StanCERA Stanislaus County Employees' Retirement Association

AGENDA

BOARD OF RETIREMENT **November 24, 2020**
Boardroom **1:30 p.m.**
832 12th Street Suite 600 Modesto, CA 95353

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.

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.

AUDIO/VIDEO: All Board of Retirement regular meetings are audio and visually recorded. Audio/Video 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.

Pursuant to California Governor Gavin Newsom's Executive Order N-29-20, The Board of Retirement ("StanCERA") is authorized to hold public meetings via teleconference and to make public meetings accessible telephonically or otherwise electronically to all members of the public who wish to participate and to provide public comment to the local legislative body during the current health emergency. We are unable to safely distance ourselves due to the COVID-19 Pandemic guidelines in our own boardroom. StanCERA's offices are currently closed to public access. The StanCERA Boardroom is being utilized for some Trustees and Staff who will be attending in person. All other Trustees, Staff and Consultants unable to attend in person will be attending remotely via teleconference.

If you wish to make either a general public comment or to comment on a specific agenda item in writing, please submit your comment (if your comment pertains to a specific agenda item, please include the agenda item number in the subject line) via email or fax prior to the meeting. Written comments regarding StanCERA's agenda items can be submitted by 4:30 p.m. on the day before the board meetings via email to Gomesk@Stancera.org or via fax to 209-558-4976. Pursuant to Government Code section 54954.3(a), Public Comment or public comment on an Agenda Item are limited to (400 words or less).

The public will not be granted access to Board of Retirement Boardroom to attend StanCERA's meeting. If you wish to join the meeting by teleconference as a member of the public and listen to the meeting, then please dial in using your phone and call **209-689-0007 Access Code: 414752**
When directed to do so please press 5* on your phone to alert the Chair you wish to a public comment. Pursuant to Government Code section 54954.3(a), Public Comment or public comment on an Agenda Item are limited to three (3) minutes StanCERA will provide its best effort to fulfill the request.

In compliance with the Americans with Disabilities Act, a person requiring an accommodation, auxiliary aid, or service to participate in this meeting should contact StanCERA at (209) 525-6393, as far in advance as possible but no later than 48 hours before the scheduled event.

Agendas and Minutes are on our website at www.stancera.org.

1. Call Meeting to Order
2. Pledge of Allegiance
3. Roll Call
4. Announcements
5. Public Comment
6. Consent Items
    a. Approval of the October 27, 2020 Meeting Minutes View
    b. Information Technology Solutions (ITS) Project Update View
    c. Approval of Service Retirement(s) – Government Code Sections 31499.14, 31670, 31662.2 & 31810
        1. Boddie, William – Stanislaus County – Effective 11-23-2020
        2. Busch, Georgia – Stanislaus County – Effective 11-13-2020
        3. Borgess, Michele– Stanislaus County – Effective 11/18/2020
        4. Davis, Natalie – Stanislaus County – Effective 11-21-2020
        5. Greer, Debra – Stanislaus County – Effective 11-18-20
        6. Jara, Aracelia – Stanislaus County – Effective 11-03-2020
        7. Perez, Maria Sallie – Stanislaus County – Effective 10-16-2020
        8. Rettberg, Karen – Stanislaus County – Effective 10-30-2020
        9. Zapata, Vanessa – Superior Court – Effective 09-11-2020
    d. Applications for Deferred Retirement(s) – Government Code Section 31700
        1. Chandler, Jereme – Stanislaus County – Effective 08/03/20
        2. Flores, Thomas – Stanislaus County – Effective 09-07-20
        3. Parmenter, Laura – Courts – Effective 9/3/2020
        4. Pearson, Eric – Stanislaus County – Effective 9/16/2020
        5. Slater, Aaron – City of Ceres – Effective 8/4/2020
        6. Tyler, Becky – Stanislaus County – Effective 6/29/20
    e. Investment Matrix View
7. Investment
    a. NEPC October Flash Report
    b. NEPC Investment Performance 2020 Quarter 3 View
    c. StanCERA 2020 Asset Liability Study View
8. Administrative
    a. Alameda Supreme Court Update

9. STANDING COMMITTEES

a. Internal Governance Committee

1. The June 30, 2020 and 2019 Comprehensive Annual Financial Report (CAFR) and Independent Auditor Report
Agenda Item View Attachment 1 View Attachment 2 View

10. 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)

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

12. Adjournment

StanCERA

Stanislaus County Employees' Retirement Association

BOARD OF RETIREMENT MINUTES
October 27, 2020

1. Call Meeting to Order

Meeting called to order 1:30 pm by Trustee O'Neal, Chair

2. Pledge of Allegiance

3. Roll Call

Trustees Present:
Michael O'Neal, Jim DeMartini, Darin Gharat,
and,
Trustees Present by Conference Call Mike Lynch, Jeff Mangar, Donna Riley Jeff Grover, Mandip Dhillon, , Rhonda Biesemeier, Alternate Retiree Representative,

Trustees Absent: Joshua Clayton

Staff Present:
Rick Santos, Executive Director
Stan Conwell, Retirement Investment Officer
Kellie Gomes, Executive Board Assistant
Natalie Davis, Fiscal Services Manager
Others Present by Conference Call:
Lisa Fraser, Benefits Manager
Fred Silva, General Legal Counsel
Daniel Hennessy, NEPC Investment Consultant
Sam Austin, NEPC Investment Consultant
Steve Hempler, VERUS Investment Consultant
Faroz Shooshani, VERUS Investment Consultant

4. Announcements

Trustee O'Neal had the following announcements:
Due to the COVID-19 Pandemic, StanCERA's offices are currently closed to public access. We are meeting today in the Stanislaus County Board of Supervisors Chambers to accommodate 6ft spacing for this meeting. If you are joining the meeting today by teleconference as a member of the public your phone will be muted. If you would like to comment on an item today please email your comments to gomesk@stancera.org or fax them to 209 558-4976. Today's agenda was posted with the same information and allowed for public comments to be sent ahead of today's meeting as well. We will make every effort to read all comments received during our meeting today if we are unable to present your public comment today it will be agenized and presented at our next meeting.

Kellie Gomes stated she would like to pull Item 8.e and will bring it back next month; County Counsel asked for more time to discuss and resolve this matter. Please note that the Chair on the minutes for September's meeting was noted incorrectly and will be corrected to reflect Jeff Grover as the Chair for that meeting Jonathan Goulding, Alternate Safety Representative will no longer sit on the Board of Retirement as a trustee. He took another job in a system that is not sponsored by StanCERA Retirement

5. Public Comment

None

6. Consent Items

a. Approval of the September 17, 2020 Meeting Minutes

b. Information Technology Solutions (ITS) Project Update

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

1. Adams, Janice – HSA – Effective 10-24-20
2. Bianchi, Ann – BHRS – Effective 10-03-20
3. Clifton, Gregg – Sheriff – Effective 10-17-20
4. De Jesus, Mario – CSA – Effective 10-07-20
5. Knittel, Joseph – Sheriff – Effective 08-01-20
6. Parker, Rhonda – BHRS – Effective 10-06-20
7. Todd, Lijiljana – GSA – Effective 09-23-20
8. Ulloa, Sheri – Superior Court – Effective 10-31-20
9. Vercelli, Dawn – BHRS – Effective 10-10-20

d. Application for Disability Retirement – Government Code Section 31724

1. Bays, Ross – City of Ceres– Effective 06-26-20

e. 2020 Executive Director Goals Update - Quarter 3

f. Investment Matrix

g. Private Markets Commitment Notice – Clayton, Dubilier & Rice Fund XI (CD&R XI) Agenda Item

Motion was made by Trustee Gharat and seconded by Trustee Mangar to accept the consent items as presented
Roll Call Vote was as follows:

Michael O'Neal, YES
Jim DeMartini, YES
Donna Riley, YES
Jeff Mangar, YES
Darin Gharat, YES
Mike Lynch, YES
Jeff Grover, YES
Mandip Dhillon YES
Motion carried unanimously

7. <u>Investment</u>

   a. Performance

      1. NEPC September Flash Report
      2. StanCERA Auxiliary Investment Report as of June 30, 2020
         - AB2833 Auxiliary Report
         - Investment Fee Summary, Value Added and Cash Flow Reports
      3. StanCERA liquidity reconciliation
      4. Verus Private Markets (Q2) (Private Credit/Equity)

   b. Asset Allocation – NEPC

      1. Potential asset mixes and expectations for the future
      2. Private Investments; Role in a well balanced portfolio

   c. Verus Private Market

      1. Private Market Asset Class Expectations

Trustee Gharat Left the Meeting – 3:15pm

8. <u>Administrative</u>

   a. All Staff Update

   b. SACRS 2020 Fall Business Meeting and Voting Delegates

Motion was made by Trustee O'Neal and seconded by Trustee Riley to appoint Trustee O'Neal as the voting proxy and Trustee Biesemeier as that alternate proxy for the SACRS 2020 Fall Virtual Business Meeting.

Roll Call Vote was as follows:

Michael O'Neal, YES	Darin Gharat, YES
Jim DeMartini, YES	Mike Lynch, YES
Donna Riley, YES	Jeff Grover, YES
Jeff Mangar, YES	Mandip Dhillon YES

Motion carried unanimously

Motion was made by Trustee O'Neal and seconded by Trustee Mangar to accept the SACRS 2020 Fall business Meeting as presented for the SACRS 2020 Fall Virtual Business Meeting.

Roll Call Vote was as follows:

Michael O'Neal, YES	Darin Gharat, YES
Jim DeMartini, YES	Mike Lynch, YES
Donna Riley, YES	Jeff Grover, YES
Jeff Mangar, YES	Mandip Dhillon YES

Motion carried unanimously

c. 415 IRS (b) Limit Update

d. Alameda Supreme Court Update

e. Retirement Board Authority
Item pulled to be discussed at the November Board Meeting.

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)

No Classed Session was Held

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

Trustee O'Neal express gratitude for a job well done by StanCERA staff on the new Pension Administration System.

13. Adjournment

Meeting adjourned at 3:45 p.m.

Respectfully submitted,

Rick Santos, Executive

APPROVED AS TO FORM

By

Fred Silva, GENERAL LEGAL COUNSEL

Back to Agenda

StanCERA Stanislaus County Employees' Retirement Association

November 24, 2020
Retirement Board Agenda Item

TO: Retirement Board

FROM: Jamie Borba, Member and Employer Services Specialist

I. SUBJECT: Information Technology Solutions (ITS) Project

II. ITEM NUMBER: 6.b

III. ITEM TYPE: Information Only

IV. STAFF RECOMMENDATION: None

V. ANALYSIS: Three (3) Business and Systems Requirement Documents (BSRD's) and constructing the functionalities are currently being reviewed:

- Disability Application Workflow
- Benefit Estimate Workflow
- Web Portal – Personal/Contact information.

Staff's confidence in Arrivos continues to grow daily with minimal questions and assistance. Work is being processed in Arrivos through currently developed workflows and processes.

On December 1, 2020, Jamie Borba will resume her normal duties as full-time Member and Employer Services Specialist.

VI. RISK: None

VII. STRATEGIC PLAN: Strategic Objective II: Successful implementation/completion of the Pension Administration System (PAS).

VIII. ADMINISTRATIVE BUDGET IMPACT: None

Jamie Borba

Jamie Borba, Member and Employer Services Specialist

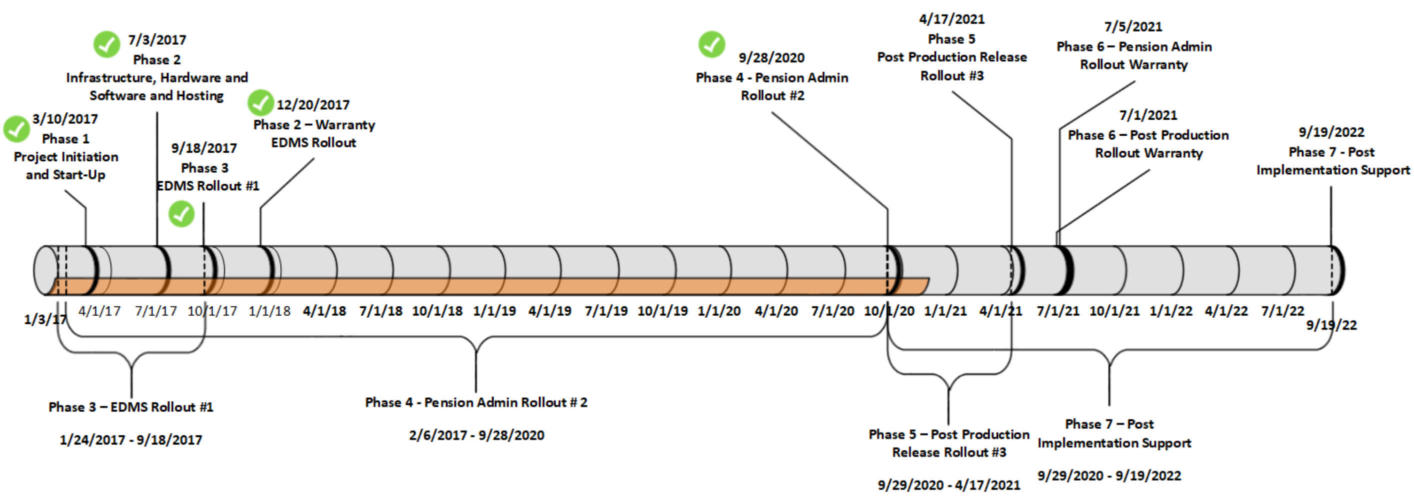
Lisa Frazer

Lisa Frazer, Member and Employer Services Manager

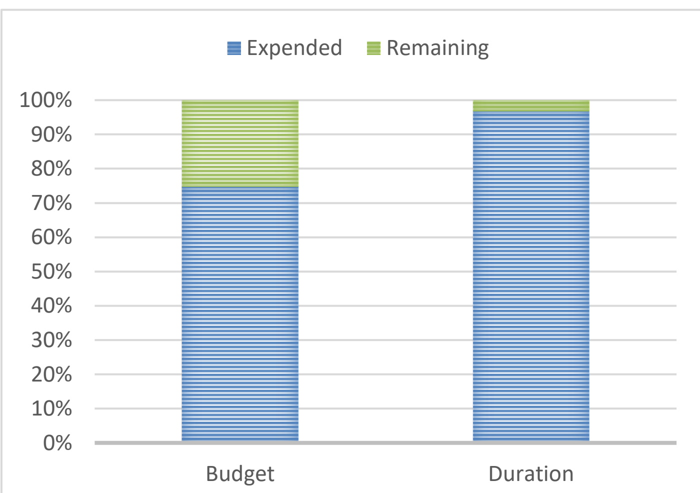
Rick Santos, Executive Director

PAS Implementation
Linea Bi-weekly Status Update

Sponsor:	Rick Santos	**Report Date:**	11-13-2020



Baseline 12/01/2016 STATUS



Linea Budget as of 09/30/2020

Risks & Issues:

No new high-level risks have been identified at this time.

Accomplishments:

- Continued transition back to regular project activities including BSR delivery and scheduling design sessions.
- Tegrit continued resolution of Help Desk items by pushing bug fixes to production, as needed.
- Progress was made on defining remaining project work and future project timeline.
- Work continued to clean up go-live action items and resolved PIRs.

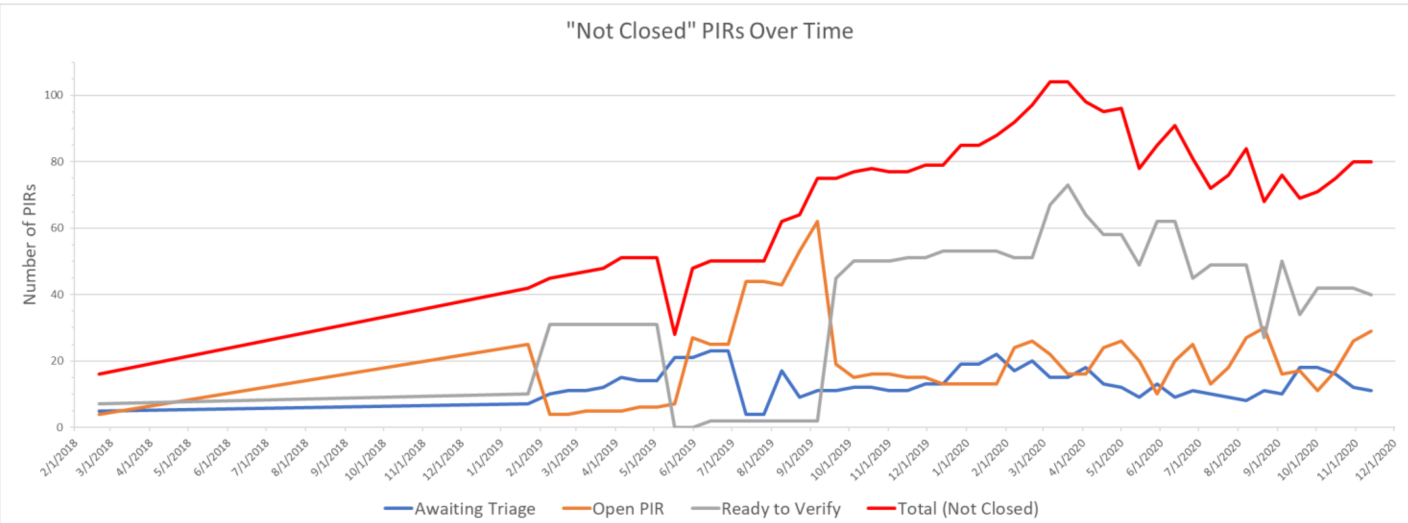
Upcoming:

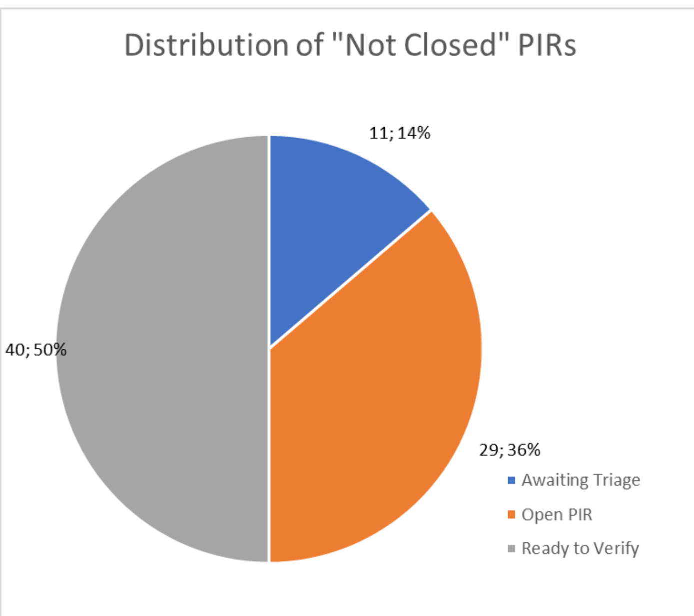
- Continued project planning and finalize timeline development for releases of future functionality.
- UAT Release R23 planned for 11/20/2020, with production release on 12/11/2020.
- Complete clean-up of leftover go-live action items and resolved PIRs.

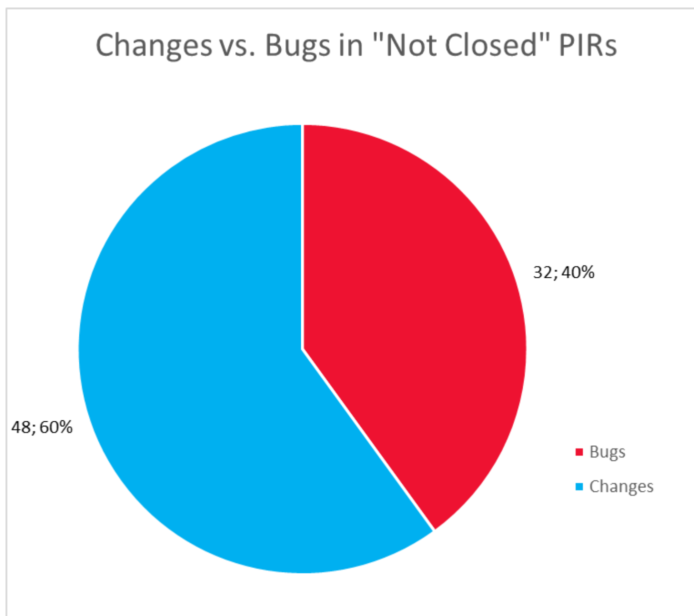
Ongoing Project Contributions

- 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 (BSR076, BSR079, BSR080).
- 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







November 24, 2020

Retirement Board Agenda Item

TO: Retirement Board

FROM: Stan Conwell, Retirement Investment Officer

I. SUBJECT: Investment Matrix

II. ITEM NUMBER: 6.e.

III. ITEM TYPE: Information Only

IV. STAFF RECOMMENDATION: N/A

V. ANALYSIS:

a) *Investment Program Activities & Governance:*

Much of investment staff's time and attention has been devoted to reviewing and refining potential asset allocation mixes. Many different mixes and potential asset classes were considered, including the option of reducing the private markets allocations. With the investment program's objectives in mind, a well-diversified set of asset mixes with varying degrees of risk and return were provided to the Board for consideration.

Staff also participated in the initial interviews for the Fiscal Manager III position. Regular meetings with Verus regarding the implementation of the private equity and private credit allocations continue. The number of potential funds in the pipeline have increased recently with two funds currently far enough along in the process to begin the legal due diligence phase. The pacing plan and private market compliance policy were also reviewed and discussed.

b) *Money Transfer Report:*

October:

From			To		
Manager	Asset Class	Amount	Manager	Asset Class	Amount
StanCERA Cash	Cash	$-2,154,329	Raven III, LP	Private Credit	$2,154,329

c) *Manager Meeting Notes:*

Dimensional Fund Advisors (DFA)

At the beginning of November, staff met with the regional director and Senior investment strategist for a fund and firm update. DFA manages a portfolio of short-term bonds that are a part of StanCERA's current risk mitigation sub-portfolio. DFA was added to the portfolio in 2017 when the functionally focused portfolio investment policy was first implemented. Topics of discussion included the fund guidelines and market developments including changes in the yield curve and credit spreads. Credit spreads did spike earlier this year but have since returned to levels below the long-term median. Additional time was spent on the composition and characteristics of both DFA and the benchmark before, during, and after the major market moves in March and April. The rest of the meeting focused on performance attribution and current positioning of the portfolio.

d) *Trainings/Conferences:*

The Director attended the virtual Society of Actuaries Annual Conference during the last week of October

VI. RISK: None

VII. STRATEGIC PLAN: N/A

VIII. ADMINISTRATIVE BUDGET IMPACT: NONE

Stan Conwell

Stan Conwell, Retirement Investment Officer

QUARTERLY PERFORMANCE REPORT

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

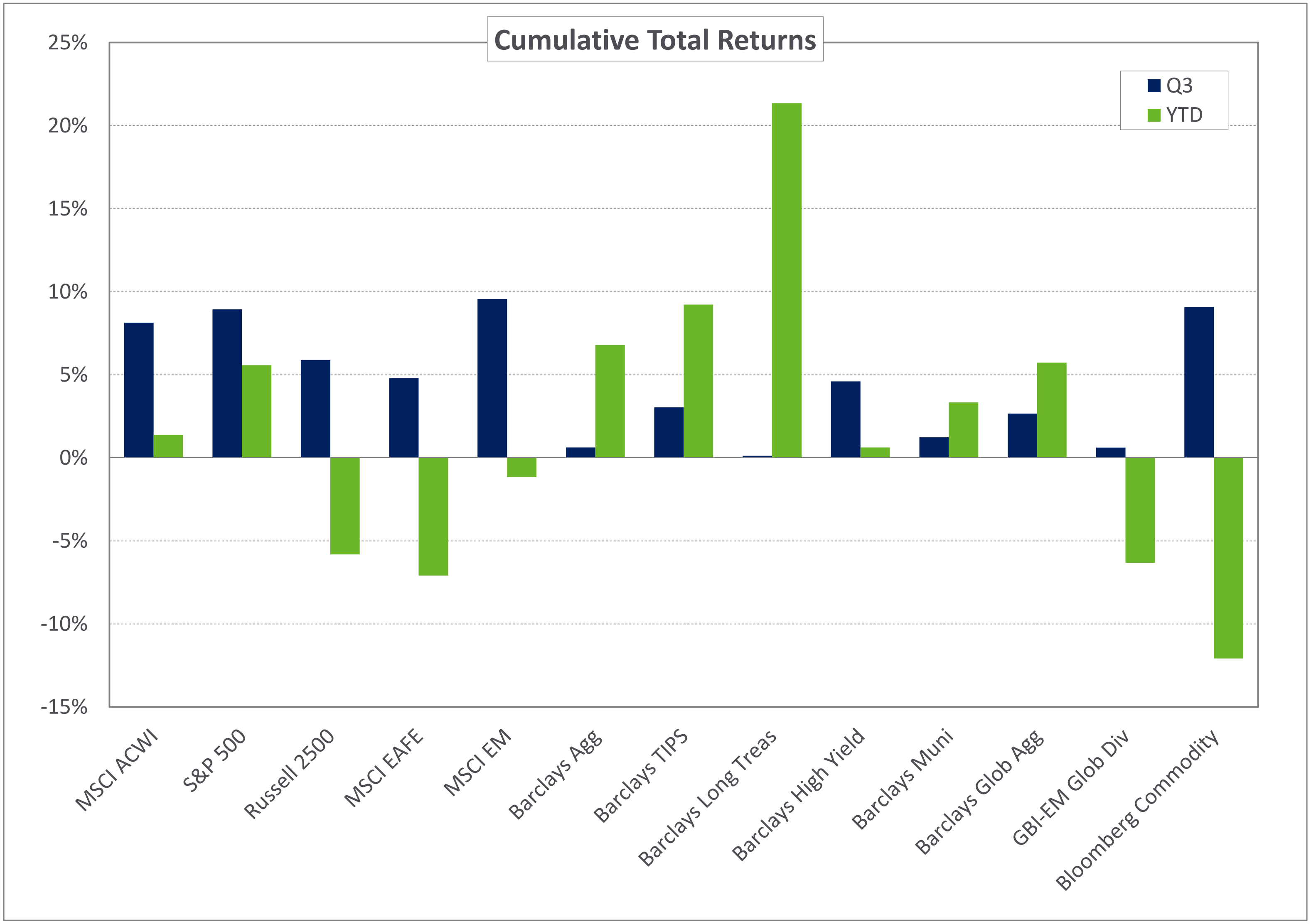
September 30, 2020

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

MARKET UPDATE

NEPC, LLC

RISK ASSETS RALLIED IN THE SEPTEMBER QUARTER



Source: S&P, Russell, MSCI, JPM, Bloomberg, FactSet

TRAILING ANNUAL INDEX PERFORMANCE

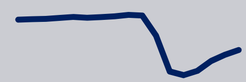
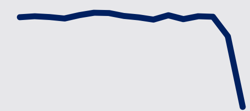
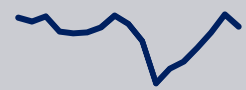
Equity							
	Sep-20	Q3	YTD	1 YR	3 YR	5 YR	10 YR
MSCI ACWI	-3.2%	8.1%	1.4%	10.4%	7.1%	10.3%	8.5%
S&P 500	-3.8%	8.9%	5.6%	15.1%	12.3%	14.1%	13.7%
Russell 1000	-3.7%	9.5%	6.4%	16.0%	12.4%	14.1%	13.8%
Russell 2000	-3.3%	4.9%	-8.7%	0.4%	1.8%	8.0%	9.9%
Russell 2500	-2.6%	5.9%	-5.8%	2.2%	4.5%	9.0%	10.8%
MSCI EAFE	-2.6%	4.8%	-7.1%	0.5%	0.6%	5.3%	4.6%
MSCI EM	-1.6%	9.6%	-1.2%	10.5%	2.4%	9.0%	2.5%

Credit							
	Sep-20	Q3	YTD	1 YR	3 YR	5 YR	10 YR
BC Global Agg	-0.4%	2.7%	5.7%	6.2%	4.1%	3.9%	2.4%
BC US Agg	-0.1%	0.6%	6.8%	7.0%	5.2%	4.2%	3.6%
BC Credit	-0.3%	1.5%	6.4%	7.5%	6.2%	5.7%	4.9%
BC US HY	-1.0%	4.6%	0.6%	3.3%	4.2%	6.8%	6.5%
BC Muni	0.0%	1.2%	3.3%	4.1%	4.3%	3.8%	4.0%
BC Muni HY	0.1%	3.1%	0.4%	1.3%	5.8%	6.0%	6.0%
BC TIPS	-0.4%	3.0%	9.2%	10.1%	5.8%	4.6%	3.6%
BC 20+ STRIPS	0.4%	0.2%	28.9%	21.3%	16.0%	11.3%	10.4%
BC Long Treasuries	0.4%	0.1%	21.3%	16.3%	11.9%	8.2%	7.2%
BC Long Credit	-0.5%	2.0%	8.0%	9.3%	8.6%	8.8%	7.3%
BC Govt/Credit 1-3 Yr	0.0%	0.2%	3.1%	3.7%	2.8%	2.1%	1.6%
JPM EMBI Glob Div	-1.9%	2.3%	-0.5%	1.3%	3.5%	6.1%	5.4%
JPM GBI-EM Glob Div	-2.0%	0.6%	-6.3%	-1.4%	0.2%	4.8%	0.5%

Real Assets							
	Sep-20	Q3	YTD	1 YR	3 YR	5 YR	10 YR
BBG Commodity	-3.4%	9.1%	-12.1%	-8.2%	-4.2%	-3.1%	-6.0%
Alerian Midstream Index	-10.5%	-9.4%	-36.2%	-34.8%	-11.9%	-4.5%	-
FTSE NAREIT Equity REITs	-3.3%	1.4%	-17.5%	-18.2%	0.2%	3.9%	7.9%

Source: S&P, MSCI, Russell, Barclays, JPM, Alerian, FTSE, FactSet

ECONOMIC DATA HAS BEGUN TO IMPROVE

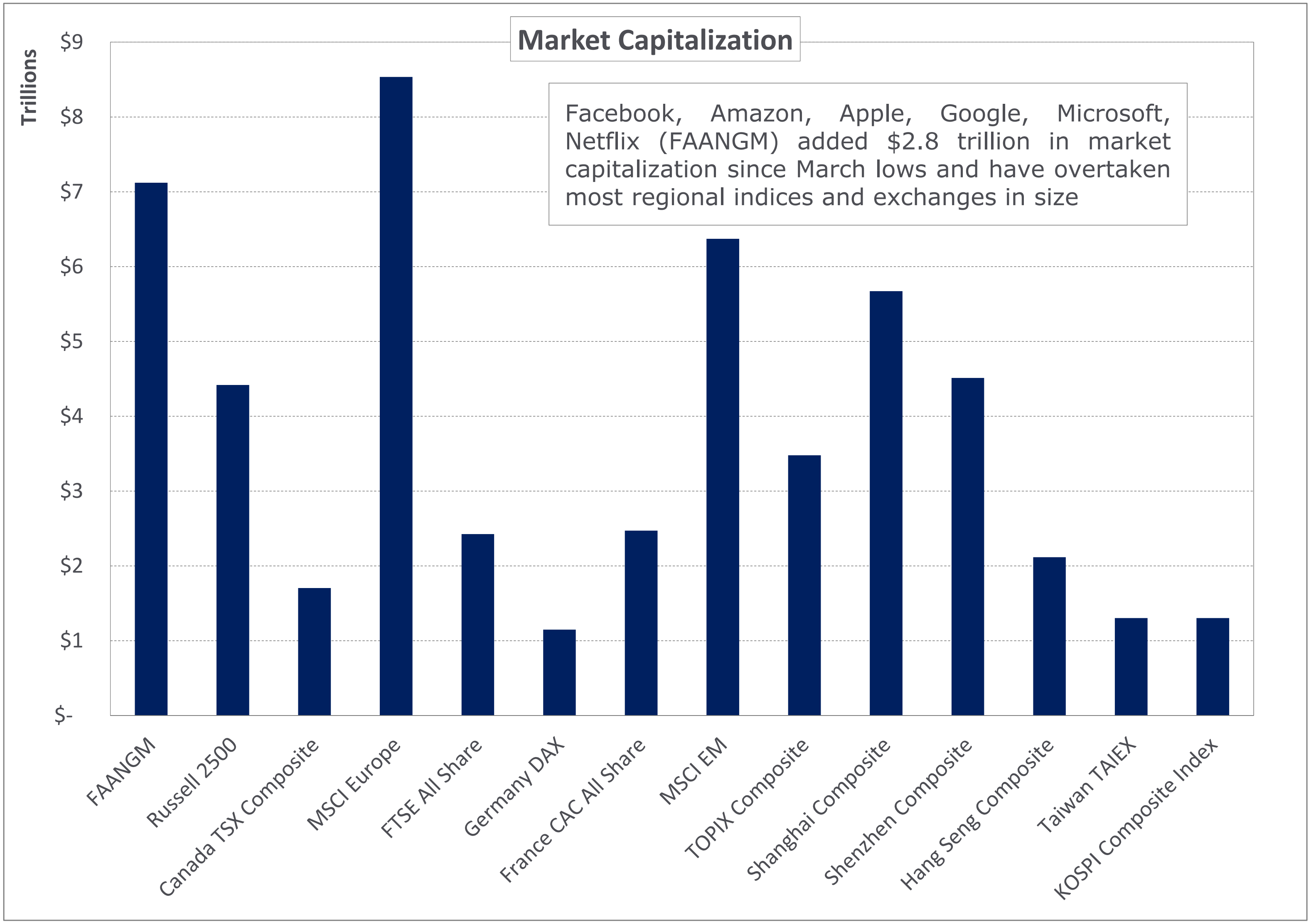
Metric	12/31/19	06/30/20	09/30/20	Trend
S&P 500 NTM Earnings Estimate	$177.8	$145.0	$157.6	
US Real GDP (QoQ%)	2.4%	-31.4%	25.4%[1]	
US 10 Year Breakeven Inflation	1.8%	1.3%	1.6%	
US Unemployment Rate	3.5%	11.1%	7.9%	
Continued Claims for Unemployment	1.7M	19.0M	11.8M[2]	
Federal Reserve Balance Sheet as % of Nominal GDP	19.2%	36.3%	32.9%	

Source: US Bureau of Labor Statistics, Federal Reserve, FactSet, NEPC
NTM represents next 12 months
[1]The 09/30/20 real GDP figure represents the consensus estimate from FactSet
[2]The 09/30/20 Continued Claims represents data as of 9/18/2020

FAANGM CONTINUED TO OUTPERFORM

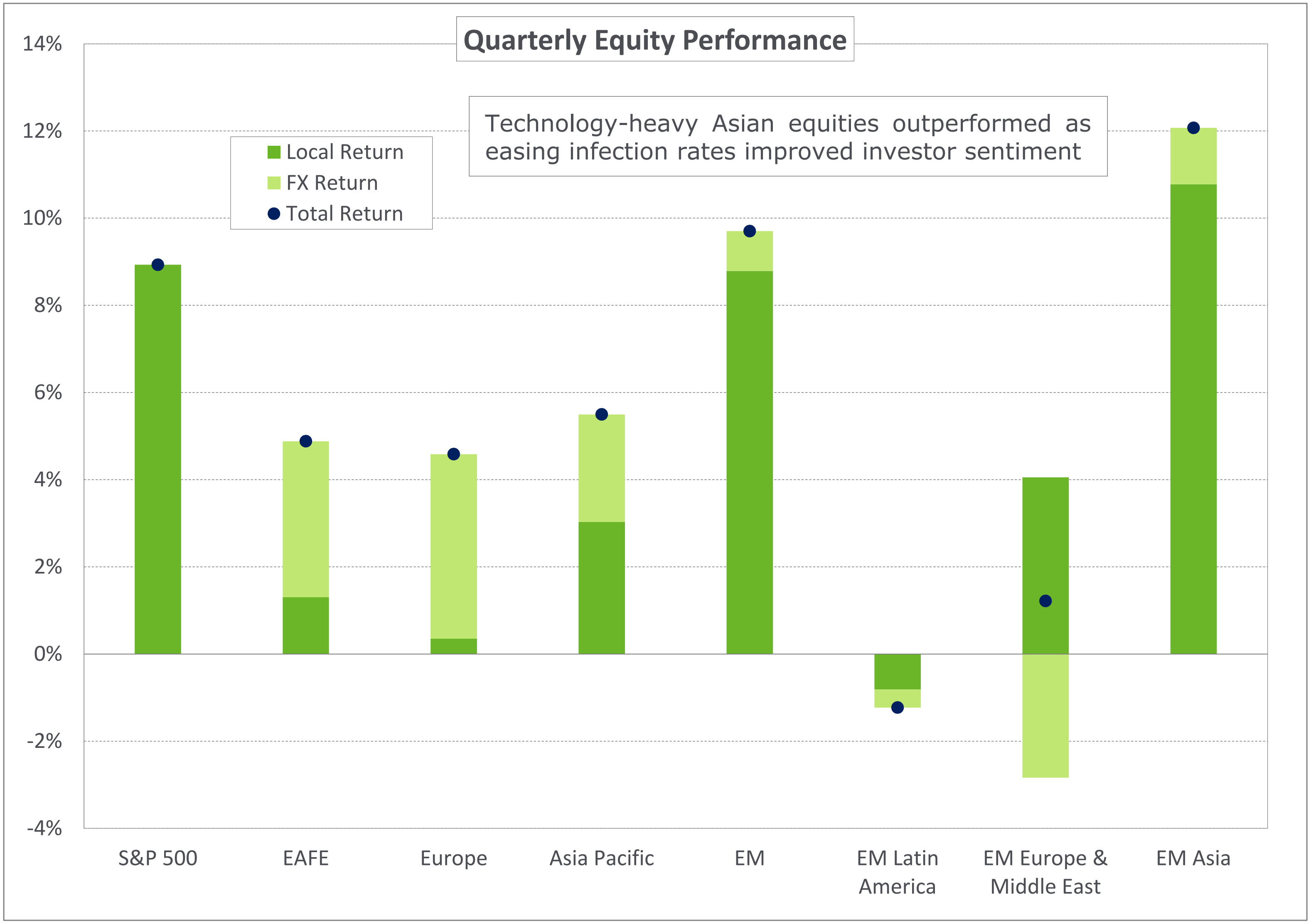
Source: S&P, FactSet
*FAANGM: Facebook, Apple, Amazon, Netflix, Google, Microsoft

FAANGM NOW LARGER THAN MOST INDICES



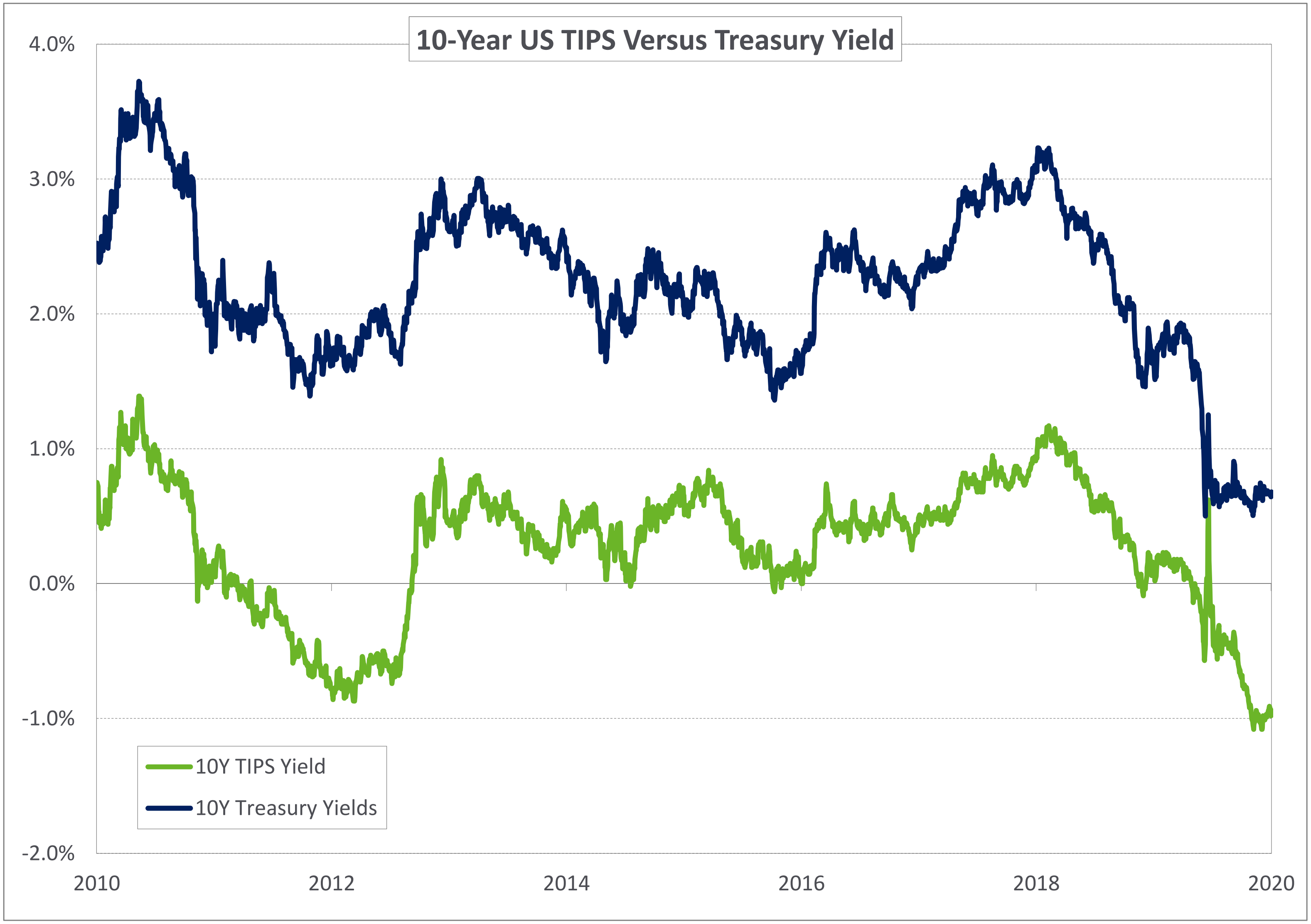
Source: MSCI, S&P, Russell, FTSE, DAX, CAC, TOPIX, SSE, SZSE, Hang Seng, TAIEX, KOSPI, FactSet

DOLLAR WEAKNESS BOLSTERED NON-US ASSETS



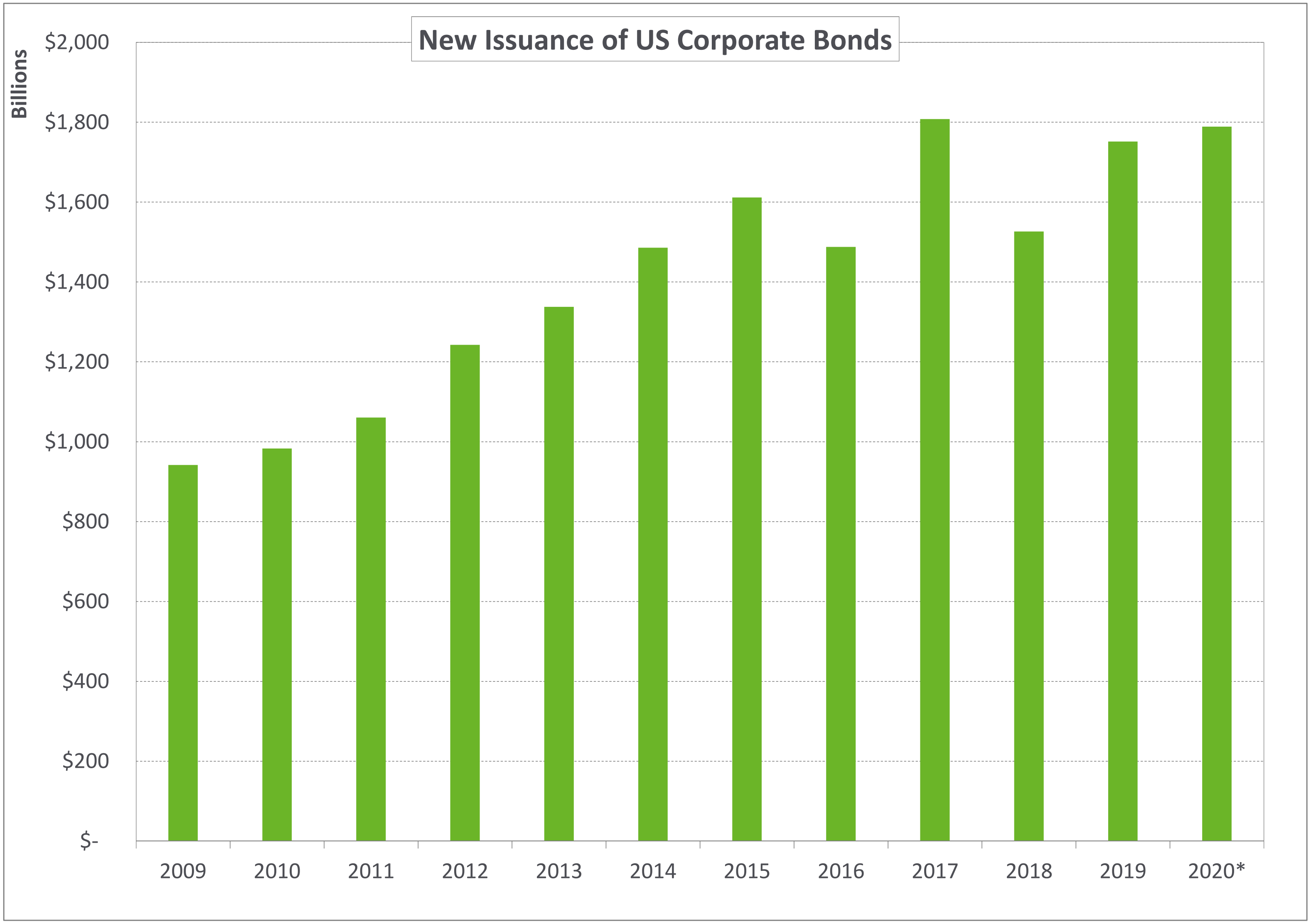
Source: S&P, MSCI, FactSet
Asia Pacific represents (from highest to lowest) Japan, China, Australia, Taiwan, South Korea, and Other
EM Europe & Middle East represents (from highest to lowest) Russia, Saudi Arabia, Qatar, Poland, United Arab Emirates, and Other

TREASURY YIELDS FELL TO HISTORICAL LOWS



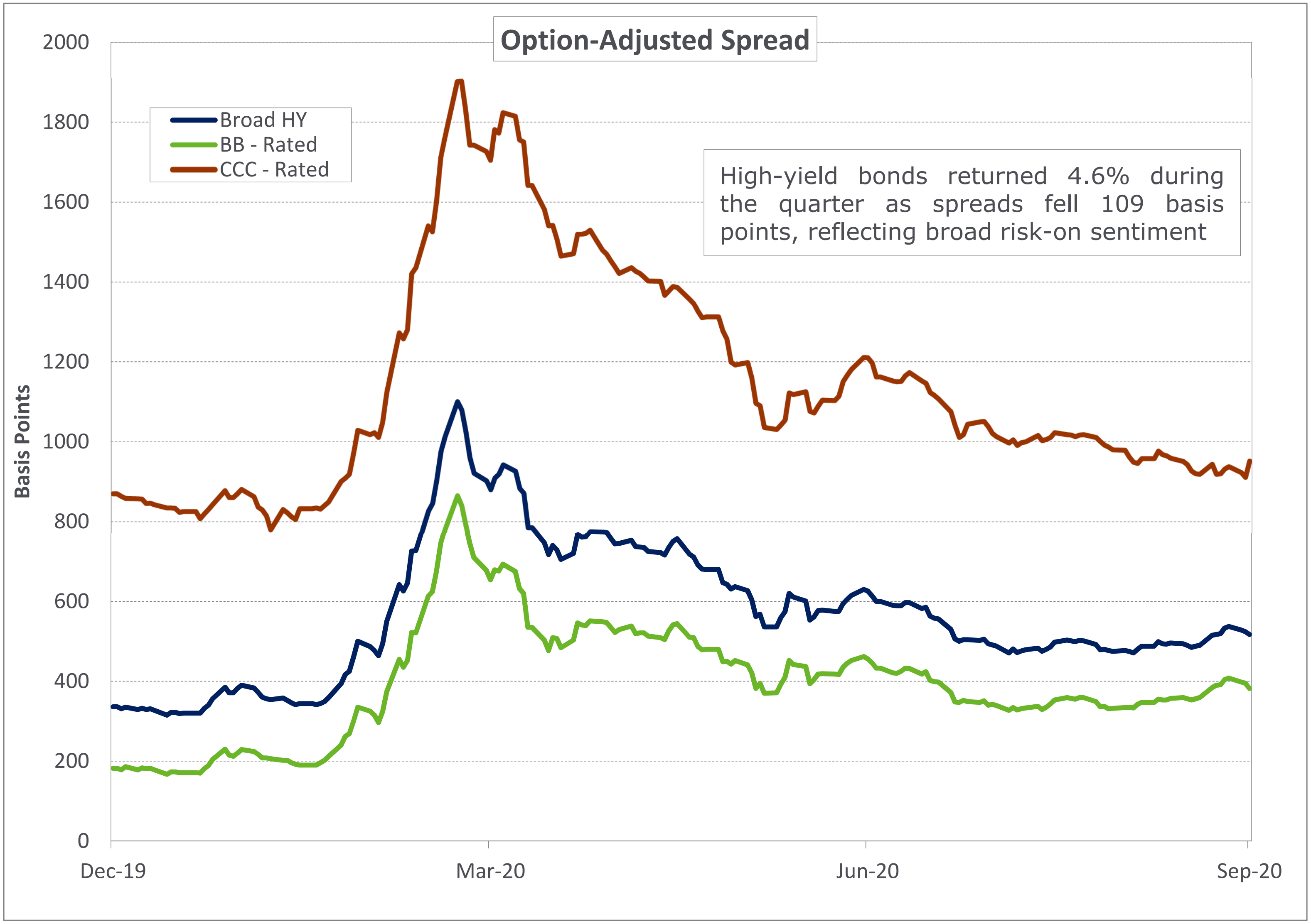
Source: FactSet

DEBT ISSUANCE LIKELY TO HIT RECORD LEVELS



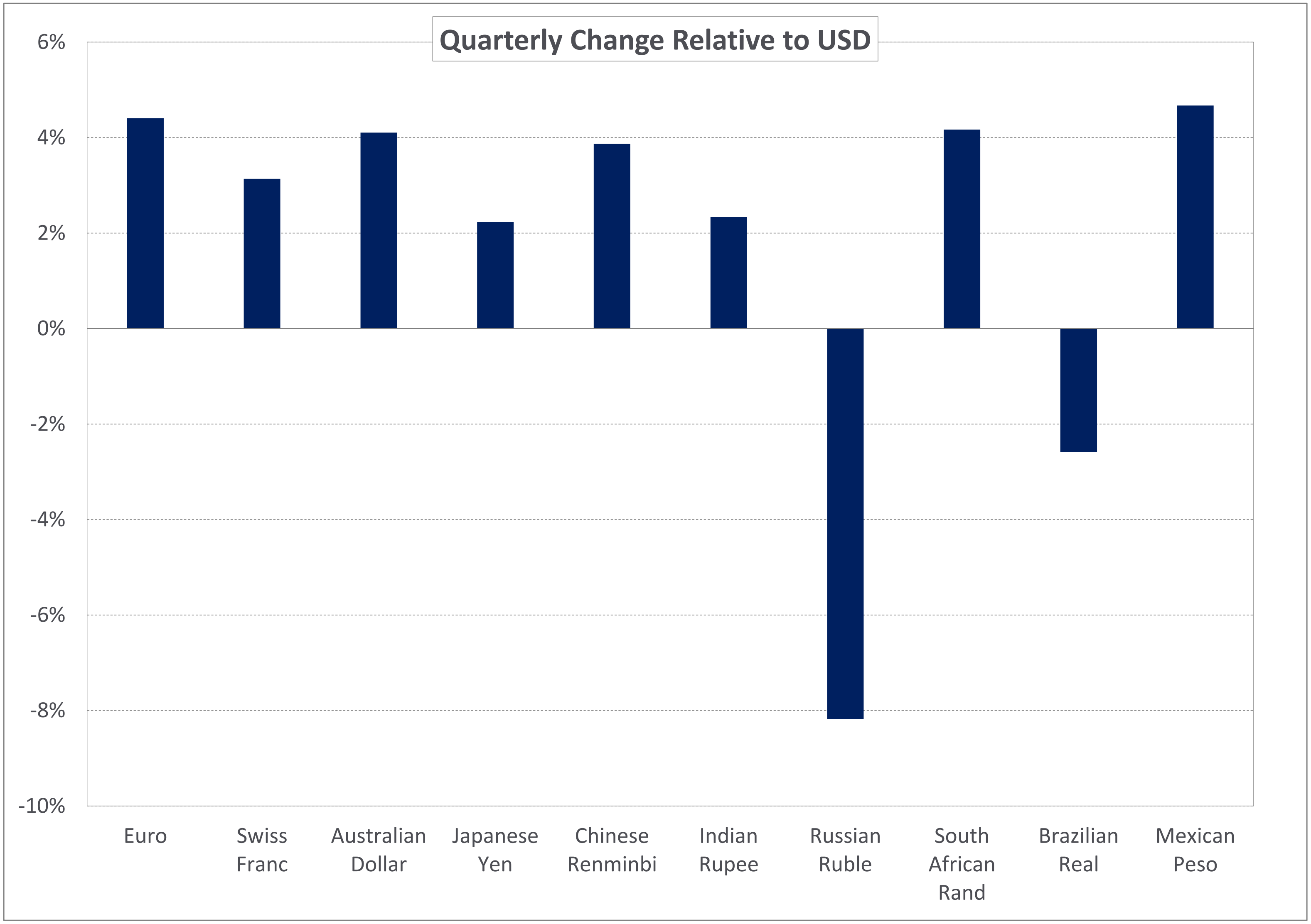
Source: Federal Reserve System, FactSet
2020* represents issuance data for the first eight months

