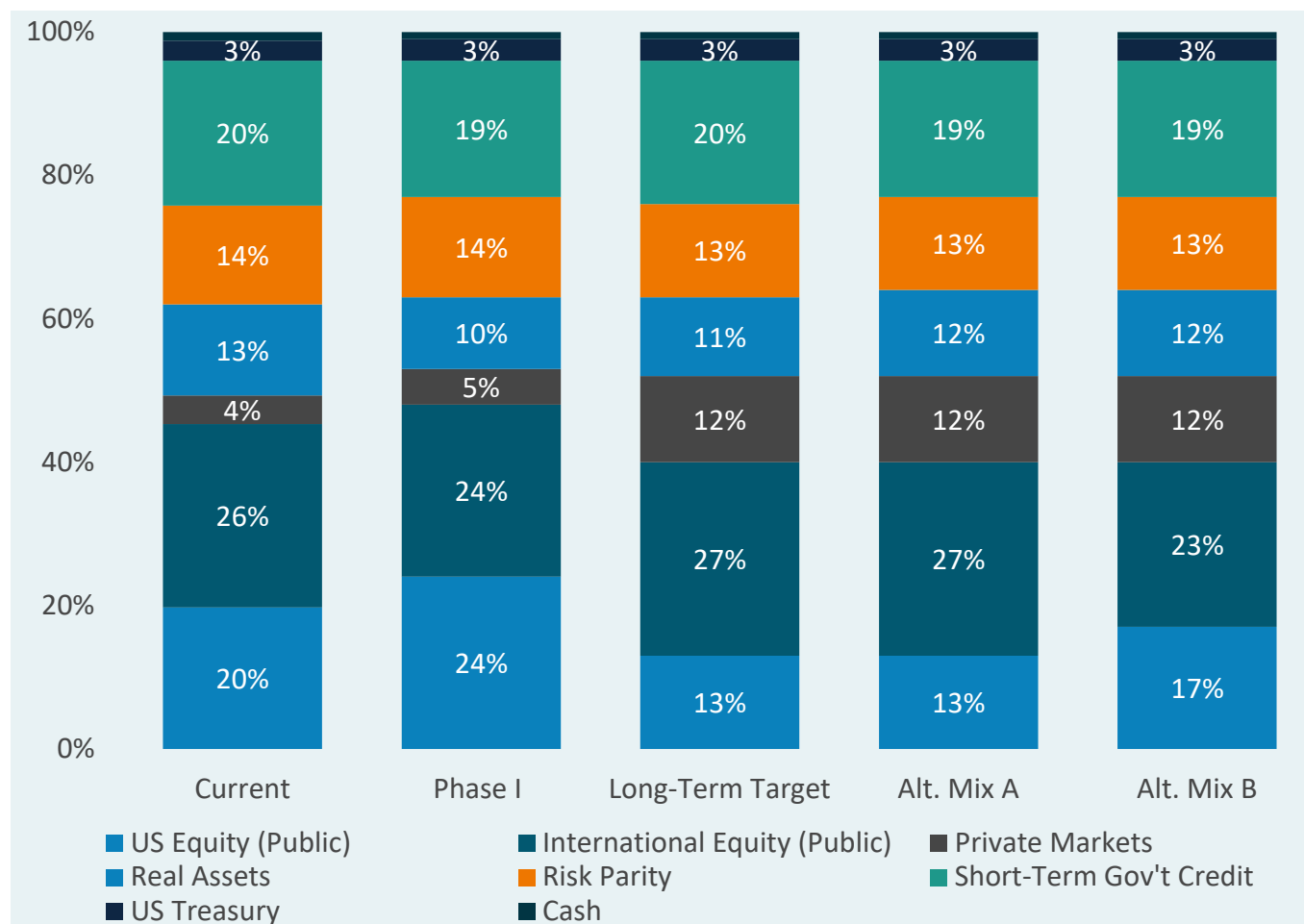
	Current (3/31/2019)	Phase 1 Targets	Long-Term Targets	Alt. Mix A	Alt. Mix B
Mean Variance Analysis					
Forecast 10 Year Return	6.5	6.4	6.8	6.9	6.8
Forecast 10 Year <u>Real</u> Return	4.4	4.3	4.7	4.8	4.7
Standard Deviation	10.3	10.2	10.3	10.7	10.2
Sharpe Ratio	0.46	0.46	0.50	0.48	0.49
Exp. Return less 1 Stnd. Dev.	-3.8	-3.8	-3.4	-3.9	-3.5
Exp. Return less 2 Stnd. Dev.	-14.1	-14.1	-13.7	-14.6	-13.7