US SPREADS CONTINUED TO TIGHTEN



Source: Bloomberg, FactSet

DOLLAR WEAKENED AGAINST MOST CURRENCIES



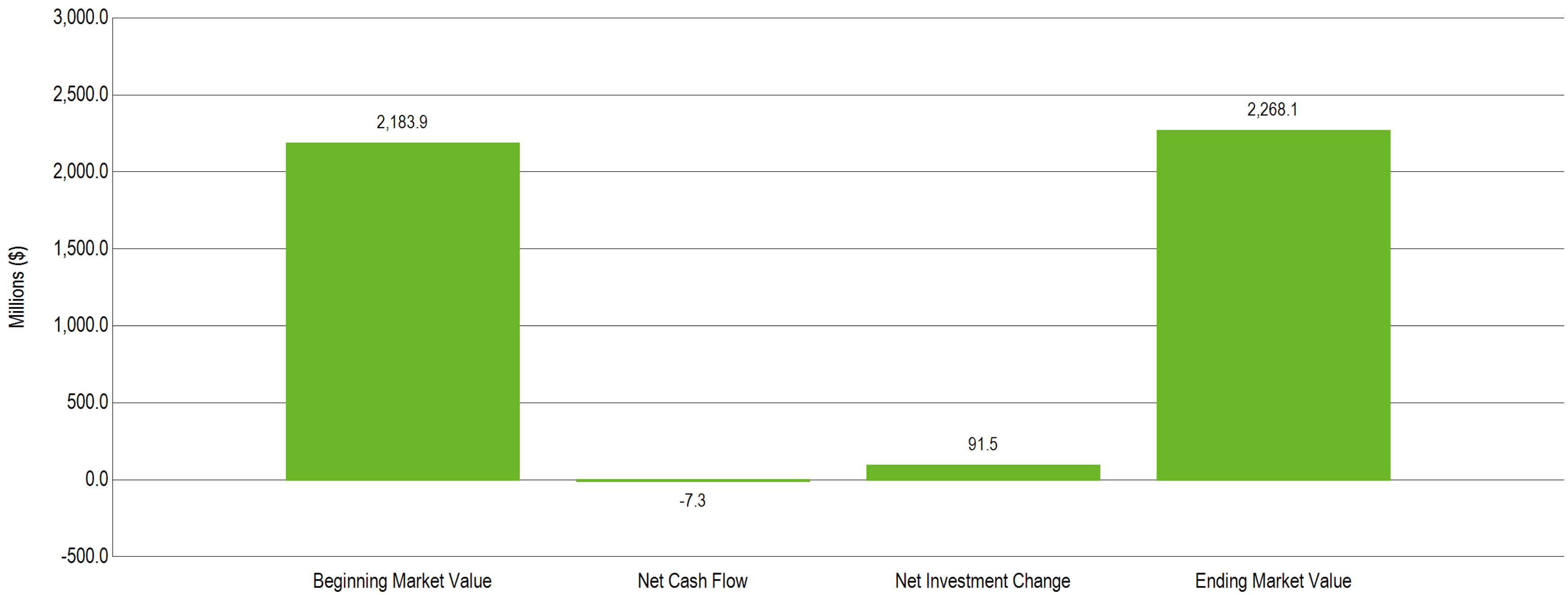
Source: FactSet

SEPTEMBER 2020 PERFORMANCE

TOTAL FUND PORTFOLIO RECONCILIATION

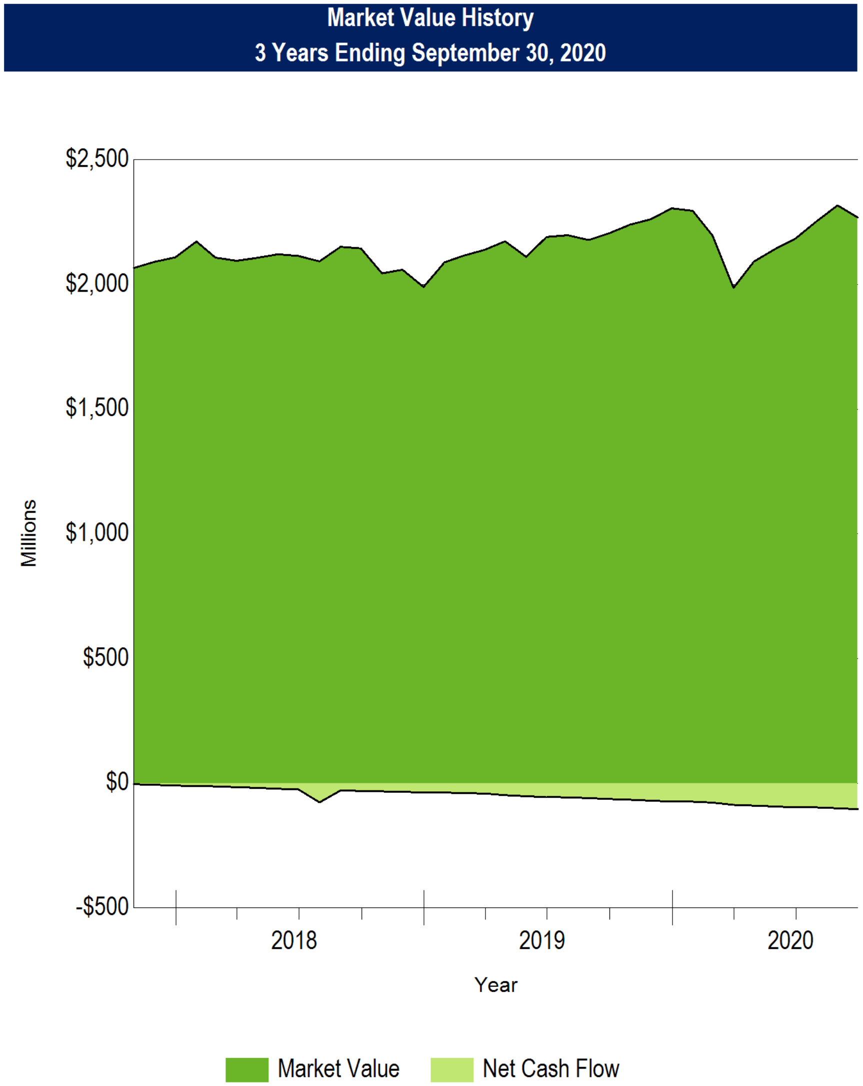
Summary of Cash Flows	Third Quarter	Fiscal Year-To-Date	Year-To-Date
Beginning Market Value	$2,183,922,647	$2,183,922,647	$2,305,291,730
Net Cash Flow	-$7,277,085	-$7,277,085	-$30,660,832
Net Investment Change	$91,461,543	$91,461,543	-$6,523,794
Ending Market Value	$2,268,107,104	$2,268,107,104	$2,268,107,104

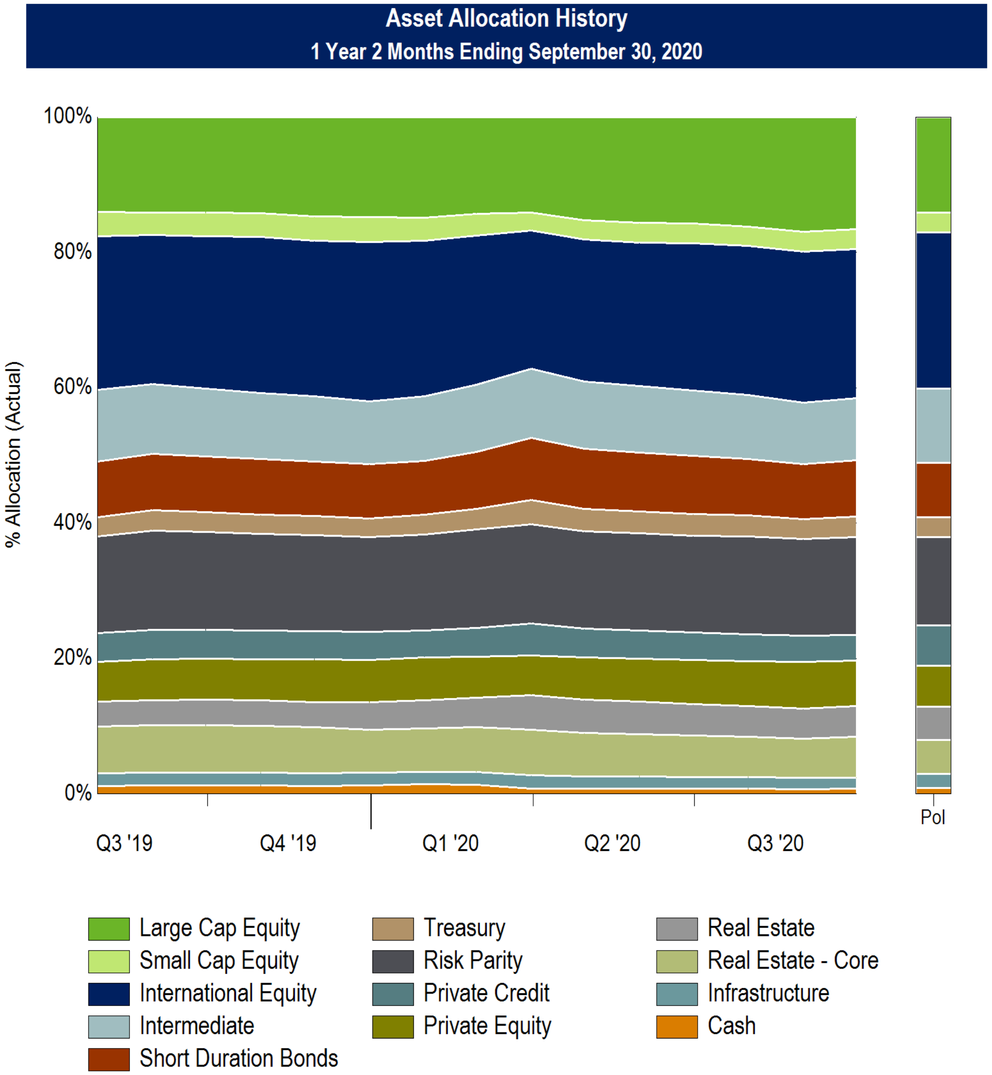
Change in Market Value
From July 01, 2020 To September 30, 2020



Stanislaus County ERA

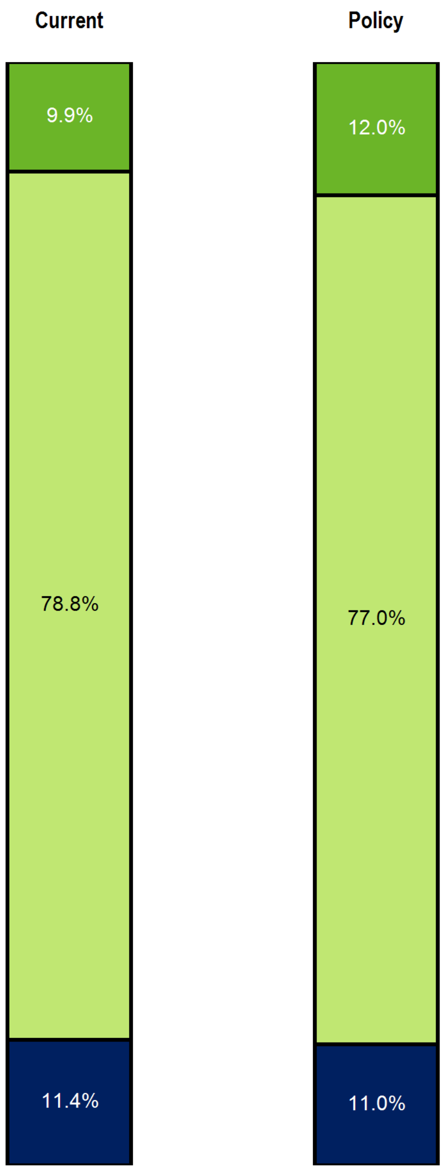
TOTAL FUND ASSET ALLOCATION HISTORY





Stanislaus County ERA

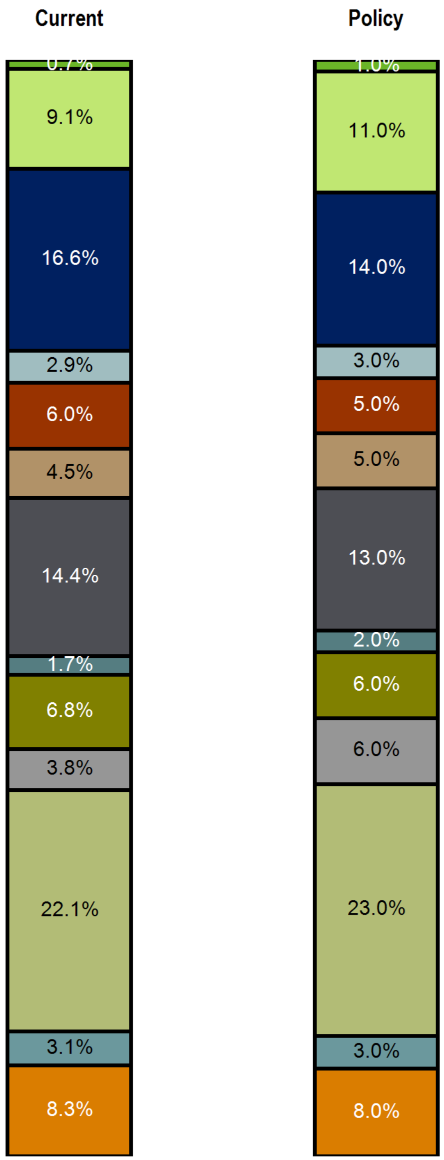
TOTAL FUND ASSET ALLOCATION VS TARGET



Allocation vs. Targets and Policy

	Current Balance	Current Allocation	Policy	Policy	Policy Range	Within IPS Range?
Liquidity Sub-Portfolio	$223,479,420	9.9%	$272,172,853	12.0%	5.0% - 16.0%	**Yes**
Growth Sub-Portfolio	$1,786,249,319	78.8%	$1,746,442,470	77.0%	50.0% - 80.0%	**Yes**
Risk-Diversifying Sub-Portfolio	$258,378,366	11.4%	$249,491,781	11.0%	5.0% - 18.0%	**Yes**
Total	**$2,268,107,104**	**100.0%**		**100.0%**		

TOTAL FUND ASSET ALLOCATION VS TARGET



Allocation vs. Targets and Policy

	Current Balance	Current Allocation	Policy	Policy	Policy Range	Within IPS Range?
Cash	$16,957,771	0.7%	$22,681,071	1.0%	0.0% - 4.0%	**Yes**
Cashflow-Matched Bonds	$206,521,649	9.1%	$249,491,781	11.0%	5.0% - 12.0%	**Yes**
US Large Equity	$377,021,641	16.6%	$317,534,995	14.0%	10.0% - 18.0%	**Yes**
US Small Equity	$65,975,032	2.9%	$68,043,213	3.0%	0.0% - 6.0%	**Yes**
Core Real Estate	$136,475,871	6.0%	$113,405,355	5.0%	0.0% - 10.0%	**Yes**
Value-Add Real Estate	$102,311,716	4.5%	$113,405,355	5.0%	0.0% - 10.0%	**Yes**
Risk Parity	$327,475,161	14.4%	$294,853,924	13.0%	8.0% - 18.0%	**Yes**
Infrastructure	$37,731,391	1.7%	$45,362,142	2.0%	0.0% - 5.0%	**Yes**
Private Equity	$153,785,292	6.8%	$136,086,426	6.0%	0.0% - 10.0%	**Yes**
Private Credit	$85,176,258	3.8%	$136,086,426	6.0%	0.0% - 10.0%	**Yes**
International Equity	$500,296,956	22.1%	$521,664,634	23.0%	14.0% - 32.0%	**Yes**
US Treasury Bonds	$69,926,521	3.1%	$68,043,213	3.0%	1.0% - 6.0%	**Yes**
Short-Term Bonds	$188,451,845	8.3%	$181,448,568	8.0%	4.0% - 12.0%	**Yes**
Total	**$2,268,107,104**	**100.0%**		**100.0%**		

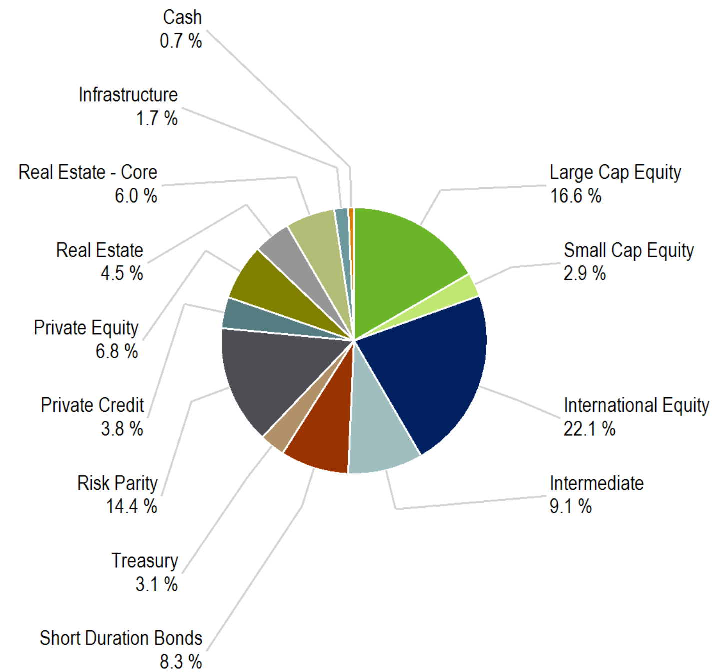
- The Private Equity allocation includes the Private Equity Proxy account value.

Stanislaus County ERA

TOTAL FUND PERFORMANCE

	Ending September 30, 2020				
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Total Fund	**4.1**	**4.4**	**5.0**	**7.5**	**7.8**
Policy Index	*4.9*	*7.5*	*5.9*	*8.0*	*7.9*
InvMetrics Public DB > $1B Net Rank	*81*	*74*	*67*	*50*	*32*
Liquidity Sub-Portfolio	**1.2**	**6.9**	**4.8**	**3.3**	**--**
StanCERA Liquidity Blended BM	*1.1*	*9.6*	*4.7*	*3.2*	*2.1*
Cash	**0.0**	**1.3**	**1.4**	**1.3**	**--**
FTSE T-Bill 1 Month TR	*0.0*	*0.9*	*1.6*	*1.1*	*0.6*
Cashflow-Matched Bonds	**1.3**	**7.3**	**5.1**	**--**	**--**
BBgBarc US Govt/Credit Int TR	*0.6*	*6.3*	*4.4*	*3.4*	*2.9*
eV US Government Fixed Inc Net Rank	*1*	*32*	*27*	*--*	*--*
Growth Sub-Portfolio	**5.1**	**3.9**	**5.1**	**8.7**	**9.4**
StanCERA Growth Blended BM	*5.4*	*7.1*	*6.4*	*9.0*	*--*
US Equities	**8.5**	**10.3**	**8.2**	**11.4**	**12.4**
Russell 3000	*9.2*	*15.0*	*11.6*	*13.7*	*13.5*
US Large Equity	**9.5**	**16.1**	**11.7**	**13.7**	**13.7**
Russell 1000	*9.5*	*16.0*	*12.4*	*14.1*	*13.8*
eV US Large Cap Equity Net Rank	*33*	*36*	*38*	*34*	*31*
US Small Equity	**3.0**	**-13.6**	**-5.1**	**2.6**	**7.5**
Russell 2000	*4.9*	*0.4*	*1.8*	*8.0*	*9.9*
eV US Small Cap Value Equity Net Rank	*44*	*50*	*58*	*69*	*50*
Capital Prospects	3.0	-13.6	-5.1	4.1	7.8
Russell 2000 Value	*2.6*	*-14.9*	*-5.1*	*4.1*	*7.1*
eV US Small Cap Value Equity Net Rank	*44*	*50*	*58*	*43*	*45*
Core Real Estate	**1.1**	**-2.7**	**3.2**	**4.4**	**4.0**
NCREIF Property Index	*0.7*	*2.0*	*5.1*	*6.3*	*9.4*
InvMetrics Public DB Real Estate Priv Net Rank	*4*	*91*	*87*	*91*	*99*
Value-Add Real Estate	**0.8**	**7.7**	**9.5**	**10.7**	**--**
NCREIF Property Index +2%	*1.2*	*4.0*	*7.2*	*8.4*	*11.5*

Current Allocation

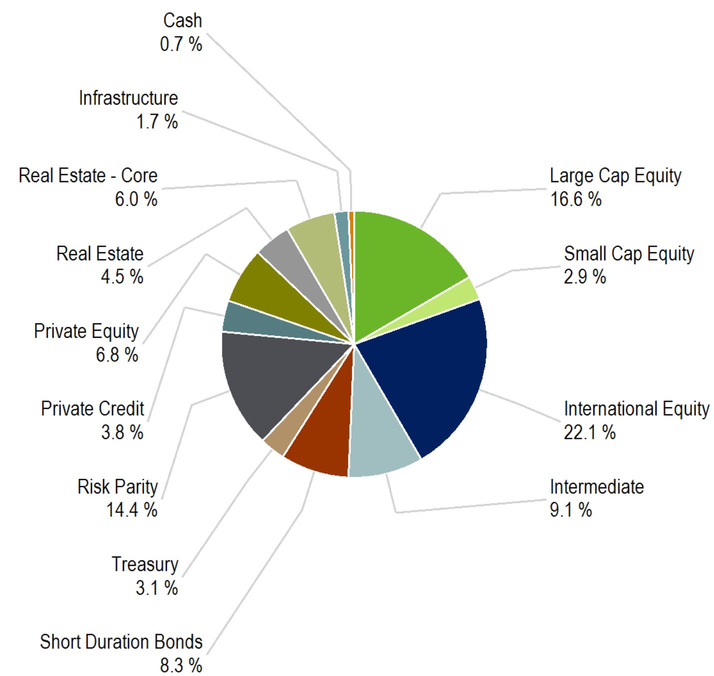


Stanislaus County ERA

TOTAL FUND PERFORMANCE

	Ending September 30, 2020				
	QTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)
Risk Parity	**4.4**	**2.6**	**--**	**--**	**--**
60% MSCI ACWI (Net)/ 40% BBgBarc Global Agg	*6.0*	*9.3*	*6.2*	*8.0*	*6.2*
Infrastructure	**3.6**	**9.2**	**15.4**	**10.0**	**--**
CPI + 5% (Unadjusted)	*2.2*	*6.4*	*6.9*	*6.9*	*6.8*
eV Infrastructure Net Rank	*25*	*10*	*3*	*1*	*--*
Private Equity	**6.6**	**--**	**--**	**--**	**--**
Russell 3000 + 3%	*10.0*	*18.4*	*15.0*	*17.1*	*16.9*
Private Equity Proxy	**9.2**	**14.9**	**13.7**	**14.8**	**14.1**
Russell 3000	*9.2*	*15.0*	*11.6*	*13.7*	*13.5*
eV US Large Cap Equity Net Rank	*37*	*37*	*31*	*27*	*28*
Private Credit	**-4.5**	**-13.0**	**-2.0**	**-0.7**	**--**
S&P/LSTA Leveraged Loan Index +2%	*4.6*	*3.1*	*5.2*	*6.1*	*6.3*
International Equity	**5.3**	**0.7**	**-0.2**	**5.6**	**4.3**
MSCI ACWI ex USA	*6.3*	*3.0*	*1.2*	*6.2*	*4.0*
eV ACWI ex-US Large Cap Equity Net Rank	*78*	*74*	*73*	*56*	*63*
Risk-Diversifying Sub-Portfolio	**0.4**	**4.8**	**3.8**	**4.1**	**4.0**
StanCERA Risk-Diversifying Blended BM	*0.2*	*5.4*	*3.9*	*2.8*	*2.3*
US Treasury Bonds	**0.2**	**8.8**	**6.1**	**5.7**	**4.8**
BBgBarc US Treasury 7-10 Yr TR	*0.3*	*10.1*	*6.8*	*4.5*	*4.2*
eV US Government Fixed Inc Net Rank	*99*	*3*	*1*	*1*	*1*
Short-Term Bonds	**0.5**	**3.5**	**3.0**	**--**	**--**
BBgBarc US Govt/Credit 1-3 Yr. TR	*0.2*	*3.7*	*2.8*	*2.1*	*1.6*
eV US Short Duration Fixed Inc Net Rank	*54*	*68*	*46*	*--*	*--*

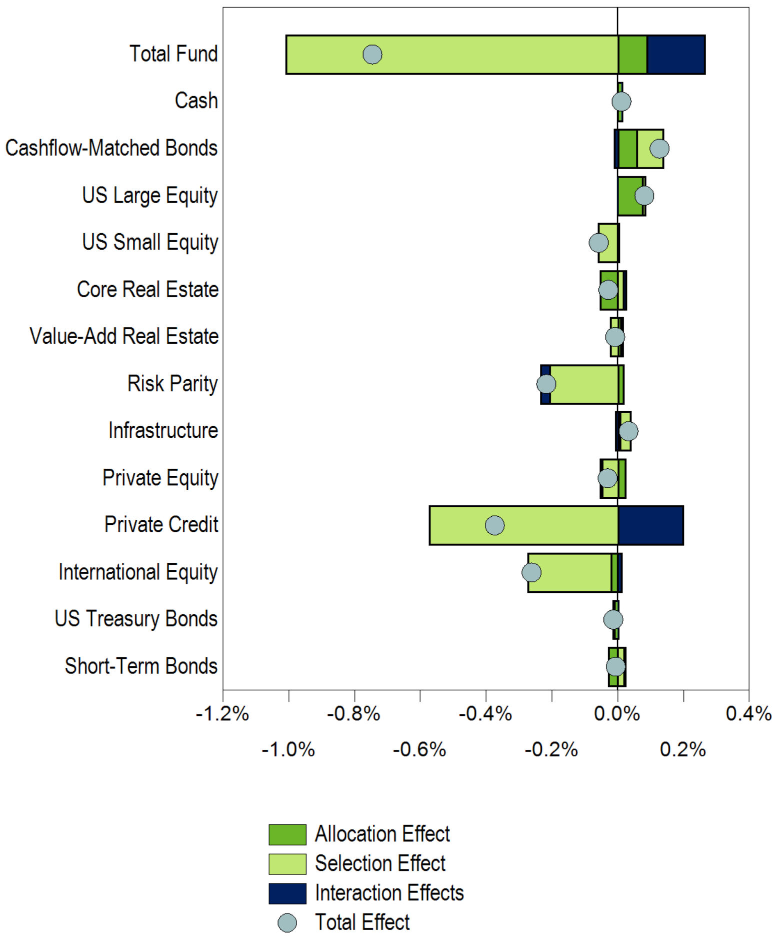
Current Allocation



Stanislaus County ERA

ATTRIBUTION ANALYSIS

Attribution Effects
3 Months Ending September 30, 2020



Performance Attribution
Quarter Ending September 30, 2020

	Quarter
Wtd. Actual Return	4.11%
Wtd. Index Return *	4.85%
Excess Return	**-0.75%**
Selection Effect	-1.01%
Allocation Effect	0.09%
Interaction Effect	0.17%

*Calculated from benchmark returns and weightings of each component.

Attribution Summary
3 Months Ending September 30, 2020

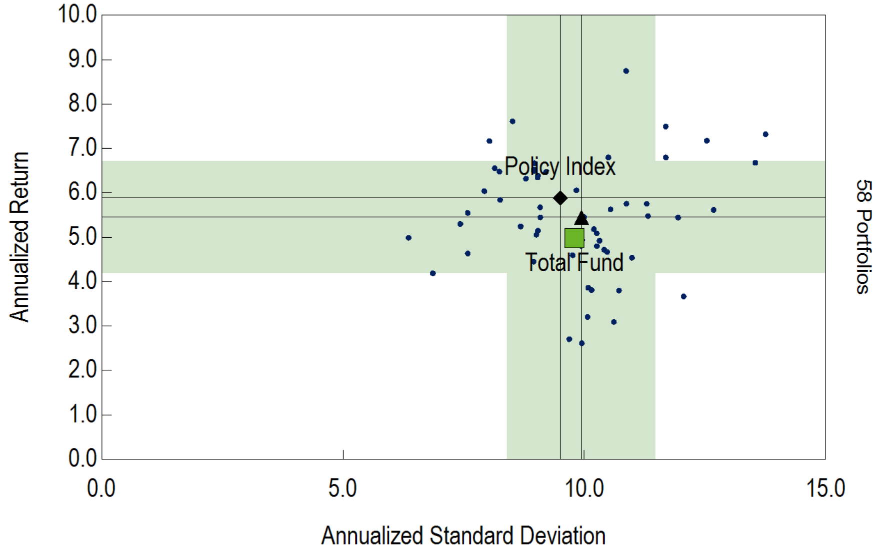
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Cash	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cashflow-Matched Bonds	1.3%	0.6%	0.7%	0.1%	0.1%	0.0%	0.1%
US Large Equity	9.5%	9.5%	0.0%	0.0%	0.1%	0.0%	0.1%
US Small Equity	3.0%	4.9%	-1.9%	-0.1%	0.0%	0.0%	-0.1%
Core Real Estate	1.1%	0.7%	0.4%	0.0%	-0.1%	0.0%	0.0%
Value-Add Real Estate	0.8%	1.2%	-0.4%	0.0%	0.0%	0.0%	0.0%
Risk Parity	4.4%	6.0%	-1.5%	-0.2%	0.0%	0.0%	-0.2%
Infrastructure	3.6%	2.2%	1.4%	0.0%	0.0%	0.0%	0.0%
Private Equity	9.2%	10.0%	-0.8%	0.0%	0.0%	0.0%	0.0%
Private Credit	-4.5%	4.6%	-9.2%	-0.6%	0.0%	0.2%	-0.4%
International Equity	5.3%	6.4%	-1.1%	-0.2%	0.0%	0.0%	-0.3%
US Treasury Bonds	0.2%	0.3%	-0.1%	0.0%	0.0%	0.0%	0.0%
Short-Term Bonds	0.5%	0.2%	0.2%	0.0%	0.0%	0.0%	0.0%
Total	**4.1%**	**4.9%**	**-0.7%**	**-1.0%**	**0.1%**	**0.2%**	**-0.7%**

Stanislaus County ERA

TOTAL FUND RISK/RETURN

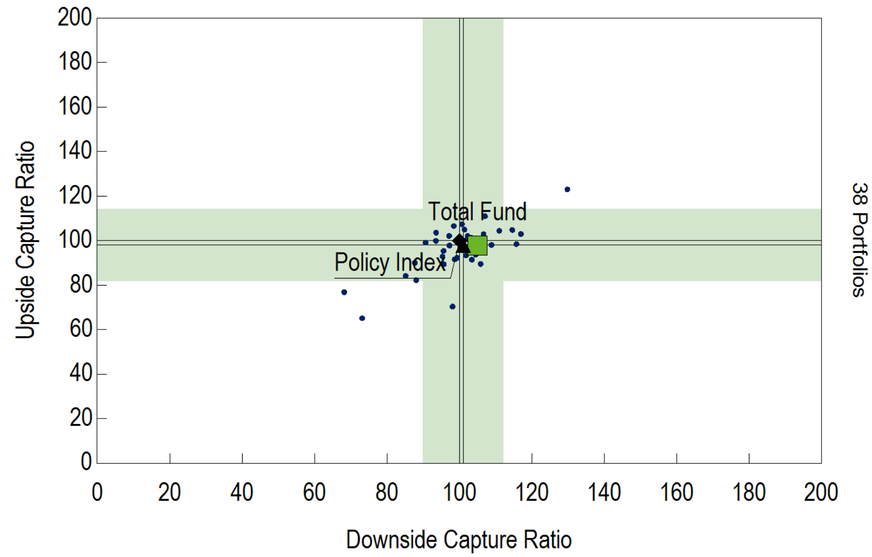
3 Years Ending September 30, 2020	Anlzd Return	Ann Excess BM Return	Anlzd Standard Deviation	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Information Ratio	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Total Fund	4.98%	-0.91%	9.79%	-1.05%	1.02	1.01%	0.99	0.35	-0.90	97.76%	105.01%
Policy Index	5.89%	0.00%	9.51%	0.00%	1.00	0.00%	1.00	0.45	--	100.00%	100.00%

Annualized Return vs. Annualized Standard Deviation
3 Years Ending September 30, 2020



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

Upside Capture Ratio vs. Downside Capture Ratio
3 Years Ending September 30, 2020



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

Stanislaus County ERA

TOTAL FUND PERFORMANCE DETAIL

	Market Value ($)	% of Portfolio	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	Inception (%)	Inception Date
								Ending September 30, 2020						
Total Fund	**2,268,107,104**	**100.0**	**4.1**	**4.4**	**5.0**	**7.5**	**7.8**	**17.4**	**-4.4**	**15.3**	**7.8**	**-0.6**	**8.7**	**Jan-95**
Policy Index			*4.9*	*7.5*	*5.9*	*8.0*	*7.9*	*16.9*	*-3.7*	*14.3*	*8.5*	*0.2*	*8.0*	*Jan-95*
InvMetrics Public DB > $1B Net Rank			*81*	*74*	*67*	*50*	*32*	*35*	*64*	*54*	*44*	*55*	*1*	*Jan-95*
Liquidity Sub-Portfolio	**223,479,420**	**9.9**	**1.2**	**6.9**	**4.8**	**3.3**	**--**	**7.7**	**0.8**	**0.4**	**1.3**	**1.0**	**--**	**Apr-11**
StanCERA Liquidity Blended BM			*1.1*	*9.6*	*4.7*	*3.2*	*2.1*	*3.9*	*1.6*	*0.8*	*1.2*	*0.6*	*2.2*	*Apr-11*
Cash	**16,957,771**	**0.7**	**0.0**	**1.3**	**1.4**	**1.3**	**--**	**1.6**	**1.6**	**0.9**	**1.3**	**1.0**	**--**	**Apr-11**
FTSE T-Bill 1 Month TR			*0.0*	*0.9*	*1.6*	*1.1*	*0.6*	*2.2*	*1.8*	*0.8*	*0.2*	*0.0*	*0.6*	*Apr-11*
Cashflow-Matched Bonds	**206,521,649**	**9.1**	**1.3**	**7.3**	**5.1**	**--**	**--**	**8.5**	**0.6**	**--**	**--**	**--**	**4.9**	**Jun-17**
BBgBarc US Govt/Credit Int TR			*0.6*	*6.3*	*4.4*	*3.4*	*2.9*	*6.8*	*0.9*	*2.1*	*2.1*	*1.1*	*4.3*	*Jun-17*
eV US Government Fixed Inc Net Rank			*1*	*32*	*27*	*--*	*--*	*1*	*87*	*--*	*--*	*--*	*27*	*Jun-17*
Insight	206,521,649	9.1	1.3	7.3	5.1	--	--	8.5	0.6	--	--	--	4.9	Jun-17
BBgBarc US Govt/Credit Int TR			*0.6*	*6.3*	*4.4*	*3.4*	*2.9*	*6.8*	*0.9*	*2.1*	*2.1*	*1.1*	*4.3*	*Jun-17*
Growth Sub-Portfolio	**1,786,249,319**	**78.8**	**5.1**	**3.9**	**5.1**	**8.7**	**9.4**	**20.9**	**-6.1**	**19.3**	**8.9**	**-0.8**	**7.6**	**Dec-03**
StanCERA Growth Blended BM			*5.4*	*7.1*	*6.4*	*9.0*	*--*	*20.7*	*-4.9*	*19.1*	*8.1*	*--*	*--*	*Dec-03*
US Equities	**442,996,673**	**19.5**	**8.5**	**10.3**	**8.2**	**11.4**	**12.4**	**29.4**	**-7.2**	**19.1**	**12.2**	**-0.6**	**9.1**	**Dec-03**
Russell 3000			*9.2*	*15.0*	*11.6*	*13.7*	*13.5*	*31.0*	*-5.2*	*21.1*	*12.7*	*0.5*	*9.1*	*Dec-03*
US Large Equity	**377,021,641**	**16.6**	**9.5**	**16.1**	**11.7**	**13.7**	**13.7**	**30.6**	**-4.0**	**21.1**	**10.8**	**0.5**	**12.5**	**Dec-94**
Russell 1000			*9.5*	*16.0*	*12.4*	*14.1*	*13.8*	*31.4*	*-4.8*	*21.7*	*12.1*	*0.9*	*10.3*	*Dec-94*
eV US Large Cap Equity Net Rank			*33*	*36*	*38*	*34*	*31*	*39*	*36*	*50*	*39*	*47*	*9*	*Dec-94*
BlackRock Russell 1000 Growth	213,010,768	9.4	13.2	37.5	21.7	20.1	17.3	36.4	-1.5	30.2	7.2	5.7	17.6	Jul-10
Russell 1000 Growth			*13.2*	*37.5*	*21.7*	*20.1*	*17.3*	*36.4*	*-1.5*	*30.2*	*7.1*	*5.7*	*17.6*	*Jul-10*
BlackRock Russell 1000 Value	81,248,742	3.6	5.6	-4.8	2.8	7.8	10.0	26.7	-8.2	13.8	17.3	-3.6	10.7	Jul-09
Russell 1000 Value			*5.6*	*-5.0*	*2.6*	*7.7*	*9.9*	*26.5*	*-8.3*	*13.7*	*17.3*	*-3.8*	*10.6*	*Jul-09*
Dodge & Cox-Equity	82,762,130	3.6	4.4	-3.4	2.2	8.6	10.9	23.9	-6.5	16.9	21.2	-4.0	11.1	Dec-94
Russell 1000 Value			*5.6*	*-5.0*	*2.6*	*7.7*	*9.9*	*26.5*	*-8.3*	*13.7*	*17.3*	*-3.8*	*9.2*	*Dec-94*
US Small Equity	**65,975,032**	**2.9**	**3.0**	**-13.6**	**-5.1**	**2.6**	**7.5**	**25.1**	**-16.7**	**14.8**	**16.2**	**-4.5**	**9.6**	**Dec-08**
Russell 2000			*4.9*	*0.4*	*1.8*	*8.0*	*9.9*	*25.5*	*-11.0*	*14.6*	*21.3*	*-4.4*	*11.4*	*Dec-08*
eV US Small Cap Value Equity Net Rank			*44*	*50*	*58*	*69*	*50*	*35*	*67*	*16*	*95*	*48*	*60*	*Dec-08*
Capital Prospects	65,975,032	2.9	3.0	-13.6	-5.1	4.1	7.8	25.1	-16.7	14.7	27.1	-7.5	9.8	Dec-08
Russell 2000 Value			*2.6*	*-14.9*	*-5.1*	*4.1*	*7.1*	*22.4*	*-12.9*	*7.8*	*31.7*	*-7.5*	*8.4*	*Dec-08*
eV US Small Cap Value Equity Net Rank			*44*	*50*	*58*	*43*	*45*	*35*	*67*	*17*	*39*	*73*	*55*	*Dec-08*

TOTAL FUND PERFORMANCE DETAIL

			Ending September 30, 2020											
	Market Value ($)	% of Portfolio	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	Inception (%)	Inception Date
Core Real Estate	**136,475,871**	**6.0**	**1.1**	**-2.7**	**3.2**	**4.4**	**4.0**	**10.0**	**1.6**	**5.2**	**5.2**	**-0.8**	**2.0**	**Mar-08**
NCREIF Property Index			*0.7*	*2.0*	*5.1*	*6.3*	*9.4*	*6.4*	*6.7*	*7.0*	*8.0*	*13.3*	*5.8*	*Mar-08*
InvMetrics Public DB Real Estate Priv Net Rank			*4*	*91*	*87*	*91*	*99*	*6*	*99*	*89*	*94*	*98*	*93*	*Mar-08*
Prime Property Fund	58,818,289	2.6	1.1	1.3	5.3	7.0	--	6.2	8.0	8.8	9.2	--	7.0	Sep-15
NCREIF ODCE			*0.5*	*1.4*	*5.2*	*6.6*	*10.3*	*5.3*	*8.3*	*7.6*	*8.8*	*15.0*	*6.6*	*Sep-15*
BlackRock US Real Estate	18,065,437	0.8	0.8	-22.4	-1.9	1.9	--	23.1	-4.2	3.7	6.6	4.4	4.8	Sep-12
DJ US Select RESI TR USD			*0.8*	*-22.3*	*-1.8*	*2.0*	*7.0*	*23.1*	*-4.2*	*3.8*	*6.6*	*4.5*	*4.9*	*Sep-12*
PGIM Real Estate US Debt Fund	59,592,145	2.6	1.2	4.6	--	--	--	6.0	--	--	--	--	5.2	Sep-18
BBgBarc US CMBS Investment Grade			*1.9*	*6.0*	*5.3*	*4.2*	*4.5*	*8.3*	*1.0*	*3.5*	*3.5*	*0.9*	*7.6*	*Sep-18*
Value-Add Real Estate	**102,311,716**	**4.5**	**0.8**	**7.7**	**9.5**	**10.7**	**--**	**9.0**	**11.7**	**11.9**	**8.8**	**18.9**	**10.1**	**Jul-14**
NCREIF Property Index +2%			*1.2*	*4.0*	*7.2*	*8.4*	*11.5*	*8.5*	*8.8*	*9.1*	*10.1*	*15.6*	*9.8*	*Jul-14*
American Strategic Value Realty	68,668,380	3.0	0.6	4.0	7.2	9.1	--	8.5	9.2	10.1	11.7	18.3	10.3	Dec-14
NCREIF Property Index			*0.7*	*2.0*	*5.1*	*6.3*	*9.4*	*6.4*	*6.7*	*7.0*	*8.0*	*13.3*	*7.2*	*Dec-14*
Greenfield Gap VII	10,318,259	0.5	1.1	4.2	10.7	11.9	--	15.4	12.9	14.7	6.1	19.4	10.9	Jul-14
NCREIF-ODCE +1%			*0.7*	*2.4*	*6.2*	*7.7*	*11.4*	*6.4*	*9.4*	*8.7*	*9.8*	*16.2*	*9.4*	*Jul-14*
Greenfield Gap VIII	23,325,077	1.0	1.4	20.3	--	--	--	6.4	--	--	--	--	18.3	Apr-18
NCREIF-ODCE +1%			*0.7*	*2.4*	*6.2*	*7.7*	*11.4*	*6.4*	*9.4*	*8.7*	*9.8*	*16.2*	*5.5*	*Apr-18*
Risk Parity	**327,475,161**	**14.4**	**4.4**	**2.6**	**--**	**--**	**--**	**22.0**	**-7.0**	**--**	**--**	**--**	**5.4**	**Nov-17**
60% MSCI ACWI (Net)/ 40% BBgBarc Global Agg			*6.0*	*9.3*	*6.2*	*8.0*	*6.2*	*18.6*	*-6.0*	*17.1*	*5.7*	*-2.5*	*5.6*	*Nov-17*
AQR Global Risk Premium - EL	161,819,671	7.1	4.0	1.8	--	--	--	21.9	--	--	--	--	5.7	Apr-18
60% MSCI ACWI (Net)/ 40% BBgBarc Global Agg			*6.0*	*9.3*	*6.2*	*8.0*	*6.2*	*18.6*	*-6.0*	*17.1*	*5.7*	*-2.5*	*5.9*	*Apr-18*
PanAgora Risk Parity Multi Asset	165,655,490	7.3	4.9	3.4	--	--	--	22.1	-7.6	--	--	--	6.1	Nov-17
60% MSCI ACWI (Net)/ 40% BBgBarc Global Agg			*6.0*	*9.3*	*6.2*	*8.0*	*6.2*	*18.6*	*-6.0*	*17.1*	*5.7*	*-2.5*	*5.6*	*Nov-17*
Infrastructure	**37,731,391**	**1.7**	**3.6**	**9.2**	**15.4**	**10.0**	**--**	**13.1**	**8.3**	**20.9**	**4.1**	**--**	**7.8**	**May-15**
CPI + 5% (Unadjusted)			*2.2*	*6.4*	*6.9*	*6.9*	*6.8*	*7.4*	*7.0*	*7.2*	*7.2*	*5.8*	*6.8*	*May-15*
eV Infrastructure Net Rank			*25*	*10*	*3*	*1*	*--*	*99*	*1*	*25*	*99*	*--*	*1*	*May-15*
MS Infrastructure Partners II	37,731,391	1.7	3.6	9.2	15.4	10.0	--	13.1	8.3	20.9	4.1	--	7.8	May-15
CPI + 5% (Unadjusted)			*2.2*	*6.4*	*6.9*	*6.9*	*6.8*	*7.4*	*7.0*	*7.2*	*7.2*	*5.8*	*6.8*	*May-15*

Stanislaus County ERA

TOTAL FUND PERFORMANCE DETAIL

								Ending September 30, 2020						
	Market Value ($)	% of Portfolio	3 Mo (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	2019 (%)	2018 (%)	2017 (%)	2016 (%)	2015 (%)	Inception (%)	Inception Date
Private Equity	**4,819,376**	**0.2**	**6.6**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**6.6**	**Apr-20**
Russell 3000 + 3%			*10.0*	*18.4*	*15.0*	*17.1*	*16.9*	*34.9*	*-2.4*	*24.7*	*16.1*	*3.5*	*35.2*	*Apr-20*
Private Equity Proxy	**148,965,916**	**6.6**	**9.2**	**14.9**	**13.7**	**14.8**	**14.1**	**31.1**	**-0.2**	**21.2**	**11.7**	**1.4**	**9.5**	**Nov-03**
Russell 3000			*9.2*	*15.0*	*11.6*	*13.7*	*13.5*	*31.0*	*-5.2*	*21.1*	*12.7*	*0.5*	*9.4*	*Nov-03*
eV US Large Cap Equity Net Rank			*37*	*37*	*31*	*27*	*28*	*37*	*14*	*50*	*34*	*40*	*42*	*Nov-03*
Private Credit	**85,176,258**	**3.8**	**-4.5**	**-13.0**	**-2.0**	**-0.7**	**--**	**4.8**	**4.2**	**-0.4**	**1.9**	**5.4**	**1.7**	**May-13**
S&P/LSTA Leveraged Loan Index +2%			*4.6*	*3.1*	*5.2*	*6.1*	*6.3*	*10.8*	*2.4*	*6.2*	*12.3*	*1.3*	*5.5*	*May-13*
International Equity	**500,296,956**	**22.1**	**5.3**	**0.7**	**-0.2**	**5.6**	**4.3**	**21.8**	**-15.8**	**27.4**	**5.3**	**-3.8**	**5.7**	**Sep-04**
MSCI ACWI ex USA			*6.3*	*3.0*	*1.2*	*6.2*	*4.0*	*21.5*	*-14.2*	*27.2*	*4.5*	*-5.7*	*5.5*	*Sep-04*
eV ACWI ex-US Large Cap Equity Net Rank			*78*	*74*	*73*	*56*	*63*	*66*	*58*	*61*	*17*	*68*	*69*	*Sep-04*
LSV Asset Mgt	232,461,679	10.2	2.0	-6.5	-3.5	3.9	3.3	20.8	-16.9	27.5	8.2	-5.4	4.9	Sep-04
MSCI ACWI ex USA			*6.3*	*3.0*	*1.2*	*6.2*	*4.0*	*21.5*	*-14.2*	*27.2*	*4.5*	*-5.7*	*5.5*	*Sep-04*
Fidelity	267,835,278	11.8	8.2	8.0	3.0	7.0	5.1	22.8	-14.7	27.0	1.8	-2.3	3.8	Apr-06
MSCI ACWI ex USA			*6.3*	*3.0*	*1.2*	*6.2*	*4.0*	*21.5*	*-14.2*	*27.2*	*4.5*	*-5.7*	*2.9*	*Apr-06*
Risk-Diversifying Sub-Portfolio	**258,378,366**	**11.4**	**0.4**	**4.8**	**3.8**	**4.1**	**4.0**	**5.9**	**1.1**	**3.8**	**5.2**	**0.2**	**4.9**	**Nov-03**
StanCERA Risk-Diversifying Blended BM			*0.2*	*5.4*	*3.9*	*2.8*	*2.3*	*5.3*	*1.4*	*1.3*	*1.3*	*0.9*	*--*	*Nov-03*
US Treasury Bonds	**69,926,521**	**3.1**	**0.2**	**8.8**	**6.1**	**5.7**	**4.8**	**7.6**	**0.7**	**5.0**	**5.2**	**0.2**	**5.4**	**Nov-03**
BBgBarc US Treasury 7-10 Yr TR			*0.3*	*10.1*	*6.8*	*4.5*	*4.2*	*8.5*	*0.9*	*2.6*	*1.1*	*1.6*	*--*	*Nov-03*
eV US Government Fixed Inc Net Rank			*99*	*3*	*1*	*1*	*1*	*1*	*86*	*1*	*1*	*78*	*1*	*Nov-03*
Northern Trust Intermediate Gov't Bond	49,244,817	2.2	0.2	6.0	4.0	--	--	5.2	1.4	--	--	--	3.8	Jul-17
BBgBarc US Govt Int TR			*0.2*	*6.0*	*4.0*	*2.8*	*2.3*	*5.2*	*1.4*	*1.1*	*1.1*	*1.2*	*3.8*	*Jul-17*
Northern Trust Long Term Gov't Bond	20,681,704	0.9	0.1	16.1	11.8	--	--	14.7	-1.7	--	--	--	11.5	Jul-17
BBgBarc US Govt Long TR			*0.1*	*16.2*	*11.8*	*8.2*	*7.2*	*14.7*	*-1.8*	*8.5*	*1.4*	*-1.2*	*11.5*	*Jul-17*
Short-Term Bonds	**188,451,845**	**8.3**	**0.5**	**3.5**	**3.0**	**--**	**--**	**5.4**	**1.2**	**--**	**--**	**--**	**2.9**	**Jul-17**
BBgBarc US Govt/Credit 1-3 Yr. TR			*0.2*	*3.7*	*2.8*	*2.1*	*1.6*	*4.0*	*1.6*	*0.8*	*1.3*	*0.7*	*2.7*	*Jul-17*
eV US Short Duration Fixed Inc Net Rank			*54*	*68*	*46*	*--*	*--*	*11*	*75*	*--*	*--*	*--*	*47*	*Jul-17*
DFA	188,451,845	8.3	0.5	3.5	3.0	--	--	5.4	1.2	--	--	--	2.9	Jul-17
BBgBarc US Govt/Credit 1-3 Yr. TR			*0.2*	*3.7*	*2.8*	*2.1*	*1.6*	*4.0*	*1.6*	*0.8*	*1.3*	*0.7*	*2.7*	*Jul-17*

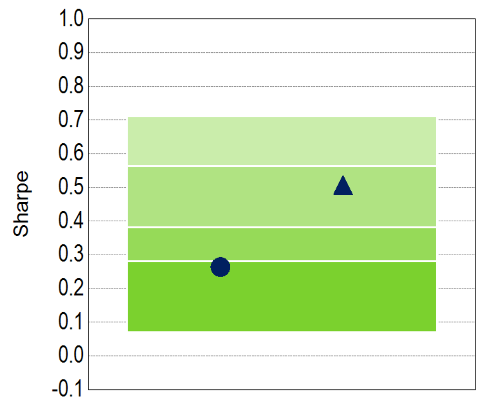
PERFORMANCE ANALYSIS

	3 Years Ending September 30, 2020										
	Anlzd Return	Ann Excess BM Return	Anlzd Standard Deviation	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Information Ratio	Up Mkt Capture Ratio	Down Mkt Capture Ratio
BlackRock Russell 1000 Growth	21.66%	-0.01%	19.03%	0.00%	1.00	0.03%	1.00	1.06	-0.42	99.90%	99.95%
BlackRock Russell 1000 Value	2.77%	0.14%	18.31%	0.15%	1.00	0.06%	1.00	0.07	2.32	100.40%	99.78%
Dodge & Cox-Equity	2.25%	-0.39%	20.12%	-0.59%	1.08	4.06%	0.96	0.03	-0.10	110.04%	106.47%
Bernzott	5.16%	10.29%	24.29%	10.21%	0.98	7.35%	0.91	0.15	1.40	131.88%	90.39%
Channing	-3.15%	1.98%	24.79%	2.10%	1.02	5.85%	0.94	-0.19	0.34	117.66%	101.90%
InView	-8.87%	-3.74%	28.43%	-2.86%	1.17	7.84%	0.94	-0.37	-0.48	97.13%	106.08%
Keeley	-7.37%	-2.24%	26.65%	-1.65%	1.12	5.23%	0.97	-0.34	-0.43	107.28%	106.44%
Pacific Ridge	-7.93%	-3.62%	27.73%	-3.04%	1.13	6.68%	0.96	-0.34	-0.54	110.28%	109.55%
Walthausen	-6.78%	-1.65%	24.00%	-1.64%	1.00	4.29%	0.97	-0.35	-0.39	98.21%	102.56%
Capital Prospects Transition	-0.05%	5.08%	0.22%	-0.05%	0.00	23.56%	0.00	-7.44	0.22	-0.12%	--
Prime Property Fund	5.30%	0.12%	3.03%	0.08%	1.01	0.70%	0.95	1.23	0.17	104.24%	119.67%
BlackRock US Real Estate	-1.88%	-0.04%	19.09%	-0.04%	1.00	0.05%	1.00	-0.18	-0.70	99.71%	99.98%
American Strategic Value Realty	7.21%	2.10%	3.38%	0.75%	1.26	1.05%	0.95	1.67	2.00	136.59%	31.46%
Greenfield Gap VII	10.69%	4.46%	8.67%	14.06%	-0.54	9.64%	0.03	1.05	0.46	164.40%	--
MS Infrastructure Partners II	15.43%	8.56%	10.92%	7.15%	1.21	10.86%	0.01	1.27	0.79	254.61%	768.33%
Medley Capital	-13.40%	-18.56%	7.15%	-12.66%	-0.14	12.19%	0.03	-2.10	-1.52	-78.75%	38.89%
Raven Opportunity I	-28.51%	-33.67%	35.31%	-27.94%	-0.11	36.59%	0.00	-0.85	-0.92	-163.98%	-6.57%
Raven Opportunity III	6.89%	1.72%	6.04%	6.48%	0.08	10.02%	0.01	0.88	0.17	49.16%	-15.34%
White Oak Pinnacle	2.69%	-2.47%	9.55%	3.83%	-0.22	14.15%	0.04	0.12	-0.17	16.25%	-11.30%
LSV Asset Mgt	-3.54%	-4.70%	18.07%	-4.81%	1.10	3.37%	0.97	-0.28	-1.40	98.29%	113.70%
Fidelity	2.97%	1.81%	16.34%	1.81%	1.00	2.13%	0.98	0.09	0.85	104.19%	96.38%

Stanislaus County ERA

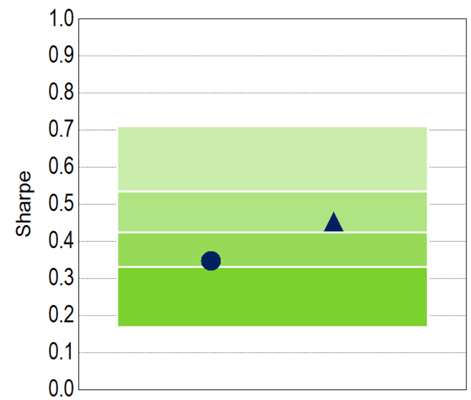
TOTAL FUND SHARPE RATIO RANKINGS

Sharpe Ratio 1 Year



● Total Fund	
Value	0.3
Rank	78
▲ Policy Index	
Value	0.5
Rank	32
Universe	
5th %tile	0.7
25th %tile	0.6
Median	0.4
75th %tile	0.3
95th %tile	0.1

Sharpe Ratio 3 Years



● Total Fund	
Value	0.3
Rank	70
▲ Policy Index	
Value	0.5
Rank	42
Universe	
5th %tile	0.7
25th %tile	0.5
Median	0.4
75th %tile	0.3
95th %tile	0.2

Sharpe Ratio 5 Years

● Total Fund	
Value	0.7
Rank	61
▲ Policy Index	
Value	0.8
Rank	45
Universe	
5th %tile	1.1
25th %tile	0.9
Median	0.8
75th %tile	0.7
95th %tile	0.6

Stanislaus County ERA

INVESTMENT MANAGER FEES

Account	Fee Schedule	Market Value As of 9/30/2020	Est. Minimum Annual Fee ($)	Estimated Annual Fee ($)	Estimated Annual Fee (%)
Cash Account	0.10% of Assets	$16,957,771		$16,958	0.10%
Insight	0.12% of Assets	$206,521,649		$247,826	0.12%
BlackRock Russell 1000 Growth	0.02% of Assets	$213,010,768		$42,602	0.02%
BlackRock Russell 1000 Value	0.02% of Assets	$81,248,742		$16,250	0.02%
Dodge & Cox-Equity	0.40% of First 10.0 Mil, 0.20% of Next 90.0 Mil, 0.15% Thereafter	$82,762,130		$185,524	0.22%
Bernzott	0.50% of Assets	$11,151,278		$55,756	0.50%
Channing	0.50% of Assets	$14,139,137		$70,696	0.50%
InView	0.50% of Assets	$11,986,285		$59,931	0.50%
Keeley	0.50% of Assets	$8,333,340		$41,667	0.50%
Pacific Ridge	0.60% of Assets	$11,685,491		$70,113	0.60%
Walthausen	0.50% of Assets	$8,679,443		$43,397	0.50%
Prime Property Fund	0.84% of Assets	$58,818,289		$494,074	0.84%
BlackRock US Real Estate	0.09% of First 100.0 Mil, 0.07% Thereafter	$18,065,437		$16,259	0.09%
American Strategic Value Realty	0.75% of First 25.0 Mil, 0.65% of Next 25.0 Mil, 0.55% of Next 50.0 Mil, 0.45% Thereafter	$68,668,380		$452,676	0.66%
AQR Global Risk Premium - EL	0.38% of Assets	$161,819,671		$614,915	0.38%
PanAgora Risk Parity Multi Asset	0.35% of Assets	$165,655,490		$579,794	0.35%
Northern Trust Russell 3000	0.02% of Assets	$148,965,916		$29,793	0.02%
Owl Rock First Lien Fund	0.70% of Assets	$5,789,783		$40,528	0.70%
LSV Asset Mgt	0.25% of Assets	$232,461,679		$581,154	0.25%
Fidelity	0.25% of Assets	$267,835,278		$669,588	0.25%

Stanislaus County ERA

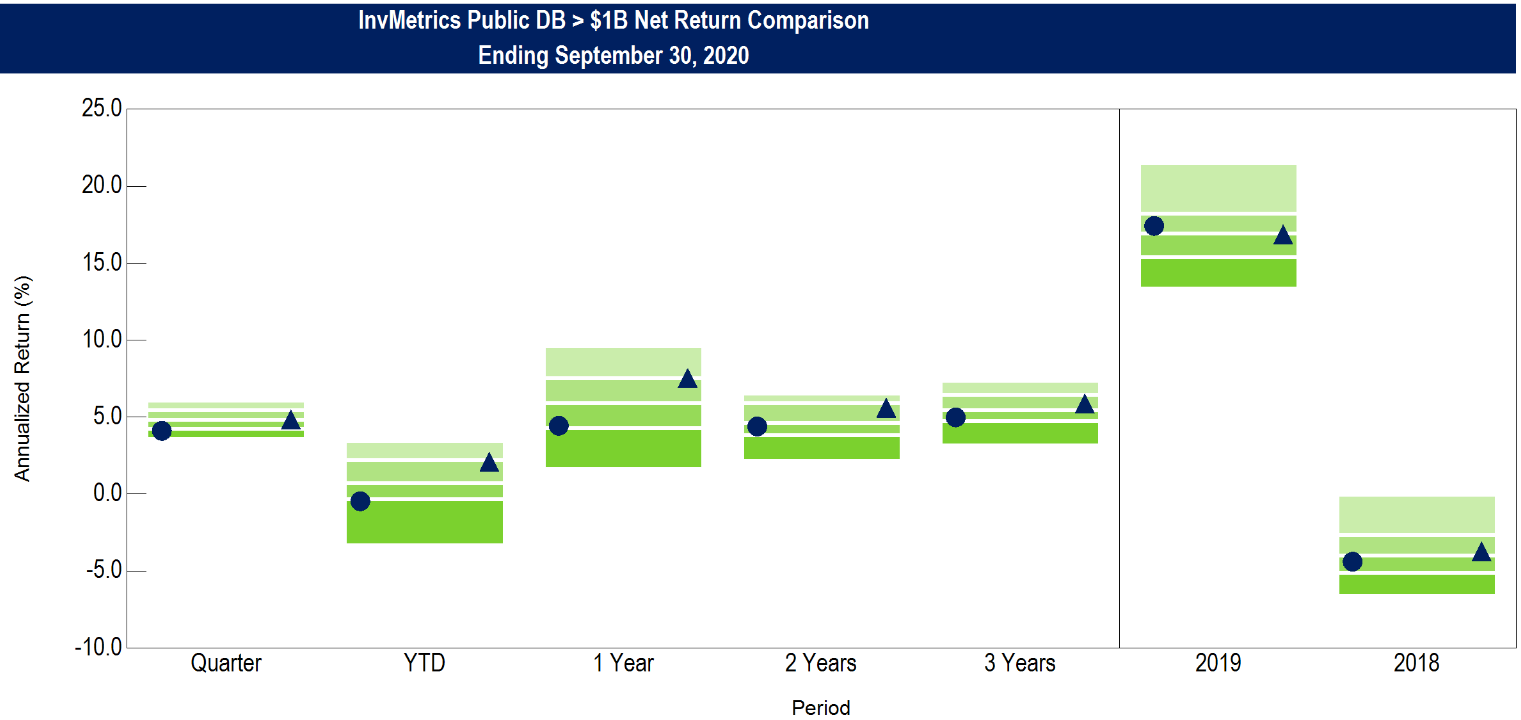
INVESTMENT MANAGER FEES

Account	Fee Schedule	Market Value As of 9/30/2020	Est. Minimum Annual Fee ($)	Estimated Annual Fee ($)	Estimated Annual Fee (%)
Northern Trust Intermediate Gov't Bond	0.05% of First 25.0 Mil, 0.04% Thereafter	$49,244,817		$22,198	0.05%
Northern Trust Long Term Gov't Bond	0.05% of First 25.0 Mil, 0.04% Thereafter	$20,681,704		$10,341	0.05%
DFA	0.20% of First 25.0 Mil, 0.10% Thereafter	$188,451,845		$213,452	0.11%
Investment Management Fee		**$2,052,934,323**		**$4,575,493**	**0.22%**

Closed end funds excluded from fee analysis.

Stanislaus County ERA

TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE



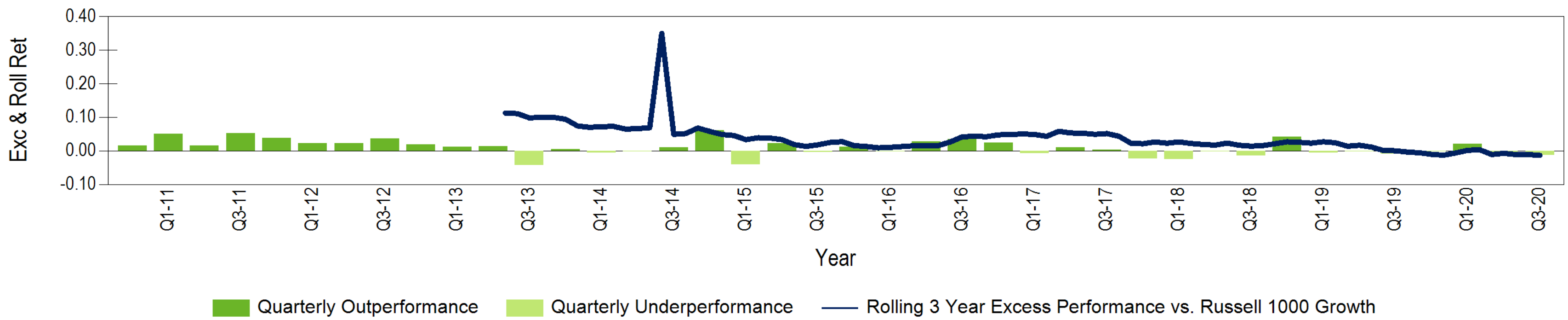
	Quarter Return	Quarter (Rank)	YTD Return	YTD (Rank)	1 Year Return	1 Year (Rank)	2 Years Return	2 Years (Rank)	3 Years Return	3 Years (Rank)	2019 Return	2019 (Rank)	2018 Return	2018 (Rank)
5th Percentile	6.1		3.4		9.6		6.5		7.3		21.5		-0.1	
25th Percentile	5.5		2.2		7.5		5.9		6.4		18.2		-2.7	
Median	4.8		0.7		5.9		4.6		5.5		17.0		-4.0	
75th Percentile	4.2		-0.3		4.3		3.8		4.7		15.4		-5.1	
95th Percentile	3.6		-3.3		1.6		2.2		3.2		13.4		-6.6	
# of Portfolios	58		58		58		58		58		69		63	
● Total Fund	4.1	(81)	-0.5	(78)	4.4	(74)	4.4	(59)	5.0	(67)	17.4	(35)	-4.4	(64)
▲ Policy Index	4.9	(47)	2.1	(28)	7.5	(25)	5.6	(30)	5.9	(35)	16.9	(52)	-3.7	(46)

Domestic Equity Managers

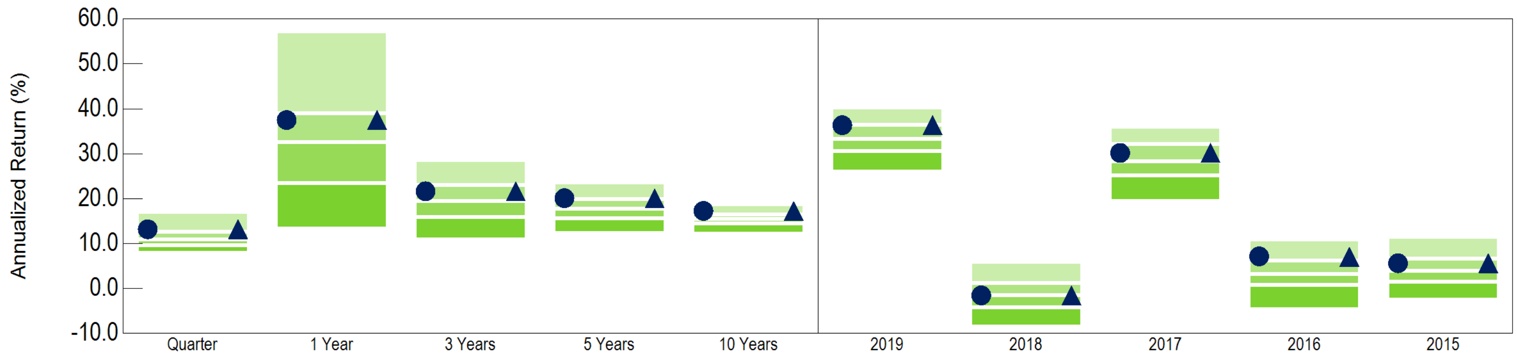
BlackRock Russell 1000 Growth

MANAGER PERFORMANCE COMPARISONS

Rolling Annualized Excess Performance



eV US Large Cap Growth Equity Net Return Comparison
Ending September 30, 2020



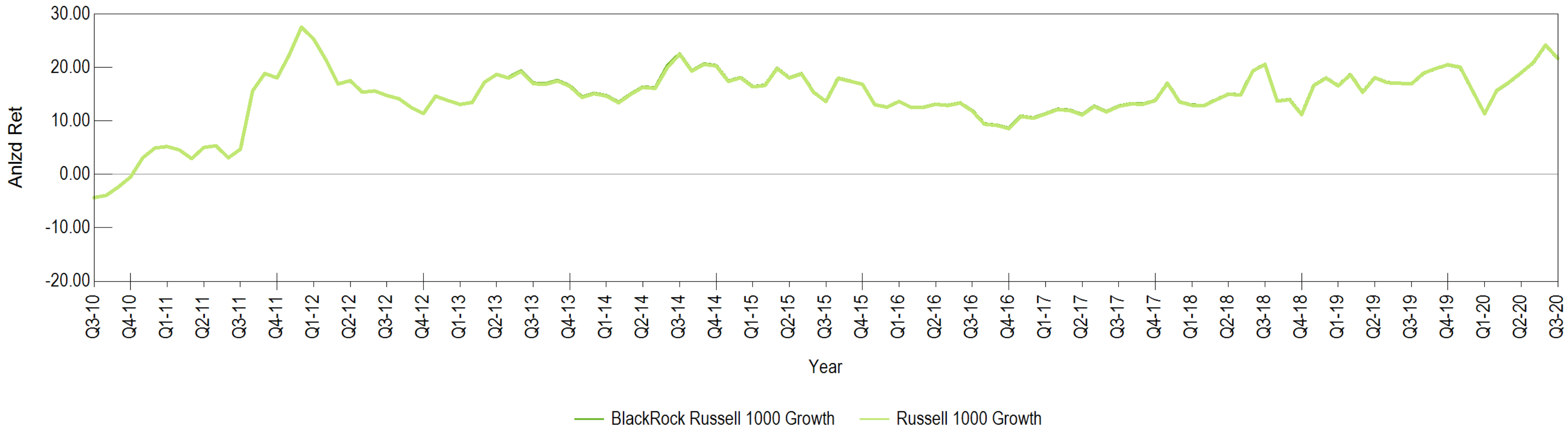
Return (Rank)	Quarter		1 Year		3 Years		5 Years		10 Years		2019		2018		2017		2016		2015	
5th Percentile	17.0		57.3		28.6		23.6		18.7		40.3		5.8		36.0		10.8		11.4	
25th Percentile	12.8		39.0		23.2		20.0		16.6		36.5		1.4		32.2		6.3		6.8	
Median	11.1		32.6		19.6		17.8		15.6		33.4		-1.3		28.5		3.4		4.1	
75th Percentile	9.7		23.5		16.0		15.8		14.6		30.6		-4.1		25.2		0.8		1.6	
95th Percentile	8.0		13.5		11.0		12.4		12.3		26.1		-8.4		19.5		-4.5		-2.3	
# of Portfolios	195		194		186		170		146		186		179		182		182		175	
● BlackRock Russell 1000 Growth	13.2	(23)	37.5	(28)	21.7	(34)	20.1	(23)	17.3	(18)	36.4	(28)	-1.5	(52)	30.2	(39)	7.2	(19)	5.7	(35)
▲ Russell 1000 Growth	13.2	(23)	37.5	(28)	21.7	(34)	20.1	(23)	17.3	(18)	36.4	(27)	-1.5	(52)	30.2	(38)	7.1	(20)	5.7	(35)

Period

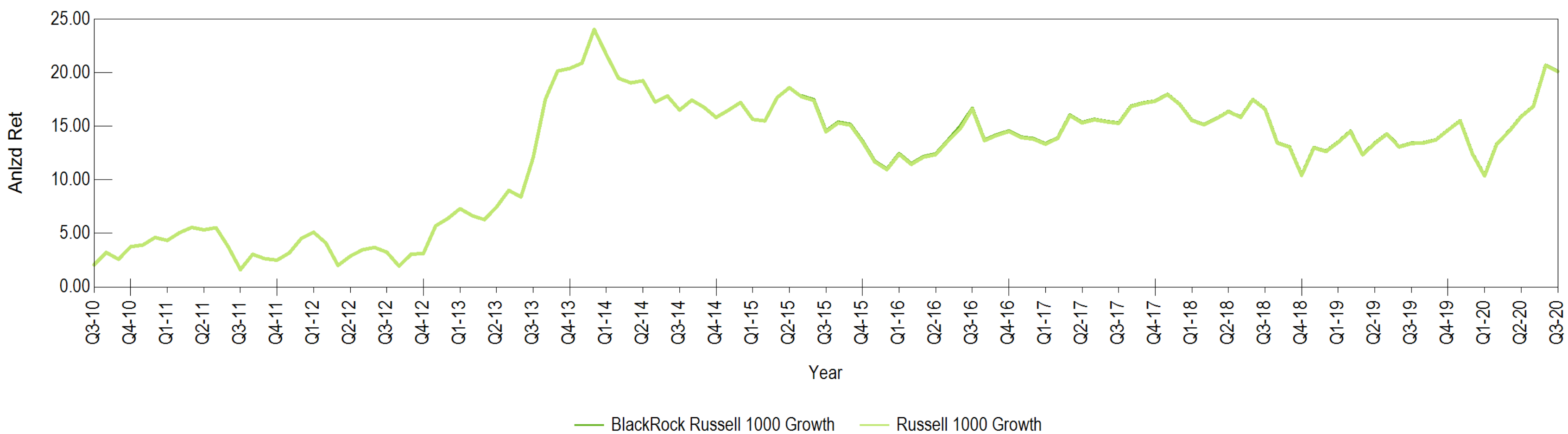
BlackRock Russell 1000 Growth

MANAGER PERFORMANCE - ROLLING 3 & 5 YEAR

Rolling 3 Year Annualized Return (%)



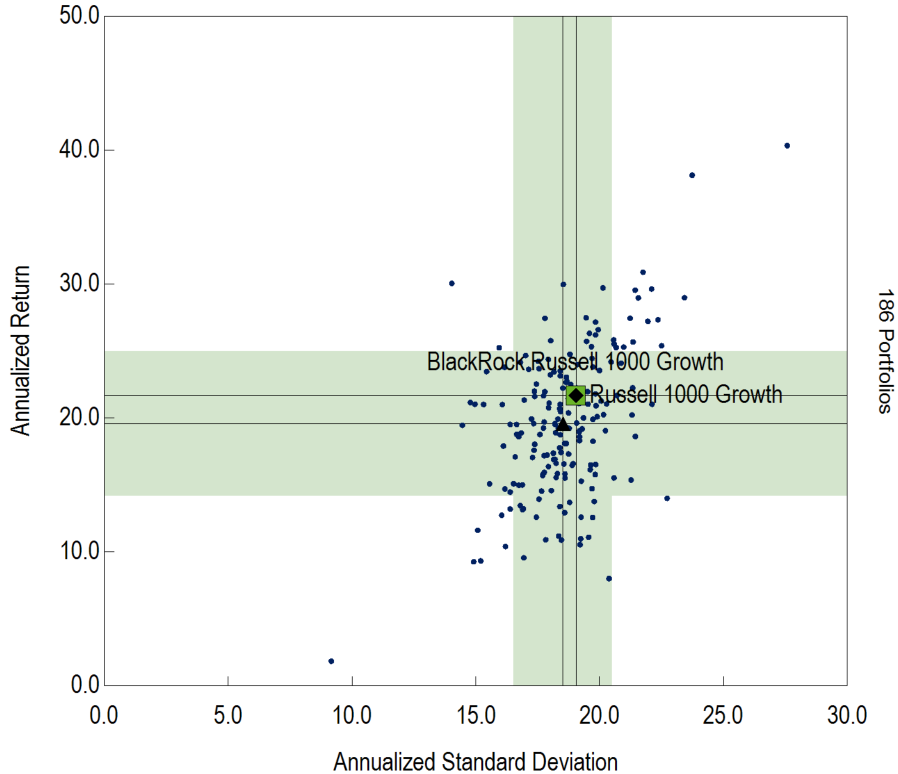
Rolling 5 Year Annualized Return (%)



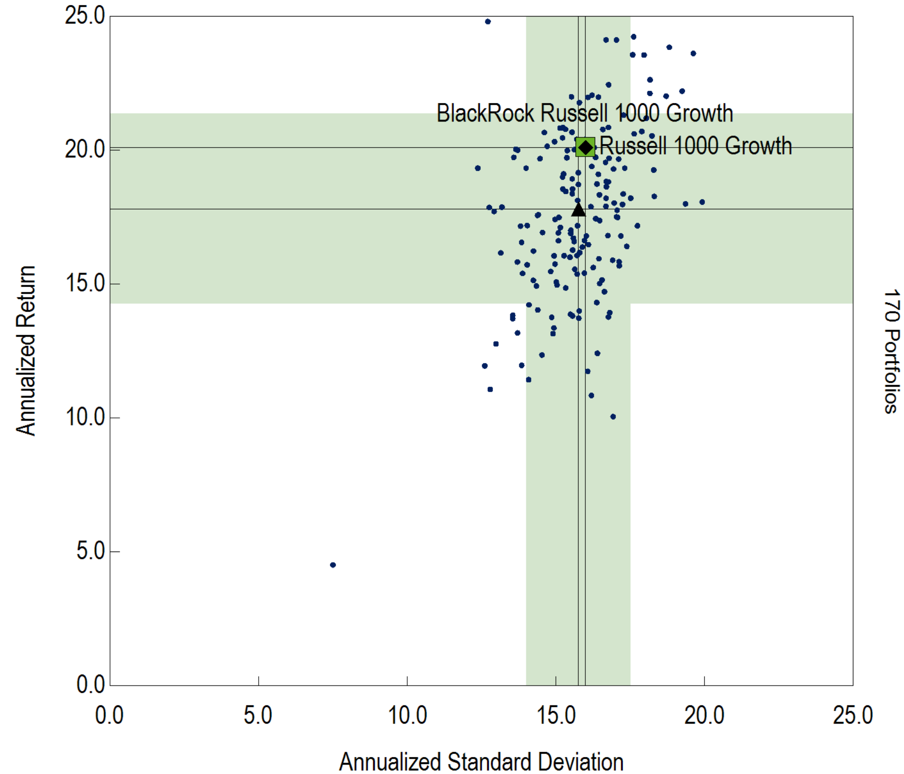
BlackRock Russell 1000 Growth

RISK VS. RETURN 3 & 5 YEAR

3 Years Ending September 30, 2020



5 Years Ending September 30, 2020



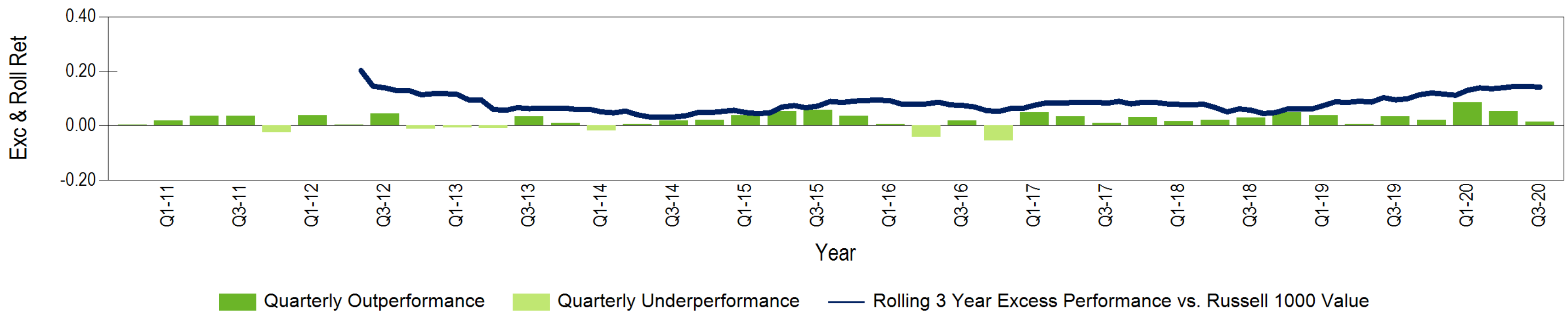
3 Years Ending September 30, 2020	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
BlackRock Russell 1000 Growth	21.66%	19.03%	1.06
Russell 1000 Growth	21.67%	19.05%	1.06
eV US Large Cap Growth Equity Net Median	19.58%	18.52%	0.98

5 Years Ending September 30, 2020	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
BlackRock Russell 1000 Growth	20.12%	15.99%	1.19
Russell 1000 Growth	20.10%	16.00%	1.19
eV US Large Cap Growth Equity Net Median	17.81%	15.76%	1.05

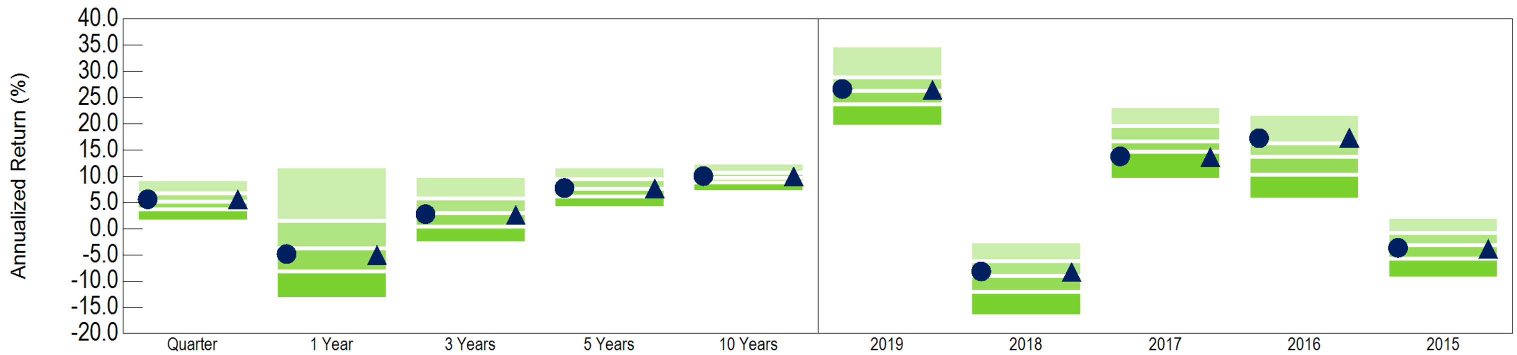
BlackRock Russell 1000 Value

MANAGER PERFORMANCE COMPARISONS

Rolling Annualized Excess Performance



eV US Large Cap Value Equity Net Return Comparison
Ending September 30, 2020



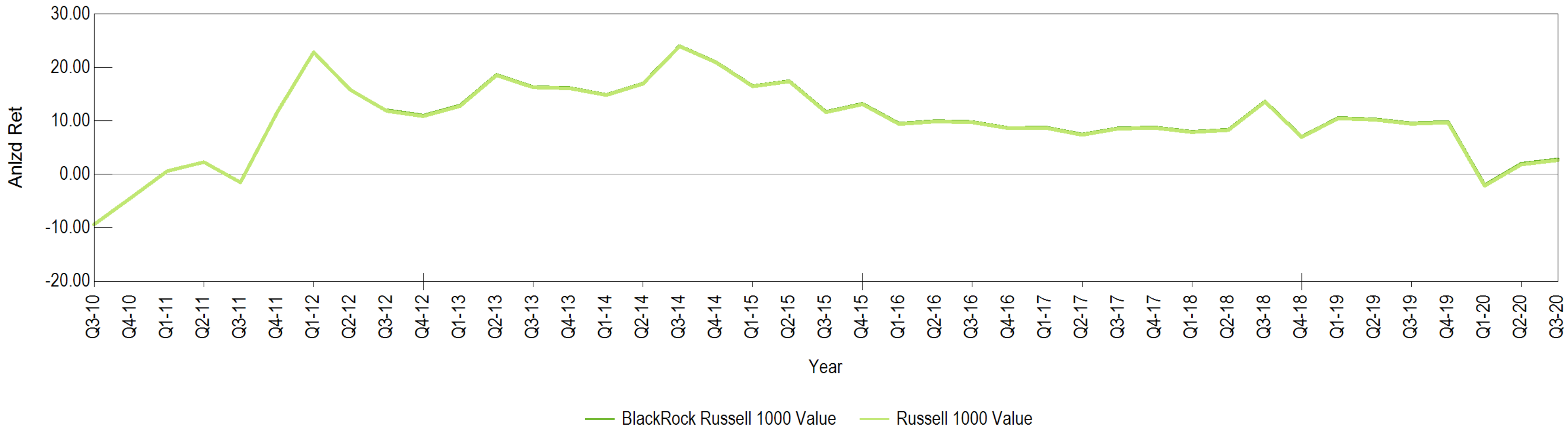
Period

Return (Rank)	Quarter		1 Year		3 Years		5 Years		10 Years		2019		2018		2017		2016		2015	
5th Percentile	9.4		11.8		10.0		11.9		12.5		34.9		-2.5		23.3		21.8		2.2	
25th Percentile	6.8		1.5		5.8		9.5		10.7		28.9		-6.1		19.7		16.3		-0.8	
Median	5.2		-3.7		3.1		7.7		9.8		26.3		-9.0		16.7		13.8		-3.1	
75th Percentile	3.7		-8.0		0.5		6.2		8.9		23.8		-12.0		14.8		10.4		-5.7	
95th Percentile	1.4		-13.3		-2.8		4.0		7.1		19.5		-16.7		9.4		5.6		-9.4	
# of Portfolios	248		246		243		233		186		249		239		231		225		195	
● BlackRock Russell 1000 Value	5.6	(42)	-4.8	(60)	2.8	(54)	7.8	(49)	10.0	(41)	26.7	(47)	-8.2	(41)	13.8	(83)	17.3	(20)	-3.6	(57)
▲ Russell 1000 Value	5.6	(42)	-5.0	(61)	2.6	(56)	7.7	(52)	9.9	(45)	26.5	(49)	-8.3	(43)	13.7	(86)	17.3	(19)	-3.8	(59)

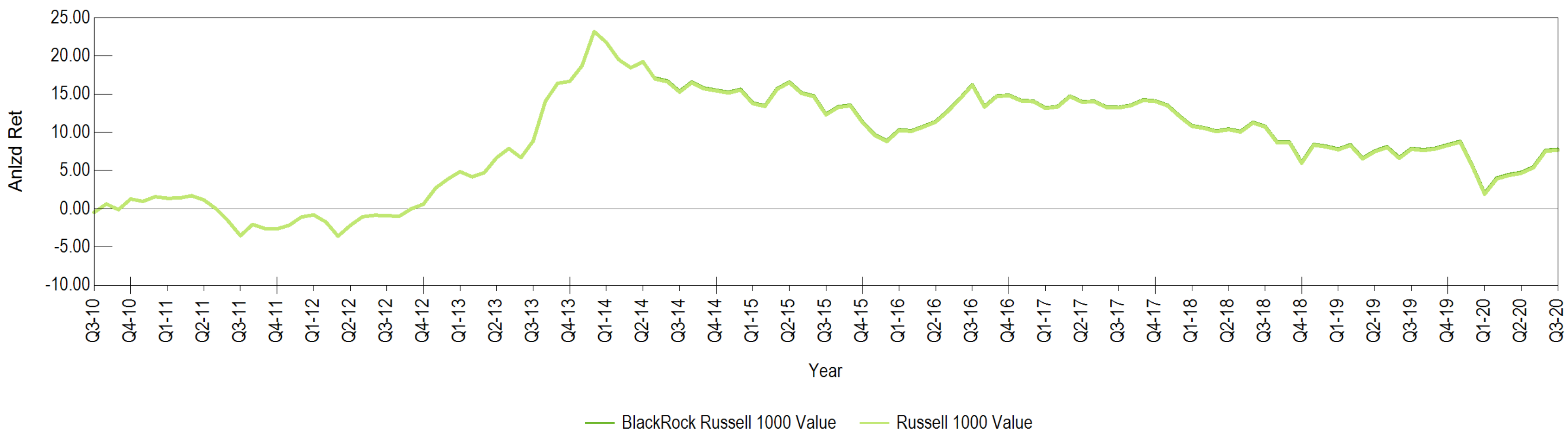
BlackRock Russell 1000 Value

MANAGER PERFORMANCE - ROLLING 3 & 5 YEAR

Rolling 3 Year Annualized Return (%)

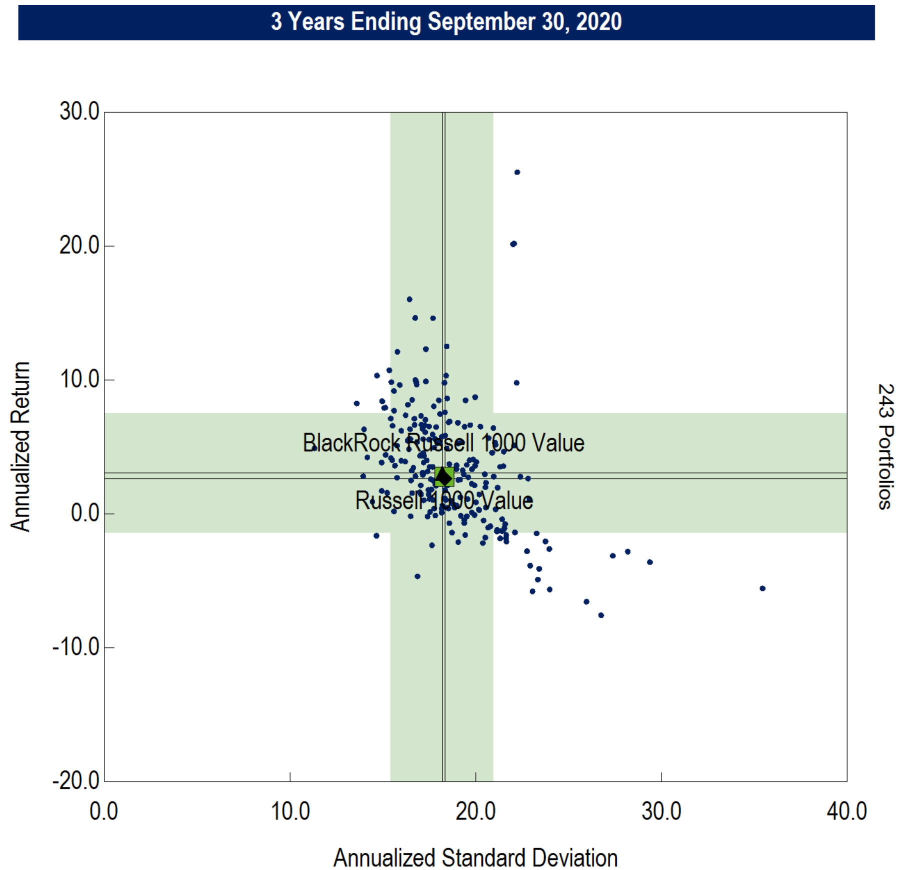


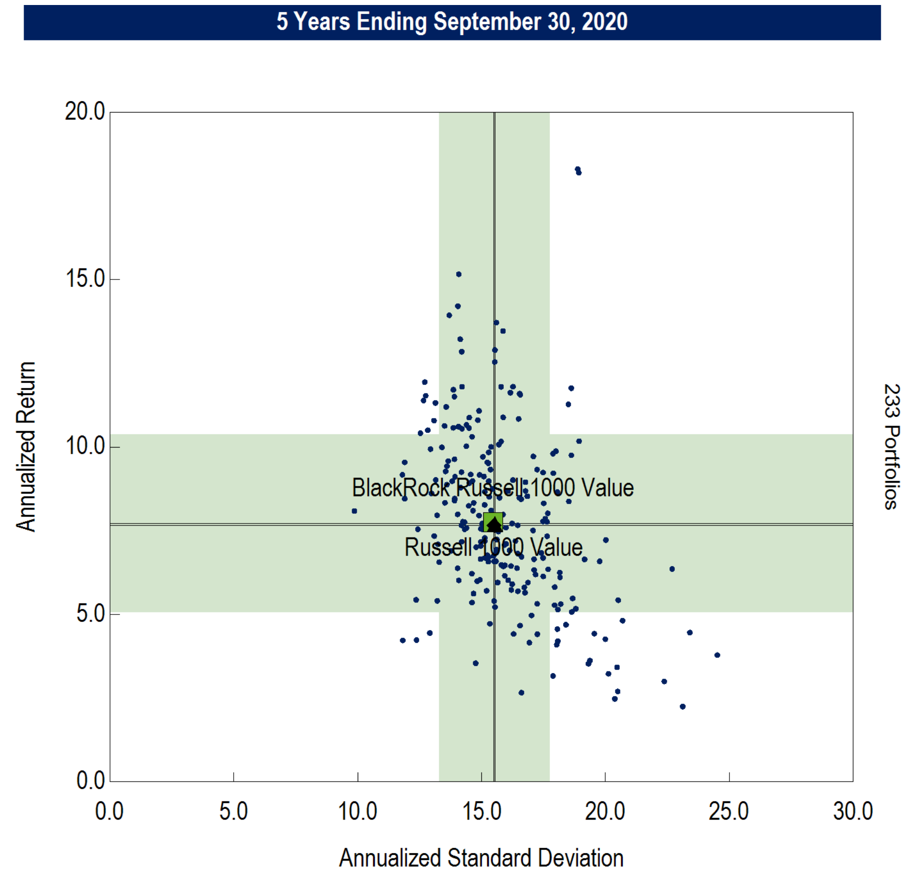
Rolling 5 Year Annualized Return (%)



BlackRock Russell 1000 Value

RISK VS. RETURN 3 & 5 YEAR





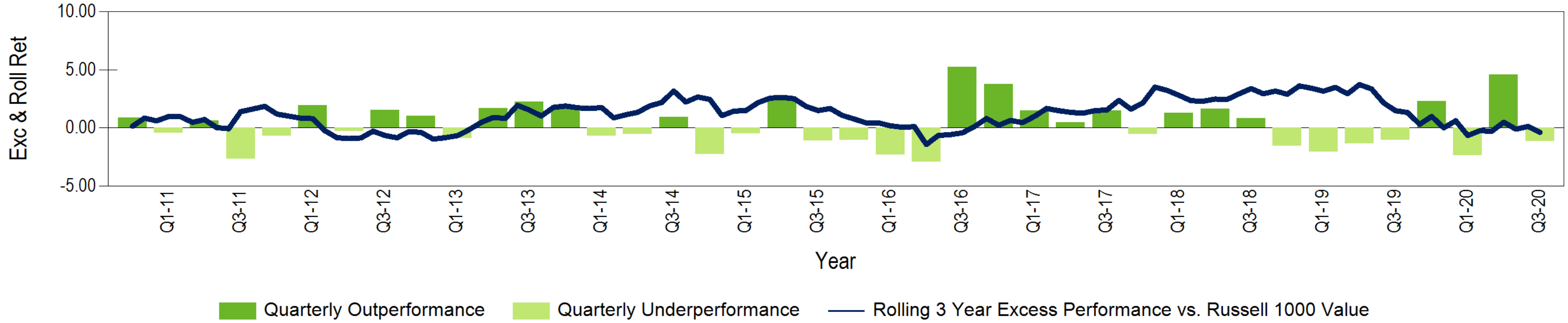
3 Years Ending September 30, 2020	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
BlackRock Russell 1000 Value	2.77%	18.31%	0.07
Russell 1000 Value	2.63%	18.33%	0.06
eV US Large Cap Value Equity Net Median	3.06%	18.19%	0.09

5 Years Ending September 30, 2020	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
BlackRock Russell 1000 Value	7.76%	15.48%	0.43
Russell 1000 Value	7.66%	15.50%	0.42
eV US Large Cap Value Equity Net Median	7.71%	15.54%	0.43

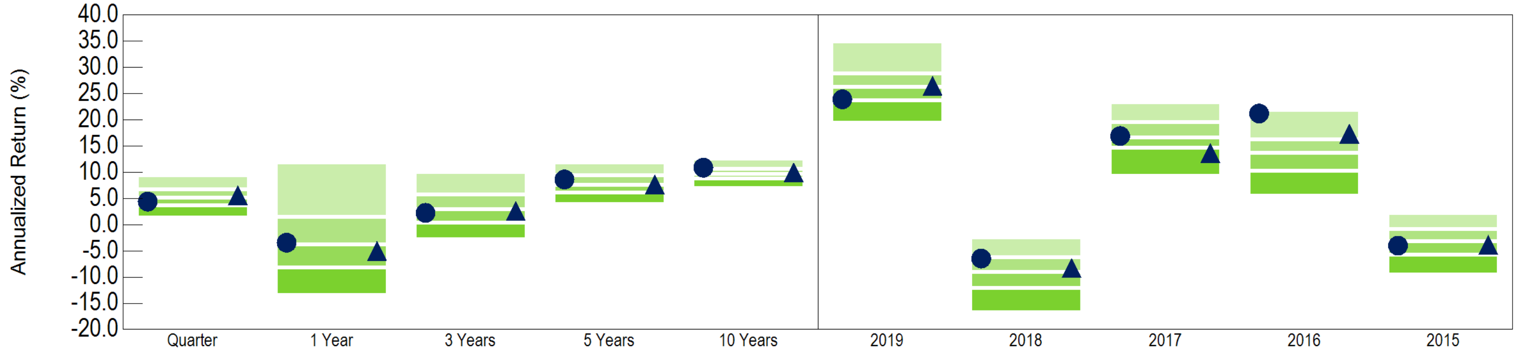
Dodge & Cox-Equity

MANAGER PERFORMANCE COMPARISONS

Rolling Annualized Excess Performance



eV US Large Cap Value Equity Net Return Comparison
Ending September 30, 2020

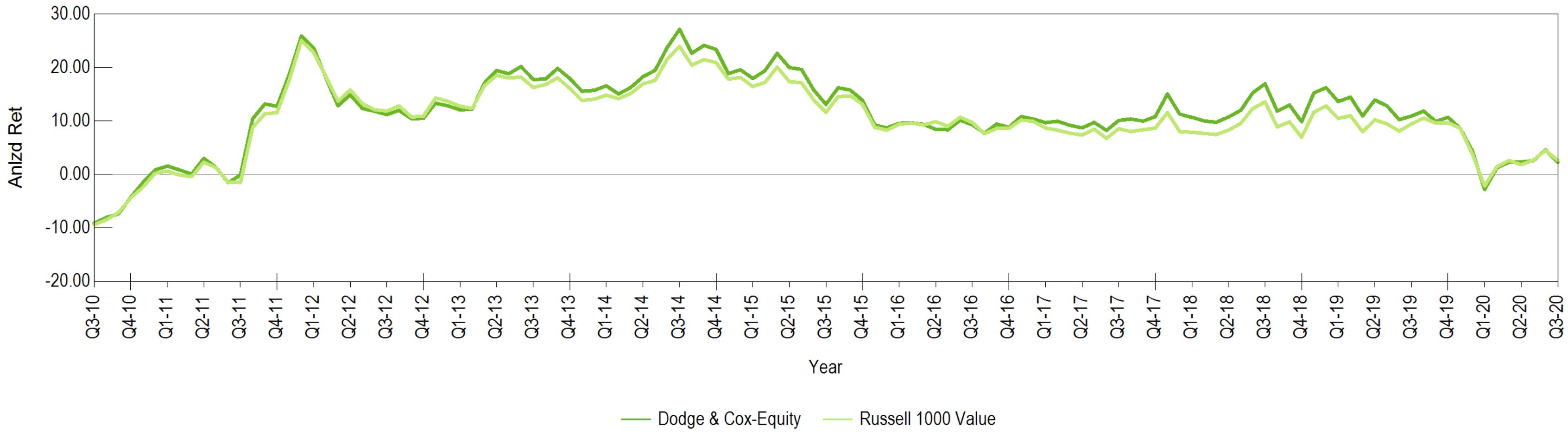


Return (Rank)	Quarter		1 Year		3 Years		5 Years		10 Years		2019		2018		2017		2016		2015	
5th Percentile	9.4		11.8		10.0		11.9		12.5		34.9		-2.5		23.3		21.8		2.2	
25th Percentile	6.8		1.5		5.8		9.5		10.7		28.9		-6.1		19.7		16.3		-0.8	
Median	5.2		-3.7		3.1		7.7		9.8		26.3		-9.0		16.7		13.8		-3.1	
75th Percentile	3.7		-8.0		0.5		6.2		8.9		23.8		-12.0		14.8		10.4		-5.7	
95th Percentile	1.4		-13.3		-2.8		4.0		7.1		19.5		-16.7		9.4		5.6		-9.4	
# of Portfolios	248		246		243		233		186		249		239		231		225		195	
● Dodge & Cox-Equity	4.4	(61)	-3.4	(47)	2.2	(61)	8.6	(37)	10.9	(23)	23.9	(74)	-6.5	(27)	16.9	(49)	21.2	(6)	-4.0	(59)
▲ Russell 1000 Value	5.6	(42)	-5.0	(61)	2.6	(56)	7.7	(52)	9.9	(45)	26.5	(49)	-8.3	(43)	13.7	(86)	17.3	(19)	-3.8	(59)

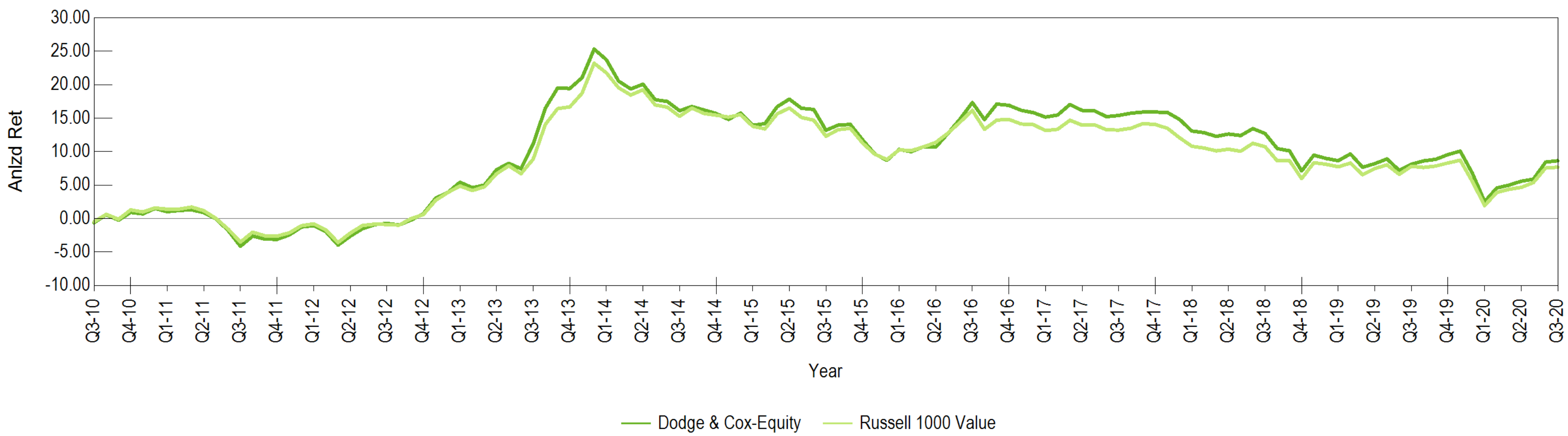
Dodge & Cox-Equity

MANAGER PERFORMANCE - ROLLING 1 & 2 YEAR

Rolling 3 Year Annualized Return (%)

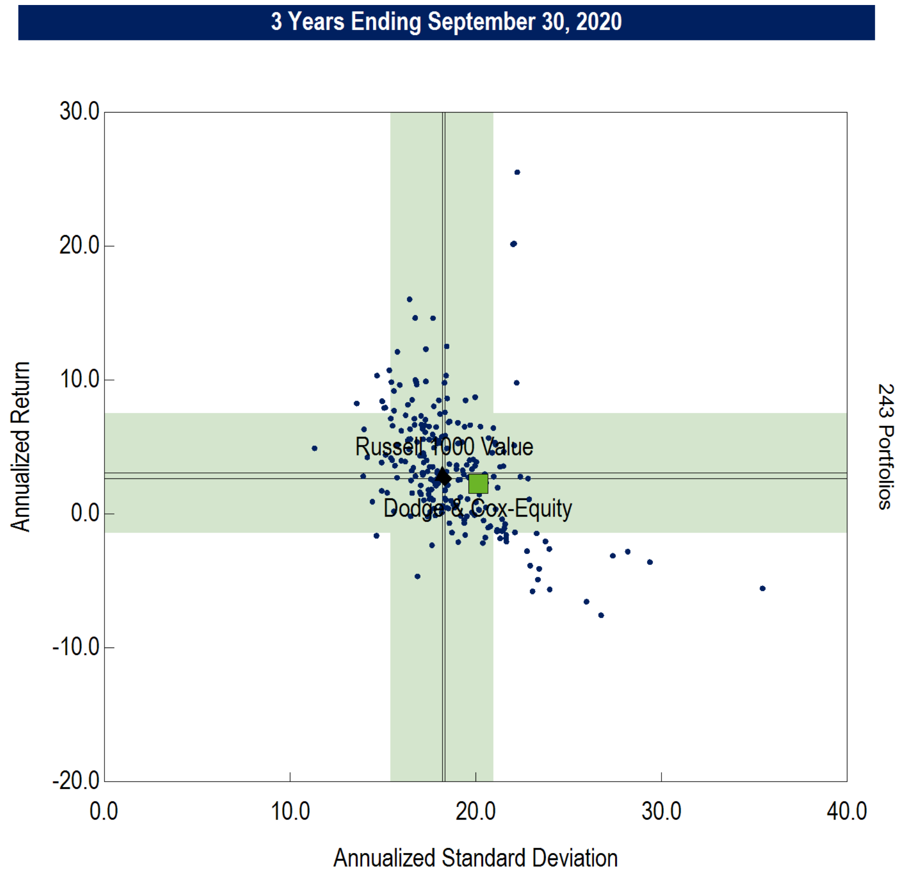


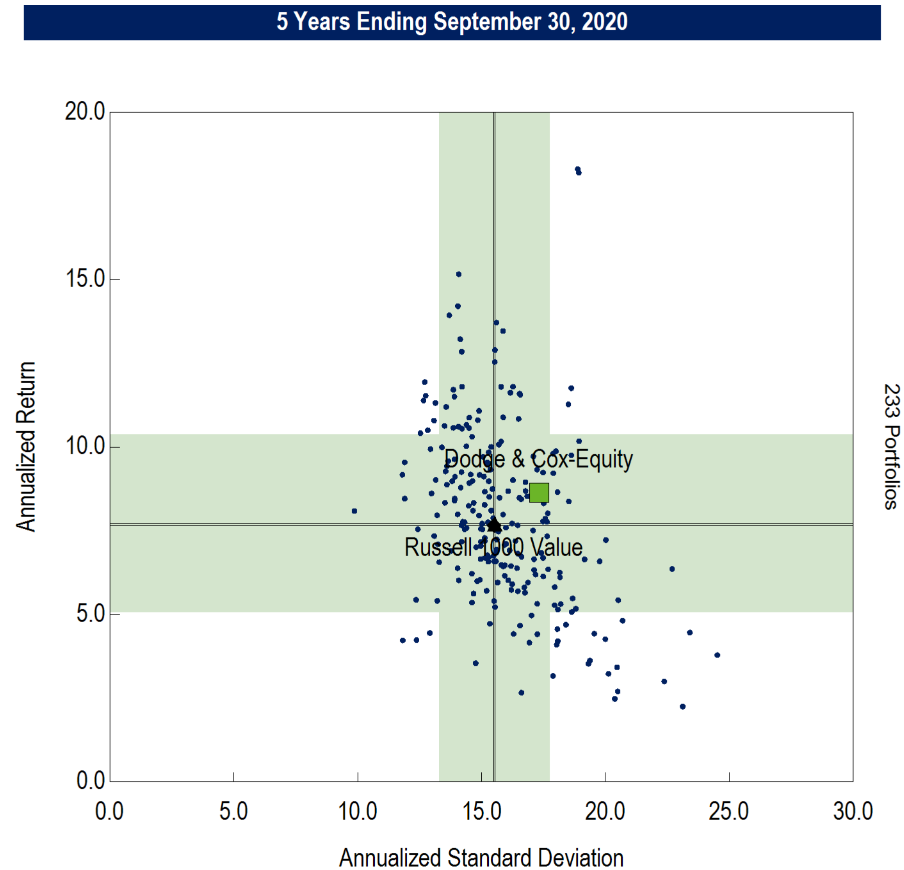
Rolling 5 Year Annualized Return (%)



Dodge & Cox-Equity

RISK VS. RETURN 3 & 5 YEAR





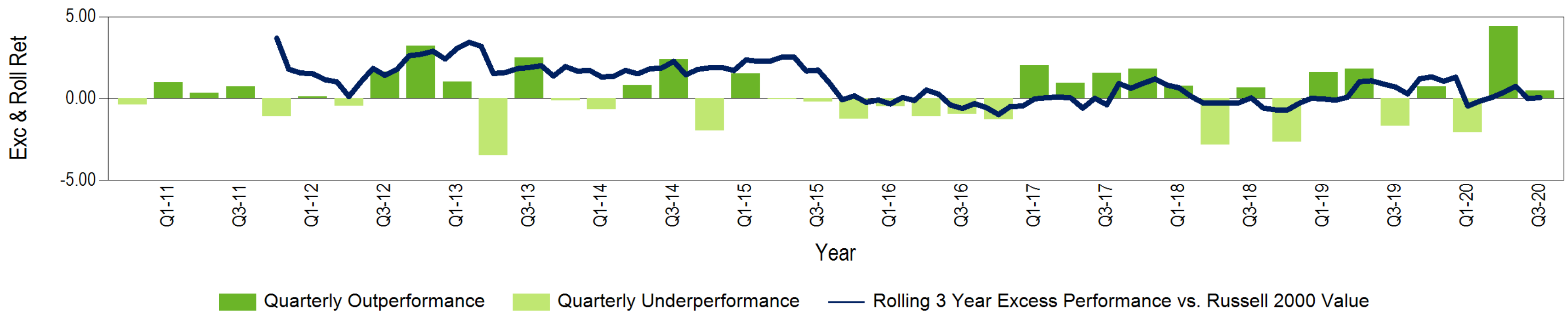
3 Years Ending September 30, 2020	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Dodge & Cox-Equity	2.25%	20.12%	0.03
Russell 1000 Value	2.63%	18.33%	0.06
eV US Large Cap Value Equity Net Median	3.06%	18.19%	0.09

5 Years Ending September 30, 2020	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Dodge & Cox-Equity	8.63%	17.32%	0.43
Russell 1000 Value	7.66%	15.50%	0.42
eV US Large Cap Value Equity Net Median	7.71%	15.54%	0.43