As of March 31, 2019

Based on Verus' 2019 Capital Market Assumptions

Asset allocation

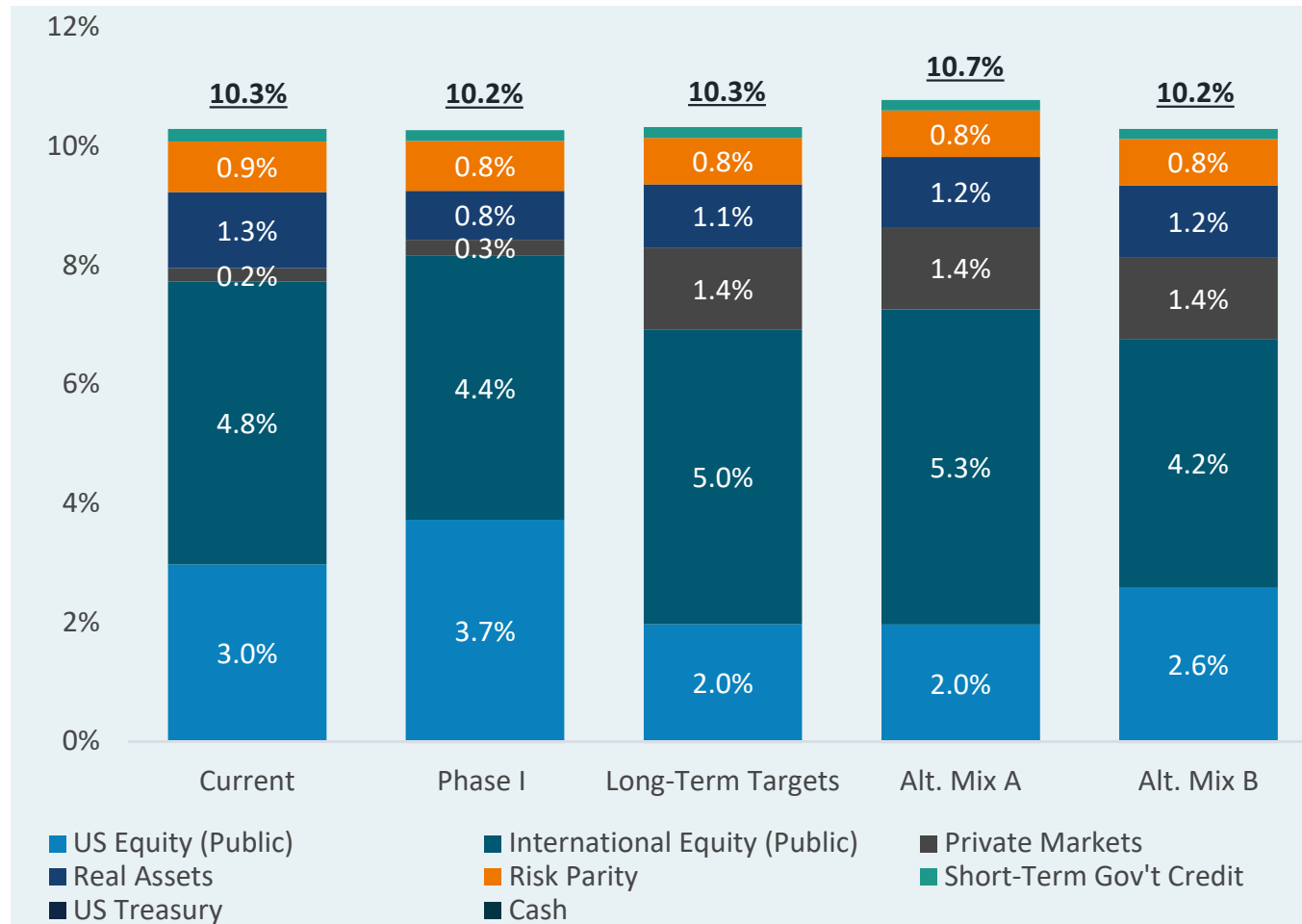
ASSET ALLOCATION BY ASSET CLASS



As of March 31, 2019

Risk contribution

RISK CONTRIBUTION BY ASSET CLASS

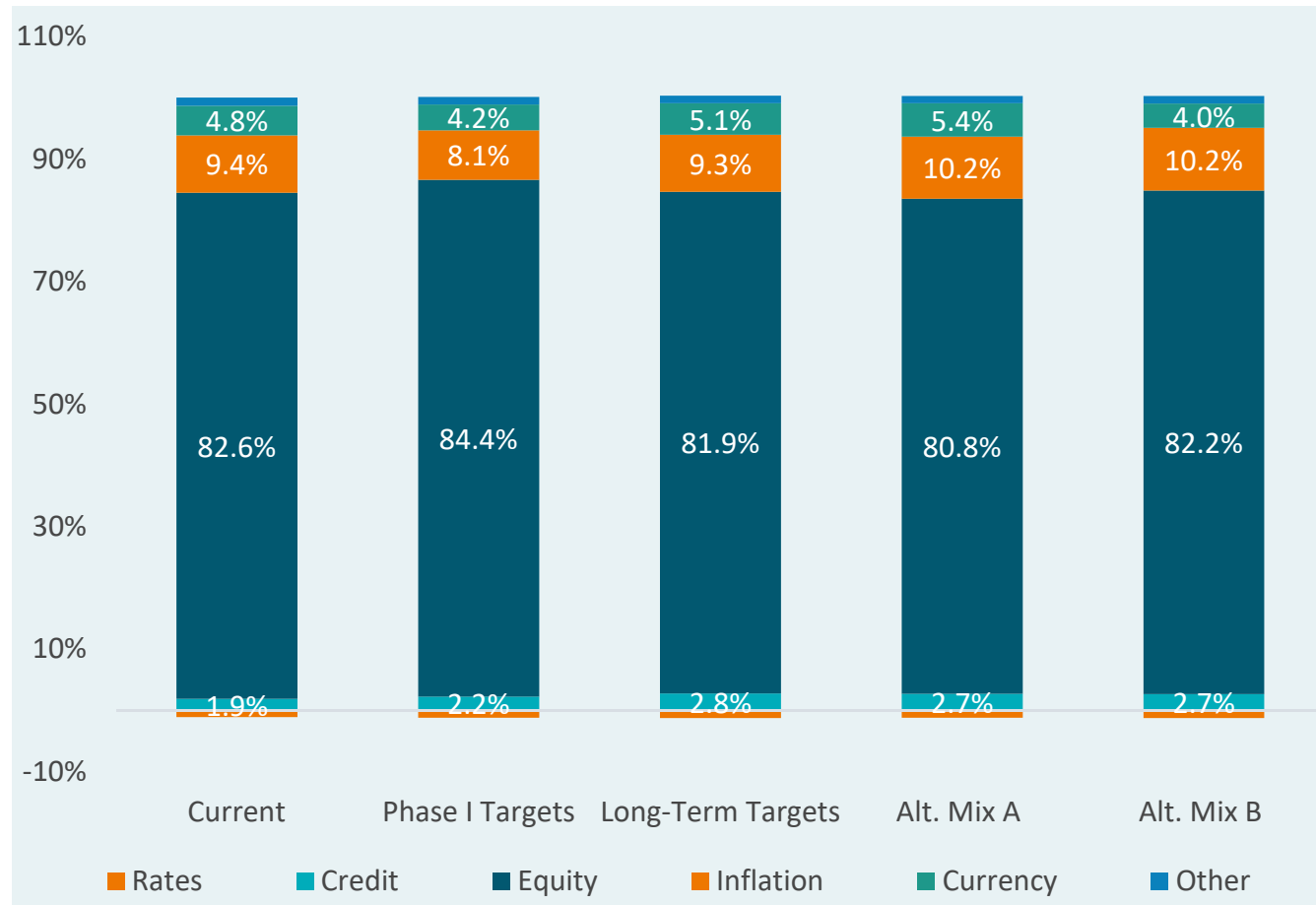


As of March 31, 2019

Based on Verus' 2019 Capital Market Assumptions

Risk contribution

RISK CONTRIBUTION BY RISK FACTOR

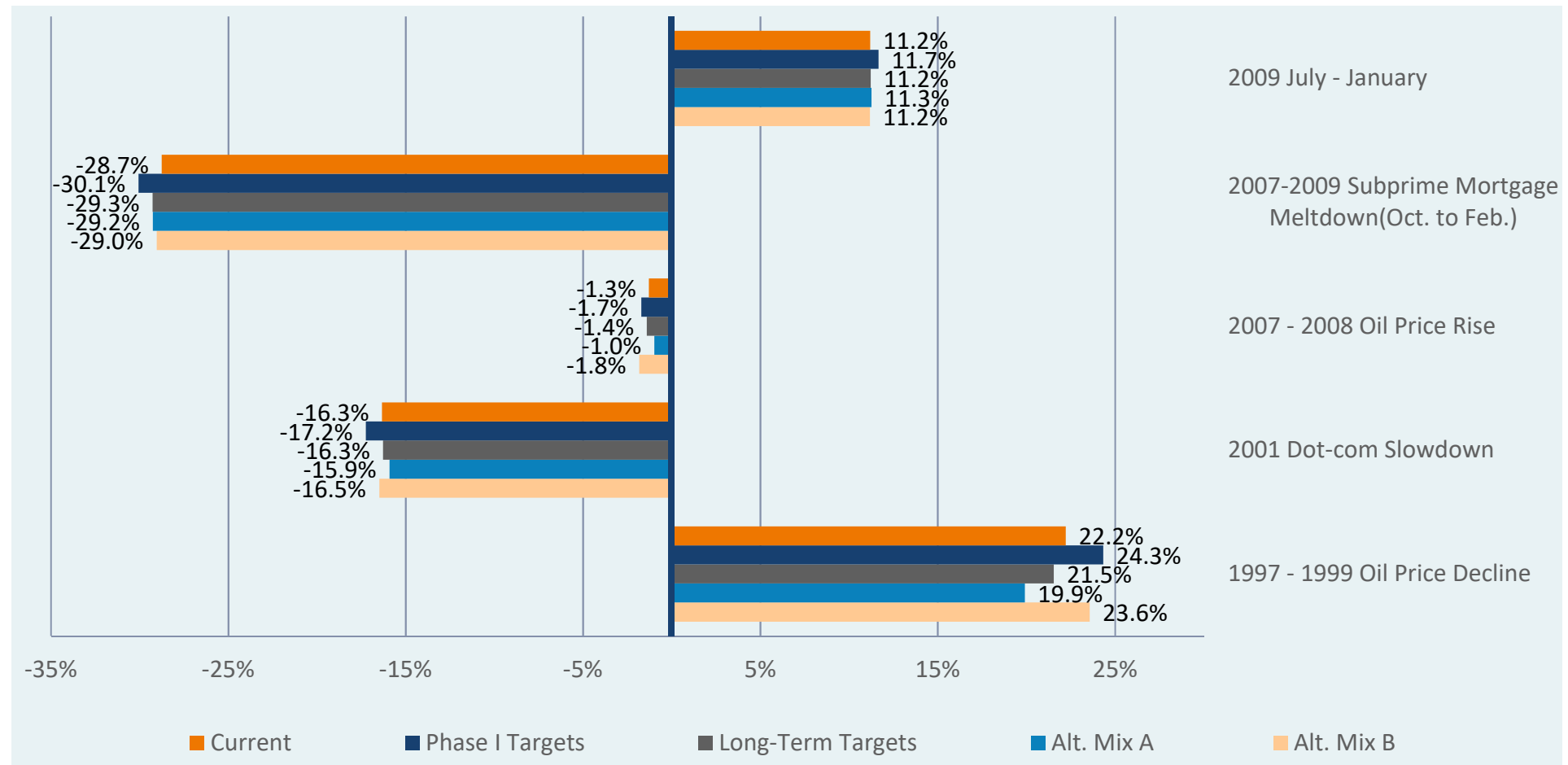


As of March 31, 2019

Based on MSCI BarraOne's 2019 Capital Market Assumptions

Historical scenario analysis

TAIL RISK – SCENARIO ANALYSIS

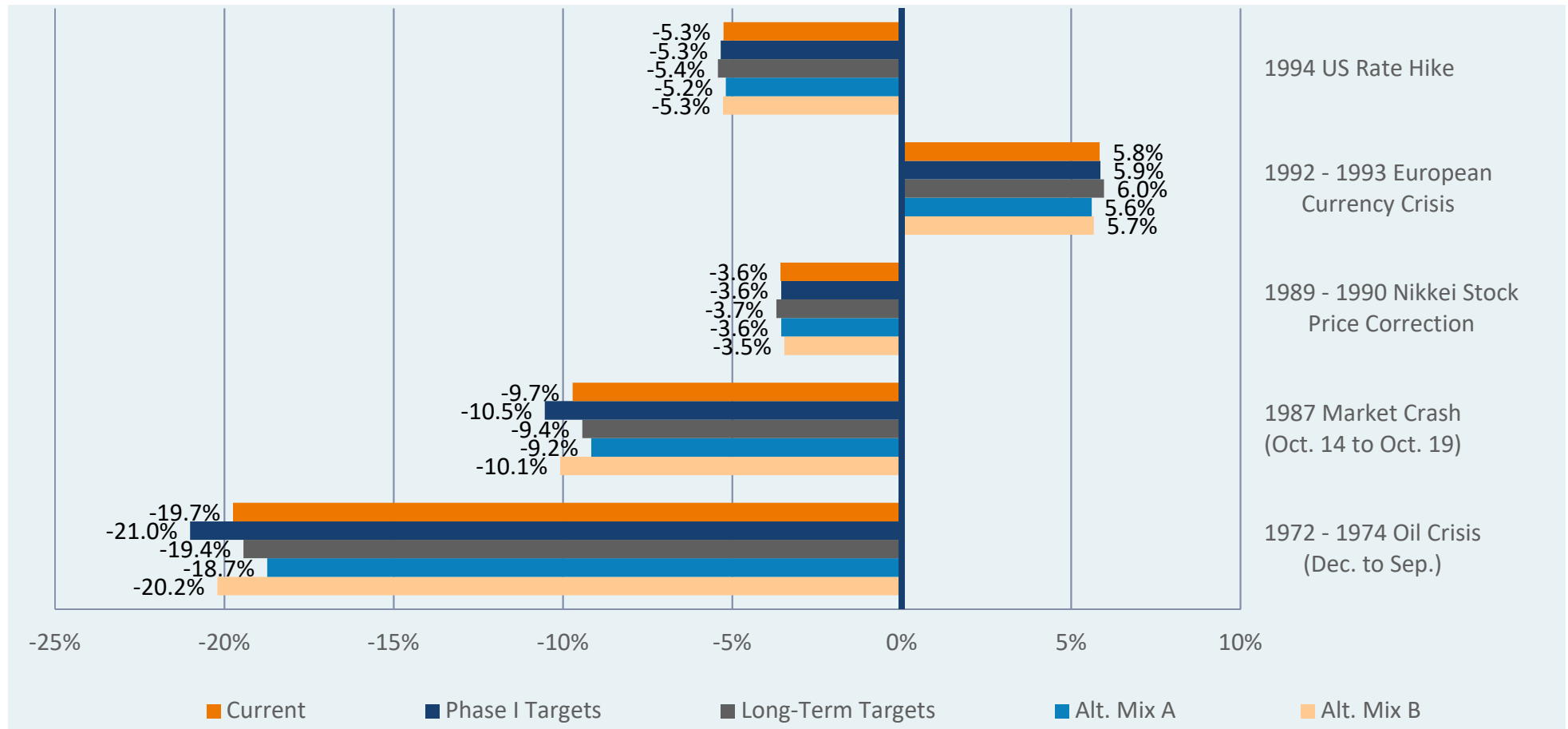


As of March 31, 2019

Scenario analysis based on risk factors in current policy index and computed as hypothetical scenarios using MSCI Barra One

Historical scenario analysis

TAIL RISK – SCENARIO ANALYSIS

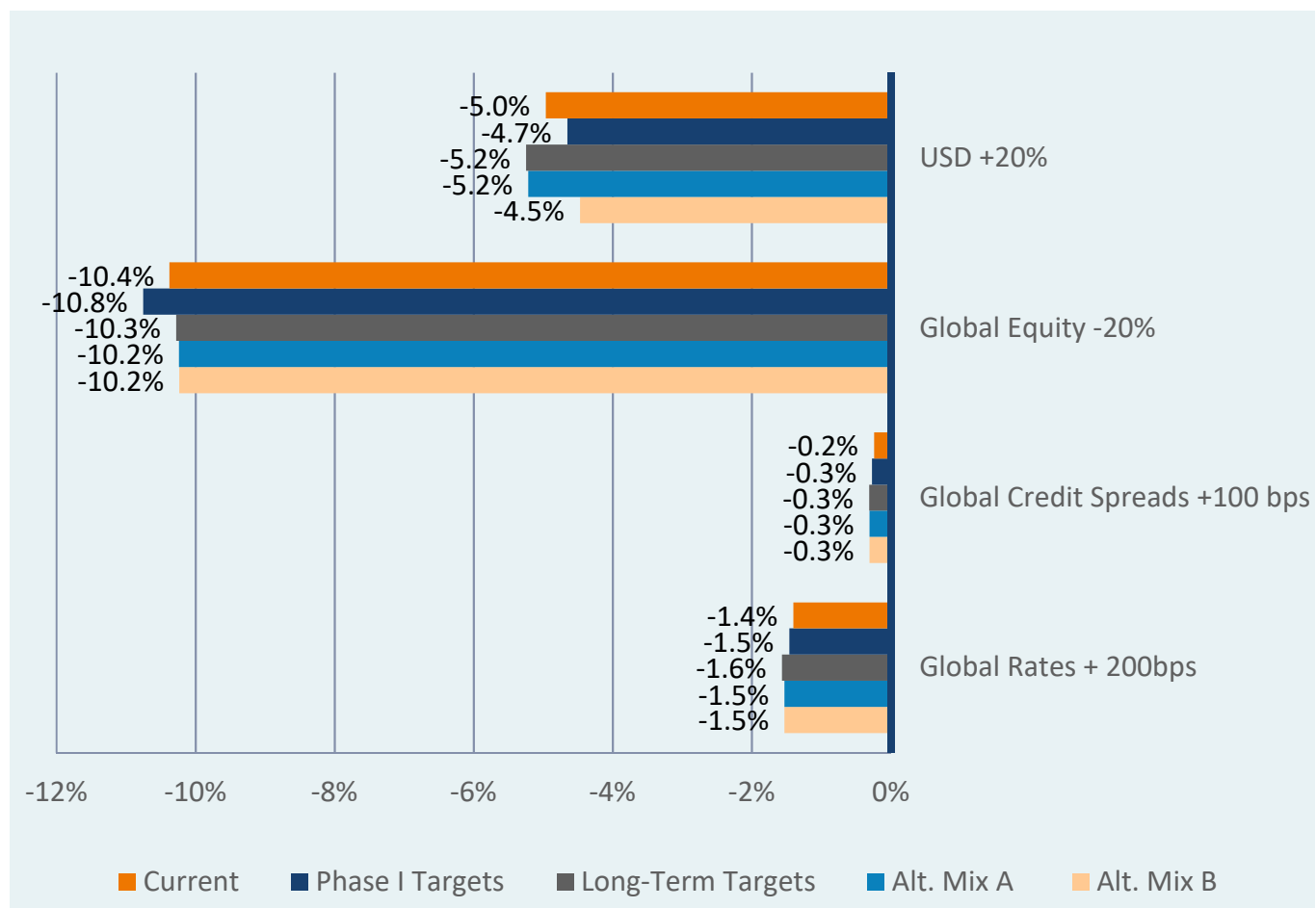


As of March 31, 2019

Scenario analysis based on risk factors in current policy index and computed as hypothetical scenarios using MSCI Barra One

Stress test

TAIL RISK – STRESS TEST



As of March 31, 2019

Based on MSCI BarraOne's 2019 Capital Market Assumptions

Next steps

- Maintain the current long-term policy or adopt Mix B
 - Because the risk and return targets of the long-term policy and Mix B are similar either, mix is acceptable.
- Update the Investment Policy Statement
 - The asset allocation will be revised via an updated investment directive, if necessary.
 - Implementation will take place in phases following the selection of any necessary mandates and approval of a rebalancing analysis at that time.
 - Update the established target allocation for the Liquidity sub-portfolio from 6 years to 9 years.