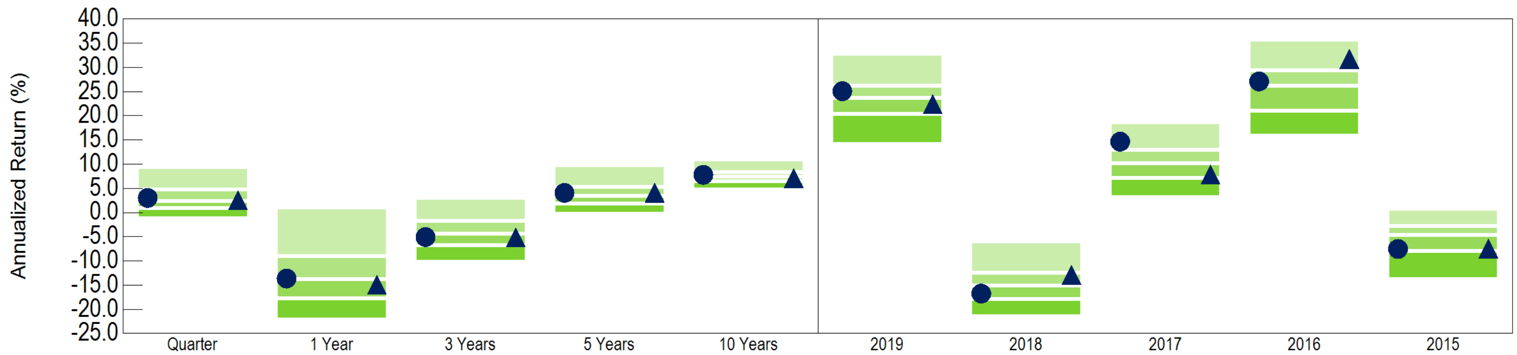
Capital Prospects

MANAGER PERFORMANCE COMPARISONS

Rolling Annualized Excess Performance



eV US Small Cap Value Equity Net Return Comparison
Ending September 30, 2020



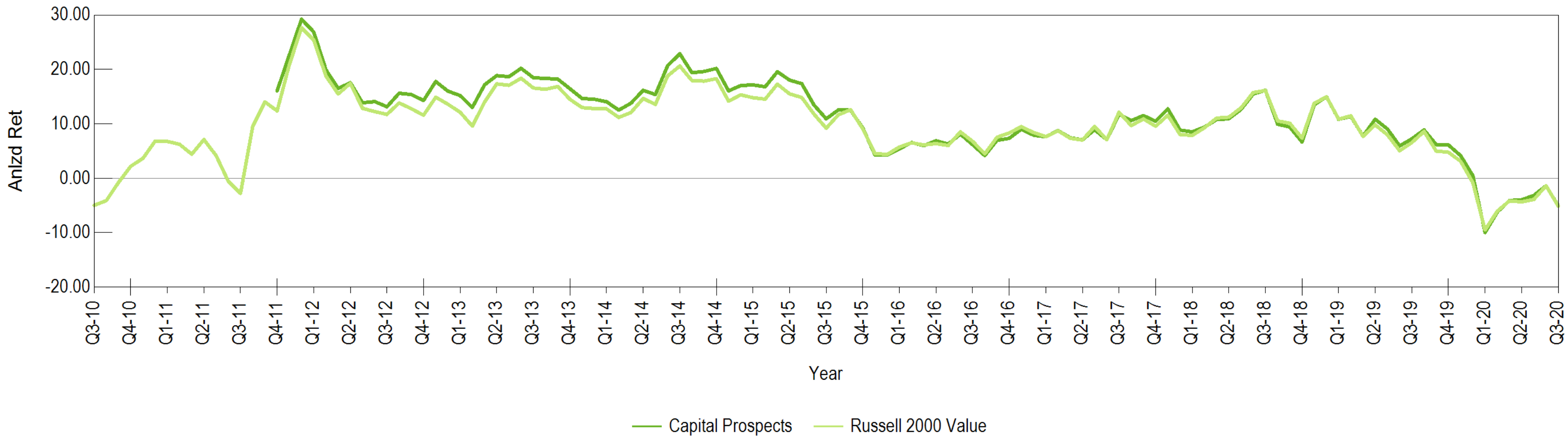
Return (Rank) — Period

	Quarter		1 Year		3 Years		5 Years		10 Years		2019		2018		2017		2016		2015	
5th Percentile	9.4		1.0		3.0		9.7		10.9		32.8		-6.0		18.6		35.7		0.8	
25th Percentile	4.8		-8.9		-1.7		5.4		8.5		26.3		-12.4		13.1		29.5		-2.7	
Median	2.4		-13.7		-4.4		3.6		7.4		23.8		-15.0		10.3		26.2		-4.6	
75th Percentile	1.0		-17.6		-6.7		1.9		6.6		20.4		-17.8		7.2		21.1		-7.8	
95th Percentile	-1.1		-22.0		-10.1		-0.2		4.8		14.2		-21.3		3.3		15.9		-13.7	
# of Portfolios	180		180		175		167		144		176		168		170		151		137	
● Capital Prospects	3.0	(44)	-13.6	(50)	-5.1	(58)	4.1	(43)	7.8	(45)	25.1	(35)	-16.7	(67)	14.7	(17)	27.1	(39)	-7.5	(73)
▲ Russell 2000 Value	2.6	(50)	-14.9	(58)	-5.1	(59)	4.1	(43)	7.1	(61)	22.4	(60)	-12.9	(31)	7.8	(70)	31.7	(15)	-7.5	(73)

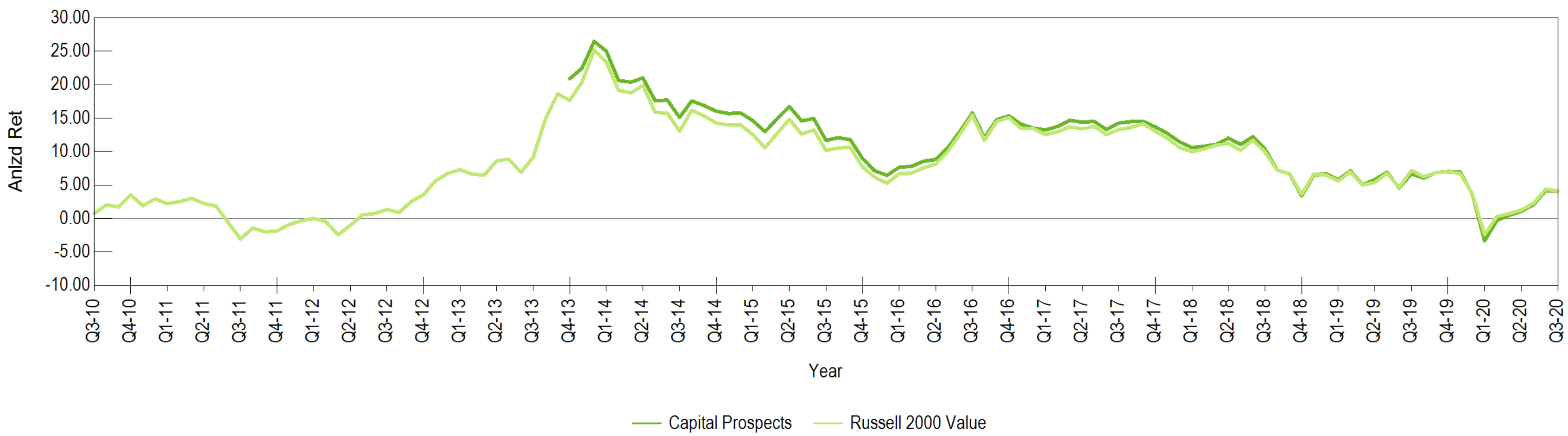
Capital Prospects

MANAGER PERFORMANCE - ROLLING 3 & 5 YEAR

Rolling 3 Year Annualized Return (%)



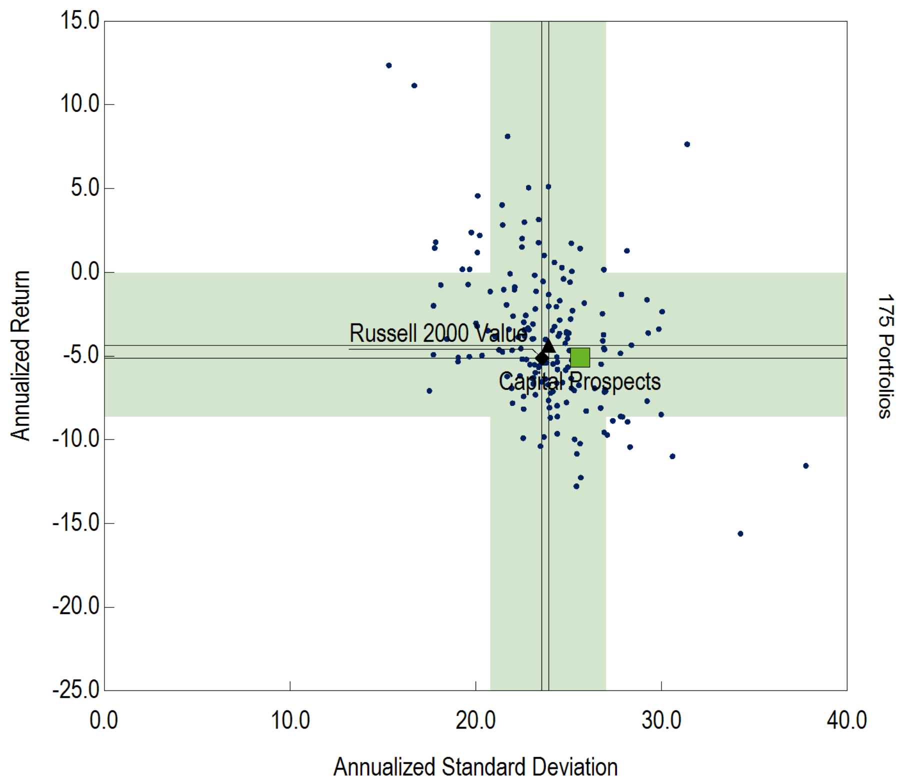
Rolling 5 Year Annualized Return (%)



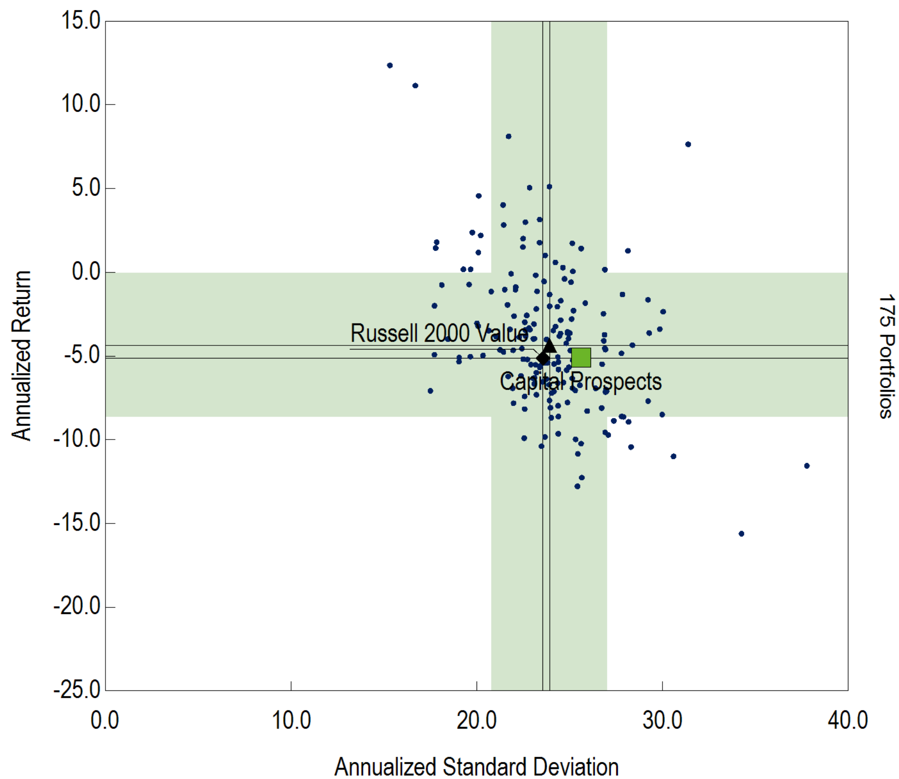
Capital Prospects

RISK VS. RETURN 3 & 5 YEAR

3 Years Ending September 30, 2020



3 Years Ending September 30, 2020



1 Year Ending September 30, 2020	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Capital Prospects	-13.63%	36.23%	-0.40
Russell 2000 Value	-14.88%	32.53%	-0.48
eV US Small Cap Value Equity Net Median	-13.65%	31.53%	-0.46

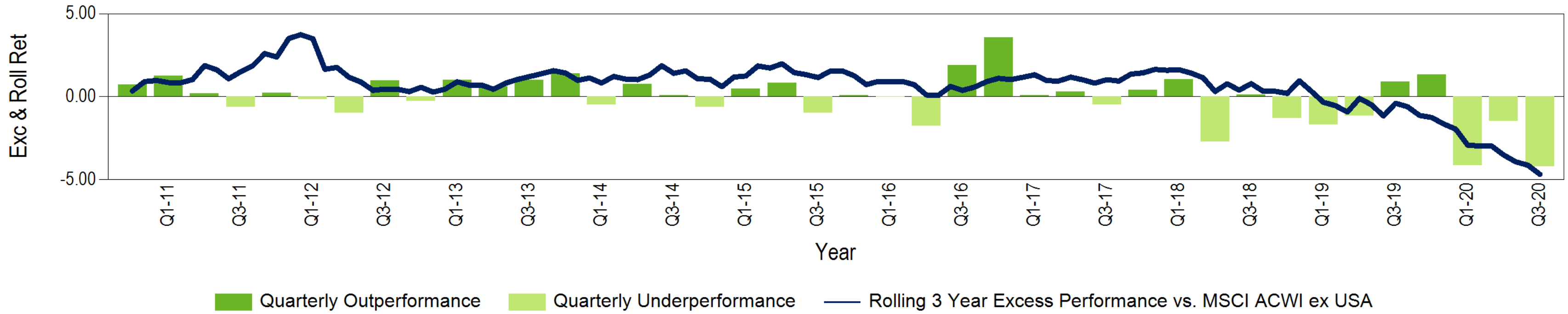
5 Years Ending September 30, 2020	Anlzd Return	Anlzd Standard Deviation
Capital Prospects	4.06%	21.86%
Russell 2000 Value	4.11%	20.74%
eV US Small Cap Value Equity Net Median	3.56%	20.98%

International Equity Managers

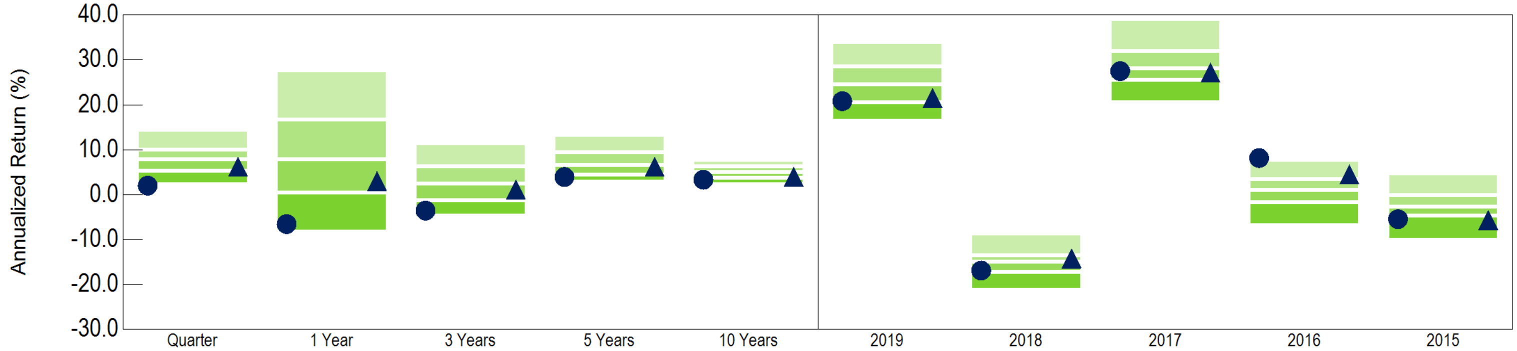
LSV Asset Mgt

MANAGER PERFORMANCE COMPARISONS

Rolling Annualized Excess Performance



eV ACWI ex-US Large Cap Equity Net Return Comparison
Ending September 30, 2020



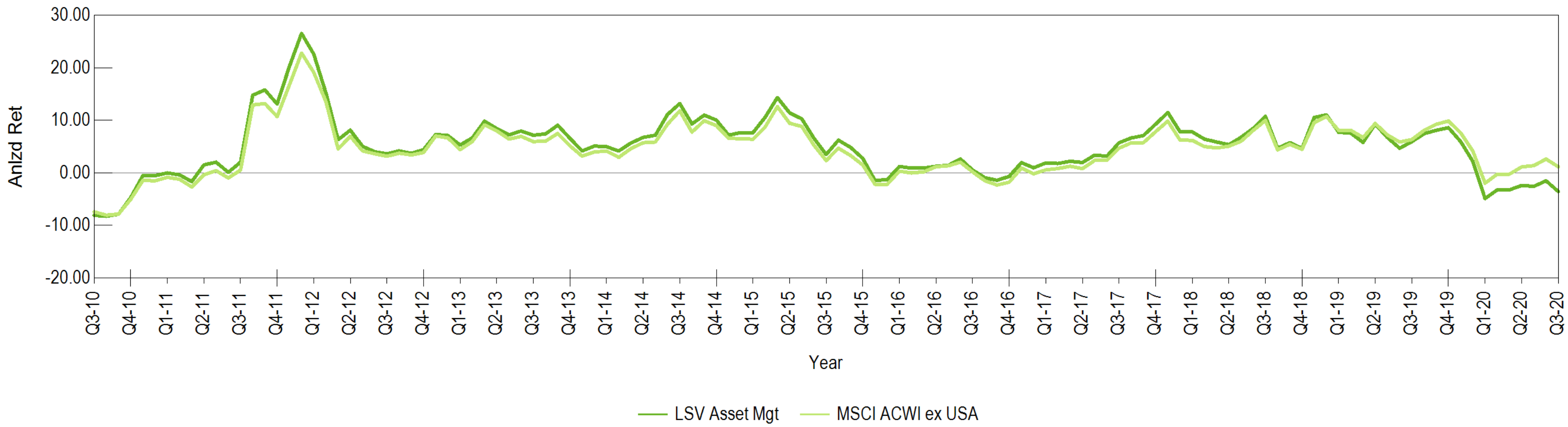
Period

Return (Rank)	Quarter		1 Year		3 Years		5 Years		10 Years		2019		2018		2017		2016		2015	
5th Percentile	14.3		27.6		11.4		13.2		7.7		33.9		-8.7		39.0		7.7		4.7	
25th Percentile	10.1		16.8		6.5		9.5		6.4		28.6		-13.4		32.1		3.5		0.0	
Median	8.0		8.0		2.5		6.8		5.1		24.7		-14.8		28.3		1.1		-2.6	
75th Percentile	5.5		0.6		-1.1		4.6		3.9		20.7		-17.1		25.7		-1.6		-4.6	
95th Percentile	2.4		-8.1		-4.6		3.0		2.4		16.5		-21.1		20.7		-6.7		-10.0	
# of Portfolios	79		78		77		70		48		82		79		71		71		60	
● LSV Asset Mgt	2.0	(99)	-6.5	(91)	-3.5	(90)	3.9	(80)	3.3	(82)	20.8	(75)	-16.9	(74)	27.5	(61)	8.2	(3)	-5.4	(80)
▲ MSCI ACWI ex USA	6.3	(70)	3.0	(61)	1.2	(57)	6.2	(54)	4.0	(68)	21.5	(67)	-14.2	(41)	27.2	(64)	4.5	(20)	-5.7	(81)

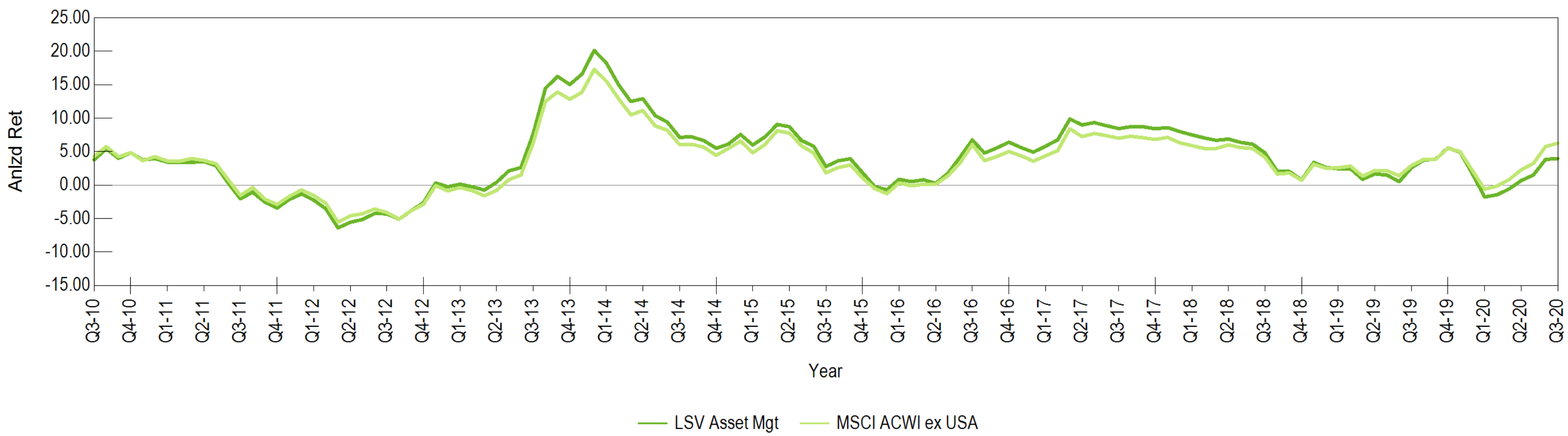
LSV Asset Mgt

MANAGER PERFORMANCE - ROLLING 3 & 5 YEAR

Rolling 3 Year Annualized Return (%)



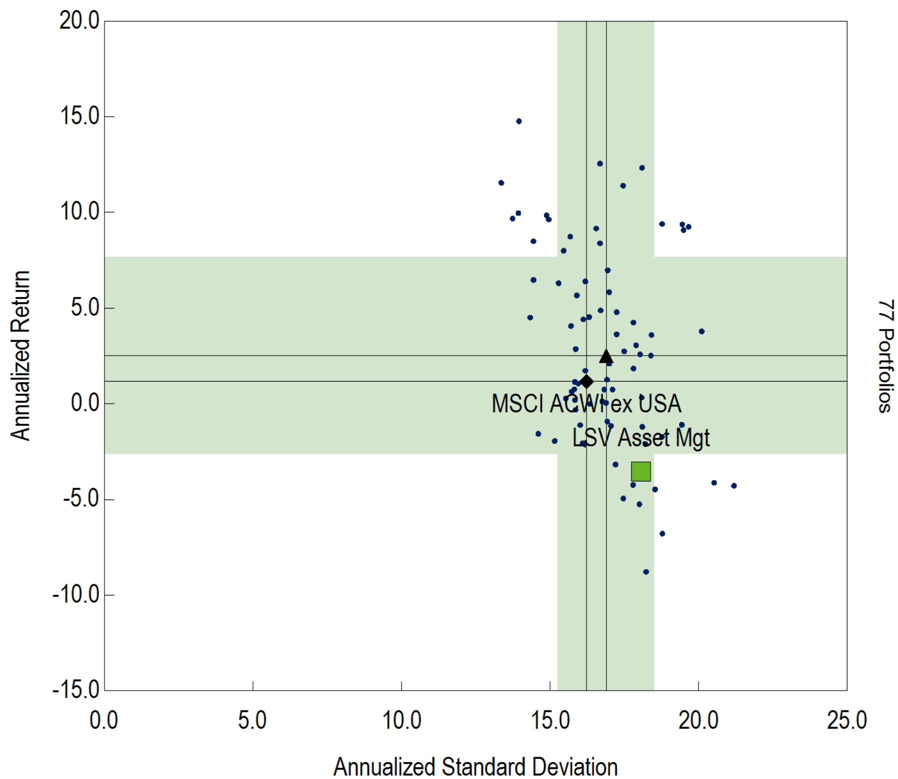
Rolling 5 Year Annualized Return (%)



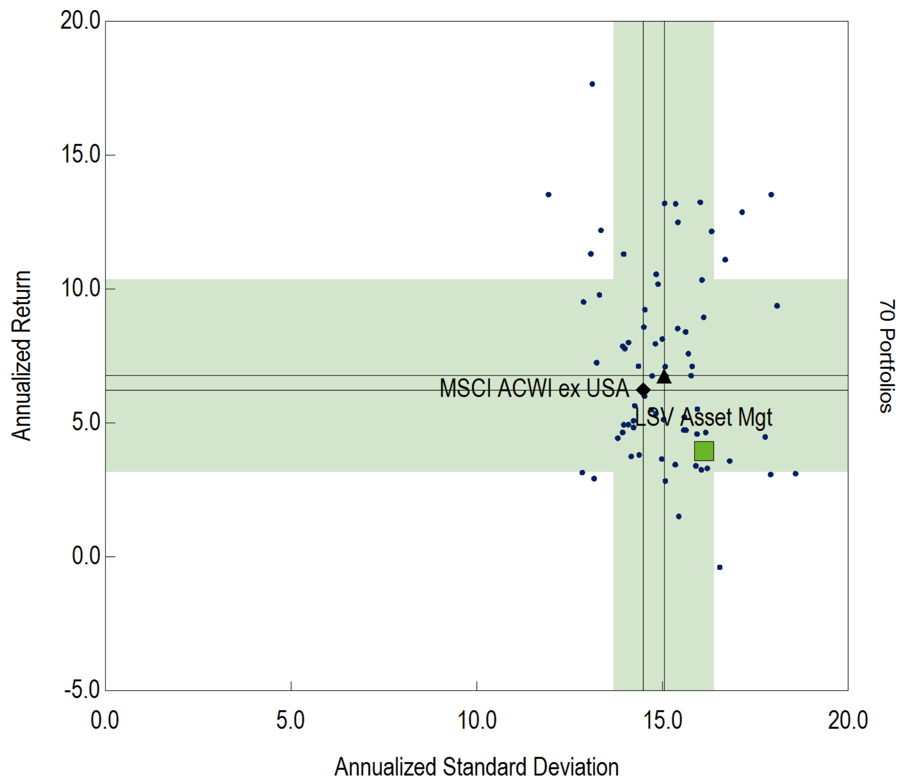
LSV Asset Mgt

RISK VS. RETURN 3 & 5 YEAR

3 Years Ending September 30, 2020



5 Years Ending September 30, 2020



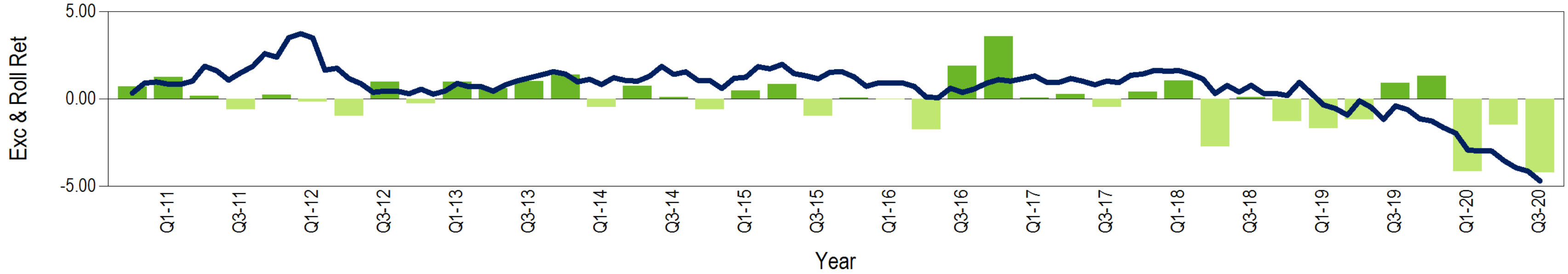
3 Years Ending September 30, 2020	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
LSV Asset Mgt	-3.54%	18.07%	-0.28
MSCI ACWI ex USA	1.16%	16.23%	-0.03
eV ACWI ex-US Large Cap Equity Net Median	2.52%	16.89%	0.05

5 Years Ending September 30, 2020	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
LSV Asset Mgt	3.95%	16.11%	0.17
MSCI ACWI ex USA	6.23%	14.49%	0.35
eV ACWI ex-US Large Cap Equity Net Median	6.76%	15.04%	0.37

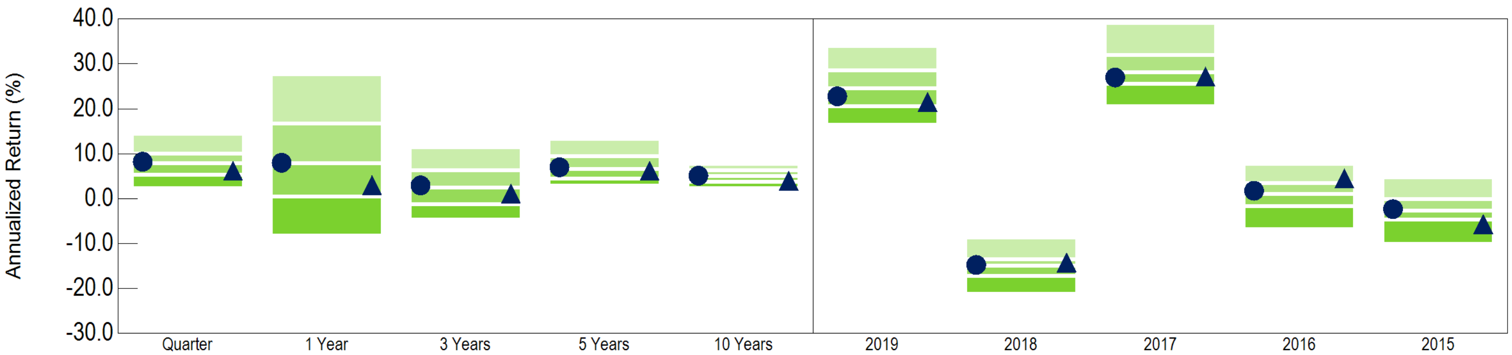
Fidelity

MANAGER PERFORMANCE COMPARISONS

Rolling Annualized Excess Performance



eV ACWI ex-US Large Cap Equity Net Return Comparison
Ending September 30, 2020

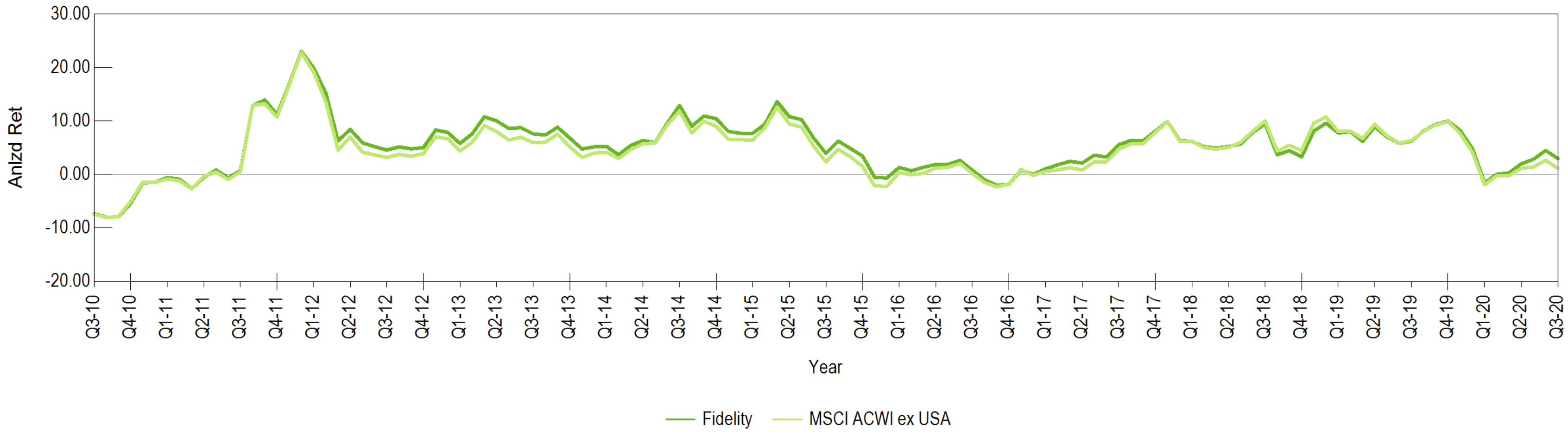


Return (Rank)	Quarter		1 Year		3 Years		5 Years		10 Years		2019		2018		2017		2016		2015	
5th Percentile	14.3		27.6		11.4		13.2		7.7		33.9		-8.7		39.0		7.7		4.7	
25th Percentile	10.1		16.8		6.5		9.5		6.4		28.6		-13.4		32.1		3.5		0.0	
Median	8.0		8.0		2.5		6.8		5.1		24.7		-14.8		28.3		1.1		-2.6	
75th Percentile	5.5		0.6		-1.1		4.6		3.9		20.7		-17.1		25.7		-1.6		-4.6	
95th Percentile	2.4		-8.1		-4.6		3.0		2.4		16.5		-21.1		20.7		-6.7		-10.0	
# of Portfolios	79		78		77		70		48		82		79		71		71		60	
● Fidelity	8.2	(48)	8.0	(51)	3.0	(46)	7.0	(49)	5.1	(51)	22.8	(56)	-14.7	(48)	27.0	(66)	1.8	(44)	-2.3	(47)
▲ MSCI ACWI ex USA	6.3	(70)	3.0	(61)	1.2	(57)	6.2	(54)	4.0	(68)	21.5	(67)	-14.2	(41)	27.2	(64)	4.5	(20)	-5.7	(81)

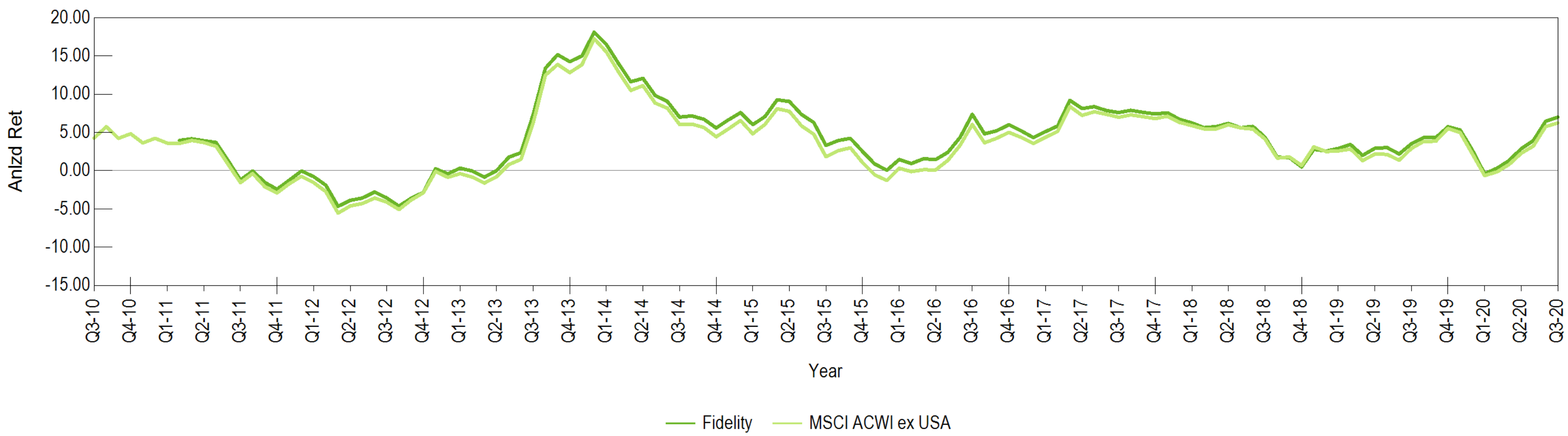
Fidelity

MANAGER PERFORMANCE - ROLLING 3 & 5 YEAR

Rolling 3 Year Annualized Return (%)

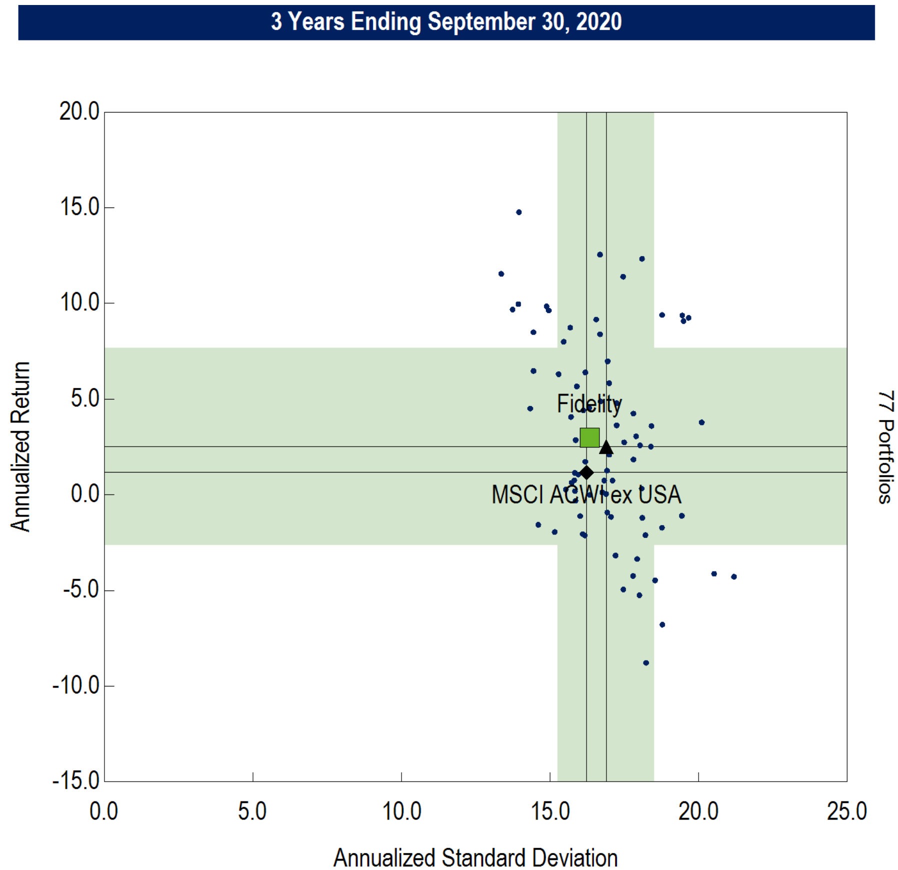


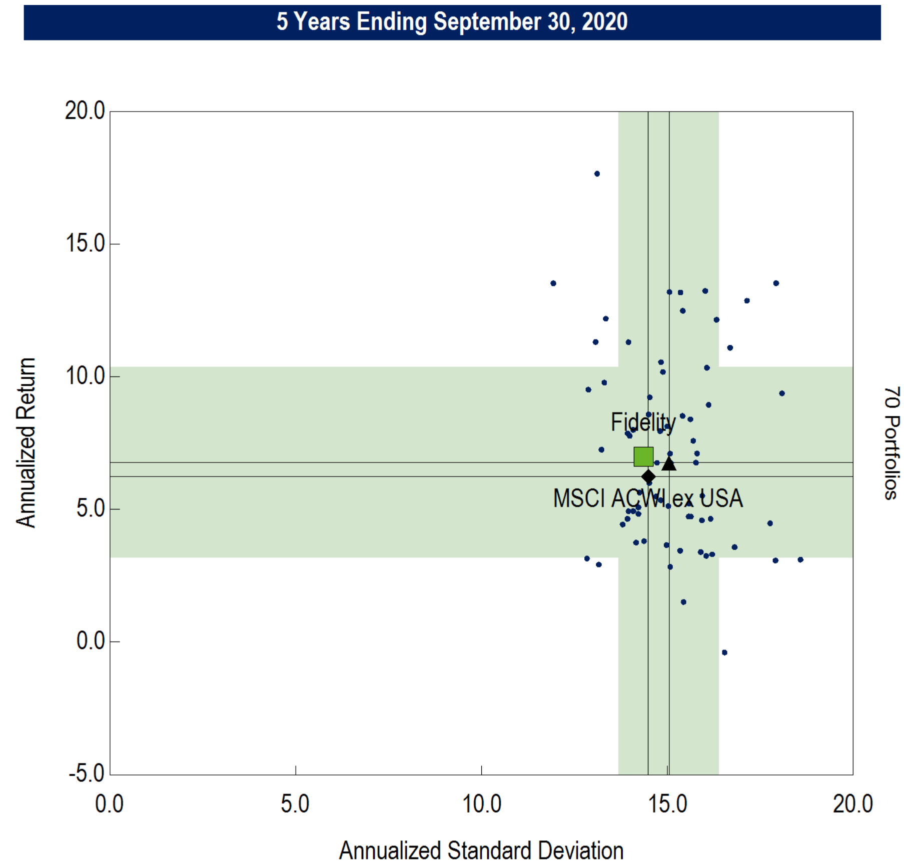
Rolling 5 Year Annualized Return (%)



Fidelity

RISK VS. RETURN 3 & 5 YEAR





3 Years Ending September 30, 2020	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Fidelity	2.97%	16.34%	0.09
MSCI ACWI ex USA	1.16%	16.23%	-0.03
eV ACWI ex-US Large Cap Equity Net Median	2.52%	16.89%	0.05

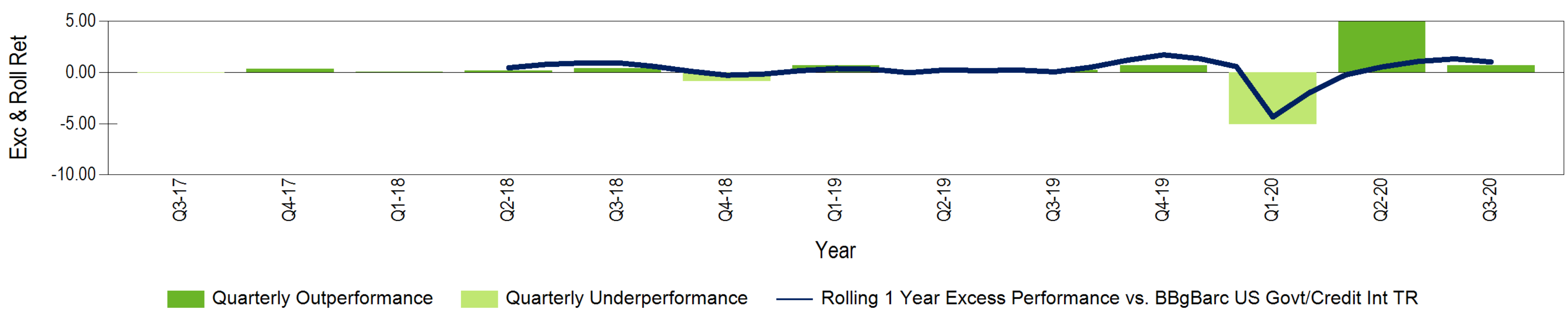
5 Years Ending September 30, 2020	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Fidelity	6.99%	14.36%	0.41
MSCI ACWI ex USA	6.23%	14.49%	0.35
eV ACWI ex-US Large Cap Equity Net Median	6.76%	15.04%	0.37

Domestic Fixed Income Managers

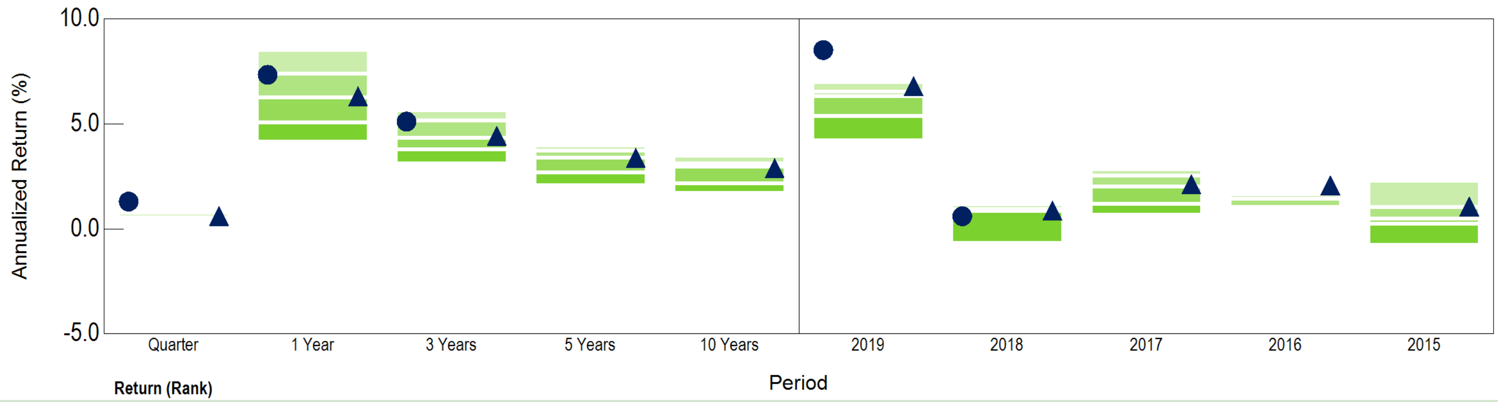
Insight

MANAGER PERFORMANCE COMPARISONS

Rolling Annualized Excess Performance



eV US Government Fixed Inc Net Return Comparison
Ending September 30, 2020

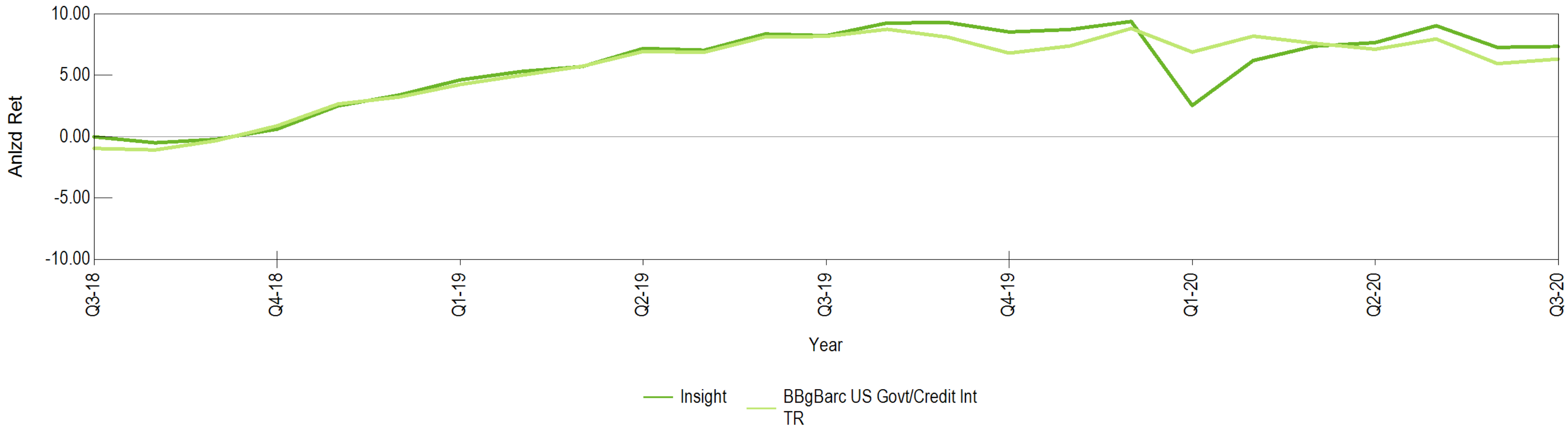


Return (Rank)	Quarter		1 Year		3 Years		5 Years		10 Years		2019		2018		2017		2016		2015	
5th Percentile	0.8		8.5		5.7		4.0		3.5		7.0		1.3		2.8		1.6		2.3	
25th Percentile	0.6		7.4		5.2		3.8		3.1		6.6		1.2		2.6		1.5		1.1	
Median	0.4		6.3		4.4		3.4		3.0		6.3		1.0		2.0		1.1		0.5	
75th Percentile	0.3		5.1		3.8		2.7		2.2		5.4		0.9		1.2		1.0		0.3	
95th Percentile	0.2		4.2		3.1		2.1		1.7		4.2		-0.6		0.7		0.8		-0.7	
# of Portfolios	14		14		14		13		13		13		12		11		9		17	
● Insight	1.3	(1)	7.3	(32)	5.1	(27)	--	(--)	--	(--)	8.5	(1)	0.6	(87)	--	(--)	--	(--)	--	(--)
▲ BBgBarc US Govt/Credit Int TR	0.6	(8)	6.3	(46)	4.4	(49)	3.4	(51)	2.9	(52)	6.8	(15)	0.9	(76)	2.1	(48)	2.1	(1)	1.1	(23)

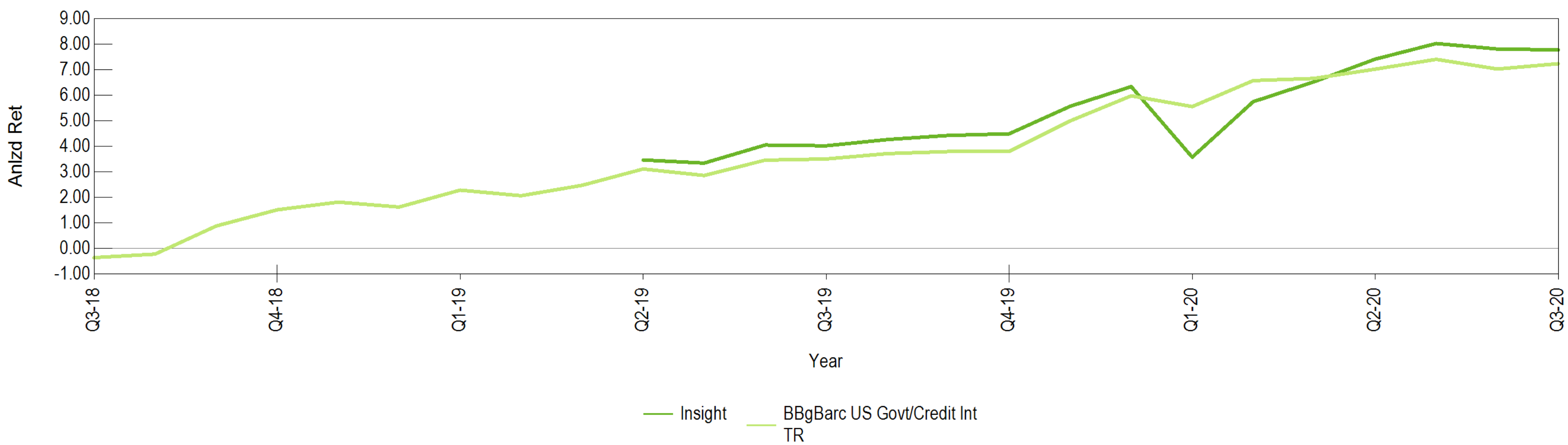
Insight

MANAGER PERFORMANCE - ROLLING 1 & 2 YEAR

Rolling 1 Year Annualized Return (%)

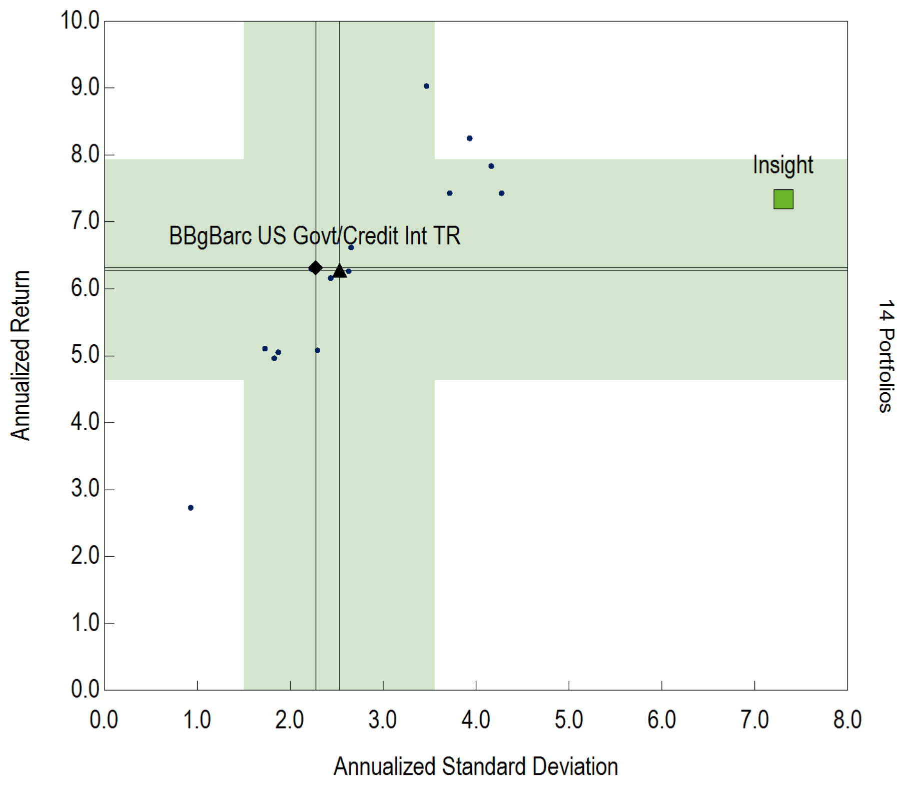


Rolling 2 Year Annualized Return (%)

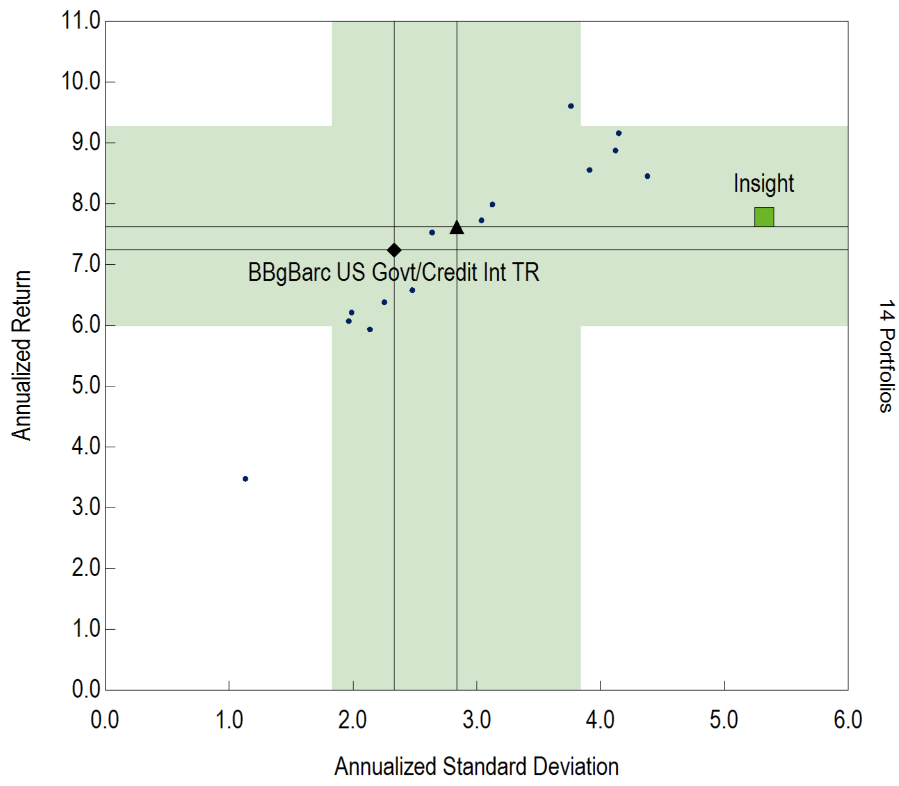


RISK VS. RETURN 1 & 2 YEAR

1 Year Ending September 30, 2020



2 Years Ending September 30, 2020



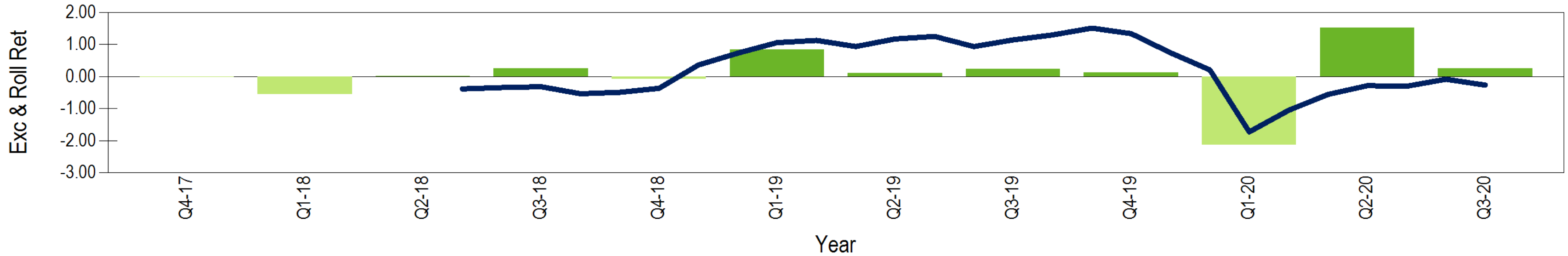
1 Year Ending September 30, 2020	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Insight	7.34%	7.31%	0.89
BBgBarc US Govt/Credit Int TR	6.32%	2.27%	2.42
eV US Government Fixed Inc Net Median	6.28%	2.53%	2.13

2 Years Ending September 30, 2020	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Insight	7.78%	5.32%	1.17
BBgBarc US Govt/Credit Int TR	7.24%	2.33%	2.44
eV US Government Fixed Inc Net Median	7.63%	2.84%	2.05

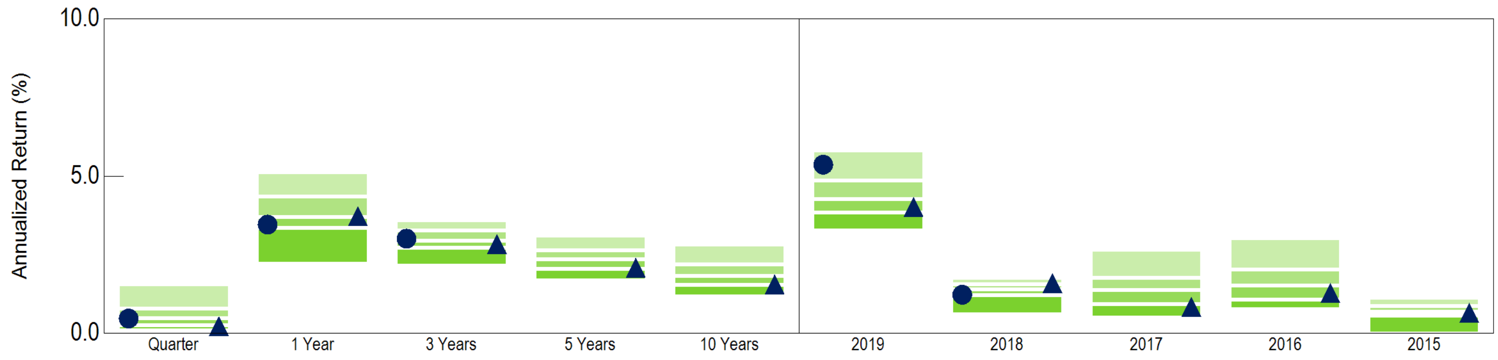
DFA

MANAGER PERFORMANCE COMPARISONS

Rolling Annualized Excess Performance



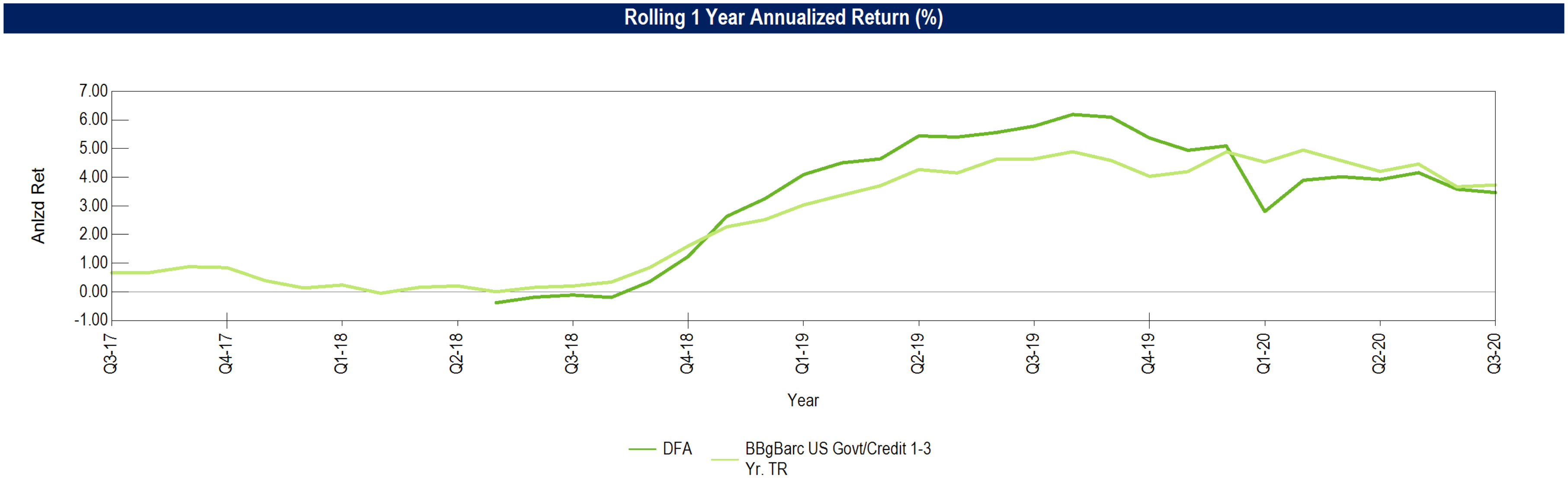
eV US Short Duration Fixed Inc Net Return Comparison
Ending September 30, 2020

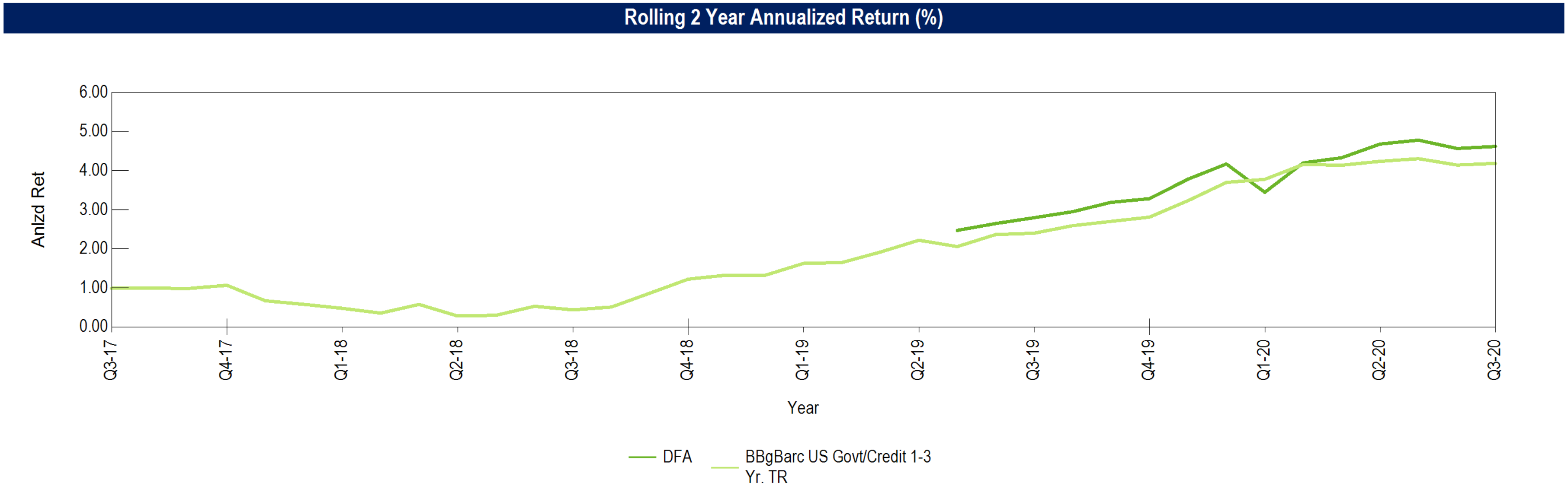


Return (Rank)	Quarter		1 Year		3 Years		5 Years		10 Years		2019		2018		2017		2016		2015	
5th Percentile	1.6		5.1		3.6		3.1		2.8		5.8		1.8		2.7		3.0		1.1	
25th Percentile	0.8		4.4		3.3		2.6		2.2		4.9		1.6		1.8		2.0		0.9	
Median	0.5		3.7		3.0		2.4		1.8		4.3		1.4		1.4		1.5		0.7	
75th Percentile	0.3		3.4		2.7		2.1		1.6		3.9		1.2		0.9		1.1		0.6	
95th Percentile	0.1		2.2		2.2		1.7		1.2		3.3		0.6		0.5		0.8		0.0	
# of Portfolios	142		141		138		131		107		144		137		126		114		96	
● DFA	0.5	(54)	3.5	(68)	3.0	(46)	--	(--)	--	(--)	5.4	(11)	1.2	(75)	--	(--)	--	(--)	--	(--)
▲ BBgBarc US Govt/Credit 1-3 Yr. TR	0.2	(81)	3.7	(49)	2.8	(64)	2.1	(73)	1.6	(75)	4.0	(68)	1.6	(22)	0.8	(83)	1.3	(66)	0.7	(58)

DFA

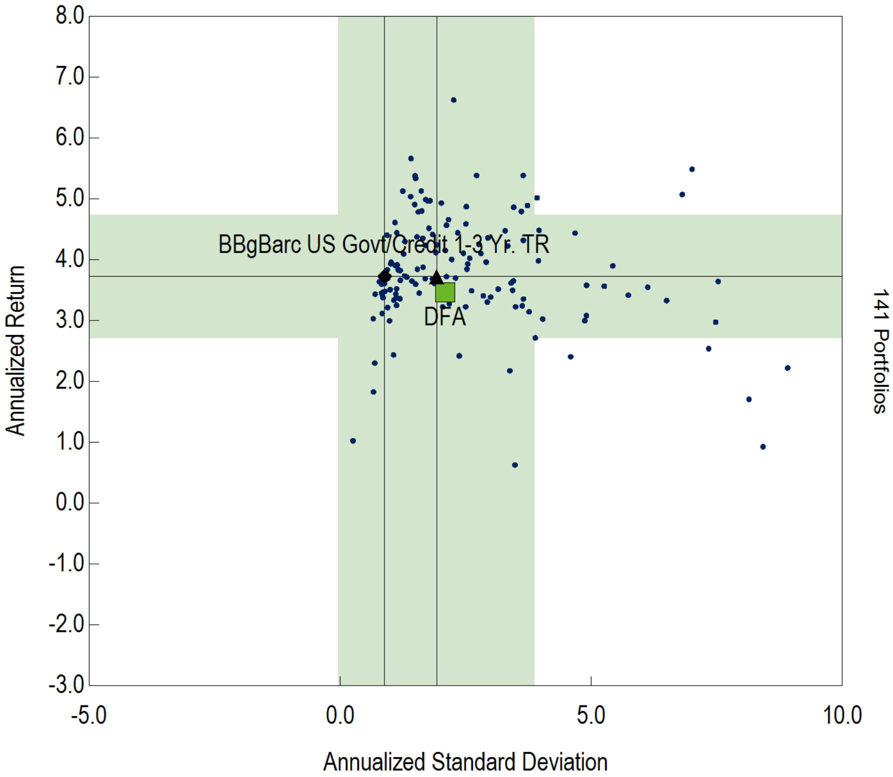
MANAGER PERFORMANCE - ROLLING 1 & 2 YEAR



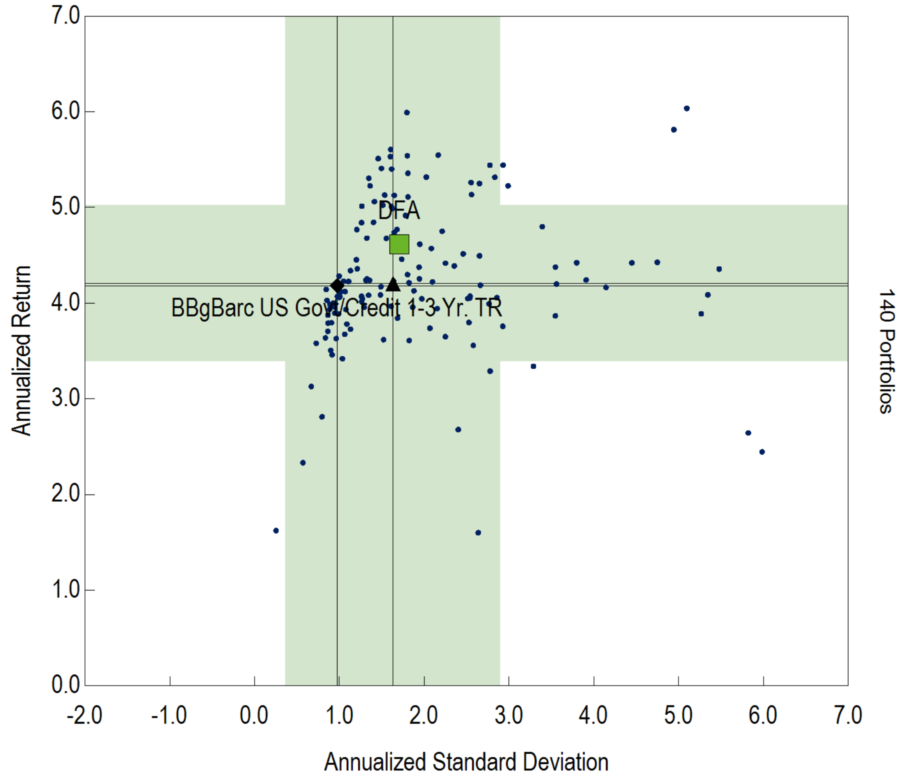


RISK VS. RETURN 1 & 2 YEAR

1 Year Ending September 30, 2020



2 Years Ending September 30, 2020



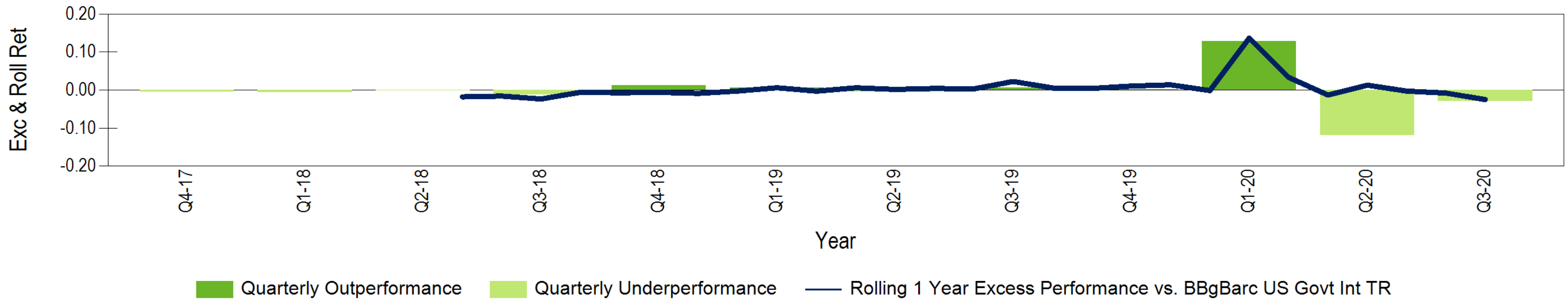
1 Year Ending September 30, 2020	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
DFA	3.46%	2.09%	1.26
BBgBarc US Govt/Credit 1-3 Yr. TR	3.73%	0.88%	3.29
eV US Short Duration Fixed Inc Net Median	3.72%	1.92%	1.67

2 Years Ending September 30, 2020	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
DFA	4.62%	1.70%	1.81
BBgBarc US Govt/Credit 1-3 Yr. TR	4.18%	0.98%	2.71
eV US Short Duration Fixed Inc Net Median	4.21%	1.63%	1.87

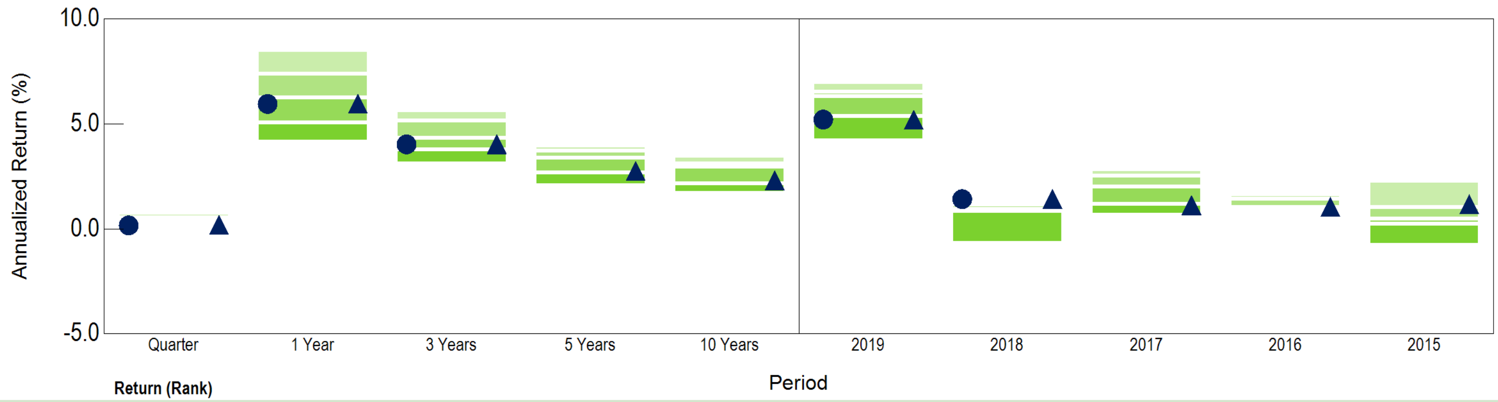
Northern Trust Intermediate Gov't Bond

MANAGER PERFORMANCE COMPARISONS

Rolling Annualized Excess Performance



eV US Government Fixed Inc Net Return Comparison
Ending September 30, 2020

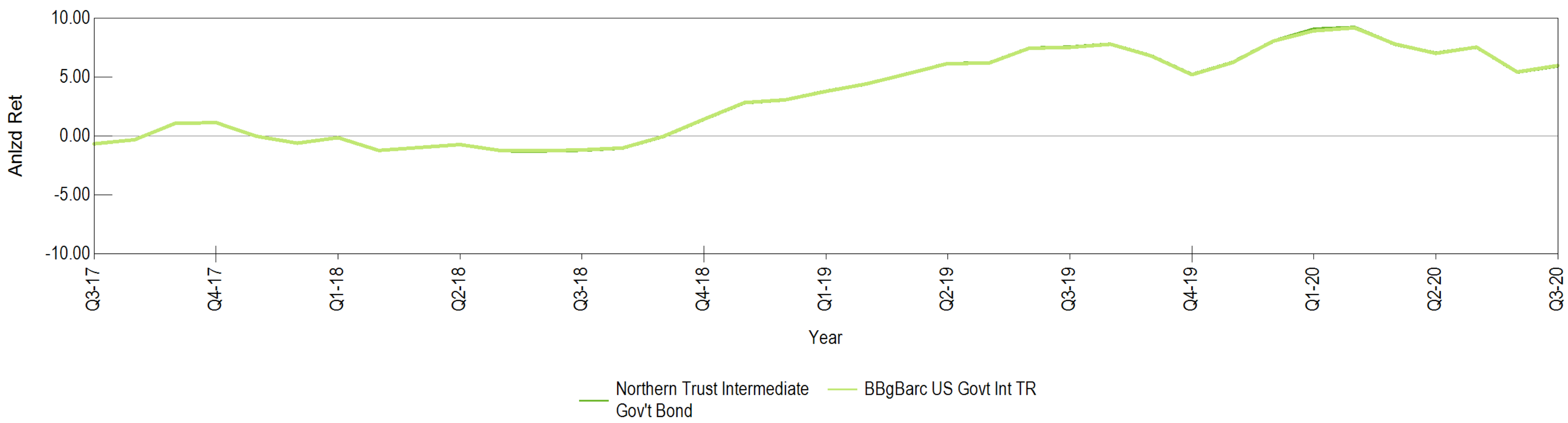


	Return (Rank)																			
5th Percentile	0.8		8.5		5.7		4.0		3.5		7.0		1.3		2.8		1.6		2.3	
25th Percentile	0.6		7.4		5.2		3.8		3.1		6.6		1.2		2.6		1.5		1.1	
Median	0.4		6.3		4.4		3.4		3.0		6.3		1.0		2.0		1.1		0.5	
75th Percentile	0.3		5.1		3.8		2.7		2.2		5.4		0.9		1.2		1.0		0.3	
95th Percentile	0.2		4.2		3.1		2.1		1.7		4.2		-0.6		0.7		0.8		-0.7	
# of Portfolios	14		14		14		13		13		13		12		11		9		17	
● Northern Trust Intermediate Gov't Bond	0.2	(99)	6.0	(64)	4.0	(57)	--	(--)	--	(--)	5.2	(79)	1.4	(1)	--	(--)	--	(--)	--	(--)
▲ BBgBarc US Govt Int TR	0.2	(99)	6.0	(63)	4.0	(57)	2.8	(59)	2.3	(73)	5.2	(79)	1.4	(1)	1.1	(78)	1.1	(54)	1.2	(18)

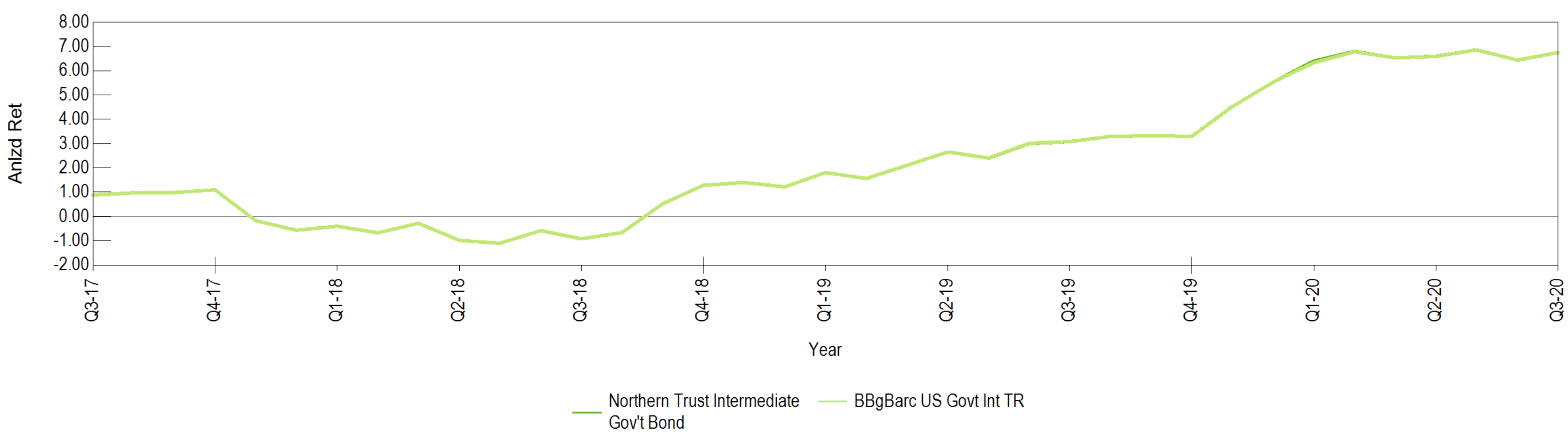
Northern Trust Intermediate Gov't Bond

MANAGER PERFORMANCE - ROLLING 1 & 2 YEAR

Rolling 1 Year Annualized Return (%)

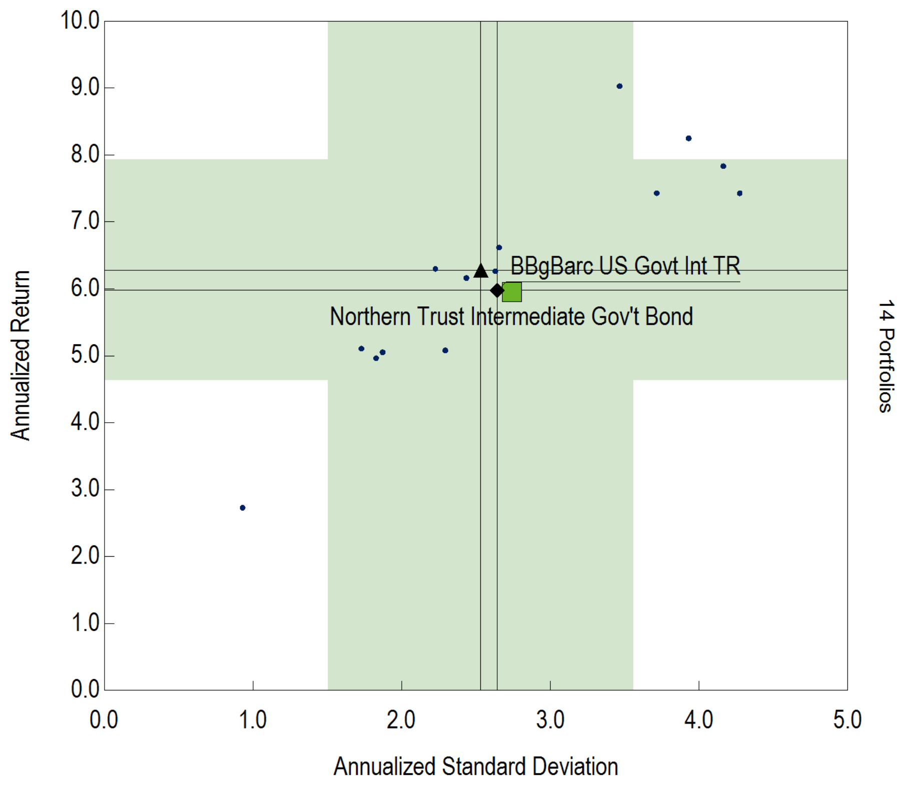


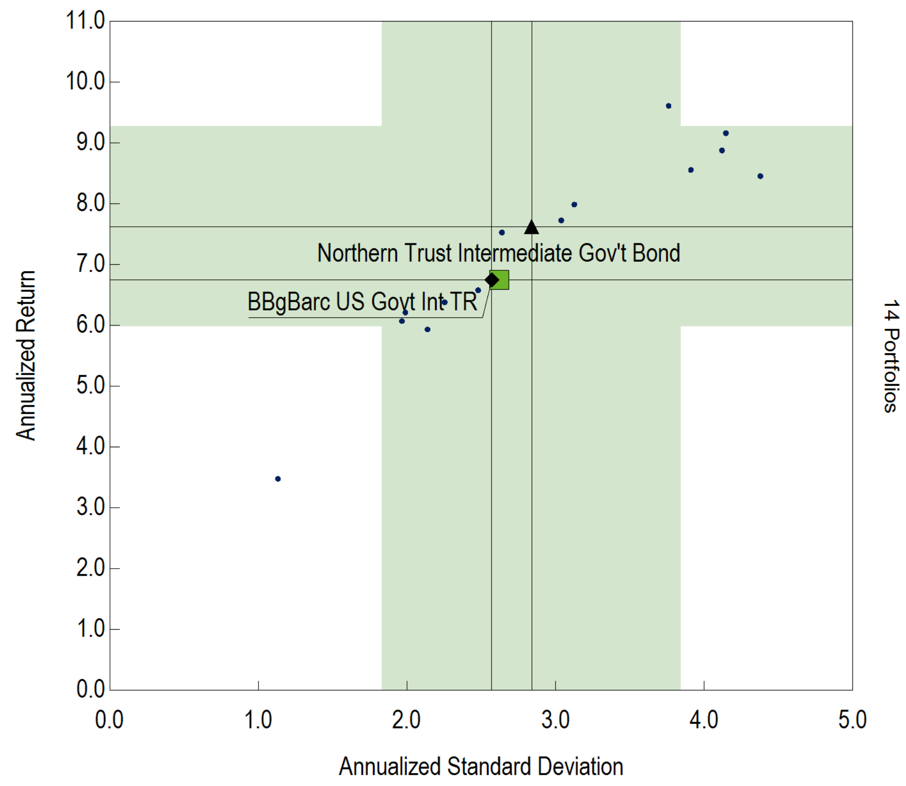
Rolling 2 Year Annualized Return (%)



Northern Trust Intermediate Gov't Bond

RISK VS. RETURN 1 & 2 YEAR





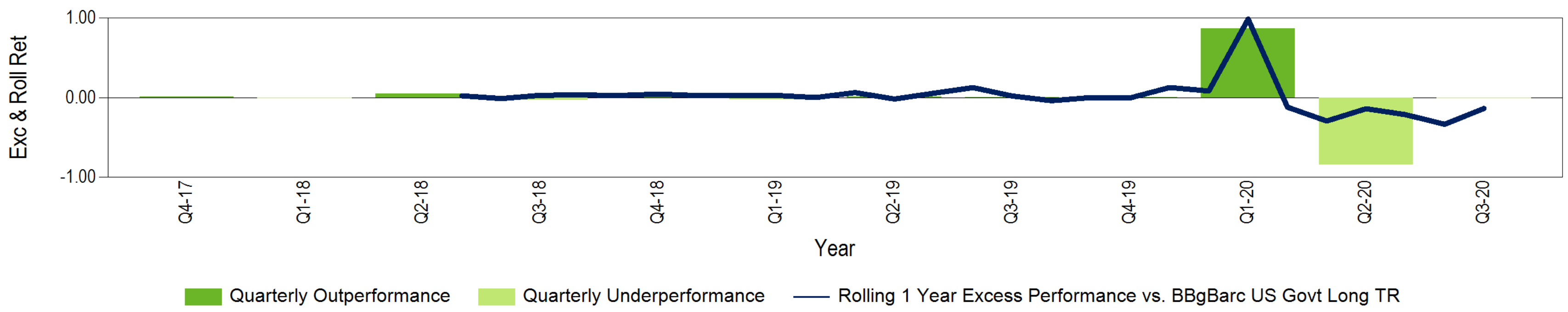
1 Year Ending September 30, 2020	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Northern Trust Intermediate Gov't Bond	5.95%	2.74%	1.87
BBgBarc US Govt Int TR	5.98%	2.64%	1.95
eV US Government Fixed Inc Net Median	6.28%	2.53%	2.13

2 Years Ending September 30, 2020	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Northern Trust Intermediate Gov't Bond	6.74%	2.62%	1.99
BBgBarc US Govt Int TR	6.75%	2.57%	2.03
eV US Government Fixed Inc Net Median	7.63%	2.84%	2.05

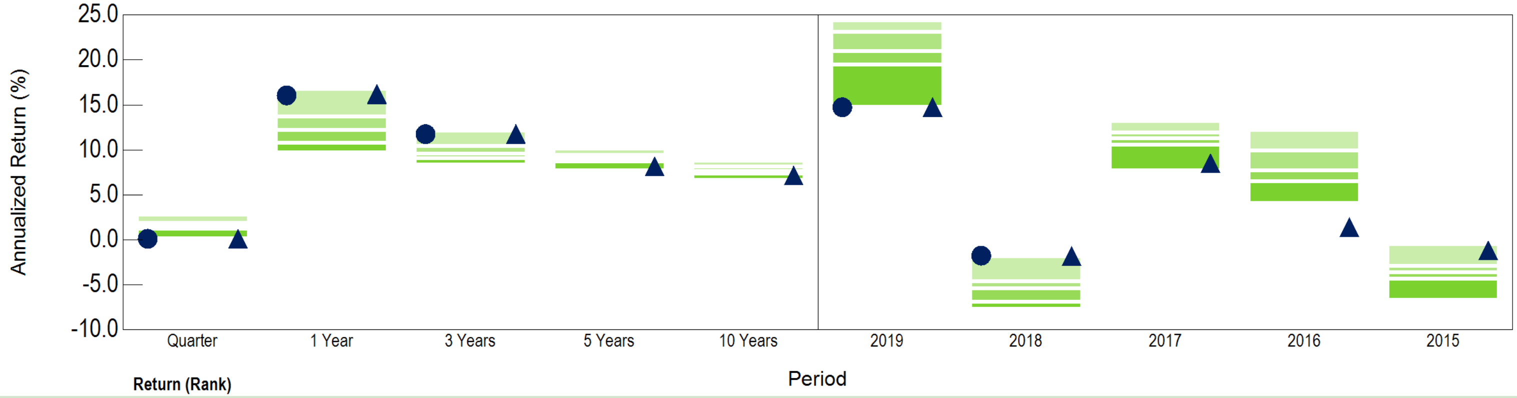
Northern Trust Long Term Gov't Bond

MANAGER PERFORMANCE COMPARISONS

Rolling Annualized Excess Performance



eV US Long Duration Fixed Inc Net Return Comparison
Ending September 30, 2020

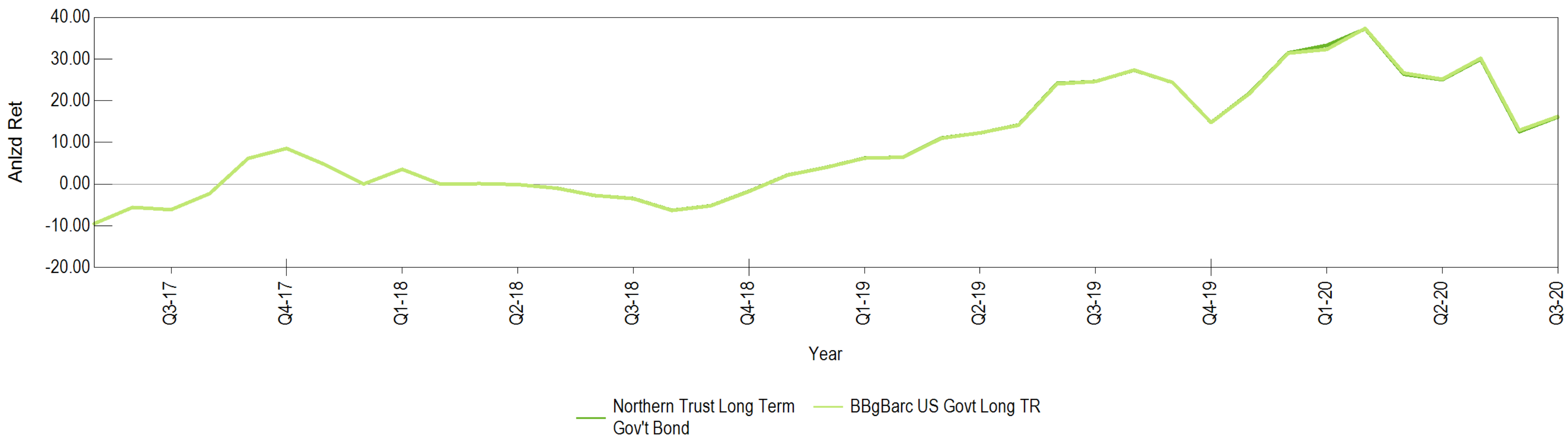


Return (Rank)	Quarter		1 Year		3 Years		5 Years		10 Years		2019		2018		2017		2016		2015	
5th Percentile	2.8		16.7		12.2		10.1		8.8		24.4		-1.9		13.2		12.2		-0.5	
25th Percentile	1.9		13.8		10.5		9.5		8.2		23.2		-4.6		12.0		10.0		-2.9	
Median	1.7		12.3		9.7		9.1		7.7		21.0		-5.3		11.4		7.8		-3.5	
75th Percentile	1.3		10.8		9.1		8.8		7.4		19.5		-6.8		10.7		6.6		-4.3	
95th Percentile	0.2		9.8		8.4		7.7		6.7		14.8		-7.6		7.7		4.1		-6.6	
# of Portfolios	94		91		86		77		55		88		89		95		91		71	
● Northern Trust Long Term Gov't Bond	0.1	(98)	16.1	(9)	11.8	(7)	--	(--)	--	(--)	14.7	(96)	-1.7	(5)	--	(--)	--	(--)	--	(--)
▲ BBgBarc US Govt Long TR	0.1	(98)	16.2	(9)	11.8	(7)	8.2	(89)	7.2	(86)	14.7	(96)	-1.8	(5)	8.5	(92)	1.4	(99)	-1.2	(9)

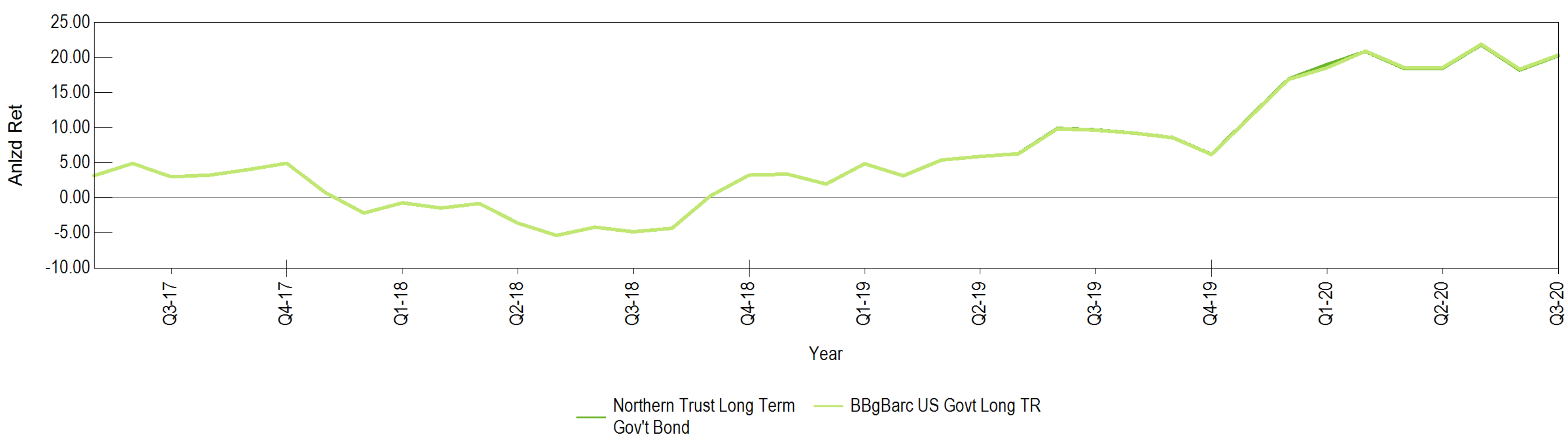
Northern Trust Long Term Gov't Bond

MANAGER PERFORMANCE - ROLLING 1 & 2 YEAR

Rolling 1 Year Annualized Return (%)



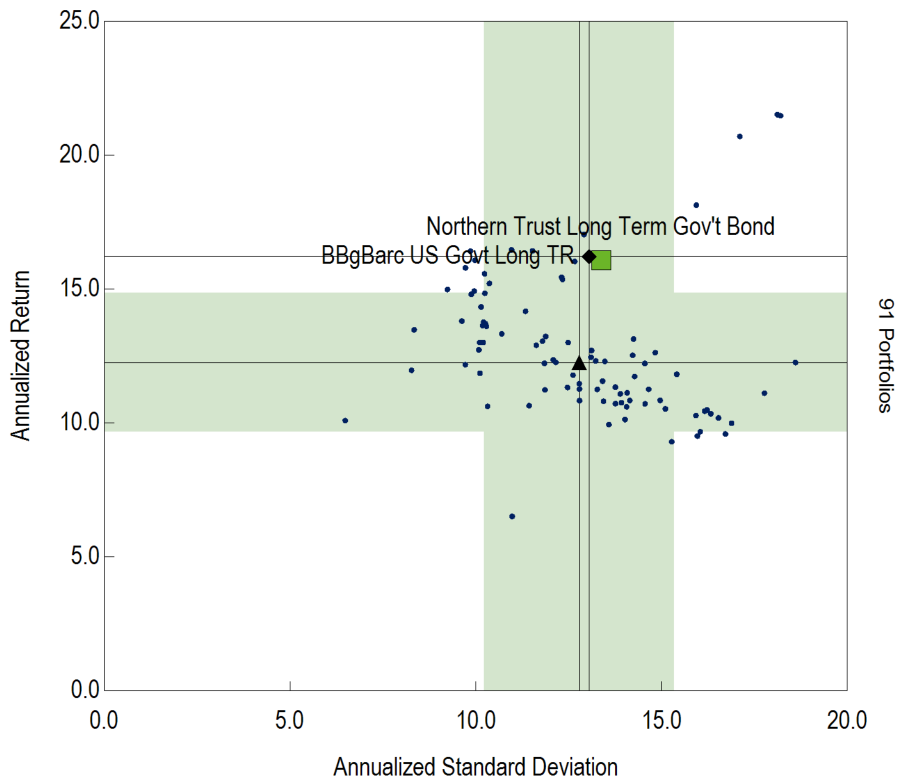
Rolling 2 Year Annualized Return (%)



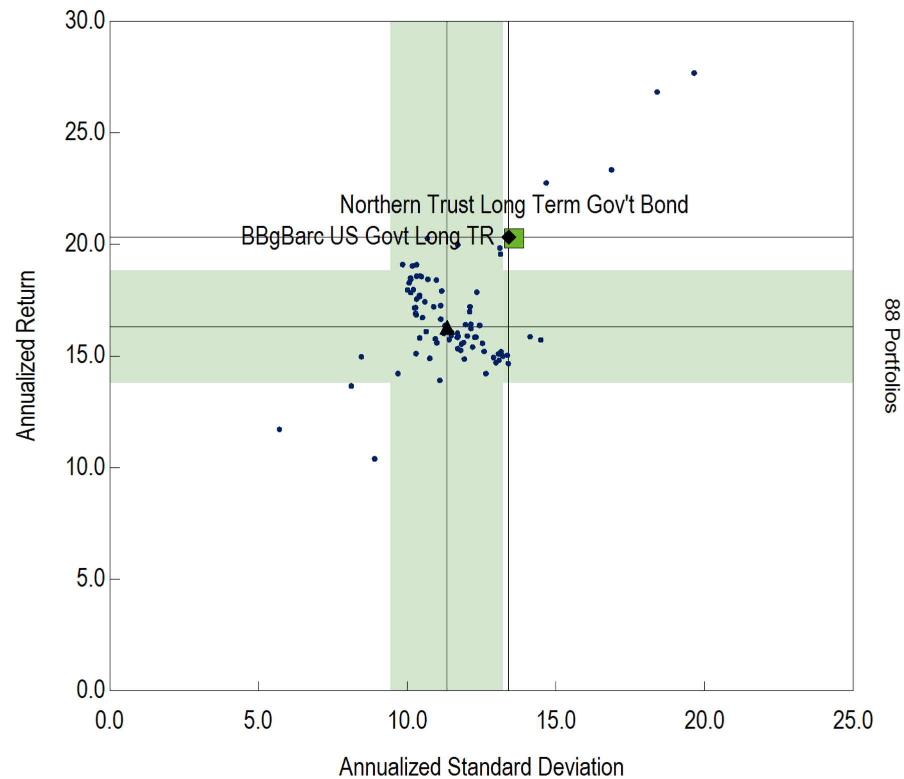
Northern Trust Long Term Gov't Bond

RISK VS. RETURN 1 & 2 YEAR

1 Year Ending September 30, 2020



2 Years Ending September 30, 2020



1 Year Ending September 30, 2020	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Northern Trust Long Term Gov't Bond	16.07%	13.37%	1.14
BBgBarc US Govt Long TR	16.21%	13.04%	1.18
eV US Long Duration Fixed Inc Net Median	12.26%	12.78%	0.91

2 Years Ending September 30, 2020	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio
Northern Trust Long Term Gov't Bond	20.26%	13.61%	1.38
BBgBarc US Govt Long TR	20.32%	13.41%	1.40
eV US Long Duration Fixed Inc Net Median	16.30%	11.34%	1.31

NOTES

- All performance is shown net of investment management fees.

- Performance history is provided by Verus through June 2020. As of July 1, 2020 performance is calculated and reported by NEPC. Policy Index History:

- **Policy Index makeup history:**

  - **Inception - 6/30/2017**: 14.4% Russell 1000 Value, 11.3% Russell 1000 Growth, 4.8% S&P 500, 4% Russell 2000 Value, 3.7% Russell 2000 Growth, 18% MSCI ACWI ex USA Gross, 29.8% BBgBarc US Aggregate TR, 3.5% DJ US Select RESI TR USD, 7.5% 9% Annual, 3% CPI + 4%

  - **7/1/2017 - 8/31/2018**: 18.5% Russell 1000, 5.5% Russell 2000, 24% MSCI ACWI ex USA Gross, 19% BBgBarc US Govt/Credit 1-3 Yr. TR, 1% FTSE T-Bill 1 Month TR, 3%BBgBarc US Treasury 7-10 Yr TR, 7.7% NCREIF Property Index, 1.7% NCREIF Property Index +2%, 0.6% CPI + 5%, 5% BBgBarc US High Yield + 2%, 14% 60% MSCI ACWI Net/40% BBgBarc Global Aggregate

  - **9/1/2018 - 5/30/2019**: 10% Russell 1000, 3% Russell 2000, 6% Russell 3000 +3%, 27% MSCI ACWI ex USA Gross, 20% BBgBarc US Govt/Credit 1-3 Yr. TR, 1% FTSE T-Bill 1 Month TR, 3% BBgBarc US Treasury 7-10 Yr TR, 5% NCREIF Property Index, 5% NCREIF Property Index +2%, 1% CPI + 5%, 6% S&P/LSTA Leveraged Loan Index+2%, 13% 60% MSCI ACWI Net/40% BBgBarc Global Aggregate

  - **6/1/2019 - 6/30/2020**: 14% Russell 1000, 3% Russell 2000, 6% Russell 3000 + 3%, 23% MSCI ACWI ex-USA, 19% BBgBarc US Gov't/Credit 1-3 Yr, 1% Citi 1 Month T-Bills, 3% BBgBarc US Treasury 7-10 Yr, 5% NCREIF Property, 5% NCREIF Property +2%, 2% CPI +5%, 6% S&P/LSTA Leveraged Loan Index + 2%, 13% 60% MSCI ACWI / 40%BBgBarc Global Aggregate

  - **7/1/2020 - Present**: 14% Russell 1000, 3% Russell 2000, 6% Russell 3000 + 3%, 23% MSCI ACWI ex-USA, 8% BBgBarc US Gov't/Credit 1-3 Yr, 1% Citi 1 Month T-Bills, 3% BBgBarc US Treasury 7-10 Yr, 5% NCREIF Property, 5% NCREIF Property +2%, 2% CPI +5%, 6% S&P/LSTA Leveraged Loan Index + 2%, 13% 60% MSCI ACWI / 40%BBgBarc Global Aggregate, 11% BBgBarc US Intermediate.

- Starting July 1, 2020, the small Capital Prospects transition cash balance is moved from the Cash composite to the Capital Prospects account. Historical performance for Capital Prospects, US Small, US Equities, Growth Sub-Portfolio, Cash, and Liquidity Sub-Portfolio prior to July 1, 2020 reflects performance of these composites before this change.

- The Cash composite market value includes a small transition cash balance.

Information Disclaimer

- Past performance is no guarantee of future results.

- All investments carry some level of risk. Diversification and other asset allocation techniques are not guaranteed to ensure profit or protect against losses.

- NEPC's source for portfolio pricing, calculation of accruals, and transaction information is the plan's custodian bank. Information on market indices and security characteristics is received from other sources external to NEPC. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.

- Some index returns displayed in this report or used in calculation of a policy, allocation or custom benchmark may be preliminary and subject to change.

- This report is provided as a management aid for the client's internal use only. Information contained in this report does not constitute a recommendation by NEPC.

- This report may contain confidential or proprietary information and may not be copied or redistributed to any party not legally entitled to receive it.

Reporting Methodology

- The client's custodian bank is NEPC's preferred data source unless otherwise directed. NEPC generally reconciles custodian data to manager data. If the custodian cannot provide accurate data, manager data may be used.

- Trailing time period returns are determined by geometrically linking the holding period returns, from the first full month after inception to the report date. Rates of return are annualized when the time period is longer than a year. Performance is presented gross and/or net of manager fees as indicated on each page.

- For managers funded in the middle of a month, the "since inception" return will start with the first full month, although actual inception dates and cash flows are taken into account in all Composite calculations.

- This report may contain forward-looking statements that are based on NEPC's estimates, opinions and beliefs, but NEPC cannot guarantee that any plan will achieve its targeted return or meet other goals.

November 24, 2020

Retirement Board Agenda Item

TO: Retirement Board

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

I. SUBJECT: StanCERA 2020 Asset Liability Study

II. ITEM NUMBER: 7.c

III. ITEM TYPE: Discussion and Action

IV. STAFF RECOMMENDATION: N/A

V. ANALYSIS: This item represents the final stage in the process of selecting the strategic asset allocation for the Organization which will drive the return process, contribution levels and funded status over the intermediate to long-term. While setting the strategic asset allocation is considered a long-term decision, the decision process is generally looked at every 3 to 5 years and cursorily reviewed by staff each year.

The strategic asset allocation is generally considered the most important decision that the Board of Retirement will make and is the culmination of several months of education on the process and the candidate asset classes that may be considered as a part of the overall allocation.

Today's presentation (Attachment 1) will be headlined by Dan Hennessy from NEPC and Graham Schmidt, StanCERA's system actuary. The discussion will be centered around 4 potential asset mixes staff feels best optimizes the potential for achieving a desired rate of return at a prudent level of risk and addresses some of the concerns we have heard from Trustees over the past several months. The presenters will be discussing the candidate asset mixes and the implications surrounding them regarding future employer contribution rates, future funded status and expected portfolio returns. The discussion will also center around the associated probabilities or likelihood of achieving those plan metrics over the short and long term.

The goal today will be for the Board to pick an asset mix that will set the strategic asset allocation for the Organization. As always, should the Board feel the need to explore certain topics or asset classes in more depth, staff can do the research and come back at a later time for a decision. However, staff feels that enough progress has been made up to this point to allow the Board to make a prudent and informed decision.

VI. RISK: None

VII. STRATEGIC PLAN: N/A

VIII. ADMINISTRATIVE BUDGET IMPACT: No budget impact administratively

Rick Santos, Executive Director StanCERA

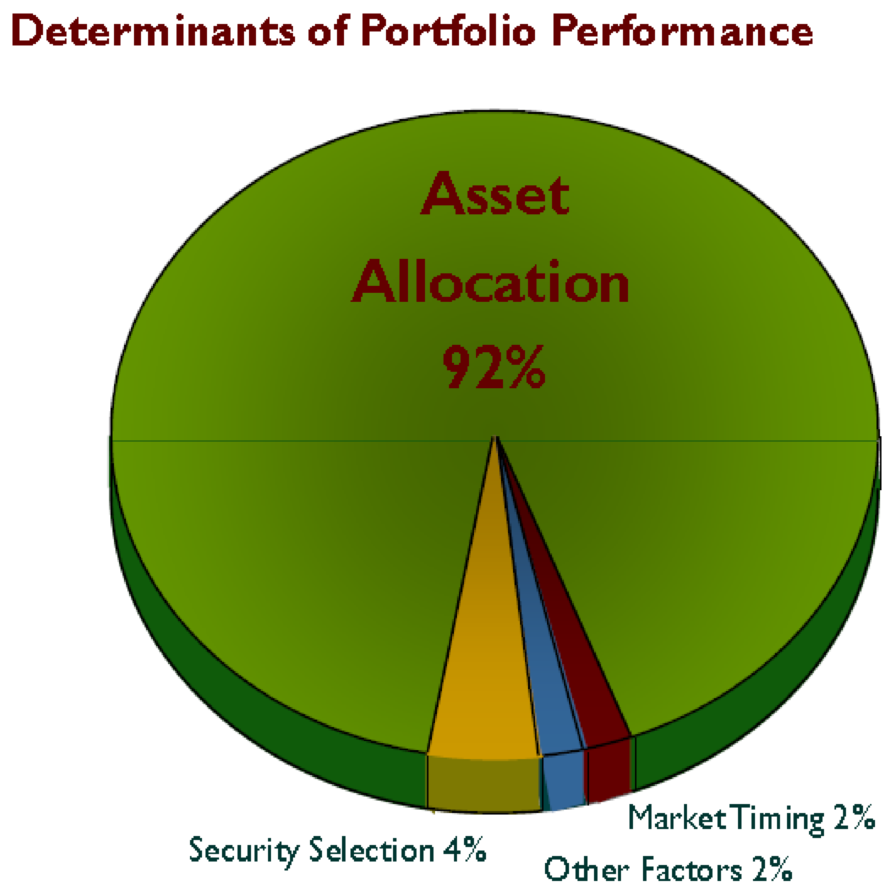
Stan Conwell, Retirement Investment Officer

ASSET ALLOCATION DISCUSSION

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

November 24, 2020

ASSET ALLOCATION: THE KEY INVESTMENT DECISION



Source: Determinants of Portfolio Performance II: An Update, Brinson, et al, Financial Analysts Journal, May/June 1991, pp 40-48.