Appendix

Plan profile

Assumptions:

- Inflation = 3.0%
- Total return = 7.0%
- Real return = 4.0%

As of June 30, 2018:

- Average monthly Plan cash flows based on the previous 24 months:
 - Total Contributions\$8.01mm
 - Employer\$5.83mm
 - Employee\$2.18mm
 - Total Benefit Payments & Expenses\$(10.02)mm
 - Benefit Payments\$(9.79)mm
 - Operating Expenses\$(0.23)mm
 - Net Operating Cash Inflow (Outflow)\$(2.01)mm
 - Total Interest & Dividends\$3.57mm
 - Net Cash Inflow\$1.56mm
- Total participants = 9,693 (4,452 or 45.9% active, 1,445 or 14.9% inactive, 3,796 or 39.2% retired)
- Actuarial liability = \$2,749.1 mm

- Market value of assets as of March 31, 2019 = \$2,137.9 mm
- Funded ratio = 77.8% (based on March 31, 2019 market value of assets)

Source: StanCERA Comprehensive Annual Financial Report June 30, 2018; Cheiron Actuarial Valuation June 30, 2018

10-year return & risk assumptions

Asset Class	Index Proxy	Ten Year Return Forecast		Standard Deviation Forecast	Sharpe Ratio Forecast (g)	Sharpe Ratio Forecast (a)	10-Year Historical Sharpe Ratio (g)	10-Year Historical Sharpe Ratio (a)
		Geometric	Arithmetic					
Equities								
U.S. Large	S&P 500	5.8%	6.9%	15.6%	0.24	0.31	0.94	0.95
U.S. Small	Russell 2000	5.4%	7.5%	21.3%	0.15	0.25	0.63	0.69
International Developed	MSCI EAFE	7.7%	9.1%	17.8%	0.31	0.39	0.37	0.43
International Small	MSCI EAFE Small Cap	6.5%	8.8%	22.4%	0.20	0.30	0.61	0.66
Emerging Markets	MSCI EM	8.6%	11.6%	26.1%	0.25	0.36	0.40	0.48
Global Equity	MSCI ACWI	6.8%	8.2%	17.1%	0.27	0.36	0.62	0.67
Private Equity*	Cambridge Private Equity	8.8%	11.7%	25.6%	0.26	0.37	-	-
Fixed Income								
Cash	30 Day T-Bills	2.1%	2.1%	1.2%	-	-	-	-
U.S. TIPS	BBgBarc U.S. TIPS 5-10	3.0%	3.1%	5.5%	0.16	0.18	0.67	0.68
U.S. Treasury	BBgBarc Treasury 7-10 Year	2.7%	2.9%	6.7%	0.09	0.12	0.46	0.48
Global Sovereign ex U.S.	BBgBarc Global Treasury ex U.S.	0.8%	1.3%	9.8%	-0.13	-0.08	0.14	0.18
Core Fixed Income	BBgBarc U.S. Aggregate Bond	3.3%	3.5%	6.4%	0.19	0.22	1.09	1.08
Core Plus Fixed Income	BBgBarc U.S. Corporate IG	4.1%	4.4%	8.4%	0.24	0.27	1.23	1.22
Short-Term Gov't/Credit	BBgBarc U.S. Gov't/Credit 1-3 Year	2.8%	2.9%	3.6%	0.19	0.22	1.38	1.37
Short-Term Credit	BBgBarc Credit 1-3 Year	3.2%	3.2%	3.7%	0.30	0.30	1.66	1.64
Long-Term Credit	BBgBarc Long U.S. Corporate	4.3%	4.7%	9.4%	0.23	0.28	0.88	0.89
High Yield Corp. Credit	BBgBarc U.S. Corporate High Yield	5.7%	6.3%	11.5%	0.31	0.37	1.39	1.36
Bank Loans	S&P/LSTA Leveraged Loan	5.9%	6.4%	10.2%	0.37	0.42	1.50	1.47
Global Credit	BBgBarc Global Credit	2.1%	2.4%	7.5%	0.00	0.04	0.88	0.89
Emerging Markets Debt (Hard)	JPM EMBI Global Diversified	6.7%	7.4%	12.6%	0.37	0.42	1.19	1.18
Emerging Markets Debt (Local)	JPM GBI-EM Global Diversified	6.9%	7.6%	12.1%	0.40	0.45	0.26	0.31
Private Credit	Bank Loans + 175bps	7.7%	8.2%	10.2%	0.55	0.60	-	-
Other								
Commodities	Bloomberg Commodity	4.2%	5.3%	15.7%	0.13	0.20	-0.29	-0.22
Hedge Funds*	HFRI Fund Weighted Composite	4.4%	4.7%	7.8%	0.29	0.33	0.76	0.76
Core Real Estate	NCREIF Property	6.1%	6.9%	12.9%	0.31	0.37	1.28	1.26
Value-Add Real Estate	NCREIF Property + 200bps	8.1%	9.8%	19.4%	0.31	0.40	-	-
Opportunistic Real Estate	NCREIF Property + 400bps	10.1%	13.0%	25.9%	0.31	0.42	-	-
REITs	Wilshire REIT	6.1%	7.8%	19.3%	0.21	0.30	0.55	0.63
Global Infrastructure	S&P Global Infrastructure	7.9%	9.3%	18.2%	0.32	0.40	0.52	0.57
Risk Parity	Risk Parity	7.1%	7.6%	10.0%	0.50	0.55	-	-
Currency Beta	Russell Conscious Currency	2.1%	2.2%	4.1%	0.02	0.02	0.25	0.26
Inflation		2.0%	-	-	-	-	-	-

Investors wishing to produce expected geometric return forecasts for their portfolios should use the arithmetic return forecasts provided here as inputs into that calculation, rather than the single-asset-class geometric return forecasts. This is the industry standard approach, but requires a complex explanation only a heavy quant could love, so we have chosen not to provide further details in this document – we will happily provide those details to any readers of this who are interested.