KEY STEPS TO DATE

- **August –** We reviewed a trustee risk survey to help establish baseline areas of agreement
- **September –** We described key market themes and NEPC's asset class expectations
- **October –** We evaluated the current asset allocation and the potential impact of adding various public and private asset classes

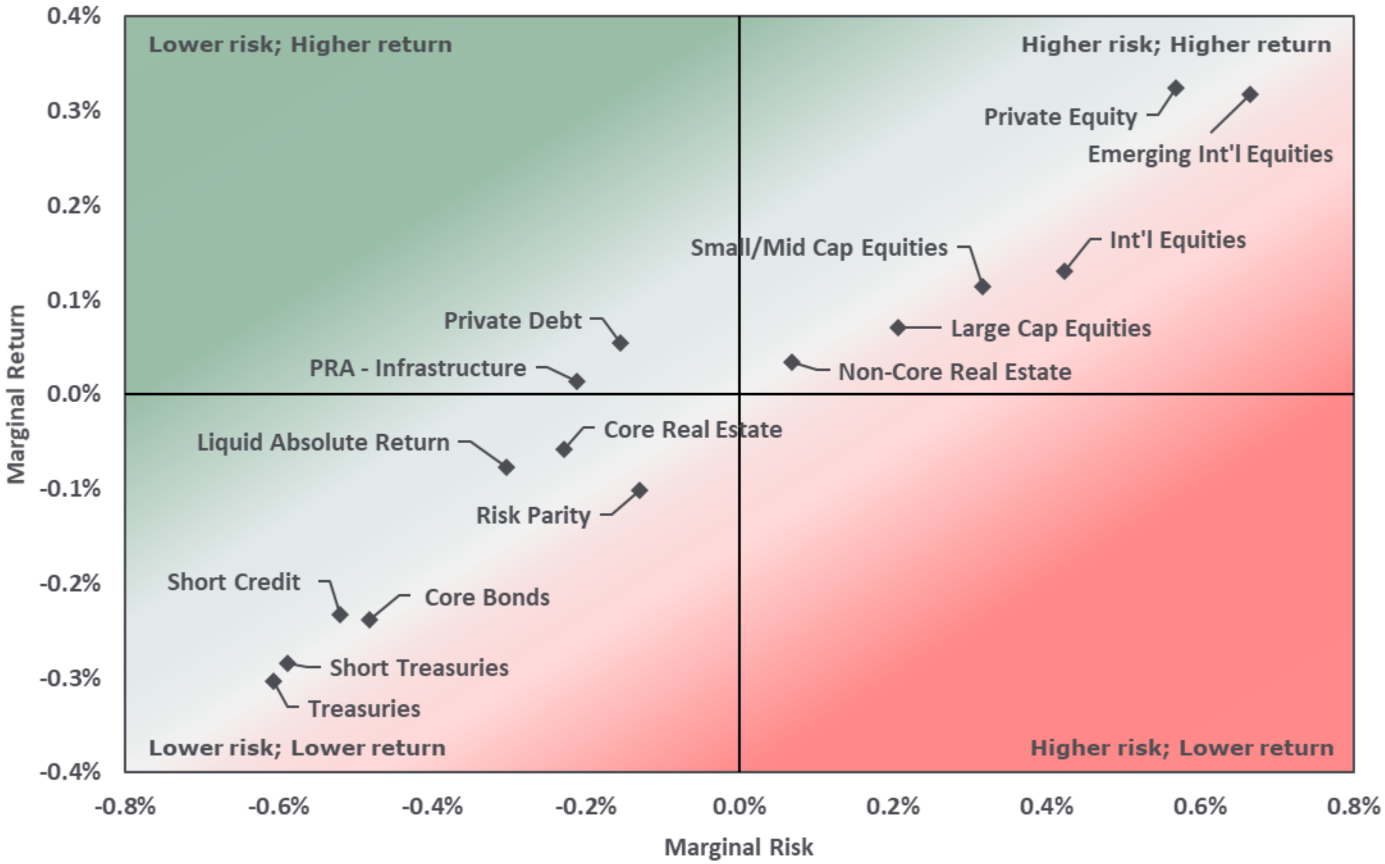
Today we will consider four specific new asset allocation mixes, using analysis from an asset-liability study and a liquidity study to better understand their key differences

ASSET CLASS OBJECTIVES

Asset Class	Portfolio Role	Current Target
Liquidity		
Fixed Income & Cash	• Covers shortfall between contributions and benefits/fees • Ensures short-term needs so the rest of the portfolio can be managed for the long-term	12%
Growth		
US and Non-US Public Equity	• Capital appreciation • Capture global growth	40%
Private Equity and Credit	• Skill-based active management • Higher return expectations than public equity and credit • Includes growth-oriented investments	12%
Real Assets (Real Estate and Infrastructure)	• Inflation hedge • Income production potential • Adds diversification	12%
Risk-Diversifying		
Treasuries and other Investment-Grade Bonds	• Downside protection • Adds diversification	11%
Risk Parity	• Liquidity source during downturns • Adds diversification	13%
Liquid Absolute Return Strategies	• Skill-based active management • Liquidity source during downturns • Adds diversification	0%

MARGINAL RISK/RETURN HEAT MAP

Impact of 5% allocation shifts on Current Policy Target risk/return



Most Efficient

Private Debt

Infrastructure

Liquid Absolute Return

Least Efficient

Int'l Equity

SMID Equity

EM Equity

This heat map highlights potential investments that, when added to the portfolio, would provide a better risk-adjusted return. Right-sizing illiquid allocation requires other non-investment considerations.

PUBLIC MARKET EQUITY

CURRENT INDEX WEIGHTS VERSUS CURRENT STANCERA TARGETS

- **Public Market Equity Allocation**
  - **US Equity** *57.4%* *(Current Policy 50.0%)*
    - **Large Cap** *48.1%* *(Current Policy 41.3%)*
    - **Small-Mid Cap** *9.2%* (Current Policy 8.7%)
  - **International Developed Equity** *30.4%* *(Current Policy 36.1%)*
    - **Large Cap** *26.0%* *(Current Policy 33.1%)*
    - **Small Cap** *4.4%* (Current Policy 3.0%)
  - **Emerging Markets Equity** *12.2%* *(Current Policy 13.9%)*
    - **Large Cap** *11.0%* *(Current Policy 13.0%)*
    - **Small Cap** *1.2%* *(Current Policy 0.9%)*

Source: S&P, MSCI, FactSet, NEPC; index data as of 09/30/2020
Note: This analysis includes the Russell 3000 index fund that is being used as a Private Equity Proxy

POTENTIAL ASSET ALLOCATIONS

Total Private Market Allocation	24.0%	20.0%	24.0%	33.0%	32.5%
	Current Policy Target	Mix 1	Mix 2	Mix 3	Mix 4
Cash	1.0%	1.0%	1.0%	1.0%	1.0%
Cashflow-Matched Bonds	11.0%	7.0%	7.0%	7.0%	7.0%
Total Liquidity Sub-Portfolio	**12.0%**	**8.0%**	**8.0%**	**8.0%**	**8.0%**
US Public Equities	17.0%	20.0%	20.0%	20.0%	22.0%
Non-US Public Equities	23.0%	20.0%	20.0%	20.0%	22.5%
Private Equity	6.0%	5.0%	5.0%	5.0%	8.0%
Private Debt	6.0%	5.0%	7.0%	8.0%	6.0%
Core Real Estate	5.0%	4.0%	4.5%	6.5%	5.0%
Value-Add Real Estate	5.0%	4.0%	4.5%	6.0%	6.0%
Private Infrastructure	2.0%	2.0%	3.0%	7.5%	7.5%
Total Growth Sub-Portfolio	**64.0%**	**60.0%**	**64.0%**	**73.0%**	**77.0%**
Risk Parity	13.0%	15.0%	13.0%	10.0%	10.0%
Liquid Absolute Return Strategies	0.0%	6.0%	6.0%	3.0%	0.0%
US Treasury	3.0%	7.0%	5.0%	6.0%	5.0%
Short-Term Gov't/Credit	8.0%	4.0%	4.0%	0.0%	0.0%
Total Risk-Diversifying Sub-Portfolio	**24.0%**	**32.0%**	**28.0%**	**19.0%**	**15.0%**
Expected Return 30 yrs	**6.5%**	**6.4%**	**6.6%**	**6.9%**	**7.2%**
Expected Return 10 yrs	**5.7%**	**5.6%**	**5.8%**	**6.1%**	**6.5%**
Standard Deviation (Volatility)	**11.3%**	**11.1%**	**11.3%**	**11.7%**	**12.9%**
Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**
Probability of 30-Year Return Over 7%	**40%**	**38%**	**42%**	**48%**	**53%**
Probability of 10-Year Return Over 7%	**36%**	**35%**	**37%**	**41%**	**45%**
Probability of 1-Year Return Under 0%	**31%**	**31%**	**30%**	**30%**	**31%**
Probability of 5-Year Return Under 0%	**13%**	**13%**	**13%**	**12%**	**13%**

		Current Policy Target	Mix 1	Mix 2	Mix 3	Mix 4
10 yr Return & Risk	***Geometric Expected Return***	**5.7%**	**5.6%**	**5.8%**	**6.1%**	**6.5%**
	Arithmetic Expected Return	**6.2%**	**6.1%**	**6.4%**	**6.7%**	**7.2%**
	Annual Asset Volatility	**11.3%**	**11.1%**	**11.3%**	**11.7%**	**12.9%**
	Sharpe Ratio	**0.45**	**0.45**	**0.46**	**0.47**	**0.46**
30 yr Return	***Geometric Expected Return***	**6.5%**	**6.4%**	**6.6%**	**6.9%**	**7.2%**
	Arithmetic Expected Return	**7.0%**	**6.9%**	**7.1%**	**7.5%**	**7.9%**
	Sharpe Ratio	**0.41**	**0.41**	**0.42**	**0.43**	**0.42**
Equity Geo Mix	***US + Private Equity (index is 57.4%)***	**50.0%**	**55.6%**	**55.6%**	**55.6%**	**57.1%**
	Developed Int'l Equity (index is 30.4%)	**36.1%**	**32.0%**	**32.0%**	**32.0%**	**28.0%**
	Emerging Markets (index is 12.2%)	**13.9%**	**12.4%**	**12.4%**	**12.4%**	**14.9%**

NEPC

POTENTIAL ASSET ALLOCATIONS

Mix 4 calls for greater equity exposure, including a new 2% non-US strategy complementary to the current managers

Total Private Market Allocation	24.0%	20.0%	24.0%	33.0%	32.5%
	Current Policy Target	Mix 1	Mix 2	Mix 3	Mix 4
Cash	1.0%	1.0%	1.0%	1.0%	1.0%
Cashflow-Matched Bonds	11.0%	7.0%	7.0%	7.0%	7.0%
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US Public Equities	17.0%	20.0%	20.0%	20.0%	22.0%
Non-US Public Equities	23.0%	20.0%	20.0%	20.0%	22.5%
Private Equity	6.0%	5.0%	5.0%	5.0%	8.0%
Private Debt	6.0%	5.0%	7.0%	8.0%	6.0%
Core Real Estate	5.0%	4.0%	4.5%	6.5%	5.0%
Value-Add Real Estate	5.0%	4.0%	4.5%	6.0%	6.0%
Private Infrastructure	2.0%	2.0%	3.0%	7.5%	7.5%
Total Growth Sub-Portfolio	**64.0%**	**60.0%**	**64.0%**	**73.0%**	**77.0%**
Risk Parity	13.0%	15.0%	13.0%	10.0%	10.0%
Liquid Absolute Return Strategies	0.0%	6.0%	6.0%	3.0%	0.0%
US Treasury	3.0%	7.0%	5.0%	6.0%	5.0%
Short-Term Gov't/Credit	8.0%	4.0%	4.0%	0.0%	0.0%
Total Risk-Diversifying Sub-Portfolio	**24.0%**	**32.0%**	**28.0%**	**19.0%**	**15.0%**
Expected Return 30 yrs	**6.5%**	**6.4%**	**6.6%**	**6.9%**	**7.2%**
Expected Return 10 yrs	**5.7%**	**5.6%**	**5.8%**	**6.1%**	**6.5%**
Standard Deviation (Volatility)	**11.3%**	**11.1%**	**11.3%**	**11.7%**	**12.9%**

Mixes 1-3 call for a new diversifying allocation to liquid absolute return strategies

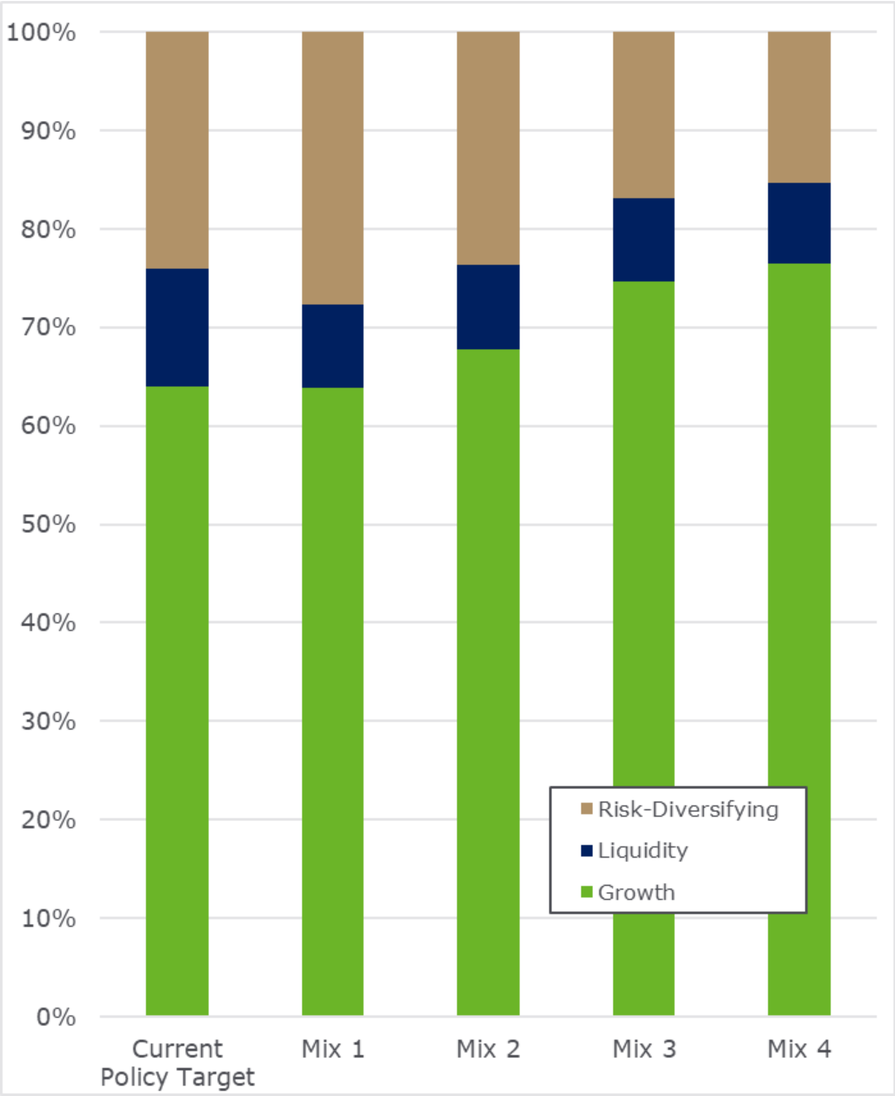
POTENTIAL NEW ASSET CLASSES

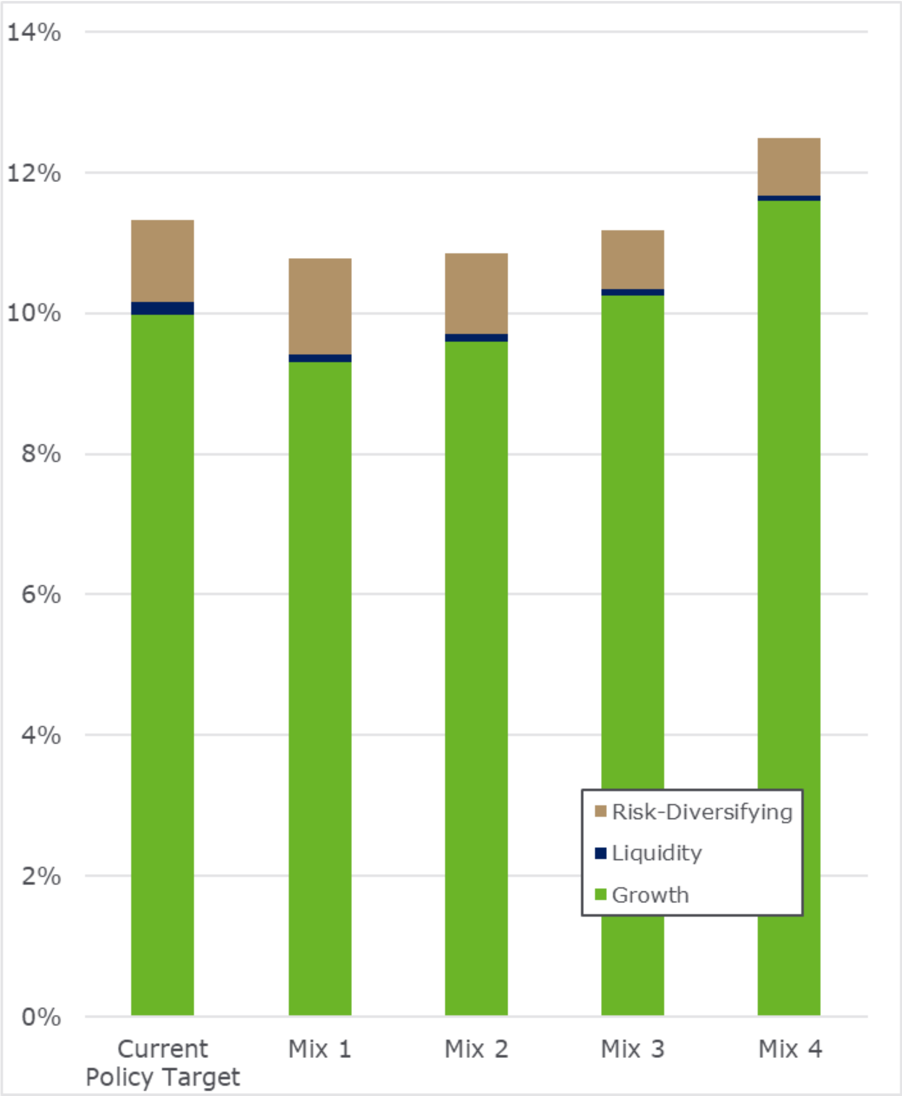
- Mix 4 assumes that StanCERA adds a 2% allocation to a slightly more aggressive non-US equity strategy – either international small-cap or emerging markets

- Mixes 1, 2, and 3 assume that StanCERA adds a new risk-diversifying allocation to liquid absolute return strategies. These skill-based strategies seek to earn investment returns that are uncorrelated to equities and fixed income, chiefly by pairing long and short positions across a wide range of liquid asset classes. Some of these strategies charge flat asset-based fees, while others also charge performance fees that allow the manager to keep a share of investment profits

Whichever asset allocation mix is selected, NEPC will provide asset class education before recommending any new managers

ASSET VS. RISK ALLOCATION





SCENARIO ANALYSIS

SCENARIO ANALYSIS: REGIME CHANGES

NEPC scenario analysis highlights the impact of shifting economic and market regimes on the portfolio and potential asset allocation mixes

- Risk asset returns are informed by credit returns which are based on changes in real rate, inflation, and credit spreads experienced across market regimes

Expansion

Informed by rising interest rates, moderately rising inflation, elevated positive real rates, and consistent spread tightening

Stagflation

Informed by rising interest rates, rising inflation, depressed negative real rates, and consistent spread widening

Goldilocks

Informed by level interest rates, level inflation, positive real rates, and consistent spread tightening

Recession

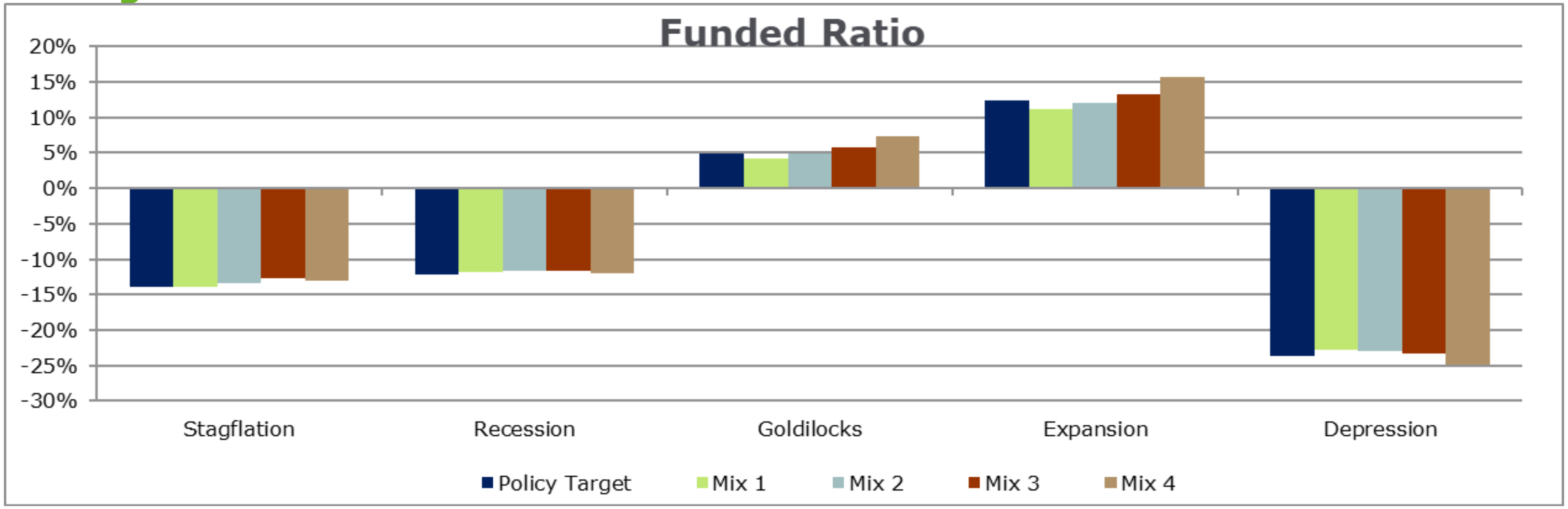
Informed by depressed interest rate levels, falling inflation, depressed positive real rates, and consistent spread widening followed by tightening back to current levels

Depression

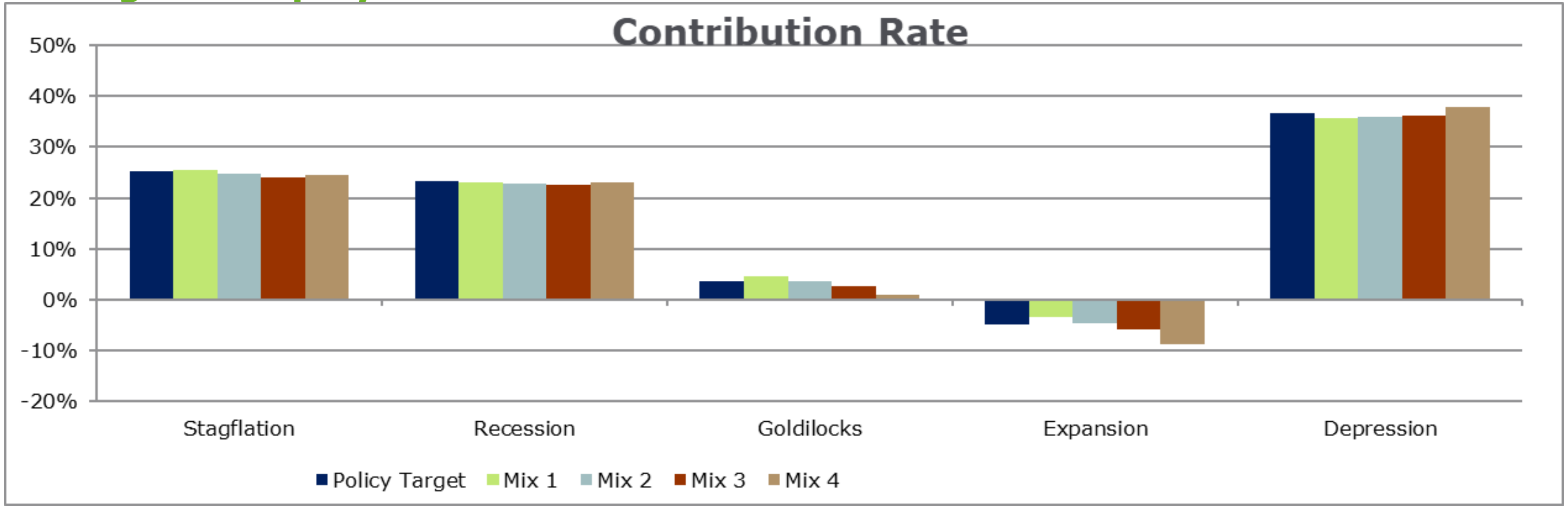
Informed by negative interest rates, deflation, and severe credit defaults and downgrades

SCENARIO ANALYSIS RESULTS

Change in Funded Ratio



Change in Employer Contribution Rate



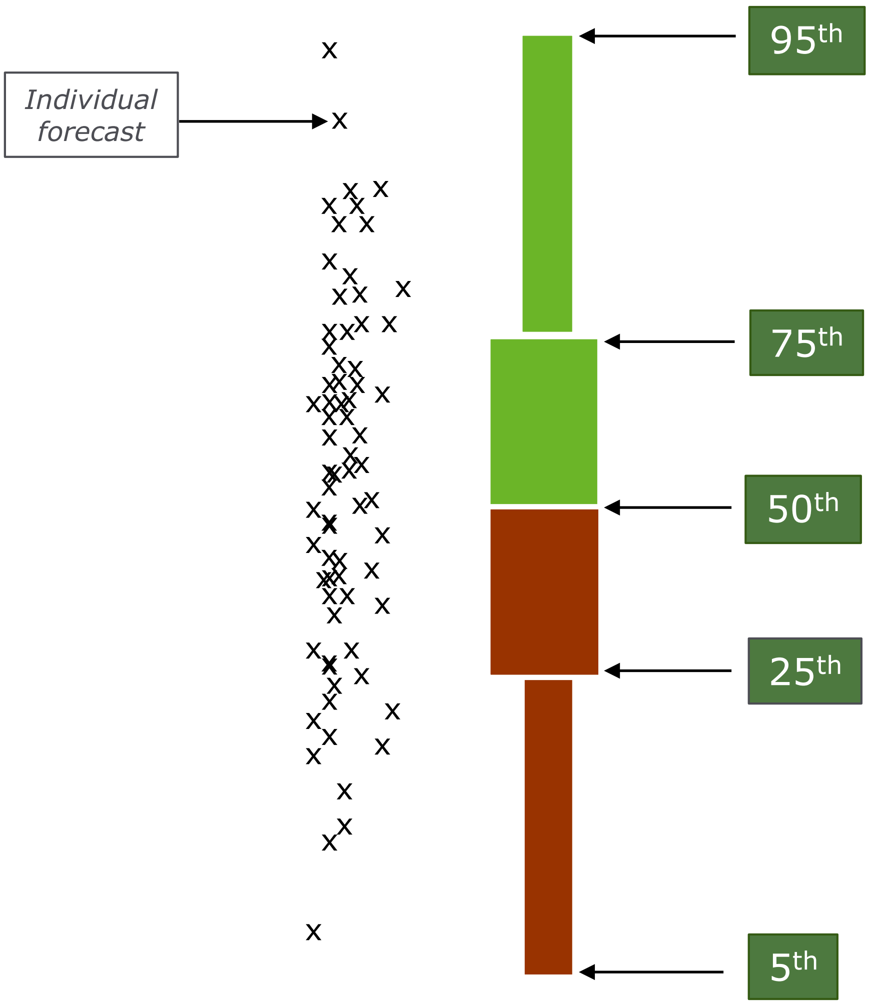
Scenarios are over a 5-year time horizon

STOCHASTIC ANALYSIS

NEPC, LLC

INTERPRETING STOCHASTIC RESULTS

Model ranks 10,000 forecasts each year



95th percentile
- Exceeded by only 5% of forecasts
- Higher than 95% of forecasts
- Overly optimistic outcome

75th percentile
- Exceeded by 25% of forecasts
- Higher than 75% of forecasts
- Optimistic outcome

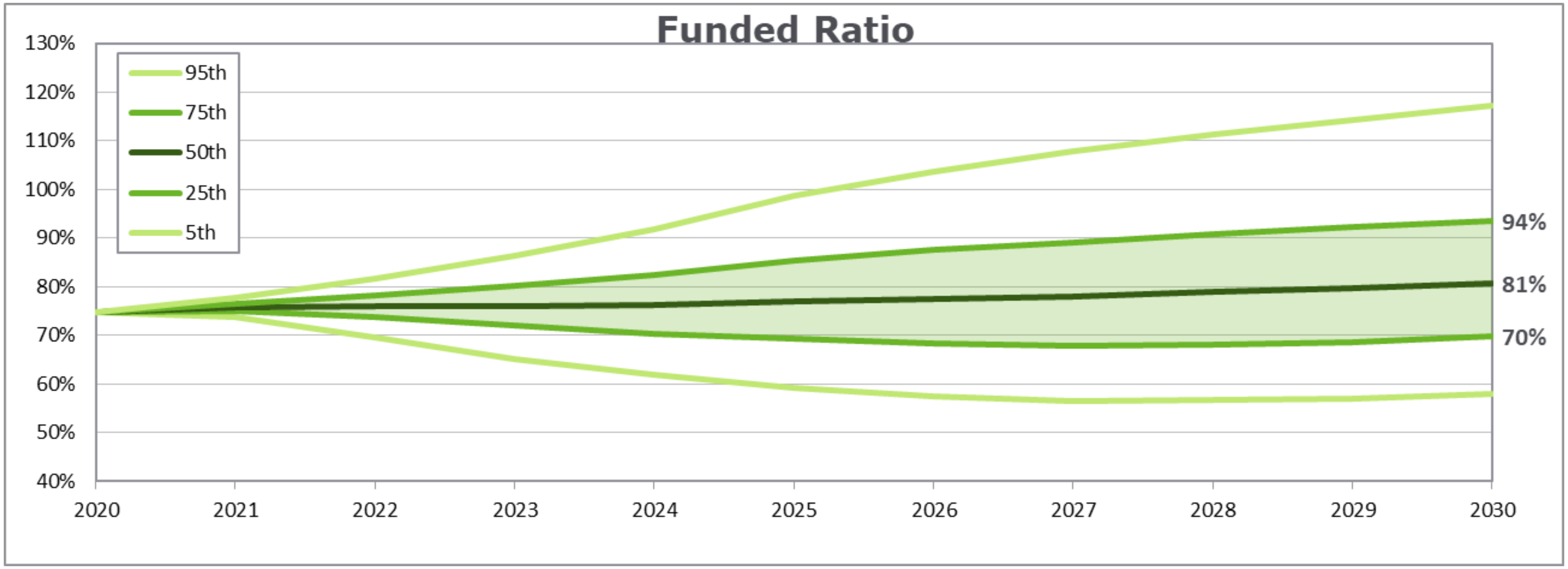
50th percentile
- Exceeded by 50% of forecasts
- Higher than 50% of forecasts
- Generally in line with best estimate

25th percentile
- Exceeded by 75% of forecasts
- Higher than 25% of forecasts
- Pessimistic outcome

5th percentile
- Exceeded by 95% of forecasts
- Higher than only 5% of forecasts
- Overly pessimistic outcome

**The above interpretation is in the context of funded percentage*

STOCHASTIC FUNDED RATIO: CURRENT TARGET



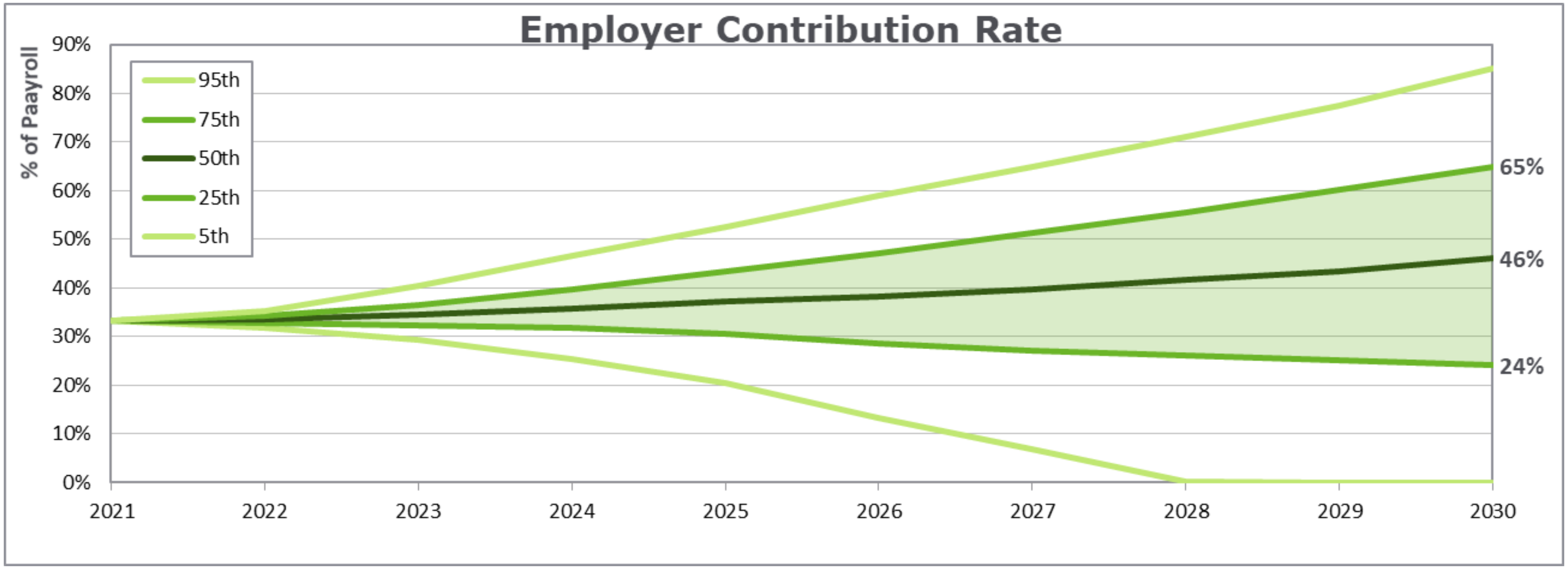
[1] Assumes arithmetic mean and variance corresponding to NEPC's 10-year return assumptions and asset risk

75th and 25th percentiles portray the optimistic and pessimistic range of funded ratio outcomes that could occur over the next 10 years

95th and 5th percentiles show the extreme upside and downside possibilities, but ignore likely plan changes that could occur

- 95th percentile ignores likelihood of increased benefits to prevent stranded assets
- 5th percentile ignores likelihood of increased contributions to prevent underfunding

STOCHASTIC CONTRIBUTIONS: CURRENT POLICY



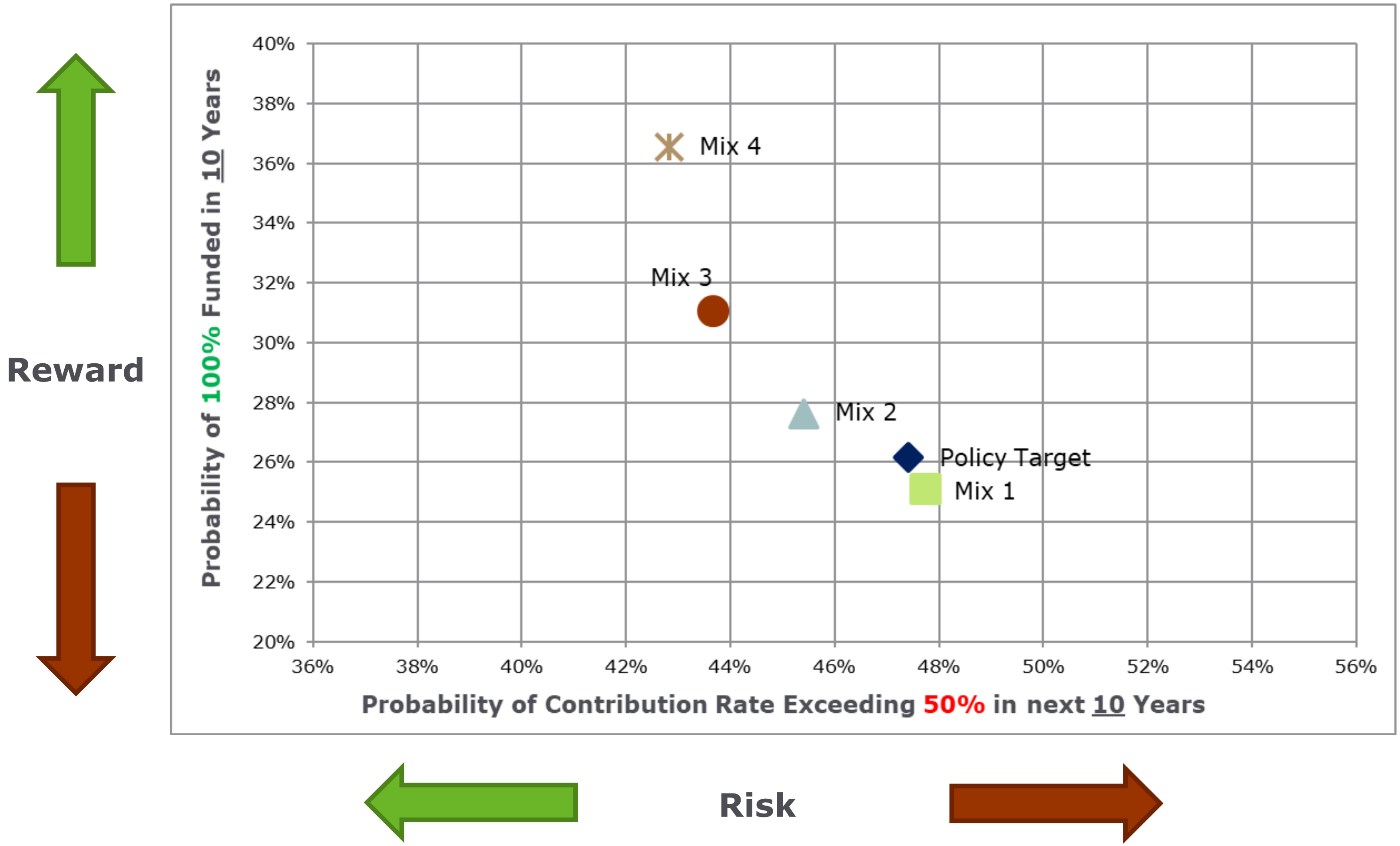
[1] Assumes arithmetic mean and variance corresponding to NEPC's 10-year return assumptions and asset risk

75th and 25th percentiles portray the pessimistic and optimistic range of contribution outcomes that could occur over the next 10 years

95th and 5th percentiles show the extreme upside and downside possibilities, but ignore likely plan changes that could occur

- 95th percentile ignores likelihood of increased benefits to prevent stranded assets
- 5th percentile ignores likelihood of increased contributions to prevent underfunding

STOCHASTIC RISK VS. REWARD



Mix 4 provides the best risk/reward tradeoff given these constraints

LIQUIDITY ANALYSIS

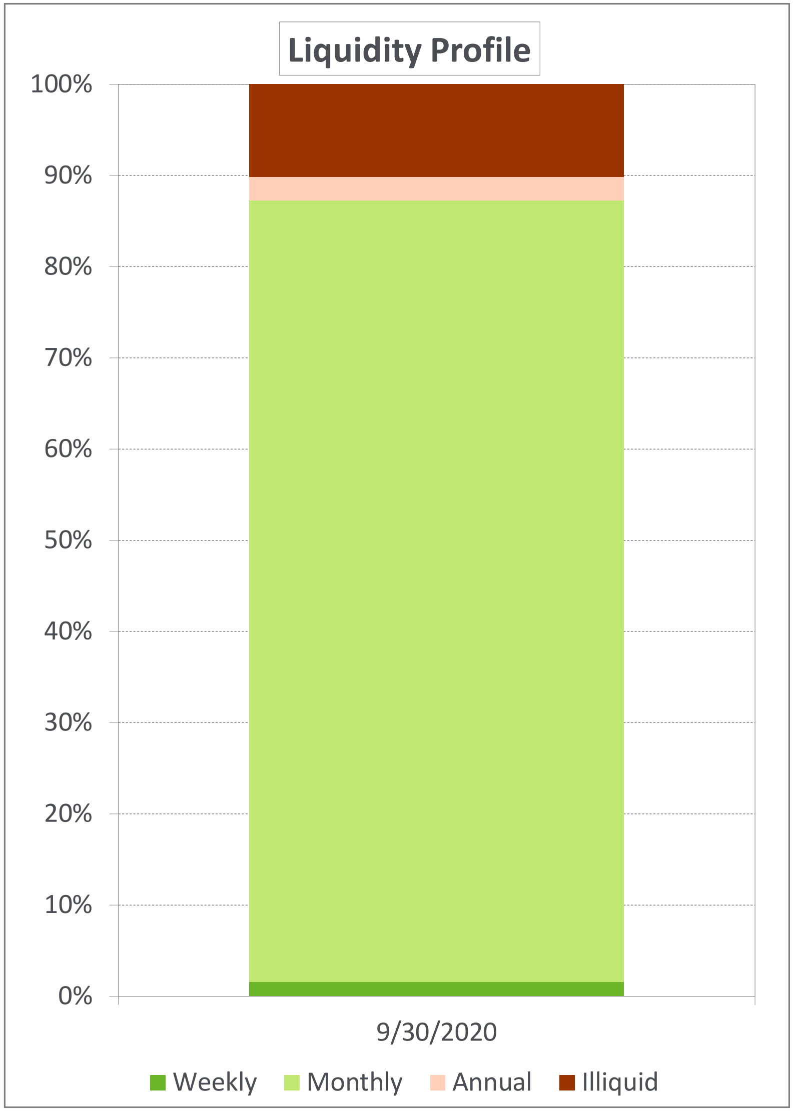
LIQUIDITY ANALYSIS SUMMARY

- **The fund is projected to run net negative cash flows averaging $22.0M per year in the base case**
  - Returns from the all three allocations are expected to offset this imbalance, affording some flexibility
  - Private investments are expected to provide returns in excess of public markets

- **While true that some liquid assets must be sold in a stressed environment…**
  - The fund currently has 87.3% of assets with monthly or better liquidity

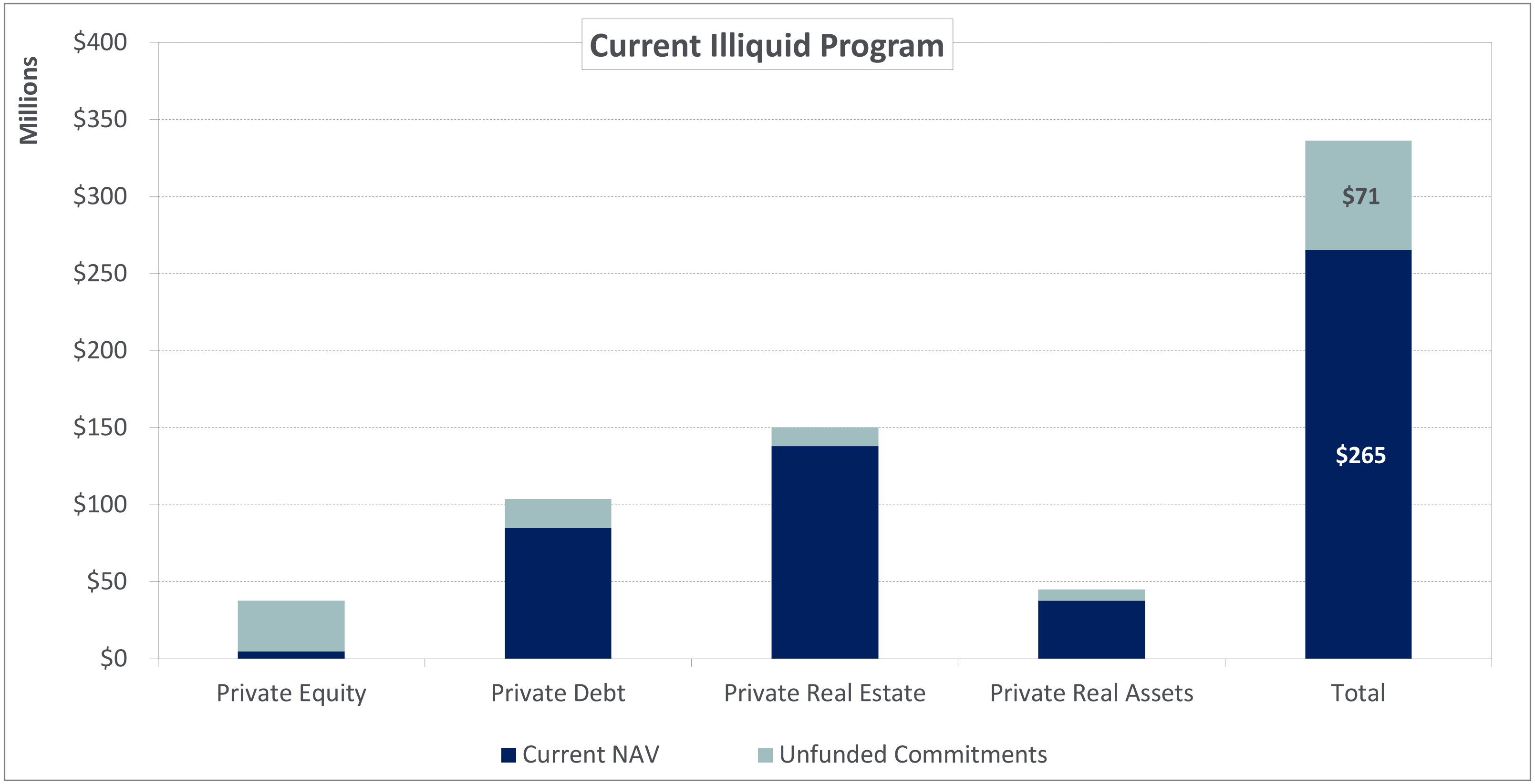
- **The current target appears well-positioned to seek the benefits of a diversified allocation to private market and can be flexible in allocating additional capital should opportunities or market conditions dictate**

EXISTING LIQUIDITY PROFILE



- **87.3% of total assets are available on at least a monthly basis to meet regular liquidity needs**
  - Spending and expenses
  - Rebalancing
  - Capital calls
- **Additional 2.6% of assets available on at least an annual basis**
  - Can be part of planned rebalancing but much less reliable for regular liquidity needs
- **Remaining 10.1% of assets are relatively illiquid**
  - Intermittent distributions - hard to plan around
  - Could be sold in secondary markets, but likely at steep discount

ILLIQUID PROGRAM SNAPSHOT



Based on data as of 6/30/2020
Private Real Estate represents illiquid investments with callable structures and excludes Core Real Estate

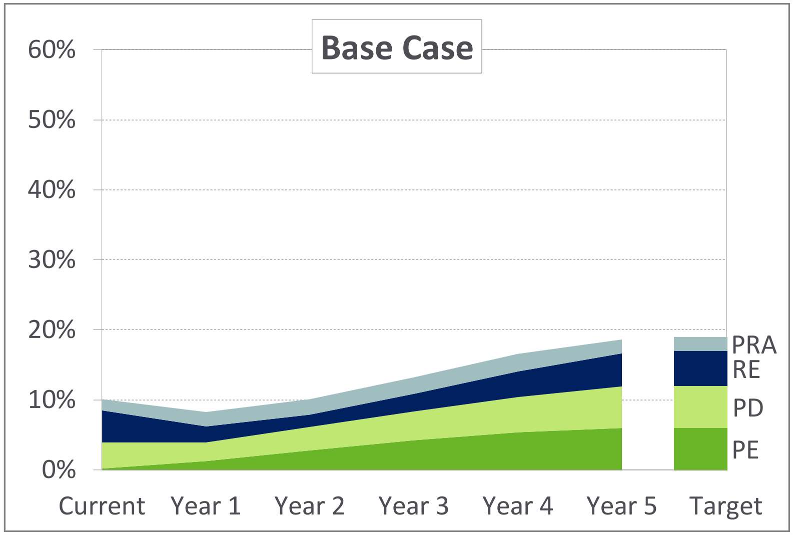
- **Because of uncalled capital commitments the allocation to illiquid investments can rise even without any additional commitments**
  - Currently ≈$71M in uncalled private market commitments

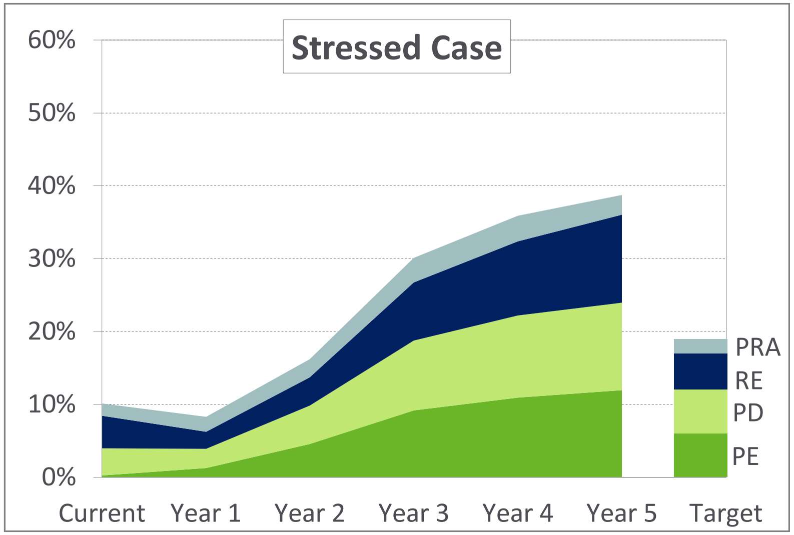
CURRENT POLICY ASSUMPTIONS

- **Base Case**
  - Returns: NEPC 10 year expected returns as of 6/30/2020
    - Total portfolio expected to return 5.7% per year
  - Benefit Payments and Expenses: based on actuarial projections, averaging $176M per year
  - Contributions: based on actuarial projections, averaging $154M per year
  - Commitments: based on sample pacing plan
    - Private Equity: averaging $51M per year for the next five years
    - Private Debt: averaging $52M per year for the next five years
    - Private Real Estate: averaging $46M per year for the next five years
    - Private Real Assets: averaging $8M per year for the next five years
  - Capital Calls and Distributions: based on standard industry averages

- **Stressed Case**
  - Returns: 0.0% in Year 1, -17.0% in Year 2 (-2 standard deviations), -5.6 in Year 3 (-1 standard deviation), 5.7% in Year 4 (expected return), and -5.6% in Year 5 (-1 standard deviation)
  - Benefit Payments and Expenses: 10% higher than base case
  - Contributions: 10% lower than base case
  - Commitments: Same as base case
  - Capital Calls and Distributions: Same as base case except capital calls are doubled in Year 2 and distributions are halved in Year 2 and Year 3

ILLIQUID ALLOCATION – CURRENT POLICY

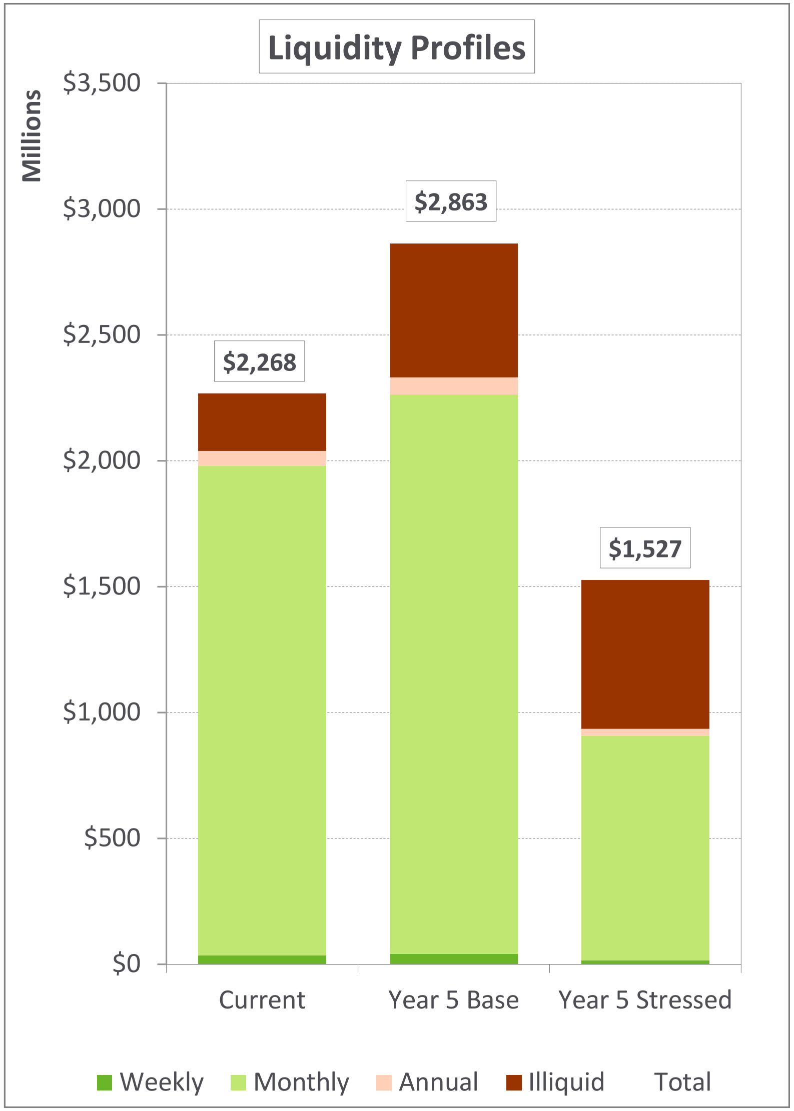


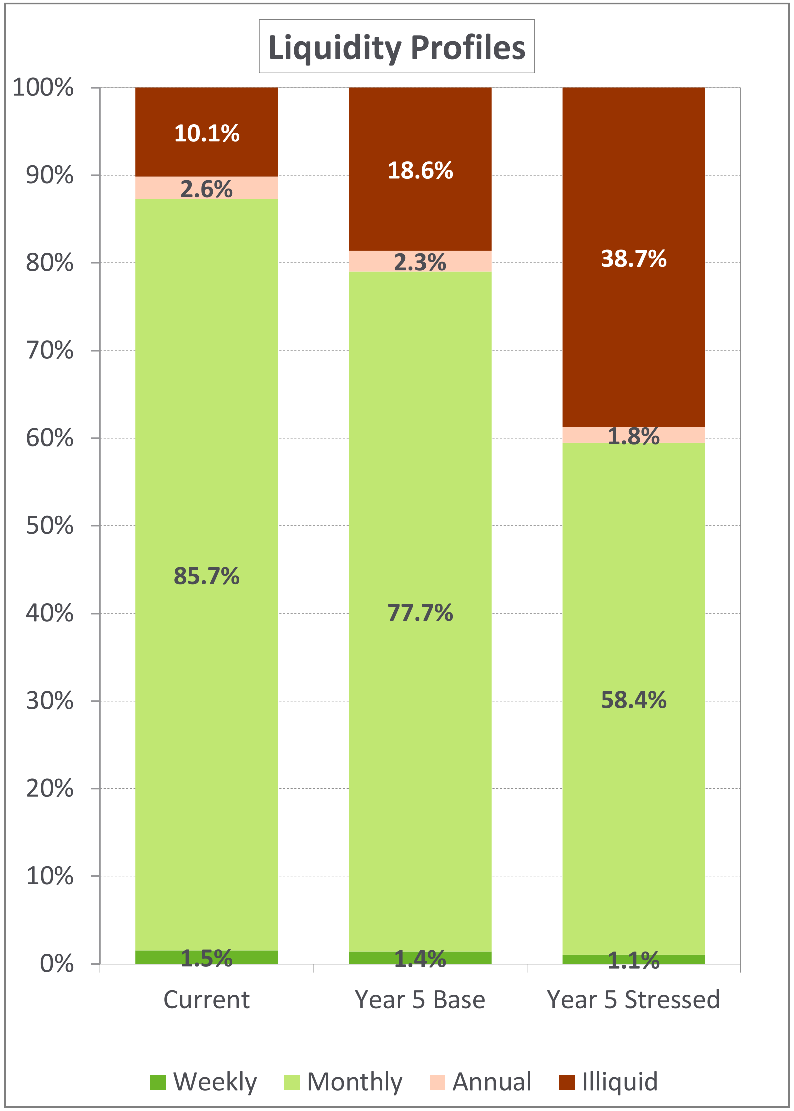


Future commitments to Private Equity (averaging $51M per year), Private Debt (averaging $52M per year), Private Real Estate (averaging $46M per year), Private Real Assets (averaging $8M per year) included for illustrative purposes
6% RE target represents investments to Non-Core Real Estate only