*Return expectations differ depending on method of implementation

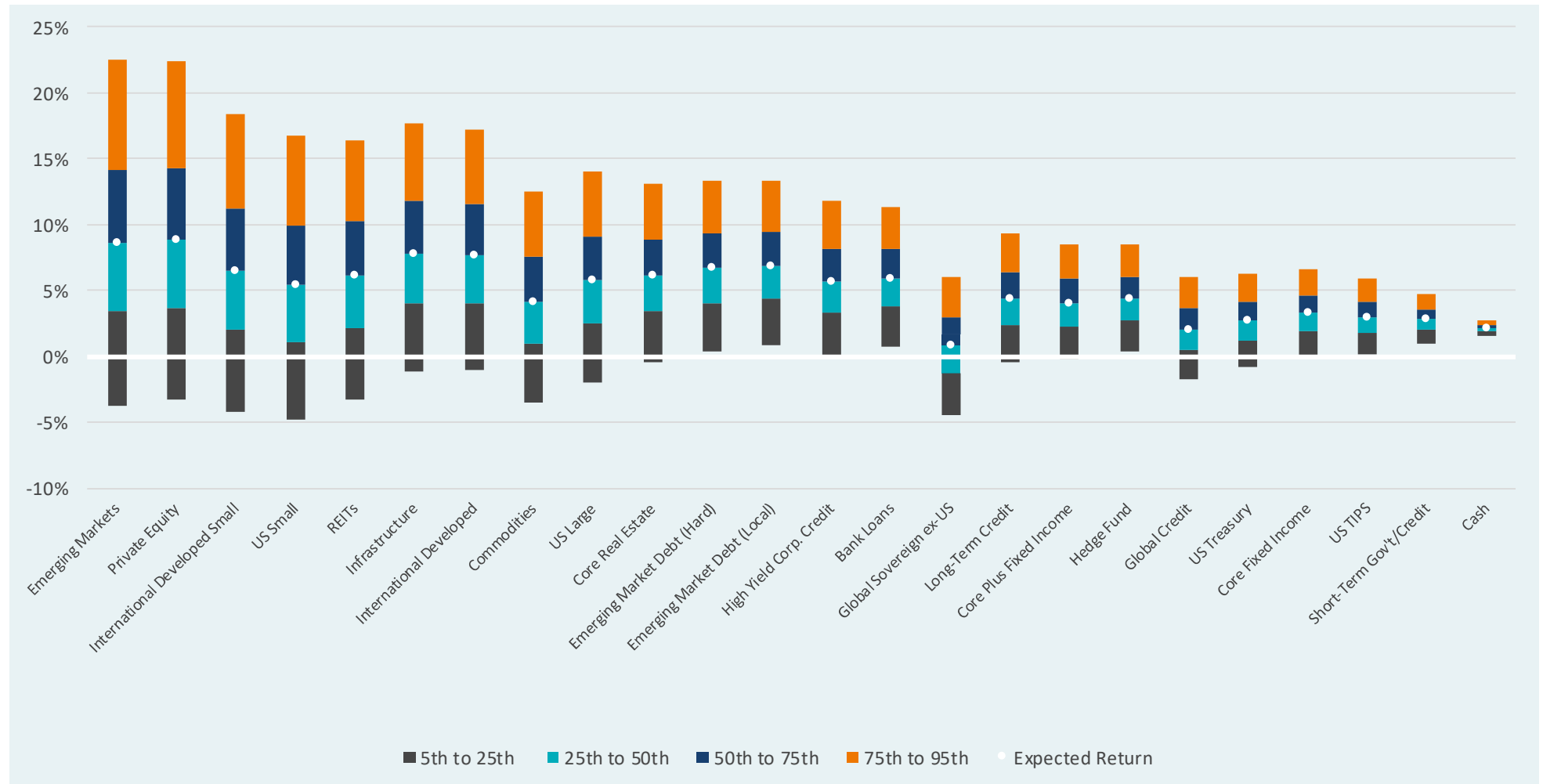
Correlation assumptions

	Cash	US Large	US Small	Intl Large	Intl Large Hdg	Intl Small	Intl Small Hdg	EM	Global Equity	PE	US TIPS	US Treasury	Global Sovereign ex US	Global Sovereign ex US Hdg	US Core	US Core Plus	ST Govt/Credit	Short-Term Credit	Long-Term Credit	US HY	Bank Loans	Global Credit	Global Credit Hdg	EMD USD	EMD Local	Commodities	Hedge Funds	Real Estate	REITs	Global Infra	Risk Parity	Currency Beta	Inflation
Cash	1.0																																
US Large	-0.1	1.0																															
US Small	-0.1	0.9	1.0																														
Intl Large	-0.1	0.9	0.7	1.0																													
Intl Large Hdg	-0.1	0.8	0.8	0.9	1.0																												
Intl Small	-0.1	0.8	0.7	1.0	0.8	1.0																											
Intl Small Hdg	-0.1	0.8	0.8	0.9	0.9	0.9	1.0																										
EM	0.0	0.8	0.7	0.8	0.7	0.8	0.7	1.0																									
Global Equity	-0.1	1.0	0.8	1.0	0.9	0.9	0.9	0.9	1.0																								
PE	-0.2	0.6	0.6	0.6	0.6	0.6	0.6	0.5	0.6	1.0																							
US TIPS	-0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.3	0.2	0.1	1.0																						
US Treasury	0.0	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-0.2	-0.3	-0.2	0.7	1.0																					
Global Sovereign ex US	0.1	0.3	0.1	0.4	0.1	0.5	0.1	0.5	0.4	0.0	0.5	0.4	1.0																				
Global Sovereign ex US Hdg	-0.1	-0.1	-0.2	-0.1	-0.2	-0.2	-0.2	-0.1	-0.1	0.0	0.5	0.7	0.3	1.0																			
US Core	-0.1	-0.1	-0.1	0.0	-0.1	0.0	-0.1	0.1	0.0	-0.1	0.7	0.9	0.5	0.7	1.0																		
US Core Plus	-0.1	0.2	0.1	0.4	0.3	0.4	0.3	0.4	0.3	0.0	0.6	0.5	0.5	0.5	0.8	1.0																	
ST Govt/Credit	0.1	0.0	0.0	0.2	0.0	0.2	0.0	0.3	0.1	-0.1	0.6	0.5	0.6	0.3	0.8	0.7	1.0																
Short-Term Credit	0.0	0.3	0.2	0.4	0.3	0.5	0.4	0.5	0.4	0.0	0.4	0.0	0.4	0.0	0.4	0.7	0.8	1.0															
Long-Term Credit	-0.1	0.2	0.1	0.3	0.2	0.3	0.2	0.3	0.2	0.0	0.5	0.5	0.5	0.5	0.8	0.9	0.5	0.5	1.0														
US HY	-0.1	0.6	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.4	0.3	-0.2	0.3	-0.1	0.1	0.6	0.4	0.7	0.4	1.0													
Bank Loans	-0.2	0.4	0.4	0.5	0.5	0.6	0.6	0.5	0.5	0.4	0.1	-0.4	0.1	-0.2	0.0	0.4	0.2	0.7	0.2	0.9	1.0												
Global Credit	0.0	0.6	0.4	0.8	0.5	0.7	0.5	0.8	0.7	0.2	0.5	0.1	0.8	0.2	0.5	0.8	0.6	0.7	0.7	0.7	0.5	1.0											
Global Credit Hdg	-0.1	0.4	0.3	0.5	0.4	0.5	0.4	0.6	0.5	0.2	0.5	0.3	0.5	0.4	0.7	0.9	0.6	0.7	0.9	0.7	0.5	0.8	1.0										
EMD USD	-0.1	0.5	0.3	0.6	0.5	0.6	0.4	0.7	0.6	0.2	0.5	0.2	0.6	0.3	0.5	0.7	0.5	0.6	0.6	0.7	0.4	0.8	0.8	1.0									
EMD Local	0.0	0.6	0.4	0.7	0.5	0.7	0.5	0.8	0.7	0.3	0.4	0.1	0.7	0.1	0.3	0.5	0.4	0.5	0.4	0.6	0.3	0.8	0.6	0.8	1.0								
Commodities	0.0	0.5	0.5	0.6	0.4	0.6	0.4	0.6	0.6	0.2	0.2	-0.2	0.5	-0.2	0.0	0.2	0.2	0.3	0.1	0.5	0.3	0.6	0.3	0.4	0.6	1.0							
Hedge Funds	-0.1	0.7	0.7	0.8	0.8	0.8	0.8	0.7	0.8	0.6	0.1	-0.3	0.2	-0.2	-0.1	0.3	0.0	0.3	0.2	0.6	0.5	0.5	0.4	0.4	0.4	0.5	1.0						
Real Estate	-0.1	0.5	0.5	0.4	0.5	0.5	0.5	0.4	0.5	0.4	0.1	0.0	0.1	0.0	0.0	0.2	0.0	0.1	0.1	0.3	0.3	0.3	0.2	0.3	0.3	0.2	0.4	1.0					
REITs	-0.1	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.7	0.4	0.2	0.1	0.3	0.2	0.3	0.5	0.3	0.4	0.4	0.6	0.4	0.5	0.6	0.5	0.5	0.3	0.4	0.7	1.0				
Global Infra	0.0	0.8	0.6	0.9	0.8	0.8	0.7	0.8	0.8	0.2	0.3	-0.1	0.6	0.0	0.2	0.5	0.3	0.5	0.4	0.7	0.4	0.8	0.6	0.7	0.8	0.6	0.6	0.4	0.3	0.7	1.0		
Risk Parity	-0.1	0.5	0.4	0.5	0.4	0.5	0.4	0.6	0.5	0.3	0.5	0.3	0.6	0.3	0.5	0.6	0.5	0.4	0.5	0.5	0.2	0.7	0.7	0.6	0.6	0.5	0.4	-0.1	0.4	0.6	1.0		
Currency Beta	0.0	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.2	-0.1	-0.2	0.0	0.0	-0.1	-0.1	-0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.0	-0.1	0.1	0.1	0.1	1.0	
Inflation	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	0.0	-0.1	0.1	-0.2	-0.1	-0.1	0.0	0.1	-0.1	0.1	0.2	0.1	0.0	0.0	0.1	0.2	0.1	-0.1	-0.1	0.0	0.1	0.0	1.0

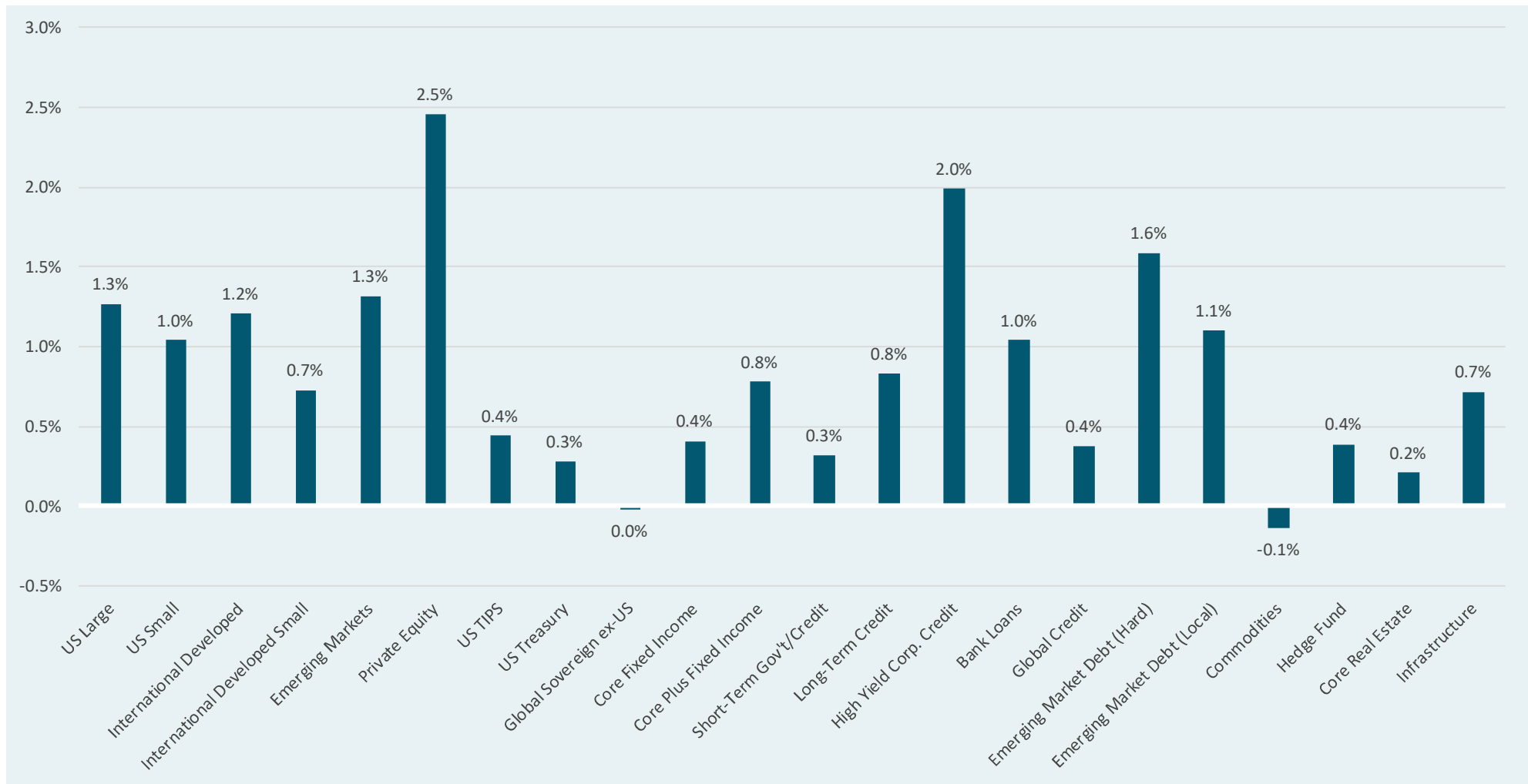
Note: Correlation assumptions are based on the last ten years. Private Equity and Real Estate correlations are especially difficult to model – we have therefore used BarraOne correlation data to strengthen these correlation estimates.

Range of likely 10 year outcomes

10 YEAR RETURN 90% CONFIDENCE INTERVAL



2019 vs. 2018 return forecast



Note: the year-over-year change is based on the 2019 methodology

Relevant forecast changes

- Return expectations increased broadly across most asset classes as bond yields moved higher, prices fell, and valuations became more attractive. This effect was particularly apparent in emerging market equity and debt, where prices suffered in 2018, which led to heightened yields and greater upside return potential.
- Equity valuations fell during the year, resulting in higher return forecast across all regions. In the U.S., large cap P/E multiples returned to more normal levels, and no longer result in a significant drag on expected returns. International developed equity valuations are below average relative to history (26th and 22nd percentile on the Shiller and trailing 12-month P/E ratios, respectively), resulting in a 75 bps increase in the annual return forecast.
- Credit spreads rose significantly in the fourth quarter of 2018, which resulted in improved return forecasts for all credit assets. Core plus fixed income spreads rose from 114 bps to 162 bps, and high yield spreads rose from 356 bps to 529 bps.
- The short end of the yield curve rose as Federal Reserve gradually tightened. The U.S. effective fed funds rate rose from 1.4% at the beginning of the year to 2.4%. The three-month U.S. dollar LIBOR reference rate increased from 1.7% to 2.8%.
- Emerging market hard and local currency debt experienced the greatest improvement in yields. In hard currency-denominated debt, spreads to U.S. Treasury yields increased from 293 bps to 421 bps, while yields of local-denominated debt increased from 6.1% to 7.2%.

All data cited above is as of 12/31/18

Notices & disclosures

Past performance is no guarantee of future results. *The information presented in this report is provided pursuant to the contractual agreement (the “Contract”) by and between the entity named and to which this report or presentation deck is being presented (“Client”) and Verus Advisory, Inc. (“Company”). Client is an institutional counter-party and in no event should the information presented be relied upon by a retail investor.*

The information presented has been prepared by the Company from sources that it believes to be reliable and the Company has exercised all reasonable professional care in preparing the information presented. However, the Company cannot guarantee the accuracy of the information contained therein. The Company shall not be liable to Client or any third party for inaccuracy or in-authenticity of information obtained or received from third parties in the analysis or for any errors or omissions in content.

The information presented does not purport to be all-inclusive nor does it contain all information that the Client may desire for its purposes. The information presented should be read in conjunction with any other material furnished by the Company. The Company will be available, upon request, to discuss the information presented in the report that Client may consider necessary, as well as any information needed to verify the accuracy of the information set forth therein, to the extent Company possesses the same or can acquire it without unreasonable effort or expense. Nothing contained therein is, or should be relied on as, a promise, representation, or guarantee as to future performance or a particular outcome. Even with portfolio diversification, asset allocation, and a long-term approach, investing involves risk of loss that the client should be prepared to bear.

The material may include estimates, outlooks, projections and other “forward-looking statements.” Such statements can be identified by the use of terminology such as “believes,” “expects,” “may,” “will,” “should,” “anticipates,” or the negative of any of the foregoing or comparable terminology, or by discussion of strategy, or assumptions such as economic conditions underlying other statements. No assurance can be given that future results described or implied by any forward-looking information will be achieved. Actual events may differ significantly from those presented. Investing entails risks, including possible loss of principal. Risk controls and models do not promise any level of performance or guarantee against loss of principal.

Verus – also known as Verus Advisory™.



May 28, 2019

Retirement Board Agenda Item

TO: Retirement Board

FROM: Rick Santos, Executive Director
Stan Conwell, Retirement Investment Officer

I. SUBJECT: Private Markets Approval Process Review

II. ITEM NUMBER: 7.a

III. ITEM TYPE: Information Only

IV. STAFF RECOMMENDATION: None.

V. EXECUTIVE SUMMARY:

A review of the approval and reporting process outlined in the Private Markets Investment Policy Statement (PM Policy) will provide an opportunity for a refreshed understanding of the private investment implementation process. The process begins with the consultant, who is tasked with sourcing high quality private market investment recommendations. The Executive Director has delegated authority to approve the consultant's recommendations up to the lesser of 10% of the target allocation of the total private market sub-portfolio (\$25.6 million as of 03/31/19) or \$25 million. The Board retains responsibility for reviewing and approving all private markets investments that exceed the Executive Director's delegated authority.

The PM Policy requires several reports be provided to the Board for each private market investment including an executive summary report from staff meant to provide a comprehensive overview of each investment. The reports will be provided to the Board for review and possible approval or for investments that fall within the Executive Director's authority at the Board meeting following approval. Some reports can contain confidential information and will be made available to Trustees for review upon request.

VI. ANALYSIS:

At the September 2018 Board meeting, the Private Markets Investment Policy Statement (PM Policy) was adopted. The policy pertains to the Private Debt and Private Equity investments within StanCERA's portfolio. As StanCERA continues to buildout the private market investments within the portfolio, a review of the approval and reporting process outlined in the PM Policy will provide an opportunity to refresh our understanding of the process.

One purpose of the PM Policy is to provide a delineation of the roles and responsibilities of the Board, staff, consultant, and investment managers with regards to the addition of private market investments. The process begins with the consultant. The consultant acting as a fiduciary to StanCERA conducts extensive and thorough due diligence on prospective funds to provide high quality private market investment recommendations.

Depending on the size of the commitment, either the Board or the Executive Director can approve the recommendation after a full and satisfactory review of the due diligence process. The PM Policy provides the Executive Director with approval authority for private markets investment proposals

from the consultant up to the lesser of 10% of the target allocation of the total private market sub-portfolio (\$25.6 million as of 03/31/19) or \$25 million. The Board retains responsibility for reviewing and approving all private market investments that exceed the Executive Director's delegated authority.

Prior to review and possible approval by the Board or by the Executive Director, the due diligence reports described in the PM Policy will be completed and compiled. Following approval, the transitioning of assets would begin after reasonable contract terms are successfully negotiated. The reports include the following:

Report	Source
Recommendation/Approval memo	Investment Staff
Recommendation/Approval memo	Consultant
Executive Summary of the Fund	Consultant
Compliance Checklist	Investment Staff
Comprehensive Due Diligence Report (available to Trustees upon request due to confidentiality)	Consultant
Manager Pitchbook	Investment Manager

In addition, for each private market investment, investment staff will produce an executive summary report. The report is anticipated to provide a comprehensive overview of each investment including details on the investment processes, rationale, concerns, and key terms of the agreement. The executive summary report will include data from the consultant, investment staff, and the investment manager and should serve as an excellent resource for both the Board and investment staff.

It is anticipated that the reports will be provided to the Board for review and possible approval for commitments that exceed the authority of the Executive Director or in the case of smaller commitments at the Board meeting following approval by the Executive Director. As noted in the PM Policy, some reports can contain confidential information and will be made available to Trustees for review upon request. Depending on the investment, this can include the executive summary report.

Attached are templates of the executive summary and compliance checklist reports which are largely expected to follow the standardize format outlined in the template.

Attachment 1 – Executive Summary Report
Attachment 2 – Compliance Checklist

VII. RISK: None

VIII. STRATEGIC PLAN: Strategic Objective IV: Refine StanCERA's business and policy practices in ways that enhance stakeholder awareness, the delivery of member services and the ability of the Organization to administer the System effectively and efficiently.

IX. ADMINISTRATIVE BUDGET IMPACT: None.

A handwritten signature in cursive script, appearing to read "Stan Conwell".

Stan Conwell, Retirement Investment Officer

A handwritten signature in cursive script, appearing to read "Rick Santos".

Rick Santos, Executive Director

Executive Summary Report [Template]

[Fund Name]

- Section I: General Information
Fund Name; Total AUM of the Firm; Current Target Fund Size; Previous Fund Size; Fund Focus; etc.
- Section II: Investment Management
Organization Structure; Management Group; Experience; Personnel Turnover; etc.
- Section III: Investment Strategy
Investment Philosophy; Investment Strategy; Investment Process; Investment Objective; etc.
- Section IV: Risk Management
Risk Control Methodology; Exit Strategy; etc.
- Section V: Investment Rationale
- Section VI: Investment Concerns
- Section VII: Performance (example)

Benchmark:

Performance History	YTD	1-yr	3-yr	5-yr	Since Inception
Fund					
Benchmark					
Out/(under)performance					

Section VIII: Key Terms

Fund Term; Preferred Return; Investment Period; Management Fee; Other Fees; General Partner Carry; GP Commitment; Advisory Board; Clawback; No-Fault Divorce; Key-Person Events; Closing Schedule; Drawdown Schedule; etc.

List of items to be addressed as appropriate.

Compliance Checklist Template for Private Market Investment Selection

Target allocation to Private Equity and Private Credit asset class: 12% of the total Fund¹ is \$xxx million.

Target allocation to Private Equity/Private Credit Portfolio: x.x% of the total Fund is \$xxx million.

StanCERA Policy for PE Portfolio

Fund Name

In Compliance

1. Permissible Legal Structures

Any legally permissible vehicle will be allowed including, but not limited to, joint ventures, limited partnerships, and limited liability corporations.	<i>Specific legal structure.</i>	<i>Yes, No or N/A</i>
--	----------------------------------	-----------------------

2. Investment Methods

Individual limited partnership funds Primary and/or Secondary Separate accounts Discretionary Fund-of-funds Direct investments/Co-Investments Combination of the above	<i>Specific investment methods.</i>	<i>Yes, No or N/A</i>
--	-------------------------------------	-----------------------

3. Investment Characteristics (*Characterize PE or PC*)

PE/PC may include, but not be limited to, buyouts, venture capital, direct lending / special situations.	<i>Specific investment type.</i>	<i>Yes, No or N/A</i>
<u>Buyouts</u> : typically purchase of a control position in an established, privately held company, <u>Venture Capital</u> : typically purchase in privately-held companies at varying stages of formation, and <u>Direct Lending / special situations</u> : typically combine a debt instrument, which provides a current yield, with an equity participation of warrants, etc. Special situations investments can encompass any variety of private investments in debt or equity.	<i>Specific investment characteristics.</i>	<i>Yes, No or N/A</i>
PE/PC may be denominated in U.S. dollars or other currencies.	<i>Specific currency denomination.</i>	<i>Yes, No or N/A</i>

¹ Estimated fair value of StanCERA's total Fund was \$x.x billion as of xx/xx/xx.

4. Portfolio Diversification

<u>By sub-asset class</u> : among buyouts and venture capital.	<i>Specific investment type.</i>	<i>Yes, No or N/A</i>
<u>By vintage year</u> : roughly equal amounts of new funding will be committed in each calendar year with deviations permitted.	<i>Specific vintage year.</i>	<i>Yes, No or N/A</i>
<u>By Investment Manager</u> : ≤20% of the target allocation to total PE Portfolio may be committed to any one partnership.	<i>Specific commitments to the Investment Manager.</i>	<i>Yes, No or N/A</i>
<u>By geography</u> : commitments to funds located and/or investing both in and outside of the U.S.	<i>Specific location.</i>	<i>Yes, No or N/A</i>

5. Return Expectation

Russell 3000 + 300 bps (net of all fees) in aggregate.	<i>Specific return target.</i>	<i>Yes, No or N/A</i>
Each sub-asset class: <ul style="list-style-type: none"> PE Benchmark: Russell 3000 + 3% PC Benchmark: S&P / LSTA Leveraged Loan Index + 2% 		<i>Yes, No or N/A</i>
		<i>Yes, No or N/A</i>

6. Investment Allocations

<u>PE Portfolio</u> : range 0%-8% of the total Fund. <u>PC Portfolio</u> : range 0%-8% of the total Fund.	<i>Expected allocations to the PE Portfolio and the underlying portfolios including specific commitment to the Investment Manager.</i>	<i>Yes, No or N/A</i>
<u>Buyouts</u> : target 4%; range 0%-5%. <u>Venture Capital</u> : target 2%; range 0%-3%. <u>Direct Lending</u> : target 4%; range 0%-4% <u>Special situations</u> : target 2%; range 0%-3%		<i>Yes, No or N/A</i>

7. Investment Constraints

<p><u>Buyouts</u>: ≤35% of the target value of the buyout portfolio may be invested in a single sector of the domestic or international economy.</p> <p><u>Venture Capital</u>: ≤50% of the target value of the venture capital portfolio may be invested in a single industry within a particular sector.</p> <p><u>Direct Lending / Special Situations</u>: The portfolio commitment will not represent greater than 20% of a single fund.</p>	<p><i>Specific commitment to the Investment Manager.</i></p>	<p><i>Yes, No or N/A</i></p>
--	--	------------------------------



StanCERA's Investment Plan for 20xx-20xx

Approved: Date

Investment Manager

In Compliance

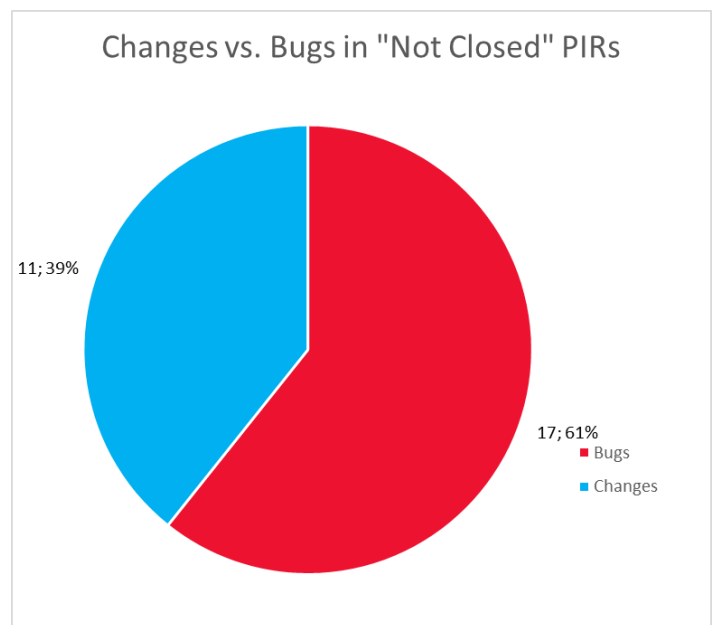
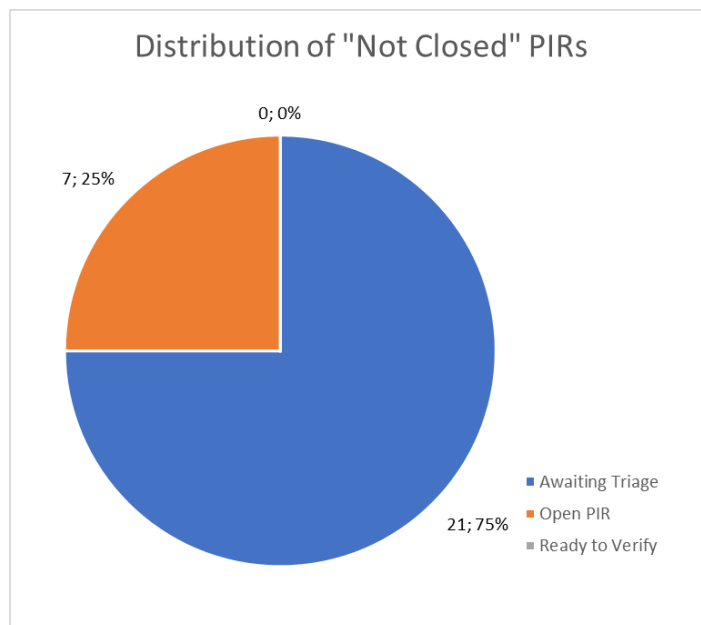
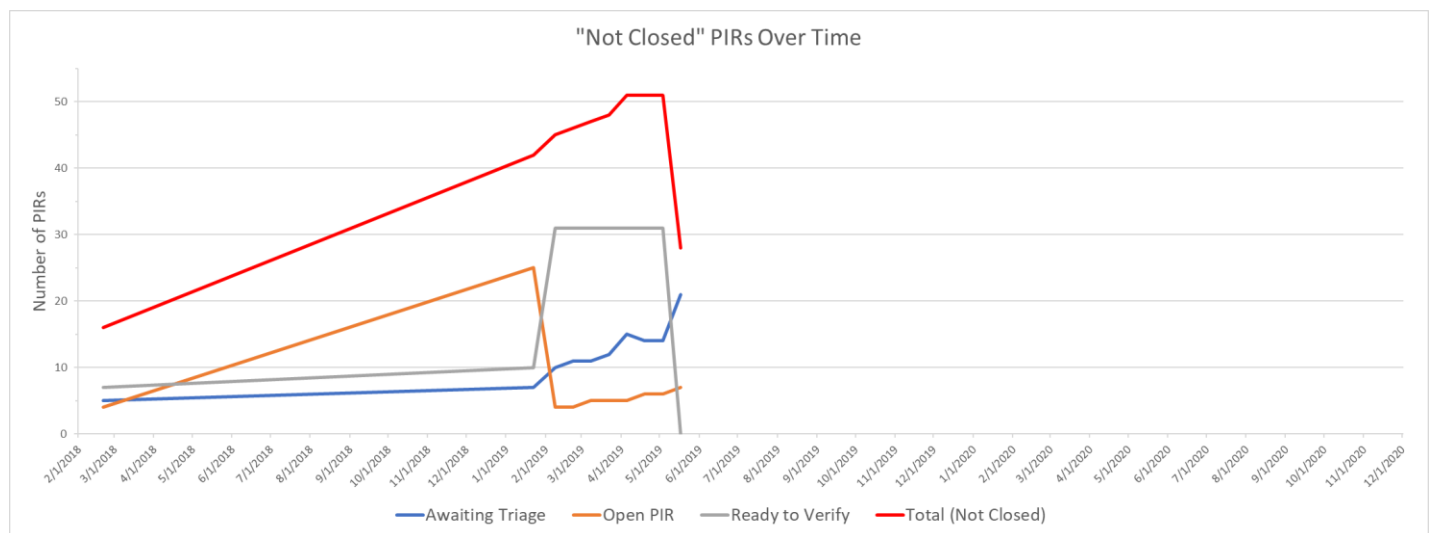
Specific Investment Plan or Pacing Study	<p><i>Specific commitment to the Investment Manager.</i></p>	<p><i>Yes, No or N/A</i></p>
--	--	------------------------------