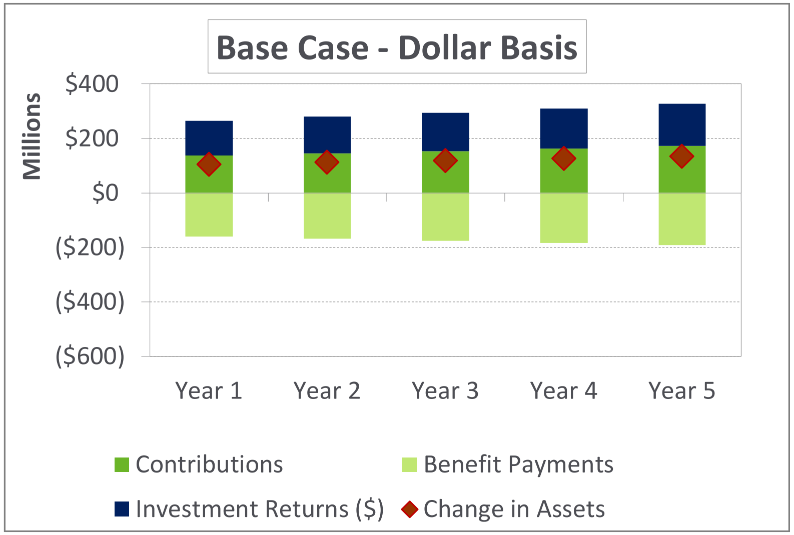
- **Allocation to illiquid assets is expected to slightly increase over the next five years in base case**
  - Steady growth as the fund makes commitments averaging $157M per year, per the current pacing plan
- **In the stressed case, an increase in capital calls and a reduction in distributions combine with negative asset returns (denominator effect) to raise allocations to private markets slightly above targets**
  - It is possible to mitigate this issue by slowing pace of future commitments and adjusting the pacing plan

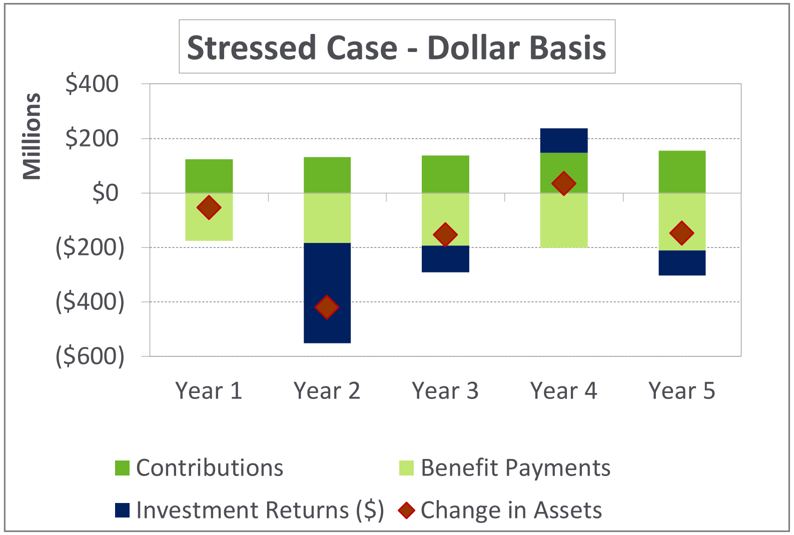
CHANGE IN LIQUIDITY PROFILE – CURRENT POLICY

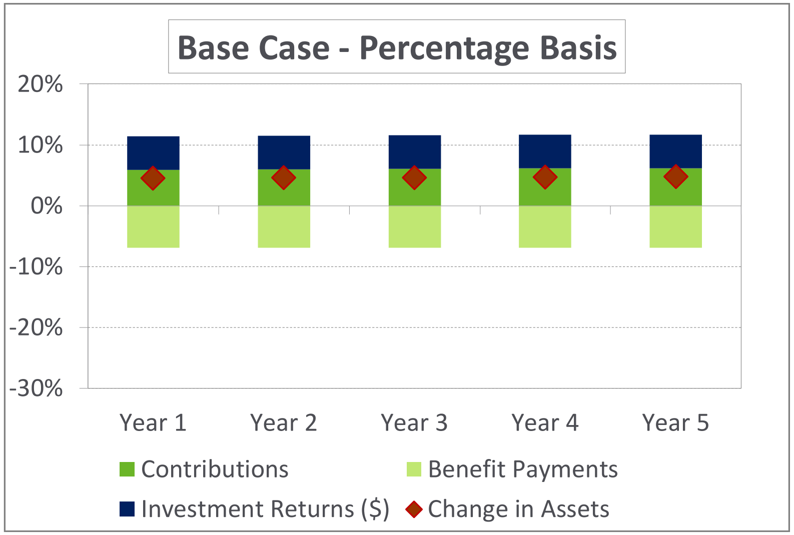


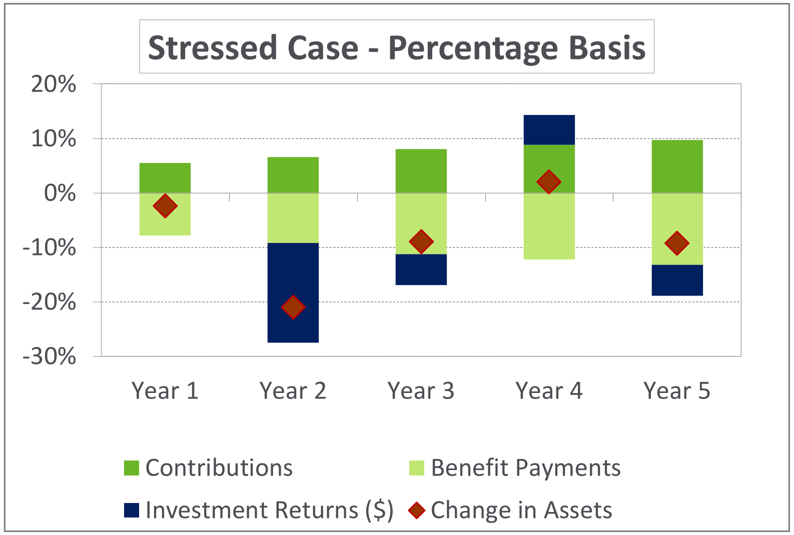


ANNUAL CHANGE IN ASSETS ATTRIBUTION







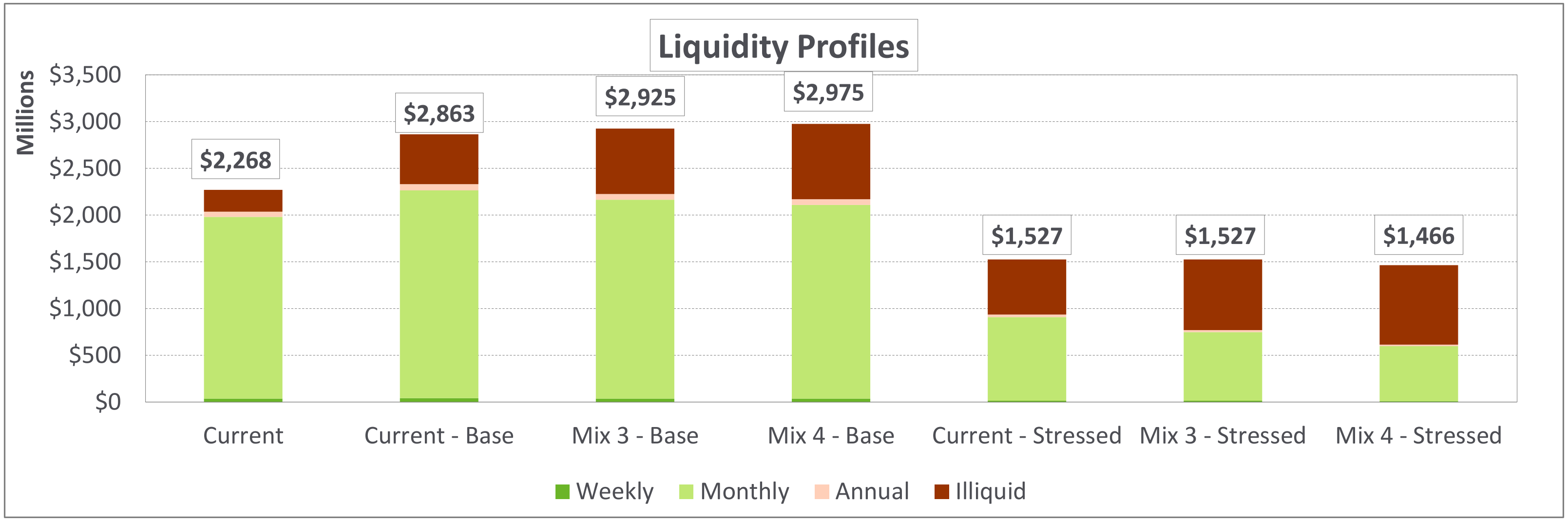


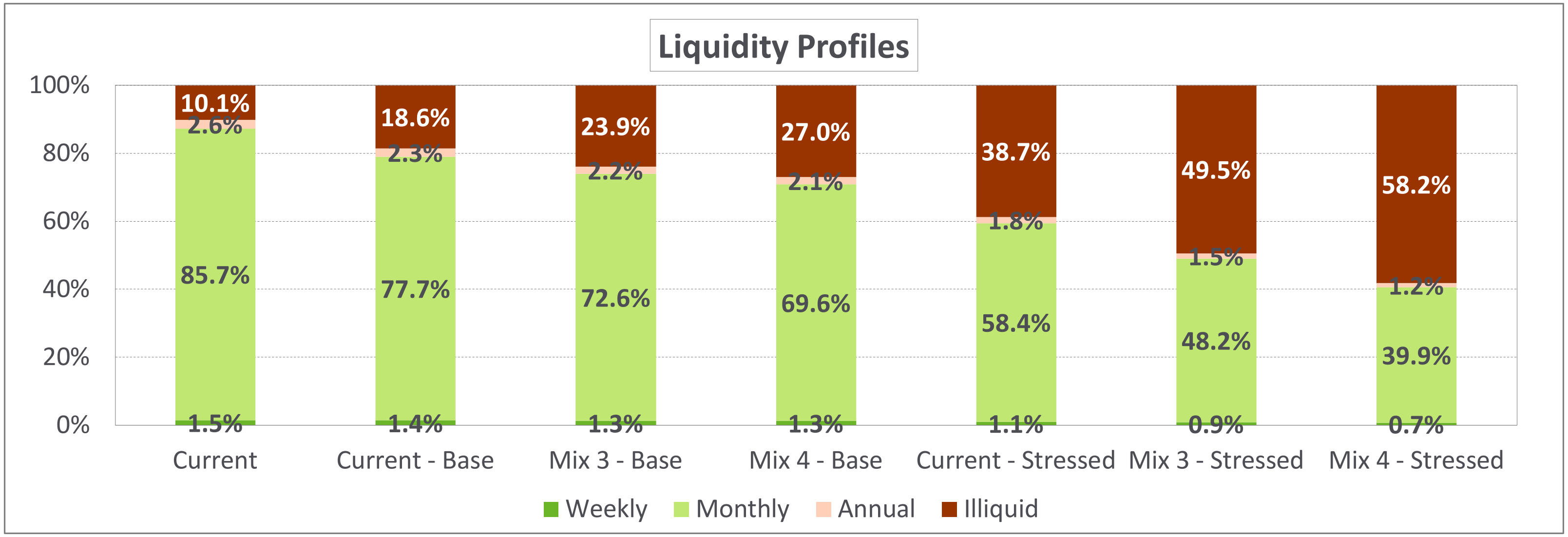
MIX 3 AND MIX 4 ASSUMPTIONS

- **Base Case**
  - Returns: NEPC 10 year expected returns as of 6/30/2020
    - Total portfolio expected to return 6.1%/6.5% per year for mixes 3/4
  - Benefit Payments and Expenses: based on actuarial projections, averaging $176M per year
  - Contributions: based on actuarial projections, averaging $154M per year
  - Commitments: based on sample pacing plan
    - Private Equity: averaging $41M/$72M per year for the next five years (mixes 3/4)
    - Private Debt: averaging $54M/$55M per year for the next five years
    - Private Real Estate: averaging $52M/$55M per year for the next five years
    - Private Real Assets: averaging $50M/$51M per year for the next five years
  - Capital Calls and Distributions: based on standard industry averages

- **Stressed Case**
  - Mix 3 Returns: 0.0% in Year 1, -17.4% in Year 2 (-2 standard deviations), -5.6 in Year 3 (-1 standard deviation), 6.1% in Year 4 (expected return), and -5.6% in Year 5 (-1 standard deviation)
  - Mix 4 Returns: 0.0% in Year 1, -19.3% in Year 2 (-2 standard deviations), -6.4 in Year 3 (-1 standard deviation), 6.5% in Year 4 (expected return), and -6.4% in Year 5 (-1 standard deviation)
  - Benefit Payments and Expenses: 10% higher than base case
  - Contributions: 10% lower than base case
  - Commitments: Same as base case
  - Capital Calls and Distributions: Same as base case except capital calls are doubled in Year 2 and distributions are halved in Year 2 and Year 3

LIQUIDITY PROFILE SUMMARY





ASSET-LIABILITY STUDY SUMMARY

NEPC, LLC

EXECUTIVE SUMMARY – BACKGROUND

This report presents the preliminary results of the asset-liability study conducted on the Stanislaus County Employees' Retirement Association (StanCERA)

The goals of the study are to:

- Review the current and projected financial status of the Plan
  - Project Pension liabilities and benefit payments
  - Project asset growth and contribution levels
- Assess the appropriateness of the current asset allocation relative to the expected progress of liabilities and cash flows
  - Analyze the tradeoffs of asset class changes
- Use multiple models to develop comprehensive understanding of plan dynamics
  - Risk and return of asset allocation
  - Relationship between assets and liabilities

StanCERA investment objectives:

- Provide liquidity to meet benefit payments in a timely manner
- Provide long-term growth to meet future benefit payments and, if applicable, to close funding gap over time
- Protect the assets against adverse impacts of rising inflation and investment market volatility

Important Risks to the Plan:

- Volatility of market returns/drawdown risk
- Volatility of funded ratio
- Volatility of contributions

EXECUTIVE SUMMARY – KEY FINDINGS

The plan is estimated to be 74.8% funded as of June 30, 2020 with an employer contribution rate of 33.3% of payroll

Current Policy Target allocation is expected to produce an average return of 5.4% over the next 10 years according to NEPC's capital market assumptions

- Vs. the actuarial investment return assumption of 7.0%
- 30 year expected return is 6.4%

The funded ratio of the plan is expected to increase to 81% over 10 years

- The path over that time will likely not be a level climb as it is projected

Employer contribution rates are expected to meaningfully increase over the next 10 years in order to make up for the expected return shortfall

ASSUMPTIONS AND METHODS

Deterministic and stochastic projections are based on NEPC’s 6/30/2020 capital market assumptions

- Actual return for the fiscal year ending 6/30/2020 was 1.3%

Asset-liability calculations follow roll-forward methodology based on June 30, 2019 actuarial valuation and experience study produced by Cheiron

- Benefit payment projection provided by Cheiron
- Other than those described herein, all assumptions remain unchanged from the actuarial valuation report
- No gains or losses are assumed other than those attributed to investment experience

Employer contributions based on stated funding policy

- Net normal cost plus administrative expense plus 17-year closed level dollar amortization of unfunded liability

ASSET-LIABILITY RESULTS: CURRENT POLICY

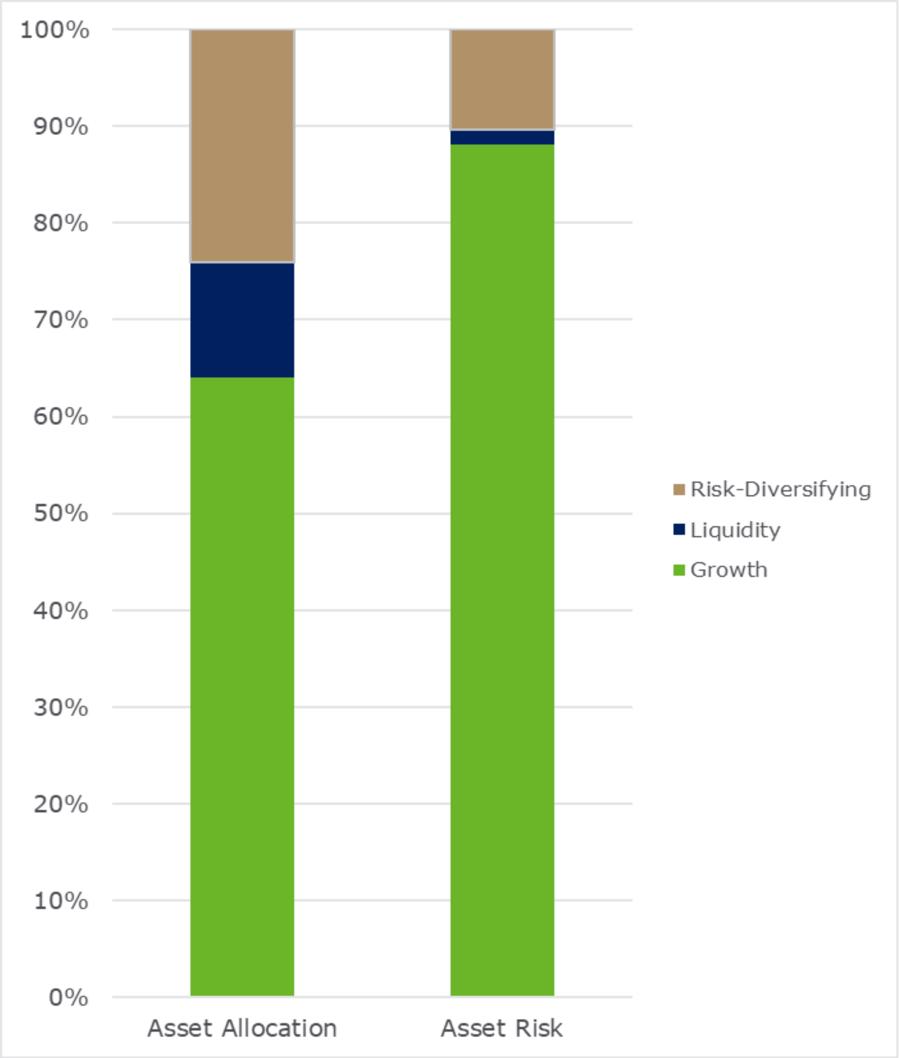
ASSET ALLOCATION

	Current Policy Target
Cash	1.0%
Cashflow-Matched Bonds	11.0%
Total Liquidity Sub-Portfolio	**12.0%**
US Public Equities	17.0%
Non-US Public Equities	23.0%
Private Equity	6.0%
Private Debt	6.0%
Core Real Estate	5.0%
Value-Add Real Estate	5.0%
Private Infrastructure	2.0%
Total Growth Sub-Portfolio	**64.0%**
Risk Parity	13.0%
US Treasury	3.0%
Short-Term Gov't/Credit	8.0%
Total Risk-Diversifying Sub-Portfolio	**24.0%**

Total Private Market Allocation	**24.0%**

Expected Return 30 yrs	**6.5%**
Expected Return 10 yrs	**5.7%**
Standard Deviation (Volatility)	**11.3%**

Probability of 30-Year Return Over 7%	**39.9%**
Probability of 10-Year Return Over 7%	**35.7%**
Probability of 1-Year Return Under 0%	**30.8%**
Probability of 5-Year Return Under 0%	**13.1%**



ASSET/LIABILITY OVERVIEW

	June 30, 2018 Valuation Results	June 30, 2019 Valuation Results	June 30, 2020 NEPC Estimate
Market Value of Assets (MVA)	$2,127	$2,208	$2,182
Actuarial Value of Assets (AVA)	$2,100	$2,200	$2,256
Actuarial Accrued Liability (AAL)	$2,749	$2,897	$3,017
Unfunded Actuarial Accrued Liability (UAAL)	$649	$697	$761
Funded Ratio	76.4%	75.9%	74.8%
Employer Contribution Rate[1]	30.4%	31.5%	33.3%

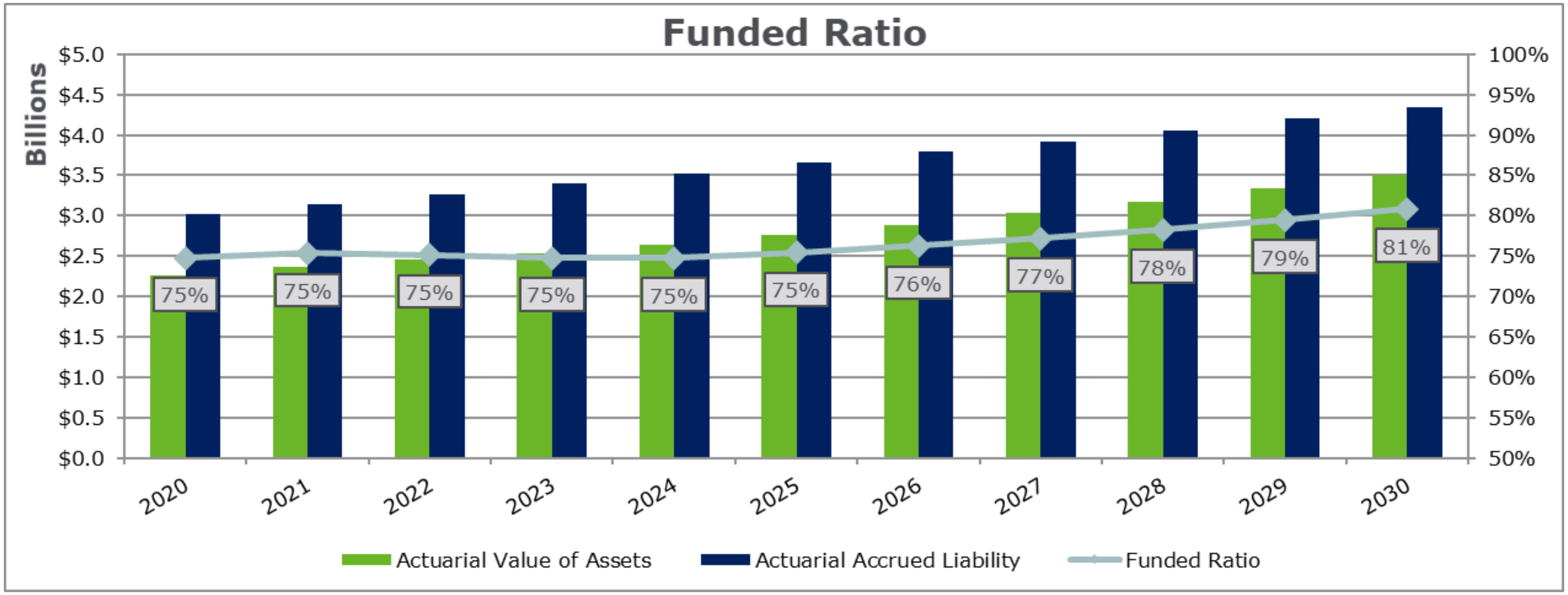
[1] As a percent of payroll
$ in millions

The market rate of return on assets for the year ended June 30, 2020 was 1.3%

NEPC estimates funded status to decline to 74.8% as a result of asset underperformance relative to the 7% investment return assumption

The employer contribution is estimated to increase to 33.3% of payroll

FUNDED RATIO – 10 YEAR



As of June 30

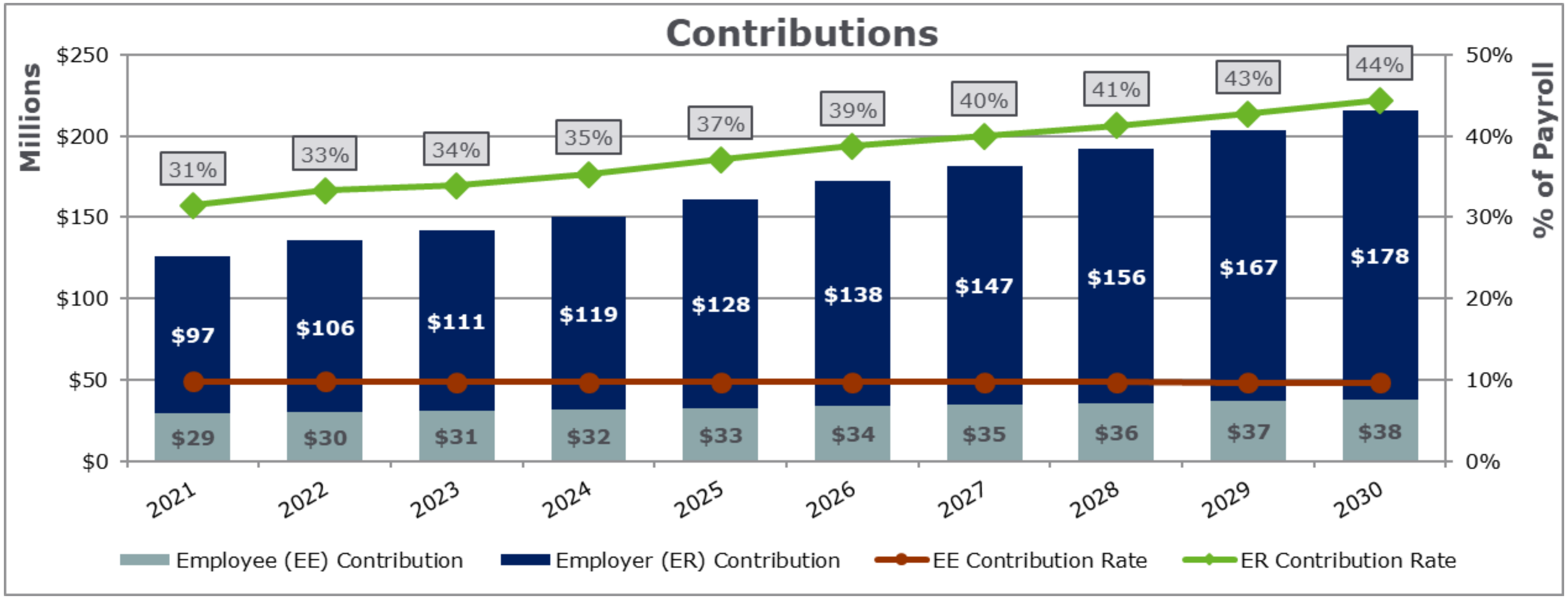
Under the current Policy Target allocation the plan's funded status is projected to improve to 81% over the next 10 years

Projected funded status gains are muted by an expected return shortfall

– Actuarial investment return assumption of 7% vs. NEPC 10-year expected return of 5.7%

Average asset growth is 4.5% while average liability growth is 3.7%

CONTRIBUTIONS – 10 YEAR



For the fiscal year ending

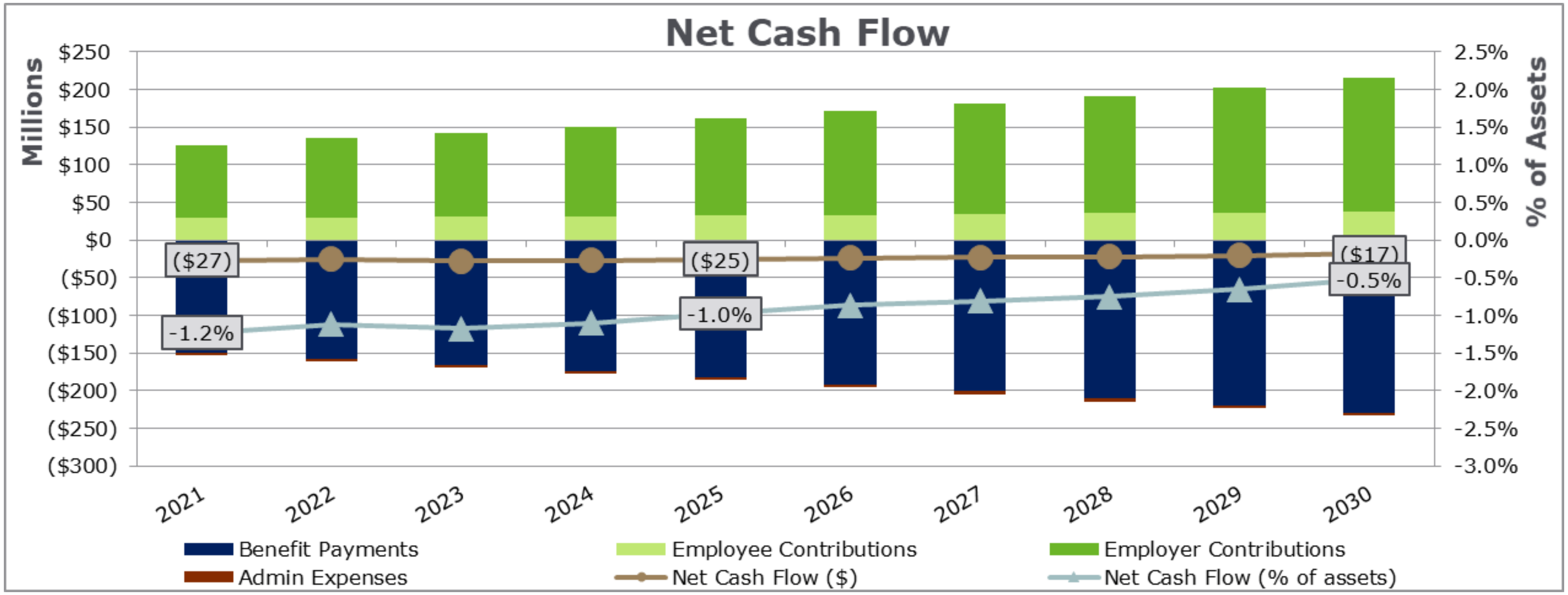
Employee contributions are a flat % of pay, therefore employer contributions must make up for any gains/losses that occur

– Investment under- or overperformance
– Changes to assumptions or provisions

Due to the expected return shortfall over the next 10 years, the employer contribution rate is expected to increase from 31% to 44%

– In other words, the 1.3% annual return shortfall translates to a 1.3% annual increase in the employer contribution rate

NET CASH FLOW – 10 YEAR



For the fiscal year ending

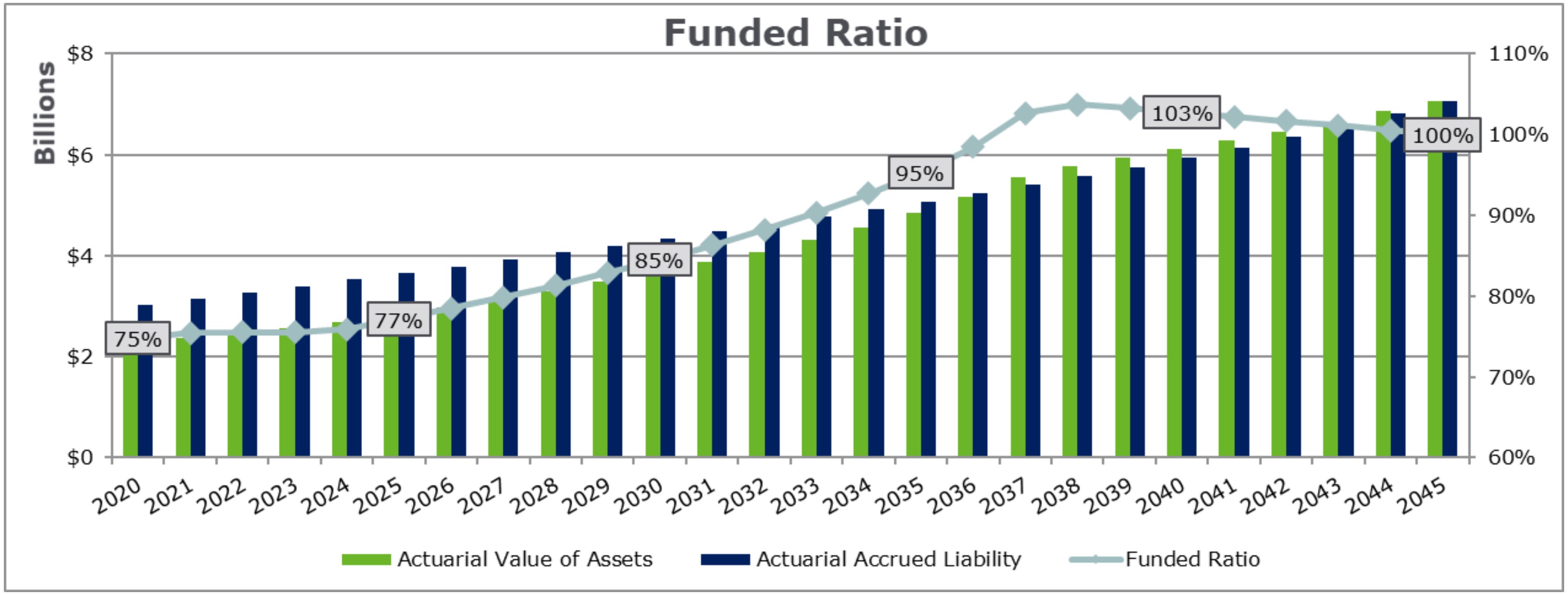
Negative net cash flow can be considered the minimum required return to maintain current asset levels

– % return has to exceed the net % of assets going out in order for asset pool to grow

The more negative net cash flow becomes, the more reliant the plan becomes on investment returns, rather than contributions, to maintain funding levels

The plan's net cash flow of -1% over the next 10 years is better than the average public plan net cash flow of -2% to -3%

FUNDED RATIO – 30 YEAR



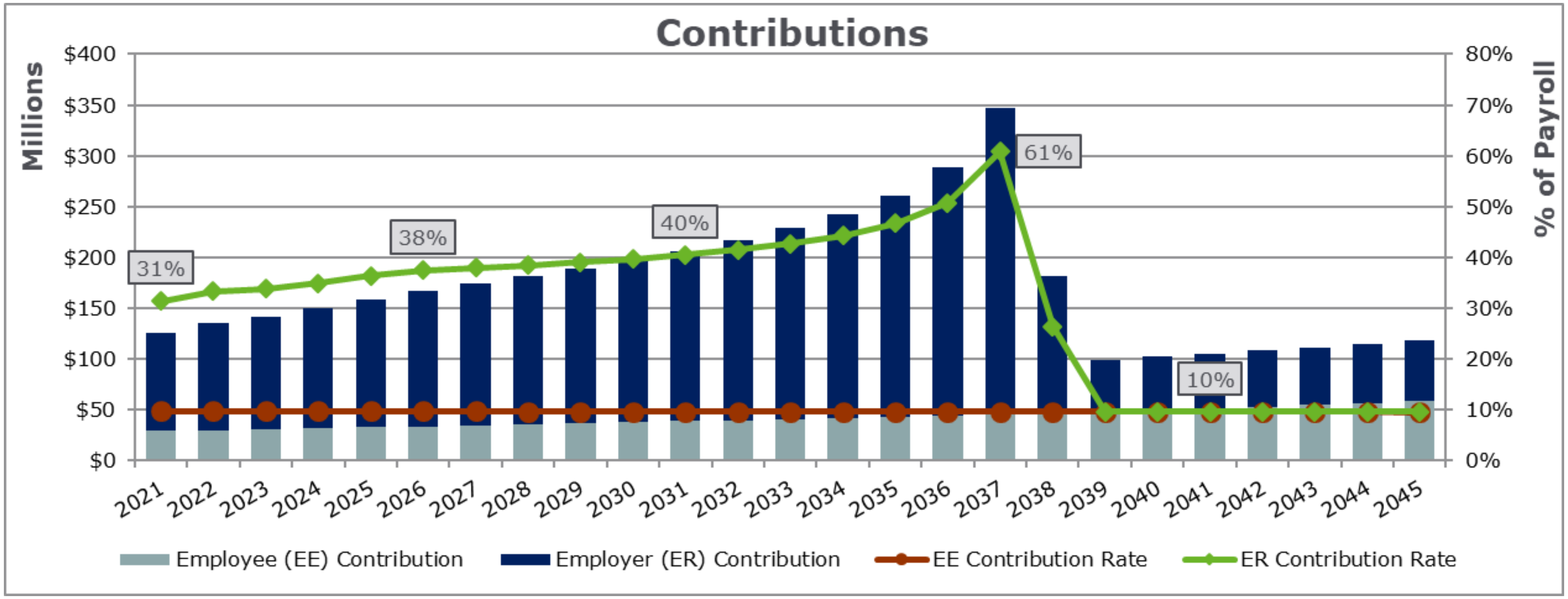
As of June 30

The current Policy Target is expected to return 6.5% over a 30-year horizon

Due to the closed amortization period on unfunded liabilities, the plan is expected to reach 100% funded over the next 17 years

Reaching 100% funded under a close amortization policy is merely a product of that type of policy and it will ultimately depend on if the required contributions can be made

CONTRIBUTIONS – 30 YEAR

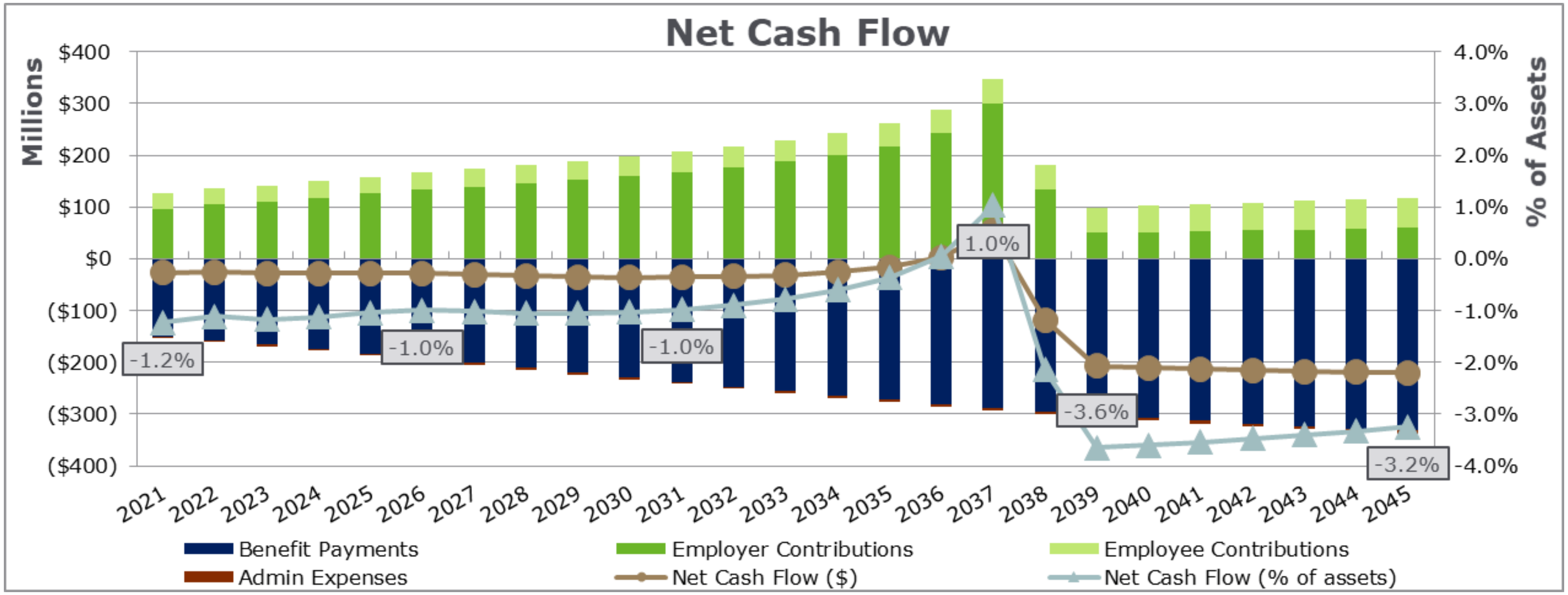


For the fiscal year ending

As the closed amortization period nears its end in 2037, the employer contribution is projected to spike to 64% of pay in order to payoff the remainder of unfunded liability in the last year

Thereafter, contributions would reduce to "maintenance" levels equal to the employer's share of normal cost plus administration expenses

NET CASH FLOW – 30 YEAR



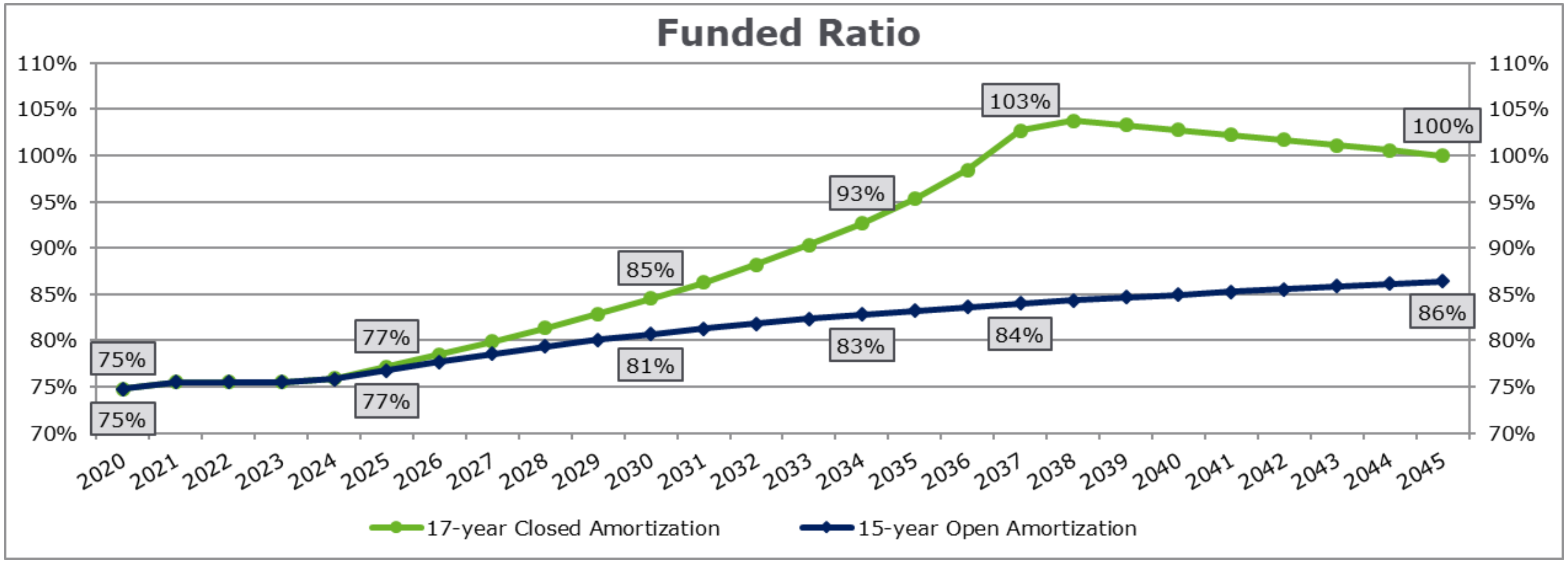
For the fiscal year ending

The projected contribution spike at the end of the amortization period causes net cash flow to turn positive in 2037

Thereafter, contributions fall to maintenance levels causing net cash flow to drop to between -3% to -4%

Managing this cash flow "cliff" will be key going forward

OPEN AMORTIZATION PERIOD – FUNDED RATIO



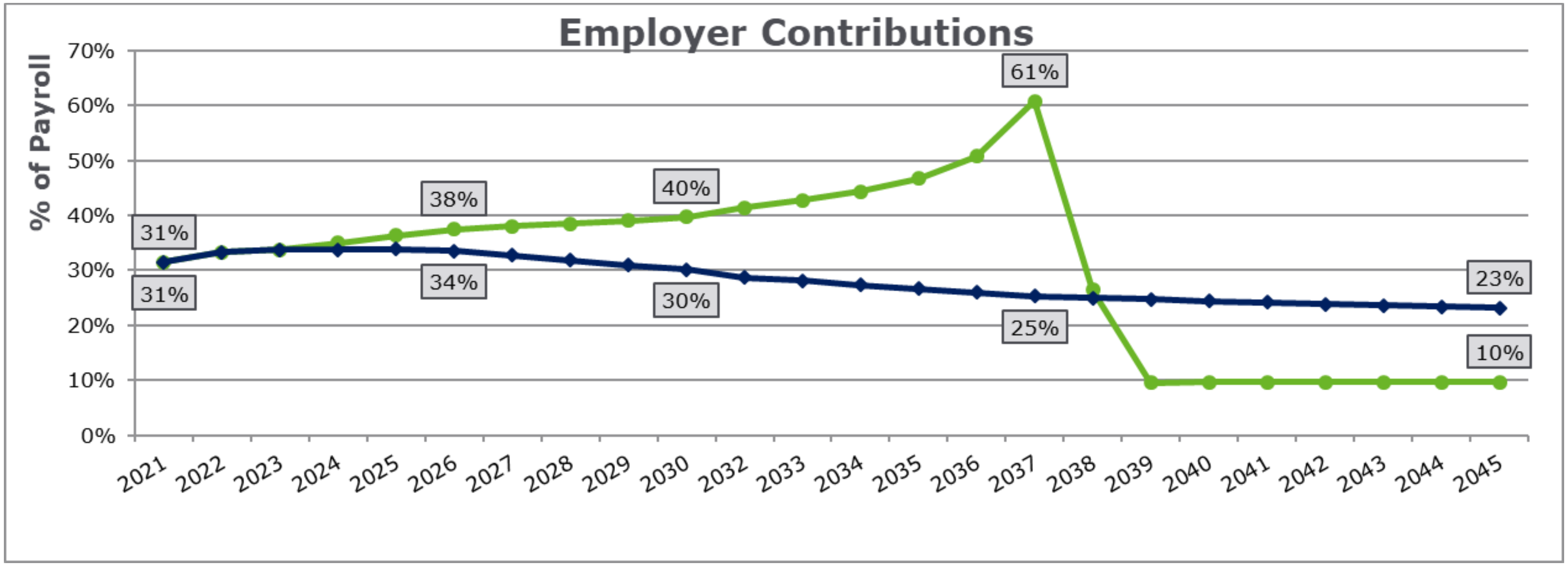
As of June 30

The unfunded liability is currently being financed using a closed amortization period with 17 years remaining

Projected above is the scenario in which the amortization method would change to an open amortization as of FY 2022

A consequence of moving to a 15-year open amortization is a much more gradual increase in funded status over time

OPEN AMORTIZATION PERIOD – CONTRIBUTIONS



For the fiscal year ending

The unfunded liability is currently being financed using a closed amortization period with 17 years remaining

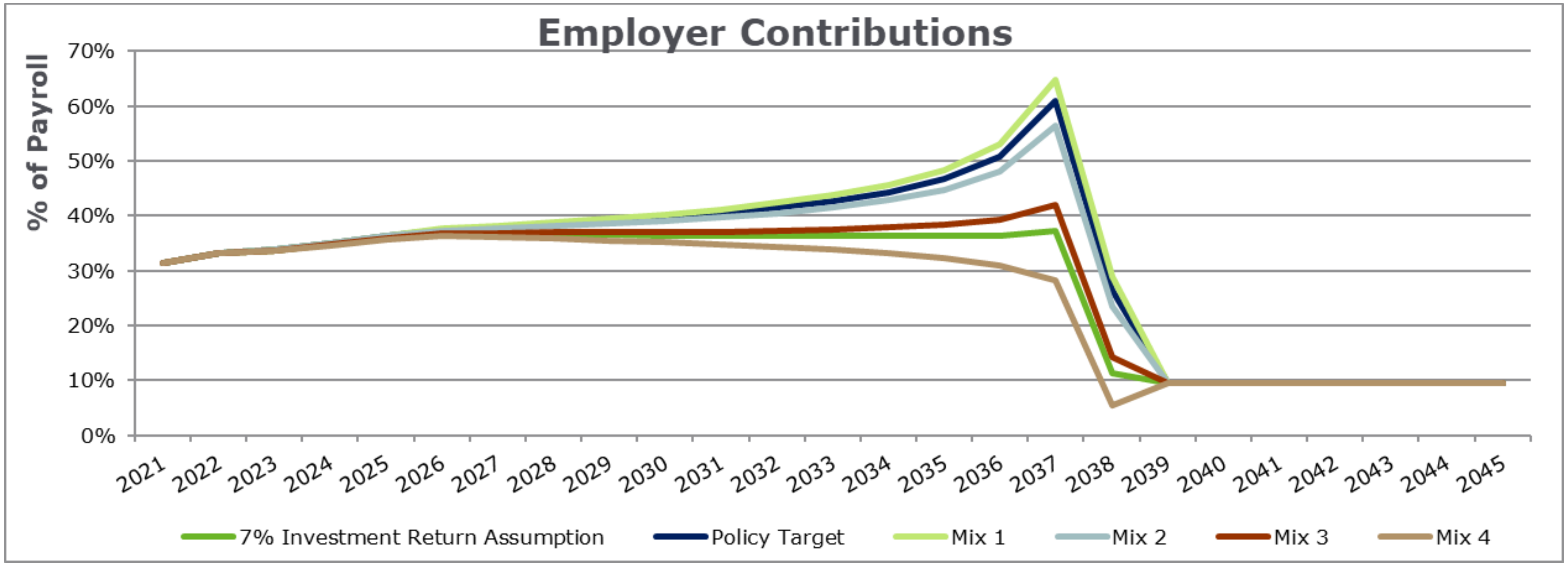
Projected above is the scenario in which the amortization method would change to an open amortization after FY 2022

A benefit of moving to a 15-year open amortization is a less volatile, more consistent path of contributions going forward

SHORTFALL ANALYSIS

NEPC, LLC

SHORTFALL ANALYSIS – 30 YEAR



For the fiscal year ending

Additional Cumulative Employer Contributions

Thru Plan Year	Policy Target	Mix 1	Mix 2	Mix 3	Mix 4
2030	$41	$48	$33	$8	($15)
2037	$378	$441	$306	$73	($145)

*Compared to projected 7% Investment Return Assumption path
$'s in millions

APPENDIX

10-YEAR RETURN FORECASTS

Geometric Expected Return			
Asset Class	**9/30/2020**	**6/30/2020**	**Delta**
Inflation	1.6%	1.7%	-0.1%
Cash	0.6%	0.6%	-
US Leverage Cost	0.9%	0.9%	-
Non-US Cash	0.0%	0.1%	-0.1%
Large Cap Equities	5.8%	6.3%	-0.5%
Small/Mid Cap Equities	6.4%	6.8%	-0.4%
Int'l Equities (Unhedged)	6.2%	6.7%	-0.5%
Int'l Equities (Hedged)	6.6%	7.1%	-0.5%
Int'l Sm Cap Equities (Unhedged)	6.4%	7.2%	-0.8%
Emerging Int'l Equities	8.0%	9.1%	-1.1%
Emerging Int'l Sm Cap Equities	8.5%	9.5%	-1.0%
Hedge Funds - Long/Short	4.3%	4.5%	-0.2%
PE Buyout	8.3%	8.7%	-0.4%
PE Growth	9.6%	9.9%	-0.3%
PE Venture	11.0%	11.3%	-0.3%
PE Secondary	7.8%	8.2%	-0.4%
PE Non-US	11.0%	11.4%	-0.4%
China Equity	7.0%	8.2%	-1.2%
US Microcap Equity	7.2%	7.4%	-0.2%

10-YEAR RETURN FORECASTS

Geometric Expected Return			
Asset Class	**9/30/2020**	**6/30/2020**	**Delta**
TIPS	0.8%	0.9%	-0.1%
Treasuries	0.6%	0.6%	-
IG Corp Credit	2.4%	2.6%	-0.2%
MBS	0.8%	0.8%	-
High-Yield Bonds	3.6%	4.3%	-0.7%
Bank Loans	3.8%	4.1%	-0.3%
EMD (External)	4.0%	4.4%	-0.4%
EMD (Local Currency)	5.4%	5.3%	+0.1%
Non-US Bonds (Unhedged)	0.6%	0.6%	-
Non-US Bonds (Hedged)	0.9%	0.9%	-
Short TIPS (1-5 yr)	0.8%	0.8%	-
Short Treasuries (1-3 yr)	0.7%	0.7%	-
Short Credit (1-3 yr)	1.6%	1.7%	-0.1%
Short HY (1-3 yr)	2.6%	3.3%	-0.7%
Municipal Bonds	2.0%	2.3%	-0.3%
Municipal Bonds (1-10 Year)	1.0%	1.3%	-0.3%
High-Yield Municipal Bonds	3.3%	4.0%	-0.7%
Hedge Funds - Credit	4.1%	4.4%	-0.3%
PD Credit Opportunities	6.6%	7.1%	-0.5%

10-YEAR RETURN FORECASTS

Geometric Expected Return			
Asset Class	**9/30/2020**	**6/30/2020**	**Delta**
PD Distressed	7.7%	8.3%	-0.6%
PD Direct Lending	5.3%	5.6%	-0.3%
Long Treasuries	0.4%	0.4%	-
Long TIPS	0.8%	1.0%	-0.2%
Long Credit	2.8%	3.0%	-0.2%
20+ YR STRIPS	0.0%	0.0%	-
Corp - AAA	1.5%	1.7%	-0.2%
Corp - AA	1.7%	1.7%	-
Corp - A	2.0%	2.1%	-0.1%
Corp - BBB	2.9%	3.1%	-0.2%
Corp - BB	4.4%	5.0%	-0.6%
Corp - B	3.8%	4.5%	-0.7%
Corp - CCC/Below	-2.4%	-0.8%	-1.6%
IG ABS/CMBS	1.6%	1.8%	-0.2%
IG CLO	2.1%	2.1%	-
HY Securitized	1.8%	1.9%	-0.1%
HY CLO	4.6%	4.6%	-
Taxable Muni Debt	2.5%	2.7%	-0.2%
US 10 yr Treasuries	0.5%	0.5%	-

10-YEAR RETURN FORECASTS

Geometric Expected Return			
Asset Class	**9/30/2020**	**6/30/2020**	**Delta**
Non-US 10-Year Sov (Hedged)	-0.1%	0.0%	-0.1%
Commodities	0.6%	1.7%	-1.1%
Midstream Energy	8.0%	7.4%	+0.6%
REITs	5.7%	6.6%	-0.9%
Public Infrastructure	6.2%	6.3%	-0.1%
Public Resource Equity	7.1%	7.5%	-0.4%
Core Real Estate	4.2%	4.4%	-0.2%
Non-Core Real Estate	5.1%	5.3%	-0.2%
Private RE Debt	3.9%	4.1%	-0.2%
Private Real Assets - Energy/Metals	8.2%	8.5%	-0.3%
Private Real Assets - Infra/Land	5.5%	5.9%	-0.4%
Hedge Funds - Macro	4.1%	4.6%	-0.5%
*Global Equity**	6.6%	7.2%	-0.6%
*Private Equity**	10.0%	10.4%	-0.4%
*Core Bonds**	1.2%	1.3%	-0.1%
*Private Debt**	6.3%	6.8%	-0.5%
*Long Govt/Credit**	1.8%	2.0%	-0.2%
*Hedge Funds**	4.3%	4.6%	-0.3%

*Calculated as a blend of other asset classes

30-YEAR RETURN FORECASTS

Geometric Expected Return			
Asset Class	**9/30/2020**	**6/30/2020**	**Delta**
Inflation	2.1%	2.4%	-0.3%
Cash	1.8%	1.8%	-
US Leverage Cost	2.1%	2.1%	-
Non-US Cash	1.2%	1.2%	-
Large Cap Equities	6.4%	6.7%	-0.3%
Small/Mid Cap Equities	6.8%	7.0%	-0.2%
Int'l Equities (Unhedged)	6.6%	6.8%	-0.2%
Int'l Equities (Hedged)	7.0%	7.2%	-0.2%
Int'l Sm Cap Equities (Unhedged)	6.9%	7.3%	-0.4%
Emerging Int'l Equities	8.7%	9.1%	-0.4%
Emerging Int'l Sm Cap Equities	8.9%	9.3%	-0.4%
Hedge Funds - Long/Short	5.2%	5.4%	-0.2%
PE Buyout	8.7%	8.9%	-0.2%
PE Growth	10.0%	10.1%	-0.1%
PE Venture	10.9%	11.0%	-0.1%
PE Secondary	8.2%	8.4%	-0.2%
PE Non-US	10.9%	11.0%	-0.1%
China Equity	8.1%	8.5%	-0.4%
US Microcap Equity	7.6%	7.6%	-