<div></div>		<div>PAS IMPLEMENTATION</div> <div>LINEA BI-WEEKLY STATUS UPDATE</div>		<div></div>			
SPONSOR:		Rick Santos		REPORT DATE:		05-17-2019	
<div><div><div><div><div><div>3/10/2017</div><div>Phase 1</div><div>Project Initiation and Start-Up</div></div><div><div>7/3/2017</div><div>Phase 2</div><div>Infrastructure, Hardware and Software and Hosting</div></div><div><div>9/18/2017</div><div>Phase 3</div><div>EDMS Rollout #1</div></div><div><div>12/20/2017</div><div>Phase 2 – Warranty</div><div>EDMS Rollout</div></div></div><div><div>1/3/17</div><div>4/1/17</div><div>7/1/17</div><div>10/1/17</div><div>1/1/18</div><div>4/1/18</div><div>7/1/18</div><div>10/1/18</div><div>1/1/19</div><div>4/1/19</div><div>7/1/19</div><div>10/1/19</div><div>1/1/20</div><div>4/1/20</div><div>7/1/20</div><div>10/1/20</div><div>1/1/21</div><div>4/1/21</div><div>7/1/21</div><div>10/1/21</div><div>1/1/22</div><div>4/1/22</div><div>4/18/22</div></div><div><div>Phase 3 – EDMS Rollout #1</div><div>1/24/2017 - 9/18/2017</div></div><div><div>Phase 4 - Pension Admin Rollout #2</div><div>2/6/2017 - 8/18/2020</div></div><div><div>Phase 4 - Pension Admin Rollout #2</div><div>4/13/2020</div></div><div><div>Phase 5</div><div>Post Production Release Rollout #3</div><div>11/13/2020</div></div><div><div>Phase 4 – Pension Admin Parallel Test Ends</div><div>8/18/2020</div></div><div><div>Phase 4 – Warranty Pension Admin Rollout</div><div>1/19/2021</div></div><div><div>Phase 5 – Warranty Post Production Release</div><div>2/5/2021</div></div><div><div>Phase 7 - Post Implementation Support</div><div>4/18/2022</div></div><div><div>Phase 5 – Post Production Release Rollout #3</div><div>4/14/2020 - 11/13/2020</div></div><div><div>Phase 7 – Post Implementation Support</div><div>4/14/2020 - 4/18/2022</div></div></div></div></div>							
Baseline 12/01/2016		STATUS		Risks & Issues:			
<div><div><div><div><div>Expended</div><div>Remaining</div></div><div><div><div><div>100%</div><div>90%</div><div>80%</div><div>70%</div><div>60%</div><div>50%</div><div>40%</div><div>30%</div><div>20%</div><div>10%</div><div>0%</div></div><div><div>Budget</div><div>Duration</div></div></div></div></div><div>Linea Budget as of 03/31/19</div></div></div>				<div>No new high-level risks have been identified at this time.</div>			
Accomplishments:				Upcoming:			
<div><div><div>Tegrit and StanCERA continued work on analysis of test files provided by upload employers and communication to resolve problems.</div><div>StanCERA completed testing of functionality in R13 release to UAT and results analysis is underway.</div></div></div>				<div><div><div>R14 release to UAT environment and UAT testing of new functionality, including new workflows and GL functions.</div><div>Continue analysis and evaluation of upload employer test files being received for consecutive pay periods.</div></div></div>			

Ongoing Project Contributions

- Facilitate weekly Project Manager's meetings and create meeting minutes.
- Facilitate monthly Steering Committee Meetings and create meeting minutes.
- Participate in Tegrit work sessions, review meeting minutes, and compile resulting decision logs and action items.
- Regularly review action items for follow up and completion.
- Review and hold group review sessions for BSRD deliverables made by Tegrit (BSR046, BSR050).
- Track requirements, as discussed in work sessions and BSRDs, using the RTM and meet with StanCERA PM to update requirements confirmation.
- Manage and participate in system testing efforts, including review of test scripts, compiling of results, input of PIRs, and tracking of issue resolution.

Current PIR Summary





Stanislaus County Employees' Retirement Association

832 12th Street, Ste. 600, Modesto, CA 95354 • PO Box 3150, Modesto, CA 95353 • www.stancera.org • 209-525-6393 • 209-558-4976 Fax

May 28, 2019

Retirement Board Agenda Item

TO: Retirement Board

FROM: Natalie Elliott, Fiscal Services Manager

- I. SUBJECT: Fiscal Year 2019-2020 Proposed Administrative Budget
- II. ITEM NUMBER: 8.c
- III. ITEM TYPE: Discussion and Action
- IV. STAFF RECOMMENDATION: Approve the Recommended Proposed Administrative Budget for Fiscal Year 2019-2020
- V. EXECUTIVE SUMMARY: Each year staff prepares a budget of general operating expenses for review and approval by the Board of Retirement (Board). Typically, there are few unexpected expenses and one budget presented and approved has been sufficient.

In preparation of the proposed budget, staff compares the current year budget with the current year expenditures. Those numbers, as well as the proposed budget request for Fiscal Year 2019-2020 are reflected in the summary below. In Fiscal Year 2018-2019 the total estimated expenditures of \$3,919,883 fall below the final budget approved by the Board. Projected legal fees, Technology, General Operations, County support services, as well as salary savings and capital expenditures can be attributed with the bulk of the savings. A total of \$5,212,930 is being requested for Fiscal Year 2019-2020.

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION						
PROPOSED FISCAL YEAR 2019-2020 ADMINISTRATIVE BUDGET						
DESCRIPTION	Approved FY 18/19 Budget including I.T.	FY 18/19 Estimated Expenditures	Fiscal Year 2019-2020 Requested Budget	CODE SECTION 31580.2(2)(b) Technology	Fiscal Year 2019-2020 Total Budget Request	Increase (Decrease) from prior year
Salaries & Benefits	2,135,080	1,507,858	1,953,491	-	1,953,491	-8.51%
Technology	300,000	279,556	157,240	204,100	361,340	20.45%
Legal Counsel & Services	577,250	197,310	426,500	-	426,500	-26.12%
County Support Services	200,700	182,118	226,950	-	226,950	13.08%
Communication & Printing	74,000	60,120	75,000	-	75,000	1.35%
General Operations	60,453	35,498	43,250	-	43,250	-28.46%
Fiduciary Education & Travel	179,476	187,658	206,700	-	206,700	15.17%
ADMINISTRATIVE BUDGET	3,526,959	2,450,118	3,089,131	204,100	3,293,231	-6.63%
Capital Expenditures	2,990,097	1,492,506	50,000	1,805,316	1,855,316	-37.95%
Capital Depreciation	185,000	79,200	170,000	-	170,000	-8.11%
6th Floor Lease Revenue	(97,040)	(101,941)	(105,617)	-	(105,617)	8.84%
TOTAL BUDGET	6,605,016	3,919,883	3,203,514	2,009,416	5,212,930	-21.08%
Valuation Year	2017		2018			
Actuarial Accrued Liability	2,648,162,000		2,749,068,000			
Maximum Administrative Budget Allowable (0.21% of Actuarial Accrued Liability)	5,561,140		5,773,043			
Percentage of Maximum	63%		54%			

Government Code section 31580.2 within the 1937 Act allows for expenditures of administrative services (other than software, hardware and computer technology consulting services) to be the greater of 0.21% of the accrued actuarial liability or \$2,000,000. The accrued actuarial liability of StanCERA as of the June 30, 2018 actuarial valuation was \$2,749,068,000 of which 0.21% (\$5,773,043) is available for administrative expenses. We have shown the costs related to the computer technology software, hardware and consulting services separately in this budget.

VI. ANALYSIS:

Review of the Current Year's Administrative Budget and Expenditures

In Fiscal Year 2018-2019 the total estimated expenditures of \$3,919,883 will fall below the budget approved by the Board. All expenditure categories came in lower than anticipated with the exception of Fiduciary Education & Travel which came in at 4.56% over budget mainly due to Trustee Education & Travel. The pension administration system and the I.T. project management and oversite expenditures also contributed to estimated costs being under the approved budgeted costs.

Fiscal Year 2019-2020 Proposed Operating Budget Request

A total of \$5,212,930 is requested for all expenses in Fiscal Year 2019-2020 including the \$2,009,416 related to the new pension system and computer technology. Please see **Attachment I** for details. The cost for several projects either approved in concept or directly by the Board are included in this proposed budget. These include the pension software system; project management costs, and the Website redesign and implementation. The 6th Floor lease revenue continues to offset 6th floor expenses.

Salaries & Benefits

Total estimated budget for **Salaries and Benefits** is \$1,953,491. Salaries include thirteen full-time staff and four part-time extra help staff who continue to work on a variety of projects 20 hours per week. The I.T. Specialist was not included in this budget due to StanCERA contracting with SBT for Embedded Employees for our I.T needs. Benefits include employer retirement contributions, medical, dental and vision care, workers comp and other negotiated and required taxes and fees.

Retirement and health care costs continue to rise. Health care is particularly dependent upon individual staff selections. If a staff member selects to use County health care coverage for a family of three or more, the budgeted amount is \$25,441 per year. Since staff does have some flexibility, the overall cost to the department can vary throughout the year.

DESCRIPTION	Approved FY 18/19 Budget including I.T.	FY 18/19 Estimated Expenditures	Fiscal Year 2019-2020 Requested Budget	CODE SECTION 31580.2(2)(b) Technology	Fiscal Year 2019-2020 Total Budget Request
Salaries & Benefits					-
Salaries	1,309,689	971,870	1,262,000	-	1,262,000
Employee Benefits	699,535	535,988	691,491	-	691,491
I.T. Specialist - Salary & Benefits	125,856	-	-	-	-
TOTALS	2,135,080	1,507,858	1,953,491	-	1,953,491

Technology

The technology budget includes contractual costs for annual maintenance of \$54,440, and disaster recovery of \$13,500 with **Tyler Technologies** for our current pension system. The Tyler maintenance contract is based on a percentage of the original implementation cost and has been extended to allow time for implementation of the new pension system. The technology budget also includes cloud hosting fees of \$78,000 for the electronic document system which went live in September 2017, and I.T. consulting services of \$50,000 to help with data cleanup for implementation of the new pension system.

The **StanCERA Website** budget of \$2,500 is based on a bare bones structure and allows room for required upgrades. As part of the overall Information Technology project the website is scheduled to be redesigned during the 2019/2020 fiscal year with a budget amount of \$50,000.

The **Software Licenses and Fees** budget of \$10,000 reflect costs associated with the various software used in the day to day operations as well as any additional needs of the project implementation.

In order to keep **Computers and Office Equipment** somewhat current, \$25,000 is budgeted each year for the replacement and repair.

The **Copier Lease and Maintenance** of \$10,000 includes leases, maintenance, and supplies for copiers, printers, scanners, etc. StanCERA processes letterhead, specialized forms, member statements and retiree payroll notices on site.

StanCERA contracts with the County for network access, email, server maintenance, security and phones. The Strategic Business Technology (**SBT**) budgeted amount, \$60,300, is provided by the County Information Technology department for these services. The amount provided for Fiscal Year 2019-2020 is within a reasonable range of costs at this time. StanCERA has contracted with SBT for Embedded Employees to provide StanCERA with desktop support and software support. This additional contract has been budgeted at \$57,600 for Fiscal Year 2019-2020.

DESCRIPTION	Approved FY 18/19 Budget including I.T.	FY 18/19 Estimated Expenditures	Fiscal Year 2019-2020 Requested Budget	CODE SECTION 31580.2(2)(b) Technology	Fiscal Year 2019-2020 Total Budget Request
Technology					-
Tyler Software Maintenance	50,000	52,590	54,440	-	54,440
Tyler Disaster Maintenance	15,000	12,751	13,500	-	13,500
Tegrit Hosting Fees	78,000	78,000	-	78,000	78,000
I.T. Consulting Services	60,000	45,400	-	50,000	50,000
Software Licenses & Fees	15,000	560	10,000	-	10,000
StanCERA Website	2,500	220	2,500	-	2,500
SBT - Data Processing	40,000	43,740	52,700	-	52,700
SBT - Telecommunications	7,500	6,930	7,600	-	7,600
SBT - Embedded Employees	-	9,600	-	57,600	57,600
Computers & Office Equipment	20,000	23,865	6,500	18,500	25,000
Copier Lease & Maintenance	12,000	5,900	10,000	-	10,000
TOTALS	300,000	279,556	157,240	204,100	361,340

Legal & Professional Services

StanCERA contracts with multiple specialized firms for legal counsel. Only one firm is on retainer with a requested budget of \$60,000. The General Counsel budget may include expenses from multiple law firms depending on the subject matter. The estimated cost for **Legal Counsel** also includes \$120,000 for Disability Counsel, \$150,000 to continue to respond to the O'Neal vs StanCERA appeal, \$20,000 for the StanCERA vs Buck lawsuit, and \$50,000 for Domestic Relations Orders. Total estimated expenses are low mainly due to a reimbursement from the insurance company for the O'Neal law suit of \$233,115 which included reimbursement for invoices from the prior fiscal year. Without this reimbursement StanCERA's legal fees totaled \$460,425 of which \$185,590 was for the O'Neal law suit.

StanCERA currently has agreements with the following law firms:

Reed Smith	Fiduciary & Information Technology
Hanson Bridgett	Tax & Investment
Rein & Rein	Real Estate
Damrell Nelson, et.al.	General & Domestic Relations Orders
Ted Cabrall	Disability

Medical Exams, Reviews, and Hearing costs related to the processing of disability retirement applications (medical exams, hearing costs, etc.) are budgeted at \$30,000 for the year.

Auditing Services are budgeted at \$46,500. Brown Armstrong is retained for the next two years to perform the annual financial audit for StanCERA.

Often during any fiscal year, legislation changes or a Board request will produce a need for professional services not provided by staff. The budgeted amount for **Other Professional Services** of \$10,000 is set aside to cover the cost of professional service providers not associated with investments.

DESCRIPTION	Approved FY 18/19 Budget including I.T.	FY 18/19 Estimated Expenditures	Fiscal Year 2019-2020 Requested Budget	CODE SECTION 31580.2(2)(b) Technology	Fiscal Year 2019-2020 Total Budget Request
Legal & Professional Services					-
Legal Counsel - Disability	150,000	55,500	120,000	-	120,000
Legal Counsel - O'Neal vs StanCERA	200,000	185,590	150,000	-	150,000
Reimbursement from Travelers	-	(233,115)	(60,000)	-	(60,000)
Legal Counsel - General	60,000	64,030	60,000	-	60,000
Legal Counsel - DRO's	20,000	46,600	50,000	-	50,000
Legal Counsel - StanCERA vs Buck	50,000	2,500	20,000	-	20,000
Medical Exams, Reviews, Hearings	20,000	28,725	30,000	-	30,000
Auditing Services	47,250	46,500	46,500	-	46,500
Other Professional Services	30,000	980	10,000	-	10,000
TOTALS	577,250	197,310	426,500	-	426,500

General Operations

Office Supplies are budgeted at \$7,000. This includes a variety of supplies, ranging from paper to calculators. The transition of paper to electronic files has decreased the office supply expenditures.

The **Other Office Expense** budgeted at \$8,000 for Fiscal Year 2019-2020 includes document storage expenses as well as other items needed for securing critically important historical documents, confidential shredding, alarm services, and other ongoing services that are periodically used to complete special projects. This budget is also set aside to accommodate unexpected ergonomic needs, safety expenses, furniture needs, etc.

The **6th Floor** budget of \$28,250 includes the costs of regular janitorial services provided by an outside provider, the additional cost for cleaning and/or replacing flooring, window cleaning, some painting, as well as any cost due to the lease of the vacant space. This budget item will be offset by the estimated lease revenue.

DESCRIPTION	Approved FY 18/19 Budget including I.T.	FY 18/19 Estimated Expenditures	Fiscal Year 2019-2020 Requested Budget	CODE SECTION 31580.2(2)(b) Technology	Fiscal Year 2019-2020 Total Budget Request
General Operations					-
Office Supplies	15,000	4,320	7,000	-	7,000
Other Office Expense	10,000	6,930	8,000	-	8,000
6th Floor Maintenance	1,500	-	1,500	-	1,500
6th Floor Janitorial & Supplies	22,353	22,600	25,000	-	25,000
6th Floor Security	10,000	430	500	-	500
6th Floor Downtown Redevelopment	1,600	1,218	1,250	-	1,250
TOTALS	60,453	35,498	43,250	-	43,250

Communication & Printing

We have budgeted for **Communications and Printing** a total of \$75,000 which includes the Comprehensive Annual Financial Report, Popular Annual Financial Report, semi-annual member statements, two elections, and printing and distribution of StanCERA's newsletter via U.S. Postal services to all members (active, deferred and retirees). In addition, the printing of retiree payroll and the associated postage has now been included in this category, the bulk of which is retiree payroll. It's important to note that StanCERA does not pre-order letter head, specialized forms, member statements or retiree payroll notices. These items are printed in-house as needed.

DESCRIPTION	Approved FY 18/19 Budget including I.T.	FY 18/19 Estimated Expenditures	Fiscal Year 2019-2020 Requested Budget	CODE SECTION 31580.2(2)(b) Technology	Fiscal Year 2019-2020 Total Budget Request
Communication & Printing					-
Member Statements, Trustee Election	34,000	21,670	30,000	-	30,000
Postage	40,000	38,450	45,000	-	45,000
TOTALS	74,000	60,120	75,000	-	75,000

County Support Services

The Stanislaus County, General Services Agency (GSA) is responsible for acquiring goods and services, negotiating contracts, leasing property and equipment, providing consultation on procurement needs and contract facilitation to County departments, in addition to the sale and/or disposal of surplus County property, mailroom messenger, and salvage services. As an Internal Service Fund, the costs of these services are based on the level of service provided.

The budget for StanCERA's portion of the 12th Street Building is \$150,000. This includes common area expenses for janitorial, maintenance, utilities and security. This increase is mainly due to the increase costs in janitorial services. StanCERA is working with the District Attorney's Office to upgrade the 10 year old security equipment and systems for the whole building as well as improve security in the lobby.

GSA estimates StanCERA's **Central Services and Mail Room** cost to be \$20,000 for Fiscal Year 2019-2020. Postage is categorized separately.

Also provided by the County is general and auto liability insurance, administrative functions by CEO/Personnel, Auditor, Purchasing, Risk Management, and a true-up process for capital expenses from the previous year. The true-up amount can fluctuate considerably from positive to negative each year. The total for these services are budgeted at \$56,950.

DESCRIPTION	Approved FY 18/19 Budget including I.T.	FY 18/19 Estimated Expenditures	Fiscal Year 2019-2020 Requested Budget	CODE SECTION 31580.2(2)(b) Technology	Fiscal Year 2019-2020 Total Budget Request
County Support Services					-
Building Maintenance	45,000	31,160	45,000	-	45,000
Building Janitorial	1,200	15,450	20,000	-	20,000
Building Security	45,000	38,275	45,000	-	45,000
Building Utilities	40,000	32,870	40,000	-	40,000
Auditor	18,000	11,180	12,000	-	12,000
CEO/Personnel	15,000	16,725	18,500	-	18,500
Central Services Mail Room	8,000	15,905	20,000	-	20,000
Purchasing	5,000	636	1,500	-	1,500
Risk Management	3,000	2,392	3,650	-	3,650
Salvage & Disposal	2,500	490	1,500	-	1,500
Insurance (General Liability & Auto)	18,000	17,035	19,800	-	19,800
TOTALS	200,700	182,118	226,950	-	226,950

Fiduciary Education & Travel

Staff, trustees and service providers to StanCERA have a fiduciary responsibility to the fund. As such, it is imperative that continuous education be provided. The Board of Retirement consists of nine members and one alternate. Continuing education for Board of Retirement Trustees is required by law. \$66,000 has been set aside to accommodate **Trustee Fiduciary Education**. This is an increase of 53.49% from prior year due to more trustees attending trainings and conferences.

With StanCERA's needs for education in investment, tax, actuarial and the benefits arenas, maintaining this budget allows for Board of Trustees and staff to receive appropriate training and is in line with the Retirement Board's Strategic Plan goal to keep current and up to date. \$35,000 is set aside for **Staff Education** and associated travel expenses which includes possible expenses for the two new employees.

The \$72,500 budgeted for **Insurance** includes the estimated cost of Automobile Liability, General Liability and Fiduciary insurances in Fiscal Year 2019-2020. The Fiduciary Insurance annual coverage cost is expected to increase. It will be based on the 6/30/2018 fund balance and past experience. In addition staff is reviewing other vulnerabilities to the system that might be well served by further coverage.

Professional Publications and Memberships are important to the continuing education of staff and trustees. The Wall Street Journal (WSJ) and other subscriptions provide key information to fiduciaries as well as memberships in specific associations. A budgeted amount of \$18,700 is in line with this fiscal year's estimated expenditures with a small increase for additional publications for the two new employees. Publications from and memberships in specific organizations continues to provide high quality education and access to pension and investment information to Board Trustees and staff.

DESCRIPTION	Approved FY 18/19 Budget including I.T.	FY 18/19 Estimated Expenditures	Fiscal Year 2019-2020 Requested Budget	CODE SECTION 31580.2(b) Technology	Fiscal Year 2019-2020 Total Budget Request
<i>Fiduciary Education & Travel</i>					-
Professional Subscriptions	6,000	5,340	6,600	-	6,600
Professional Memberships	11,000	10,345	12,100	-	12,100
Staff Education & Travel	28,000	31,328	35,000	-	35,000
Trustee Education & Travel	43,000	66,035	66,000	-	66,000
Trustee Meeting Allowance	14,500	8,700	14,500	-	14,500
Insurance (Fiduciary & Auto)	76,976	65,910	72,500	-	72,500
TOTALS	179,476	187,658	206,700	-	206,700

Capital Expenditures

The budgeted **Depreciation** of \$170,000 includes the Tyler computer software, 12th Street offices, tenant improvements, furniture, phone systems, audio system, security monitoring systems, and the Arrivos document imaging system. The new pension administration system will not start depreciating until we go live with it in the spring of 2020.

The bulk of the current **Capital Expenditures** budget request of \$1,755,316 is attributed to the new pension software system. \$50,000 has been carried over from the prior year to update and redesign StanCERA's website and \$50,000 has been carried over from the prior year for the 12th Street Lobby Upgrade.

DESCRIPTION	Approved FY 18/19 Budget including I.T.	FY 18/19 Estimated Expenditures	Fiscal Year 2019-2020 Requested Budget	CODE SECTION 31580.2(2)(b) Technology	Fiscal Year 2019-2020 Total Budget Request
Capital Expenditures					-
Pension Administration System	1,965,097	591,587	-	1,060,316	1,060,316
I.T. Project Management & Oversight	610,000	609,842	-	695,000	695,000
Audio Visual Equipment	15,000	-	-	-	-
6th Floor Lobby Upgrade	-	-	TBD	-	-
12th St Lobby Upgrade	50,000	-	50,000	-	50,000
Board Room Tenant Improvements	300,000	291,077	-	-	-
Website Redesign	50,000	-	-	50,000	50,000
TOTALS	2,990,097	1,492,506	50,000	1,805,316	1,855,316
Capital Depreciation	185,000	79,200	170,000	-	170,000

Non- Administrative Expenses

Section 31596.1 of the CERL states: the following expenses shall not be considered a cost of administration to the retirement system, but shall be considered as a reduction in earnings from those investments or a charge against the assets of the retirement system as determined by the Board. These expenses are reported in the audited financial statements presented to the Board of Retirement in the Comprehensive Annual Financial Report.

- Actuarial Fees
- Investment Consultant Fees
- Attorney Fees –directly related to an investment
- Investment Manager Fees
- Custodial Bank Fees.

- VII. RISK: Government Code section 31580.2 allows for expenditures for administrative services (other than software, hardware and computer technology consulting services) to be the greater of 0.21% of the accrued actuarial liability or \$2,000,000. In Fiscal Year 2019-2020, we continue to exercise prudence in budgeting administrative expenses and are submitting a budget which is only 0.11% of the accrued actuarial liability and well below the allotted legal amount.
- VIII. STRATEGIC PLAN: Strategic Objective IV: Refine StanCERA's business and policy practices in ways that enhance stakeholder awareness, the delivery of member services and the ability of the Organization to administer the System effectively and efficiently.

- IX. ADMINISTRATIVE BUDGET IMPACT: A total of \$5,212,930 is requested for all operating expenses in Fiscal Year 2019-2020 including the \$2,009,416 related to the new pension software and other technology related projects. Overall, the proposed budget for Fiscal Year 2019-2020 is flat with a decrease of \$1,392,086 from the prior fiscal year reflecting a decrease in the salary budget for the I.T. Specialist and lower cost for the new pension system software implementation.


Natalie Davis, Fiscal Services Manager


Rick Santos, Executive Director

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION FISCAL YEAR 2019-2020 PROPOSED BUDGET						
	Fiscal Year 2018-2019 Final Budget	Fiscal Year 2018-2019 Estimated Expenditures	Fiscal Year 2019-2020 Admin Services	Technology Adjustment \$31580.2(b)	Fiscal Year 2019-2020 Budget Request	Percent change from prior year budget
SALARIES & BENEFITS						
Salary and Wages	1,269,689	942,974	1,180,000	-	1,180,000	
Project Help Wages	40,000	28,896	82,000	-	82,000	
Information Technology Wages & Benefits	125,856	-	-	-	-	
Employee Benefits	699,535	535,988	691,491	-	691,491	
Salaries & Benefits	2,135,080	1,507,858	1,953,491		1,953,491	-8.51%
TECHNOLOGY						
Tyler Software Maint	50,000	52,590	54,440	-	54,440	
Tyler Disaster Maint	15,000	12,751	13,500	-	13,500	
Tegrit Hosting Fees	78,000	78,000	-	78,000	78,000	
I.T. Consulting Services	60,000	45,400	-	50,000	50,000	
Software Licenses & Fees	15,000	560	10,000	-	10,000	
StanCERA Website	2,500	220	2,500	-	2,500	
SBT - Data Processing Services	40,000	43,740	52,700	-	52,700	
SBT - Telecommunications	7,500	6,930	7,600	-	7,600	
SBT - Embedded Employees	-	9,600	-	57,600	57,600	
Computers & Office Equipment	20,000	23,865	6,500	18,500	25,000	
Copier Lease & Maint	12,000	5,900	10,000	-	10,000	
Technology	300,000	279,556	157,240	204,100	361,340	-47.59%
Legal & Professional Services						
Legal Counsel - Disability	150,000	55,500	120,000	-	120,000	
Legal Counsel - O'Neal vs StanCERA	200,000	185,590	150,000	-	150,000	
Reimbursement from Travelers Ins	-	(233,115)	(60,000)	-	(60,000)	
Legal Counsel - General	60,000	64,030	60,000	-	60,000	
Legal Counsel - Domestic Relation Orders	20,000	46,600	50,000	-	50,000	
Legal Counsel - StanCERA vs Buck	50,000	2,500	20,000	-	20,000	
Medical Exams, Reviews, Hearings	20,000	28,725	30,000	-	30,000	
Auditing Services	47,250	46,500	46,500	-	46,500	
Other Professional Services	30,000	980	10,000	-	10,000	
Legal & Other Professional & Services	577,250	197,310	426,500		426,500	-26.12%
GENERAL OPERATIONS & CONDOMINIUM						
Office Supplies	15,000	4,320	7,000	-	7,000	
Other Office Expense	10,000	6,930	8,000	-	8,000	
6th Floor Maint	1,500	-	1,500	-	1,500	
6th Floor Janitorial & Supplies	22,353	22,600	25,000	-	25,000	
6th Floor Security	10,000	430	500	-	500	
6th Floor taxes (Downtown Redevelopment)	1,600	1,218	1,250	-	1,250	
General Operations & Condominium	60,453	35,498	43,250		43,250	-28.46%
COMMUNICATION & PRINTING						
Member Statements, Trustee Elections	34,000	21,670	30,000	-	30,000	
Postage	40,000	38,450	45,000	-	45,000	
Communication & Printing	74,000	60,120	75,000		75,000	1.35%
COUNTY SUPPORT & BUILDING SERVICES						
Building Maintenance	45,000	31,160	45,000	-	45,000	
Building Janitorial	1,200	15,450	20,000	-	20,000	
Building Security	45,000	38,275	45,000	-	45,000	
Building Utilities	40,000	32,870	40,000	-	40,000	
Auditor	18,000	11,180	12,000	-	12,000	
CEO/Personnel (true up)	15,000	16,725	18,500	-	18,500	
Central Services, Mail Room, Salvage	8,000	15,905	20,000	-	20,000	
Purchasing	5,000	636	1,500	-	1,500	
Risk Management	3,000	2,392	3,650	-	3,650	
Salvage & Disposal	2,500	490	1,500	-	1,500	
Insurance (General Liability & Auto)	18,000	17,035	19,800	-	19,800	
County Support Services & Building Services	200,700	182,118	226,950		226,950	13.08%
FIDUCIARY EDUCATION & TRAVEL						
Professional Publications & Subscriptions	6,000	5,340	6,600	-	6,600	
Staff Education & Travel	28,000	31,328	35,000	-	35,000	
Professional Memberships	11,000	10,345	12,100	-	12,100	
Trustee Education & Travel	43,000	66,035	66,000	-	66,000	
Trustee Meeting Allowance	14,500	8,700	14,500	-	14,500	
Insurance (Fiduciary)	76,976	65,910	72,500	-	72,500	
Fiduciary Education & Travel	179,476	187,658	206,700		206,700	15.17%
CAPITAL EXPENDITURES						
Pension Administration System	1,965,097	591,587	-	1,060,316	1,060,316	
PAS Project Management & Oversight	610,000	609,842	-	695,000	695,000	
Audio Visual Equipment	15,000	-	-	-	-	
6th Floor Lobby Upgrade	-	-	TBD	-	-	
12th St Lobby Upgrade	50,000	-	50,000	-	50,000	
Board Room Tenant Improvements	300,000	291,077	-	-	-	
Website redesign & implementation	50,000	-	-	50,000	50,000	
Capital Expenditures	2,990,097	1,492,506	50,000	1,805,316	1,855,316	-37.95%
Capital Depreciation	185,000	79,200	170,000	-	170,000	
6th Floor Lease Revenue	(97,040)	(101,941)	(105,617)	-	(105,617)	
TOTAL BUDGET	6,605,016	3,919,883	3,203,514	2,009,416	5,212,930	-21.08%



Stanislaus County Employees' Retirement Association

832 12th Street, Ste. 600, Modesto, CA 95354 • PO Box 3150, Modesto, CA 95353 • www.stancera.org • 209-525-6393 • 209-558-4976 Fax

May 28, 2019

Retirement Board Agenda Item

TO: Retirement Board

FROM: Rick Santos, Executive Director

- I. SUBJECT: StanCERA Quarterly Newsletter
- II. ITEM NUMBER: 8.d
- III. ITEM TYPE: Information
- IV. STAFF RECOMMENDATION: None
- V. ANALYSIS: The StanCERA newsletter is an informative tool, for our members, keeping them aware of current issues facing public retirement systems as well as any events occurring within our organization.

StanCERA staff shall begin publishing the newsletter on a quarterly basis, limiting the content to one page, consisting of informative information such as:
 - Important Dates
 - Plan Announcements
 - Fund/Investment Information
 - Legislative/Legal Updates.
- VI. RISK: None
- VII. STRATEGIC PLAN: Strategic Objective IV: Refine StanCERA's business and policy practices in ways to enhance stakeholder awareness, the delivery of member services and the ability of the Organization to administer the System effectively and efficiently.
- VIII. ADMINISTRATIVE BUDGET IMPACT: None

Lisa Frazer, Member and Employer Services Manager

Rick Santos, Executive Director



May 28, 2019

Retirement Board Agenda Item

TO: Retirement Board

FROM: Natalie Elliott, Fiscal Services Manager

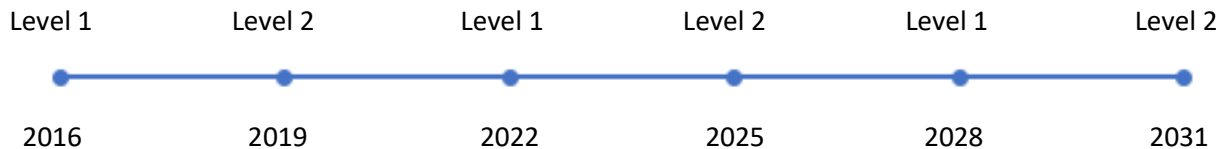
- I. SUBJECT: Proposed Actuarial Audit Schedule
- II. ITEM NUMBER: 8.e.
- III. ITEM TYPE: Discussion and Action
- IV. STAFF RECOMMENDATION: Perform a Level 1 actuarial audit every six years and a Level 2 actuarial audit performed every six years starting with the third year after the Level 1 actuarial audit.
- V. EXECUTIVE SUMMARY: An actuarial audit enhances the credibility of the actuarial valuation process by providing independent assurance that it was performed in accordance with actuarial standards of practice. It increases the public's trust that the pension trust is being governed appropriately, it can provide recommendations on improvement of the actuarial valuation process, and an actuarial audit can lead to the remediation of errors that might otherwise go undetected.
- VI. ANALYSIS: There are three levels of actuarial audits:
 - Level 1 – the reviewing actuary replicates the original actuarial valuation completely reviewing the consulting actuary's methods and assumptions for reasonableness
 - Level 2 – uses a sample of the plans participant data to test the results of the consulting actuaries and reviews the consulting actuary's methods and assumptions for reasonableness
 - Level 3 – only a review of the consulting actuary's methods and assumptions for reasonableness

At the April 22, 2008 StanCERA Retirement Board meeting, the Retirement Board awarded Milliman Actuaries the Actuarial Audit Services contract to perform a Level 1 actuarial audit on Buck Consultants 2006 actuarial valuation and the 2003-2006 actuarial experience study. This actuarial audit uncovered several assumptions made by Buck Consultants that were outside of the normal practice for publicly funded systems. Since then, two other Level 1 actuarial audits (three years apart) have taken place, the last one at a cost of \$47,960.


StanCERA is currently having a Level 1 actuarial audit performed every three years on both the actuarial valuation and the triennial experience study as directed by the Board of Retirement. An inquiry to other pension systems that belong to the Public Pension Financial Forum (P2F2) group was done to see how often other systems required an actuarial audit to be performed. Twelve systems responded with the following results:

- 2 every three years (experience study audit only for one)
- 1 every three to four years
- 1 every three to five years
- 1 every five to seven years
- 1 every ten years
- 6 every five years

GFOA Best Practices states, "Provide for actuarial audits at least once every five years." This is designed to ensure that more than one actuary has reviewed or replicated the actuarial valuation during any five-year period. When a new actuary is awarded a contract, the new actuary will typically perform a reconciliation valuation of the previous actuarial valuation, therefore, during that year another actuarial audit is not needed. Fifty percent of the systems responding to the inquiry have the Level 1 actuarial audit performed every five years keeping with GFOA's Best Practices. Having a Level 1 actuarial audit done every five years will provide times when the Level 1 actuarial audit will fall on a year that the triennial experience study was not performed. Therefore, staff recommends having the Level 1 actuarial audit performed every six years and a Level 2 actuarial audit performed every six years starting with the third year after the Level 1 actuarial audit. Since the last Level 1 actuarial valuation was done in 2016 on the July 1, 2012 through June 30, 2015 triennial experience, the first Level 2 actuarial audit would be performed on the July 1, 2015 through Jun 30, 2018 triennial experience study and the June 30, 2018 actuarial valuation. Below is a time line of how this looks:



- VII. RISK: None, as an actuarial audit will be performed every three years.
- VIII. STRATEGIC PLAN: Strategic Objective IV: Refine StanCERA's business and policy practices in ways that enhance stakeholder awareness, the delivery of member services and the ability of the Organization to administer the System effectively and efficiently.
- IX. ADMINISTRATIVE BUDGET IMPACT: None


Natalie Davis, Fiscal Services Manager


Rick Santos, Executive Director