30-YEAR RETURN FORECASTS

Geometric Expected Return			
Asset Class	**9/30/2020**	**6/30/2020**	**Delta**
TIPS	2.1%	2.0%	+0.1%
Treasuries	1.9%	1.9%	-
IG Corp Credit	3.7%	3.8%	-0.1%
MBS	2.2%	2.2%	-
High-Yield Bonds	5.2%	5.4%	-0.2%
Bank Loans	4.7%	4.7%	-
EMD (External)	4.8%	4.9%	-0.1%
EMD (Local Currency)	5.3%	5.2%	+0.1%
Non-US Bonds (Unhedged)	1.5%	1.6%	-0.1%
Non-US Bonds (Hedged)	1.8%	1.9%	-0.1%
Short TIPS (1-5 yr)	2.0%	2.1%	-0.1%
Short Treasuries (1-3 yr)	1.9%	1.9%	-
Short Credit (1-3 yr)	2.8%	2.8%	-
Short HY (1-3 yr)	3.3%	3.5%	-0.2%
Municipal Bonds	2.3%	2.5%	-0.2%
Municipal Bonds (1-10 Year)	1.9%	2.0%	-0.1%
High-Yield Municipal Bonds	4.1%	4.4%	-0.3%
Hedge Funds - Credit	5.4%	5.5%	-0.1%
PD Credit Opportunities	7.1%	7.2%	-0.1%

30-YEAR RETURN FORECASTS

Geometric Expected Return			
Asset Class	**9/30/2020**	**6/30/2020**	**Delta**
PD Distressed	7.9%	8.1%	-0.2%
PD Direct Lending	7.0%	7.0%	-
Long Treasuries	1.8%	1.9%	-0.1%
Long TIPS	2.0%	1.9%	+0.1%
Long Credit	4.0%	4.1%	-0.1%
20+ YR STRIPS	1.5%	1.6%	-0.1%
Corp - AAA	2.8%	2.9%	-0.1%
Corp - AA	2.9%	2.9%	-
Corp - A	3.3%	3.3%	-
Corp - BBB	4.0%	4.1%	-0.1%
Corp - BB	5.8%	6.0%	-0.2%
Corp - B	5.1%	5.4%	-0.3%
Corp - CCC/Below	-0.5%	0.1%	-0.6%
IG ABS/CMBS	3.0%	3.1%	-0.1%
IG CLO	3.1%	3.1%	-
HY Securitized	4.3%	4.4%	-0.1%
HY CLO	5.6%	5.5%	+0.1%
Taxable Muni Debt	3.9%	4.0%	-0.1%
US 10 yr Treasuries	2.1%	2.1%	-

30-YEAR RETURN FORECASTS

Geometric Expected Return			
Asset Class	**9/30/2020**	**6/30/2020**	**Delta**
Non-US 10-Year Sov (Hedged)	1.1%	1.2%	-0.1%
Commodities	3.6%	4.1%	-0.5%
Midstream Energy	7.9%	7.6%	+0.3%
REITs	6.8%	7.1%	-0.3%
Public Infrastructure	6.7%	6.8%	-0.1%
Public Resource Equity	7.2%	7.4%	-0.2%
Core Real Estate	5.5%	5.6%	-0.1%
Non-Core Real Estate	6.9%	7.0%	-0.1%
Private RE Debt	5.1%	5.1%	-
Private Real Assets - Energy/Metals	8.9%	9.0%	-0.1%
Private Real Assets - Infra/Land	6.8%	7.0%	-0.2%
Hedge Funds - Macro	4.7%	5.0%	-0.3%
*Global Equity**	7.2%	7.4%	-0.2%
*Private Equity**	10.3%	10.5%	-0.2%
*Core Bonds**	2.6%	2.6%	-
*Private Debt**	7.3%	7.4%	-0.1%
*Long Govt/Credit**	3.1%	3.2%	-0.1%
*Hedge Funds**	5.4%	5.5%	-0.1%

*Calculated as a blend of other asset classes

VOLATILITY FORECASTS

Asset Class	Volatility	Asset Class	Volatility
Inflation	-	TIPS	6.50%
Cash	1.00%	Treasuries	5.50%
US Leverage Cost	1.00%	IG Corp Credit	7.50%
Non-US Cash	1.00%	MBS	7.00%
Large Cap Equities	16.50%	High-Yield Bonds	12.50%
Small/Mid Cap Equities	20.00%	Bank Loans	9.00%
Int'l Equities (Unhedged)	20.50%	EMD (External)	13.00%
Int'l Equities (Hedged)	17.50%	EMD (Local Currency)	13.00%
Int'l Sm Cap Equities (Unhedged)	22.00%	Non-US Bonds (Unhedged)	10.00%
Emerging Int'l Equities	28.00%	Non-US Bonds (Hedged)	4.50%
Emerging Int'l Sm Cap Equities	31.00%	Short TIPS (1-5 yr)	3.50%
Hedge Funds - Long/Short	11.50%	Short Treasuries (1-3 yr)	2.50%
PE Buyout	18.50%	Short Credit (1-3 yr)	3.50%
PE Growth	30.50%	Short HY (1-3 yr)	8.50%
PE Venture	45.00%	Municipal Bonds	7.00%
PE Secondary	21.00%	Municipal Bonds (1-10 Year)	5.50%
PE Non-US	33.00%	High-Yield Municipal Bonds	12.00%
China Equity	29.50%	Hedge Funds - Credit	9.00%
US Microcap Equity	25.00%	PD Credit Opportunities	14.00%

VOLATILITY FORECASTS

Asset Class	Volatility
PD Distressed	14.00%
PD Direct Lending	11.00%
Long Treasuries	12.00%
Long TIPS	10.00%
Long Credit	12.00%
20+ YR STRIPS	21.00%
Corp - AAA	7.00%
Corp - AA	6.50%
Corp - A	7.50%
Corp - BBB	8.50%
Corp - BB	10.50%
Corp - B	12.50%
Corp - CCC/Below	20.00%
IG ABS/CMBS	9.00%
IG CLO	7.50%
HY Securitized	11.00%
HY CLO	11.00%
Taxable Muni Debt	8.00%
US 10 yr Treasuries	7.50%

Asset Class	Volatility
Non-US 10-Year Sovereign (Hedged)	5.50%
Commodities	19.00%
Midstream Energy	18.50%
REITs	20.00%
Public Infrastructure	18.50%
Public Resource Equity	22.00%
Core Real Estate	13.00%
Non-Core Real Estate	19.50%
Private RE Debt	11.00%
Private Real Assets - Energy/Metals	32.00%
Private Real Assets - Infra/Land	12.00%
Hedge Funds - Macro	9.50%
*Global Equity**	*17.79%*
*Private Equity**	*24.58%*
*Core Bonds**	*6.01%*
*Private Debt**	*11.54%*
*Long Govt/Credit**	*11.25%*
*Hedge Funds**	*8.18%*

*Assumptions are derived from the underlying equity, credit, and real assets building blocks

PRIVATE MARKETS COMPOSITES

Assumed public market beta composites for private market return assumptions are detailed below:

Private Equity:

Private Equity – Buyout: 25% US Large Cap, 75% US Small/Mid Cap

Private Equity – Secondary: 25% US Large Cap, 75% US Small/Mid Cap

Private Equity – Growth: 50% US Small/Mid Cap, 50% US Microcap

Private Equity – Venture: 25% US Small/Mid Cap, 75% US Microcap

Private Equity – Non-US: 70% International Small Cap, 30% Emerging Small Cap

PE Composite: 34% Buyout, 34% Growth, 15 % Non-US, 8.5% Secondary, 8.5% Venture

Private Debt:

Private Debt – Direct Lending: 100% Bank Loans

Private Debt – Distressed: 20% US Small/Mid Cap, 60% US High Yield, 20% Bank Loans

Private Debt – Credit Opportunities: 24% US SMID Cap, 33% US High Yield, 33% Bank Loans

Private Debt Composite: 50% Direct Lending, 25% Credit Opportunities, 25% Distressed

Private Real Assets:

Private Real Assets – Energy: 30% Comm., 35% Midstream, 35% Public Resource Equity

Private Real Assets - Infra/Land: 30% Commodities, 70% Public Infrastructure

Private Real Estate Debt: 50% CMBS, 50% Core Real Estate

DISCLOSURES

Past performance is no guarantee of future results.

NEPC, LLC is an investment consulting firm. We provide asset-liability studies for certain clients but we do not provide actuarial services. Any projections of funded ratio or contributions contained in this report should not be used for budgeting purposes. We recommend contacting the plan's actuary to obtain budgeting estimates.

The goal of this report is to provide a basis for substantiating asset allocation recommendations. The opinions presented herein represent the good faith views of NEPC as of the date of this report and are subject to change at any time.

Information on market indices was provided by sources external to NEPC. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.

The projection of liabilities in this report uses standard actuarial projection methods and does not rely on actual participant data. Asset and liability information was received from the plan's actuary, and other projection assumptions are stated in the report.

All investments carry some level of risk. Diversification and other asset allocation techniques do not ensure profit or protect against losses.

This report is provided as a management aid for the client's internal use only. This report may contain confidential or proprietary information and may not be copied or redistributed to any party not legally entitled to receive it.

November 24, 2020
Retirement Board Agenda Item

TO: Retirement Board

FROM: Donna Riley, Internal Governance Chair

I. SUBJECT: Internal Governance Committee – Approval of the Comprehensive Annual Financial Statement for the Fiscal Years ended June 30, 2020 and 2019.

II. ITEM NUMBER: 9.a.1

III. ITEM TYPE: Discussion and Action

IV. STAFF RECOMMENDATION: Accept Committee's Recommendation for Receipt of the Comprehensive Annual Financial Report (Attachment 1)

V. ANALYSIS: The Internal Governance Committee met November 17, 2020 with internal staff and a partner and the auditors from the Brown Armstrong Accountancy Corporation. Brown Armstrong performed its audit in accordance with generally accepted auditing standards. Brown Armstrong did not provide any opinion regarding internal controls, however, it was noted that no internal control weaknesses were found. StanCERA received an unqualified opinion that the basic financial statements (beginning on page 22) present fairly the financial position of StanCERA in accordance with generally accepted accounting principles.

In the management comments, there were no material weaknesses or deficiencies found for FY 2020-2019. There is an agreed upon condition regarding methodology and reconciliation of the value of alternative investments. It was suggested that StanCERA work with the custodial bank regarding using the same recording process. StanCERA management concurs with this suggestion.

VI. RISK: None

VII. STRATEGIC PLAN: N/A

VIII. ADMINISTRATIVE BUDGET IMPACT: None

Natalie Davis

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Natalie Davis, Fiscal Services Manager

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Rick Santos, Executive Director

Comprehensive Annual Financial Report

For the Fiscal Years Ended June 30, 2020 and 2019

Stanislaus County Employees' Retirement Association (StanCERA)

(Pension Trust Fund of the County of Stanislaus)

Stanislaus County

Stanislaus County Employees' Retirement Association

(Pension Trust Fund of the County of Stanislaus, California)

Comprehensive Annual
Financial Report

For the Years Ended
June 30, 2020 and 2019

Issued By

Rick Santos, CFA, ASA, MAAA
Executive Director

StanCERA
Staff

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Introduction Section

LETTER OF TRANSMITTAL

November 12, 2020

Stanislaus County Employees' Retirement Association
Modesto, CA 95354

Dear Board Members:

Please find enclosed the Comprehensive Annual Financial Report (CAFR) of the Stanislaus County Employees' Retirement Association (StanCERA or the Plan) for the fiscal years ended June 30, 2020 and 2019. As of June 30, 2020, it is StanCERA's 72nd year of operations.

The CAFR is a detailed financial report established by the Government Finance Officers Association (GFOA) for publicly disclosing the viability of a defined benefit public retirement system. The CAFR is intended to provide users with extensive reliable information for making management decisions, determining compliance with legal provisions, and demonstrates the responsible management and stewardship of StanCERA. StanCERA management is responsible for both the accuracy of the data and the completeness and fairness of the presentation of financial information within this CAFR, including all disclosures.

StanCERA is a multiple employer public employees' retirement system, established by Stanislaus County on July 1, 1948. StanCERA is operated and administered by the Board of Retirement (the Board) to provide retirement, disability, death and survivor benefits for its members under the California State Government Code, Section 31450 et seq. known as the County Employees Retirement Law of 1937 (CERL) and the Public Employees' Pension Reform Act (PEPRA).

StanCERA and Its Services

StanCERA was established by Stanislaus County to provide retirement allowances and other benefits to general and safety members employed by Stanislaus County. Currently, Stanislaus County and seven participating agencies are members of StanCERA. The participating agencies are:

City of Ceres
Stanislaus Council of Governments
Stanislaus County Superior Court
East Side Mosquito Abatement District
Hills Ferry Cemetery District
Keyes Community Services District
Salida Sanitary District

StanCERA and Its Services (continued)

StanCERA is governed by the California Constitution; the County Employees Retirement Law of 1937 (CERL); Public Employees' Pension Reform Act; and the bylaws, regulations, policies, and procedures adopted by the Board of Retirement. The Stanislaus County Board of Supervisors may also adopt resolutions, as permitted by the CERL, which may affect benefits to Stanislaus County members.

The Board of Retirement is responsible for the management of StanCERA and is comprised of nine members and two alternate members, one of whom is a safety alternate and the other a retiree alternate. The safety alternate seat is not currently filled. Four members are appointed by the Stanislaus County Board of Supervisors, one member and the alternate safety member are elected by the safety members, two members are elected by the general members, while the retiree and alternate retiree members are elected by the retired members. The Stanislaus County Treasurer serves as an ex-officio member. Members, with the exception of the Stanislaus County Treasurer, serve three-year terms with no term limits.

Financial Information

The accompanying financial statements are prepared using the accrual basis of accounting. Contributions from employers and members are recognized when received or when due pursuant to legal requirements. Benefits are recognized when due and payable in accordance with the terms of the plan. Expenses are recorded when corresponding liabilities are incurred regardless of when payment is due or made. Investments are recorded at the fair value of the asset.

An overview of StanCERA's fiscal operations for the years ended June 30, 2020 and 2019, is presented in the Management's Discussion and Analysis (MD&A) located in the financial section of the CAFR. This transmittal letter, together with the MD&A, provides an expanded view of the activities of StanCERA.

Brown Armstrong Accountancy Corporation, StanCERA's independent auditor, has audited the accompanying financial statements. Management believes an adequate system of internal controls is in place and the accompanying statements, schedules, and tables are fairly presented and free from material misstatement. The concept of reasonable assurance recognizes that first, the cost of a control should not exceed the benefits likely to be derived, and that second, the valuation of the cost and benefits requires estimates and judgments by management.

Internal controls over financial reporting cannot provide absolute assurance of achieving financial reporting objectives because of its inherent limitations. Internal controls over financial reporting are processes that involve human diligence and compliance and are subject to lapses in judgment and breakdowns resulting from human failures. Internal controls over financial reporting also can be circumvented by collusion or improper management override. Because of such limitations, there is a risk that material misstatements may not be prevented or detected within a timely basis by internal controls over financial reporting. However, these inherent limitations are known features of the financial reporting process. Therefore, it is possible to design safeguards into the process to reduce, but not eliminate, this risk.

Net Pension Liability and Actuarial Funding

StanCERA's funding objective is to meet long-term benefit obligations by maintaining a well-funded plan status and obtaining optimum investment returns. Pursuant to the CERL, StanCERA engages an independent actuary to perform an actuarial valuation of the Plan on an annual basis. Economic assumptions are normally reviewed every three years. Additionally, every three years, a triennial experience study is conducted, at which time non-

Net Pension Liability and Actuarial Funding (continued)

economic assumptions are also updated. The most recent triennial experience study was conducted as of June 30, 2018 by Cheiron, Inc. Cheiron, Inc. conducted the last actuarial valuation as of June 30, 2019, the results of which were rolled forward to StanCERA's fiscal year ended June 30, 2020 and determined the Plan's Fiduciary Net Position as a Percentage of the Total Pension Liability to be 73.0% using the recommended assumptions.

Investments

The Board of Retirement has exclusive control of all StanCERA investments and is responsible for establishing investment objectives, strategies, and policies. The California Constitution and Government Code Sections 31594 and 31595 authorize the Board of Retirement to invest in any investment deemed prudent in the Board's informed opinion.

The Board has adopted an Investment Policy, which provides a framework for the management of StanCERA's investments. This policy establishes StanCERA's investment objectives and defines the duties of the Board of Retirement, investment managers, and custodial bank. The asset allocation is an integral part of the Investment Policy and is designed to provide an optimum mix of asset classes with return expectations to ensure growth of assets to meet future liabilities, minimize employer contributions, and defray reasonable administrative costs. StanCERA engages an Investment Consultant to analyze the investment policy and strategy and to conduct periodic asset allocation and asset/liability studies on behalf of StanCERA. For the fiscal years ended June 30, 2020 and 2019, the Plan's investments provided a 1.3% and 5.1% rate of return, respectively. A summary of the asset allocation can be found in the Investment Section of this report.

Awards

StanCERA is the recipient of several awards. The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to StanCERA for its CAFR for the fiscal year ended June 30, 2019. The Certificate of Achievement is a prestigious national award recognizing conformance with the highest standards for preparation of state and local government financial reports. This was the sixteenth consecutive year StanCERA has achieved this prestigious award.

In order to be awarded a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized CAFR, the contents of which meet or exceed program standards. The CAFR must satisfy both generally accepted accounting principles and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year only. We believe our current report continues to conform to the Certificate of Achievement program requirements, and we are submitting it to the GFOA for evaluation.

StanCERA received the Award for Outstanding Achievement in Popular Annual Financial Reporting for the fiscal year ended June 30, 2019. This report provides all StanCERA members more concise and condensed information that can be found in the CAFR.

StanCERA also received the Public Pension Coordinating Council's Public Pension Standards 2019 Award, in recognition of meeting professional standards for plan design and administration as set forth in the Public Pension Standards.

Awards (continued)

The Public Pension Coordinating Council (PPCC) is a coalition of the following associations that represent public pension funds that cover the vast majority of public employees in the U.S.:

- National Association of State Retirement Administrators (NASRA)
- National Council on Teacher Retirement (NCTR)
- National Conference on Public Employee Retirement Systems (NCPERS)

The Public Pension Standards are intended to reflect minimum expectations for public retirement systems management and administration, and serve as a benchmark by which all defined benefit public plans should be measured.

Service Efforts and Accomplishments

Written communication for members continues to be a focus for StanCERA. Non retired members receive statements twice a year. Retirees receive printed advice notices with critical information monthly and to communicate the financial health of the fund, an easy-to-read Popular Annual Financial Report (PAFR) is distributed to all members annually.

StanCERA sponsors a one half-day pre-retirement seminar to potential retirees annually, participates in the Stanislaus County new employee orientation workshop and continues to provide group educational programs at the work site for interested employees.

In addition, StanCERA continues to increase its website presence. Audio recordings of education seminars and Board of Retirement meetings are available. Meeting agendas and minutes are posted timely. Policies, by-laws, member services and forms can be easily identified and downloaded. Members continue to visit the contribution and benefit calculators regularly.

Acknowledgement

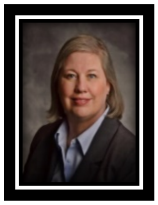
The compilation of this report reflects the combined efforts of many people on StanCERA's staff. It is intended to provide reliable information as the basis for making management decisions, as a means for determining compliance with legal provisions, and as a means of determining responsible stewardship of the funds of StanCERA. Both the accuracy of the data presented and the completeness and fairness of the presentation of the CAFR are the responsibility of the management of StanCERA.

I congratulate the Board, staff and service providers of StanCERA for their commitment and for their diligent work to ensure the continued successful operation of StanCERA.

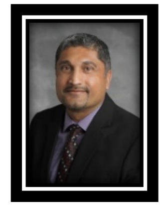
Sincerely,

Rick Santos, CFA, ASA, MAAA
Executive Director

BOARD OF RETIREMENT
JUNE 30, 2020

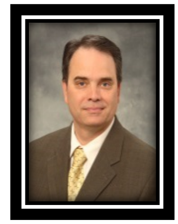


Seat # 1 ***Donna Riley***
Ex-Officio, Treasurer/Tax Collector



Seat # 2 ***Mandip Dhillon***
Trustee, Elected by Active General Membership

Seat # 3 ***Jeff Mangar***
Trustee, Elected by Active General Membership



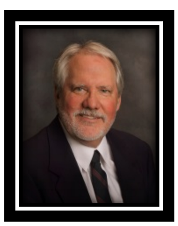
Seat # 4 ***Darin Gharat***
Trustee, Appointed by the Board of Supervisors

Seat # 5 ***Mike Lynch***
Trustee, Appointed by the Board of Supervisors

Seat # 6 ***Jim DeMartini***
Trustee, Appointed by the Board of Supervisors

Seat # 7 ***Vacant***
Trustee, Elected by Active Safety Membership

Seat # 7a **Vacant**
Alternate Trustee, Elected by Active Safety Membership



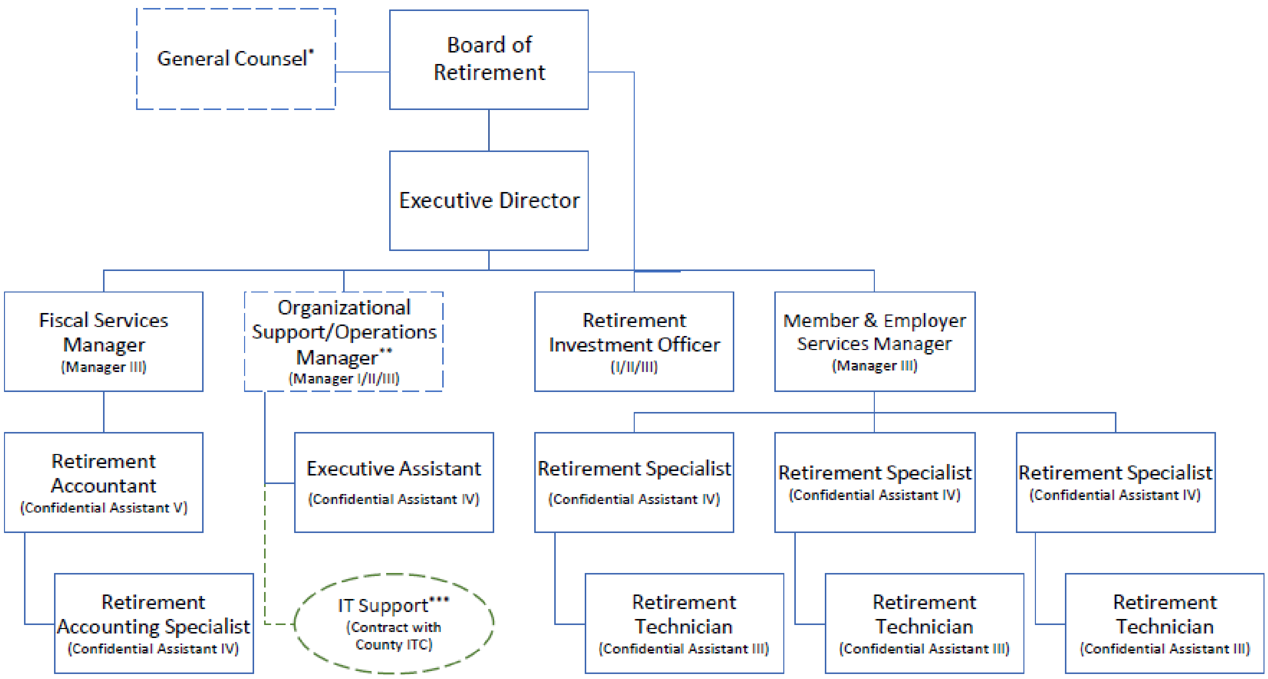
Seat # 8 **Michael O'Neal**
Chair, Elected by Retired Membership

Seat # 8a ***Rhonda Biesemeier***
Alternate Trustee, Elected by Retired Membership

Seat # 9 ***Jeff Grover***
Vice Chair, Appointed by the Board of Supervisors

StanCERA ORGANIZATIONAL CHART

Effective 2020



*General Counsel position is allocated for – remains vacant
**Organizational Support/Operations Manager is allocated for – remains vacant
*** IT Support position is allocated for – remains vacant

* Retirement Board utilizes private general legal counsel for administrative legal services.
Private attorneys provide legal assistance for disability retirement applications.

PROFESSIONAL CONSULTANTS
JUNE 30, 2020

Consulting Services

Actuary
Cheiron, Inc.

Auditors
Brown Armstrong Accountancy Corporation

Investment Custodian
Northern Trust

Investment Consultant
Verus, Inc.

Legal Counsel
Damrell Nelson Schrimp Pallios
Pacher & Silva (General Legal Counsel)
Law Office of Ted M Cabral
Hansen Bridgett LLP
Reed Smith LLP
Rein & Rein

Technical & Data Services
Tyler, Inc.
SBT, County of Stanislaus

Investment Management Services*

Fixed Income
Insight
Dimensional Fund Advisors
Northern Trust Intermediate Bond
Northern Trust Long Term Bond

Large Cap Value Equity
Dodge & Cox
BlackRock R1000 Value

Large Cap Growth Equity
BlackRock R1000 Growth
Northern Trust Russell 1000

Small Cap Value Equity
Capital Prospects

Investment Management Services*

International Equity
LSV Asset Management (Value)
Fidelity Asset Management (Growth)

Real Estate Securities
Black Rock US Real Estate Index

Private Credit
Medley Opportunity
Raven Capital Management, LLC
White Oak Global Advisors, LLC
Owl Rock First Lien

Private Equity
Insight Partners XI
Vista Foundation IV Fund

Private Real Estate
American Realty Advisors
Greenfield Acquisition Partners
Morgan Stanley Prime Property
PGIM Real Estate U.S. Debt

Infrastructure
North Haven Partners II LP

Risk Parity
AQR
PanAgora

*Refer to the Investment Section for the Schedule of Investment Management Fees (Page 56) and Schedule of Investment Broker Commissions (Page 57).

Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

Stanislaus County
Employees' Retirement Association
California

For its Comprehensive Annual Financial Report
For the Fiscal Year Ended

June 30, 2019

Christopher P. Morrill

Executive Director/CEO

Government Finance Officers Association

Award for Outstanding Achievement in Popular Annual Financial Reporting

Presented to

Stanislaus County

Employees' Retirement Association

California

For its Annual
Financial Report
for the Fiscal Year Ended

June 30, 2019

Executive Director/CEO

Public Pension Coordinating Council

Public Pension Standards Award
For Funding and Administration
2019

Presented to

Stanislaus County Employees' Retirement Association

In recognition of meeting professional standards for
plan funding and administration as
set forth in the Public Pension Standards.

Presented by the Public Pension Coordinating Council, a confederation of

National Association of State Retirement Administrators (NASRA)
National Conference on Public Employee Retirement Systems (NCPERS)
National Council on Teacher Retirement (NCTR)

Alan H. Winkle

Alan H. Winkle
Program Administrator

Financial Section

BROWN
ARMSTRONG
CERTIFIED
PUBLIC
ACCOUNTANTS

BROWN ARMSTRONG
Certified Public Accountants

INDEPENDENT AUDITOR'S REPORT

To the Board of Retirement and Internal Governance Committee of
Stanislaus County Employees' Retirement Association
Modesto, California

Report on the Basic Financial Statements

We have audited the accompanying Statements of Fiduciary Net Position of the Stanislaus County Employees' Retirement Association (StanCERA) as of June 30, 2020 and 2019, the related Statements of Changes in Fiduciary Net Position for the fiscal years then ended, and the related notes to the financial statements, which collectively comprise StanCERA's basic financial statements as listed in the table of contents.

Management's Responsibility for the Basic Financial Statements

Management is responsible for the preparation and fair presentation of these basic financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of basic financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the basic financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the basic financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the basic financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to StanCERA's preparation and fair presentation of the basic financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of StanCERA's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the basic financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

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REGISTERED with the Public Company Accounting Oversight Board and MEMBER of the American Institute of Certified Public Accountants

Opinion

In our opinion, the basic financial statements referred to above present fairly, in all material respects, the fiduciary net position of StanCERA as of June 30, 2020 and 2019, and the changes in fiduciary net position for the fiscal years then ended in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and required supplementary information (RSI), as listed in the table of contents, be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the management's discussion and analysis and RSI in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

Other Information

Our audit was conducted for the purpose of forming an opinion on the financial statements that collectively comprise StanCERA's basic financial statements. The other supplemental information and the introductory, investment, actuarial, and statistical sections, as listed in the table of contents, are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The other supplemental information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the other supplemental information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

The introductory, investment, actuarial, and statistical sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements and, accordingly, we do not express an opinion or provide any assurance on them.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated November 12, 2020, on our consideration of StanCERA's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, agreements, and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering StanCERA's internal control over financial reporting and compliance.

BROWN ARMSTRONG
ACCOUNTANCY CORPORATION

Brown Armstrong
Accountancy Corporation

Bakersfield, California
November 12, 2020

MANAGEMENT'S DISCUSSION AND ANALYSIS

This discussion and analysis of the Stanislaus County Employees' Retirement Association's (StanCERA or the Plan) financial performance provides an overview of the financial activities and funding conditions for the fiscal years ended June 30, 2020 and 2019. Please review information presented here in conjunction with the Letter of Transmittal and additional information provided.

Financial Highlights

- Fiduciary Net Position decreased by $2.4 million (or 0.1%) during fiscal year 2020 as a result of the fiscal year's activities.
- Contributions (employer and member), in total, increased by $6.0 million (or 5.2%) during fiscal year 2020.
- Net investment income (including Net Appreciation in Fair Value of Investments) decreased by $80.8 million (or 81.4%) during fiscal year 2020.
- Benefit payments increased by $9.1 million (or 7.1%) during fiscal year 2020 from the prior fiscal year.

Plan Highlights

- Benefit plans for Tiers 2 and 3 were closed to new hires and Tiers 4 and 5 were adopted effective March 9, 2002, to provide retirement formulas commonly known as 2% at age 55 for active general members, and 3% at age 50 for active safety members. One district did not implement the new benefit plans. Members in the non-contributory Tier 3 were allowed to transfer into a contributory plan. Effective January 1, 2011, Tier 5 was closed and Tier 2 was re-opened for all new hires for Stanislaus County with the reduced benefit formulas of 2% at age 61 for most general members and 2% at 50 for safety members. Tier 2 was closed and Tier 6 was adopted effective January 1, 2013, for all new hires and provides 2% at 62 for general members and 2.7% at age 57 for safety members.
- In April of 2020 and 2019, a 2.5% and 3.0%, respectively, cost-of-living increase was given to all retired, disabled, and beneficiary members receiving a recurring allowance except those retirees who received pensions for service as a Tier 3 non-contributory member.

Using the Annual Report

The financial statements reflect the activities of the Stanislaus County Employees' Retirement Association and are composed of the Statements of Fiduciary Net Position and the Statements of Changes in Fiduciary Net Position. These statements are presented on an accrual basis of accounting and reflect all trust activities as incurred.

Overview of the Basic Financial Statements

This Management's Discussion and Analysis is intended to serve as an introduction to StanCERA's basic financial statements, which are comprised of the following three components:

1. Statements of Fiduciary Net Position
2. Statements of Changes in Fiduciary Net Position
3. Notes to the Basic Financial Statements

StanCERA's basic financial statements and the note disclosures to the basic financial statements are in compliance with accounting principles generally accepted for governments (GAAP) within the United States as established by the Governmental Accounting Standards Board.

Financial Analysis

Statements of Fiduciary Net Position

The Statements of Fiduciary Net Position show the assets available for future payments to retirees and liabilities as of the fiscal year end. The following condensed comparative summary of Fiduciary Net Position demonstrates that the pension trust is primarily focused on the cash and investments and the restricted net position. This statement is also a good indicator of the financial strength of StanCERA.

Fiduciary Net Position, as of June 30, 2020, 2019, and 2018	2020	2019	2018	$ Change 2020-2019	$ Change 2019-2018
Current Assets	$ 87,551,117	$ 70,667,937	$ 238,347,078	$ 16,883,180	$ (167,679,141)
Investments	2,221,404,069	2,290,474,787	2,012,777,600	(69,070,718)	277,697,187
Capital Assets, Net	7,763,618	6,609,873	5,326,791	1,153,745	1,283,082
Total Assets	2,316,718,804	2,367,752,597	2,256,451,469	(51,033,793)	111,301,128
Total Liabilities	110,852,565	159,511,165	129,490,724	(48,658,600)	30,020,441
Total Fiduciary Net Position Restricted for Pension Benefits	**$ 2,205,866,239**	**$ 2,208,241,432**	**$ 2,126,960,745**	**$ (2,375,193)**	**$ 81,280,687**

Financial Analysis (continued)

Statements of Changes in Fiduciary Net Position

The Statements of Changes in Fiduciary Net Position provide an account of the fiscal years' additions to and deductions from Fiduciary Net Position.

Additions To Fiduciary Net Position For The Fiscal Years Ended June 30, 2020, 2019, and 2018	2020	2019	2018	$ Change 2020-2019	$ Change 2019-2018
Employer Contributions	$ 92,684,609	$ 88,589,381	$ 76,966,471	$ 4,095,228	$ 11,622,910
Plan Member Contributions	29,645,645	27,742,863	26,746,289	1,902,783	996,574
Net Investment Income (Loss)	18,496,773	99,280,525	154,988,199	(80,783,751)	(55,707,674)
Total Additions	**$ 140,827,027**	**$ 215,612,769**	**$ 258,700,959**	**$ (74,785,740)**	**$ (43,088,190)**

Deductions From Fiduciary Net Position For The Fiscal Years Ended June 30, 2020, 2019, and 2018	2020	2019	2018	$ Change 2020-2019	$ Change 2019-2018
Benefit Payments	$ 138,223,922	$ 129,100,668	$ 121,138,269	$ 9,123,254	$ 7,962,399
Member Refunds - Termination	1,351,779	1,826,145	1,905,488	(474,366)	(79,343)
Member Refunds/Payouts - Death	409,894	847,878	128,359	(437,984)	719,519
Administrative Expenses	3,216,625	2,557,391	2,791,409	659,234	(234,018)
Total Deductions	**$ 143,202,220**	**$ 134,332,082**	**$ 125,963,525**	**$ 8,870,137**	**$ 8,368,557**
Change in Fiduciary Net Position Restricted for Pension Benefits	**$ (2,375,193)**	**$ 81,280,687**	**$ 132,737,434**	**$ (83,655,880)**	**$ (51,456,747)**
Fiduciary Net Position Restricted for Pension Benefits					
Beginning of Year	2,208,241,432	2,126,960,745	1,994,223,311	81,280,687	132,737,434
End of Year	**$ 2,205,866,239**	**$ 2,208,241,432**	**$ 2,126,960,745**	**$ (2,375,193)**	**$ 81,280,687**

Additions to Fiduciary Net Position

A review of the Statement of Fiduciary Net Position shows that June 30, 2020, closed with assets exceeding liabilities by $2.206 billion with all of the Fiduciary Net Position restricted for StanCERA's ongoing obligations to plan participants and their beneficiaries. The fiscal year ended June 30, 2019, closed with assets exceeding liabilities by $2.208 billion. The $2.4 million decrease and $81.3 million increase, respectively, in Fiduciary Net Position is a direct result of the changes in the financial market over the past two years. StanCERA remains in good financial condition.

Financial Analysis (continued)

Additions to Fiduciary Net Position (continued)

The primary sources to finance the benefits StanCERA provides are accumulated through return on investments and through the collection of member and employer contributions. The total for these income sources for fiscal year 2019-2020 resulted in a decrease of $74.8 million, where fiscal year 2018-2019 resulted in a decrease of $43.1 million. The decrease is primarily a result of the activity in the broad market, as discussed in the Investment Analysis below. Employer and member contributions increased by $6.0 million (or 5.2%) from the contributions made in 2018-2019. Employer contribution increases in 2020 and 2019 are due mainly to changes to the economic and demographic assumptions adopted for the June 30, 2018 actuarial valuation.

Deductions from Fiduciary Net Position

The primary uses of StanCERA's assets are the payment of benefits to retirees and their beneficiaries, refunds of contributions to terminated employees, and the costs of administering the Plan. These expenses for fiscal year 2019-2020 were $143.2 million, an increase of $8.9 million from prior year. This increase is mainly due to the increase in the number of retirees and the average amount that they are paid as well as acquiring a new pension system. For fiscal year 2018-2019, the expenses were $134.3 million, an increase of $8.4 million from prior year due to the increase in the number of retirees and the average amount they are paid. For fiscal year 2019-2020, administrative expense increased by 25.8% from fiscal year 2018-2019. Total administrative expense represented 0.1038% of the accrued actuarial liability (funding basis) for fiscal year 2019-2020 and 0.0828% for fiscal year 2018-2019.

Overall Financial Condition

Investment Analysis

StanCERA's investment activity is a function of the underlying marketplace for the period measured and the investment policy's asset allocation. For the fiscal year ended June 30, 2020, StanCERA's investments were reported by the three functional portfolios per the Investment Policy restated and approved by the Board of Retirement on May 28, 2019.

The Plan's domestic equity returns for the fiscal year ended June 30, 2020, underperformed their benchmark by 433 basis points and international equity underperformed their benchmark by 87 basis points. Domestic equity returns for the fiscal year ended June 30, 2019, outperformed their benchmark by 30 basis points and international equity underperformed their benchmark by 260 basis points.

The Plan's fixed income returns for fiscal year ended June 30, 2020, underperformed their benchmark by 200 basis points. For the fiscal year ended June 30, 2019, the Plan's fixed income returns underperformed their benchmark by 140 basis points.

For the fiscal year ended June 30, 2020, StanCERA's total portfolio underperformed its policy benchmark by 200 basis points with an overall return of 1.3%. For the fiscal year ended June 30, 2019, StanCERA's total portfolio underperformed its policy benchmark by 80 basis points with an overall return of 5.1%. Management believes the Plan remains in a very strong financial position to meet its obligations to the Plan participants and beneficiaries.

Overall Financial Condition (continued)

Net Pension Liability

The primary concern to most pension plan participants is the amount of resources available to pay benefits. Historically, pension plans have been under-funded when the employer fails to make actuarially determined contributions. All StanCERA employers have traditionally contributed the actuarially determined contribution as determined by the Plan's actuary.

An indicator of funding status is the ratio of the Fiduciary Net Position to the Total Pension Liability (TPL). An increase in the percentage over time usually indicates a plan is becoming financially stronger; however, a decrease will not necessarily indicate a plan is in financial decline. Changes in actuarial assumptions can significantly impact the Net Pension Liability (NPL). Performance in the stock and bond markets can have a material impact on the fair value of assets and Fiduciary Net Position.

The NPL as of June 30, 2019, rolled forward to StanCERA's fiscal year ended June 30, 2020, was $815.3 million using the entry age normal cost method. The Board of Retirement approves the assumptions used by the actuary to perform their calculation. As of the most recent actuarial valuation dated June 30, 2019, rolled forward to June 30, 2020, StanCERA's Fiduciary Net Position was 73.0% of the TPL. The next actuarial valuation is scheduled for June 30, 2020 to be rolled forward to fiscal year ended June 30, 2021.

StanCERA's Fiduciary Responsibilities

StanCERA's Board of Retirement and management staff are fiduciaries of the pension trust fund. Under the California Constitution, the Fiduciary Net Position can only be used for the exclusive benefit of plan participants and their beneficiaries.

Requests for Information

This financial report is designed to provide the Board of Retirement, plan participants, taxpayers, investment professionals and creditors with a general overview of StanCERA's financial condition and to demonstrate StanCERA's accountability for the funds under its stewardship.

Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to:

Rick Santos, CFA, ASA, MAAA
Executive Director
Stanislaus County Employees' Retirement Association
832 12th Street, Suite 600
Modesto, CA 95354

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
STATEMENTS OF FIDUCIARY NET POSITION
As of June 30, 2020 and 2019

	June 30, 2020	June 30, 2019
ASSETS		
Cash and Cash Equivalents (Note 4):	**$ 73,474,225**	**$ 56,243,082**
Receivables:		
Interest and Dividends	6,367,746	6,791,291
Securities Transactions	414,882	877,077
Contributions (Note 3)	7,270,478	6,666,983
Total Receivables	14,053,106	14,335,351
Prepaid Items	23,786	89,504
Capital Assets, Net (Note 2):	**7,763,618**	**6,609,873**
Investments at Fair Value (Note 4):		
U.S. Government and Agency Obligations	114,025,363	128,247,054
Corporate Bonds	199,848,144	231,402,588
Emerging Market / Non-US Bonds	130,606,093	120,066,422
Domestic Stocks	139,456,101	149,746,709
Domestic Equity Index Fund	403,321,743	280,245,220
International Equity	463,894,174	553,218,608
Real Estate Securities	17,918,244	37,095,763
Private Credit	85,029,245	95,094,309
Private Real Estate	218,955,534	197,966,376
Private Equity	2,354,578	-
Infrastructure	36,156,708	43,388,166
Risk Parity	313,455,483	309,627,036
Securities Lending Collateral	96,382,659	144,376,536
Total Investments	**2,221,404,069**	**2,290,474,787**
Total Assets	**2,316,718,804**	**2,367,752,597**
LIABILITIES		
Current Liabilities:		
Accounts Payable	13,167,410	12,596,100
Securities Transactions	907,496	2,143,529
Securities Lending Obligation (Note 4)	96,382,659	144,376,536
Total Current Liabilities	**110,457,565**	**159,116,165**
Long Term Liabilities:		
Grant Deed Extension Fee	**395,000**	**395,000**
Total Liabilities	**110,852,565**	**159,511,165**
Fiduciary Net Position Restricted For Pension Benefits (Note 6)	**$ 2,205,866,239**	**$ 2,208,241,432**

The accompanying notes are an integral part of these financial statements.

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
STATEMENTS OF CHANGES IN FIDUCIARY NET POSITION
For the Fiscal Years Ended June 30, 2020 and 2019

	June 30, 2020	June 30, 2019
ADDITIONS		
Contributions (Note 5):		
Employer	$ 92,684,609	$ 88,589,381
Plan Members	29,645,645	27,742,863
Total Contributions	**122,330,254**	**116,332,244**
Investment Income:		
Net Appreciation/(Depreciation) in Fair Value of Investments	(15,166,254)	54,084,769
Interest and Dividends	44,752,966	53,382,923
Total Investment Gain	29,586,712	107,467,692
Net Income from Commission Recapture	25,624	22,395
Less: Investment Expense (Note 4)	(11,703,204)	(9,008,420)
Net Investment Income	**17,909,132**	**98,481,667**
Other Investment Income:		
Net Litigation Recovery Income	982	19,915
Rental Income	102,921	101,941
Other Investment Income	127,520	202,284
Net Other Investment Income	**231,423**	**324,140**
Securities Lending Activities (Note 4):		
Securities Lending Income	508,646	677,888
Less: Securities Lending Expense	(152,428)	(203,170)
Net Securities Lending Income	356,218	474,718
Total Investment Income	18,496,773	99,280,525
Total Additions	**140,827,027**	**215,612,769**
DEDUCTIONS		
Benefit Payments and Subsidies	138,223,922	129,100,668
Member Refunds - Termination	1,351,779	1,826,145
Member Refunds - Death	409,894	847,878
Administrative Expenses (Note 2)	3,216,625	2,557,391
Total Deductions	**143,202,220**	**134,332,082**
Net Change in Fiduciary Net Position	(2,375,193)	81,280,687
Fiduciary Net Position Restricted for Pension Benefits (Note 6)		
Beginning of Year	2,208,241,432	2,126,960,745
End of Year	**$ 2,205,866,239**	**$ 2,208,241,432**

The accompanying notes are an integral part of these financial statements.

NOTES TO BASIC FINANCIAL STATEMENTS

June 30, 2020 and 2019

NOTE 1 - DESCRIPTION OF PLAN

Description of System and Applicable Provisions of the Law

The Stanislaus County Employees' Retirement Association (StanCERA or the Plan) is an integrated public employee retirement system established under and subject to the legislative authority of the State of California as enacted and amended in the County Employees Retirement Law of 1937 (Chapter 677 Statutes of 1937) (CERL) and the Public Employees' Pension Reform Act. It is a cost-sharing multiple-employer pension plan. StanCERA was established by the County of Stanislaus Board of Supervisors on July 1,1948, and was integrated with Social Security on January 1,1956.

Membership

StanCERA consists of employees from the County of Stanislaus, East Side Mosquito Abatement District, Hills Ferry Cemetery District, Keyes Community Service District, City of Ceres, Salida Sanitary District, Stanislaus County Superior Court, and Stanislaus Council of Governments. Each person entering employment full-time or permanent part-time (50% or more of the regular hours) becomes a member on the first day of employment. The structure of the Membership with StanCERA is as follows:

	June 30, 2020			June 30, 2019		
	General	Safety	Total	General	Safety	Total
Active Members:						
Vested & Non-vested	3,653	806	4,459	3,691	813	4,504
Total Active	**3,653**	**806**	**4,459**	**3,691**	**813**	**4,504**
Inactive Members:						
Deferred Members	856	210	1,066	803	211	1,014
Unclaimed Contributions	483	66	549	403	59	462
Total Inactive	**1,339**	**276**	**1,615**	**1,206**	**270**	**1,476**
Retired Members:						
Service Retirements	3,143	518	3,661	3,024	473	3,497
Disability Retirements	206	173	379	215	167	382
Survivor Payments	43	10	53	45	10	55
Total Retired	**3,392**	**701**	**4,093**	**3,284**	**650**	**3,934**
Total	**8,384**	**1,783**	**10,167**	**8,181**	**1,733**	**9,914**

Active

StanCERA has Tiers 1, 2, 3, 4, 5 and 6 for General Members and Tiers 2, 4, 5 and 6 for Safety Members. All tiers are closed with the exception of Tier 6 for both General and Safety Members. Members of the Plan receive a 100% vested interest in the Plan after 5 years of service, except Tier 3 which requires 10 years of service.

NOTE 1 – DESCRIPTION OF PLAN (continued)

Benefits

StanCERA provides for retirement, disability, death, beneficiary, cost-of-living, and ad-hoc retirement benefits.

Service Retirement Benefit

Members of Tiers 1, 2, 4, and 5 with 10 years of service, who have attained the age of 50, are eligible to retire. Tier 3 members are eligible to retire with 10 years of service at age 55. Tier 6 members are eligible to retire with 5 years of service at age 50 for Safety members, and age 52 for General members. Members of Tiers 1, 2, 4, and 5 with 30 years of service (20 years for safety), regardless of age, are eligible to retire. The benefit is a percentage of monthly final average salary (FAS) per year of service, depending on age at retirement, and is illustrated below for representative ages. Government Code Section 31462 of the CERL defines the FAS as a member's average monthly compensation earned during any consecutive 12 months (applicable to members of Tiers 1, 4, and 5). Government Code Sections 31462.1 and 7522.32 use the member's average monthly compensation earned during any 36 consecutive months (applicable to members of Tiers 2, 3, and 6). For members integrated with Social Security, the benefit is reduced by 1/3 of the percentage shown below times the first $350 of the monthly FAS per year of service credited after January 1, 1956. Tier 6 is not integrated with Social Security.

Percentage of FAS:

	General						Safety		
Age	Tier 1	Tier 2	Tier 3	Tier 4	Tier 5	Tier 6	Tiers 1&2	Tiers 4&5	Tier 6
50	1.34	1.18	N/A	1.48	1.48	N/A	2.00	3.00	2.00
55	1.77	1.49	0.68*	1.95	1.95	1.30	2.62	3.00	2.50
60	2.34	1.92	1.14*	2.44	2.44	1.80	2.62	3.00	2.70
65	2.62	2.43	2.00*	2.62	2.62	2.30	N/A	N/A	2.70

* 1% of FAS for each year of service over 35 reduced by 1/35 of Social Security Benefits at age 65 not to exceed 35 years

Retiring members may choose from 4 different beneficiary retirement allowances. Most retirees elect to receive an unmodified allowance, which includes a continuation of 60% of the allowance to the retirees' surviving spouse or registered domestic partner.

Death Benefit-Before Retirement

Employed Less Than 5 Years

In addition to the return of contributions, a death benefit is payable to the member's beneficiary or estate equal to 1 month of salary for each completed year of service under the retirement system, based on the final year's average salary, not to exceed 6 months of salary (except Tier 3 members).

NOTE 1 – DESCRIPTION OF PLAN (continued)

Death Benefit-Before Retirement (continued)

Employed More than 5 Years

If a member dies while eligible for service retirement or non-service connected disability, the spouse or registered domestic partner receives 60% of the allowance that the member would have received for retirement benefits on the day of his or her death (except Tier 3 members).

If a member dies in the performance of duty, the spouse or registered domestic partner receives a monthly benefit of 50% of the member's FAS (except Tier 3 members).

Death Benefit-After Retirement

If a member dies after retirement, a burial allowance of $5,000 is paid to the beneficiary or estate (except Tier 3 members).

If the retirement benefit is for service-connected disability, 100% of the member's allowance as it was at death is continued to the surviving spouse or registered domestic partner for Tiers 1, 2, 4, 5, and 6. Tier 3 Members have no allowance continued to the surviving spouse or registered domestic partner.

If the retirement benefit is for other than service-connected disability, 60% of the member's allowance is continued to the surviving spouse or registered domestic partner for Tiers 1, 2, 4, 5, and 6, and 60% of the member's allowance is continued to the surviving spouse or registered domestic partner if the unmodified option is chosen at time of retirement.

Disability Benefit

Members with 5 years of service, regardless of age, are eligible for non-service connected disability (except Tier 3 members). The benefit may be up to 1/3 of FAS. If the disability is service connected, the member may retire regardless of length of service, and the benefit is 50% of FAS (except Tier 3 members).

Cost-of-Living Benefit

The current maximum increase in retirement allowance is 3% per year (except Tier 3). The increases are based on the change in the Bureau of Labor Statistics Consumer Price Index (CPI) in the San Francisco Bay area from January 1 to December 31, effective the following April 1.

Ad-Hoc Benefits

Ad-hoc benefits are non-vested benefits which are determined by the Board of Retirement subject to funding availability.

NOTE 1 – DESCRIPTION OF PLAN (continued)

Ad-Hoc Benefits (continued)

No ad-hoc benefits are currently being paid (effective since January 1, 2010). Changes in the excess earnings policy, approved by the Board of Retirement (Board) on May 25, 2012, placed additional restrictions on the Board's ability to grant these benefits. The greatest restriction currently is the Plan must be 100% funded on a market basis prior to funding any ad-hoc benefit.

Contribution Rates

The CERL establishes the basic obligations for employer and member contributions to the retirement system. The actual employer and member contribution rates in effect each year are based on recommendations made by an independent actuary and adopted by the Board.

StanCERA's policy for contributions states that actuarially determined rates expressed as a percentage of annual covered payroll are required to finance the costs of benefits earned by plan members during the year, with an additional amount to finance any unfunded liability. Level percentage of payroll employer contribution rates are determined using the entry age actuarial cost method. For funding purposes, StanCERA also uses the level entry age normal cost method with the Unfunded Actuarial Accrued Liability (UAAL) to amortize the unfunded liability. StanCERA's actuarially determined composite employer contribution rates for the fiscal years ended June 30, 2020 and June 30, 2019 were 31.65% and 29.01%, respectively, of annual payroll. Employee contribution rates are based on age of entry for Tiers 1, 2, 4 and 5 and range between 3.45% and 17.21% for the fiscal years ended June 30, 2020 and June 30, 2019. Tier 6 employer rates are based on 50% of the total normal cost. Tier 6 employee contribution rates are not based on age of entry and are a flat rate ranging between 8.63% and 14.11% for fiscal years ended June 30, 2020 and June 30, 2019.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Reporting Entity

StanCERA is governed by the Board and is considered an independent legal entity. StanCERA is a component unit of Stanislaus County (the County) and is being reported as a Pension Trust Fund in the County's Financial Report in accordance with Governmental Accounting Standards Board (GASB) Statement No. 39, *Determining Whether Certain Organizations Are Component Units – an Amendment of GASB Statement No. 14*.

Basis of Accounting

StanCERA follows GASB accounting principles and reporting guidelines. The financial statements are prepared on a full accrual basis of accounting, which recognizes income when earned and expenses when incurred. Contributions from employers and members are recognized when received or when due pursuant to legal requirements. Benefits and refunds are recognized when due and payable in accordance with the terms of each plan.

NOTE 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Cash and Cash Equivalents

Cash includes deposits with a financial institution and pooled cash with the Stanislaus County Treasurer. Pooled cash is reported at amortized cost, which approximates fair value. Income on pooled cash is allocated on StanCERA's average daily balance in relation to total pooled assets.

Investments

The Board has exclusive control of the investments of StanCERA. Statutes authorize the Board to invest, or to delegate the authority to invest, in any investment allowed by statute and considered prudent in the informed opinion of the Board.

Investments are stated at fair value in accordance with GASB Statement No. 67, *Financial Reporting for Pension Plans – an Amendment of GASB Statement No. 25*. Values for stocks, publicly traded bonds, issues of the U.S. Government and its agencies, and real estate securities are valued according to sale prices of recognized exchanges as of the fiscal year end, with international securities reflecting currency exchange rates in effect at June 30, 2020 and 2019. Both domestic and international investments are denominated in U.S. currency. Private Credit Partnerships, Private Real Estate and Infrastructure investments are valued using their respective Net Asset Value (NAV) and are audited annually. The most significant input into the NAV of such an entity is the fair value of its investment holdings. These holdings are valued by the partnerships on a quarterly basis and the assumptions are based upon the nature of the investment and the underlying business. The valuation techniques vary based upon investment type and involve a certain degree of expert judgment.

Securities Transactions and Related Investment Income

Securities transactions are accounted for on a trade date basis. Interest income is recognized when earned and dividend income is recognized on the ex-dividend date. Stock dividends or stock splits are recorded as memo items and do not affect the total value of the securities.

Capital Assets

Capital assets, consisting of software development, the purchase of a condominium interest in one floor of an office building, and office equipment are presented at historical cost. StanCERA occupies 60% of the 6th floor of the office building, and 40% has been developed as office space which is currently leased out. Total cost of the capital assets as of June 30, 2020 and June 30, 2019 were $9,797,084 and $8,507,983, respectively, with accumulated depreciation of $2,033,466 and $1,898,110, respectively. Out of the total amount, $4,207,583 and $3,331,295, respectively, were not being depreciated due to the assets not being placed in service as of June 30, 2020 and June 30, 2019. Depreciation expense for the fiscal years ending June 30, 2020 and June 30, 2019 totaled $135,356 and $130,517, respectively. Depreciation is calculated using the straight-line method with an estimated life of 10 years for the software development, an estimated life of 99 years for the office space, an estimated life of 10 years for the leasehold improvements, and an estimated life of 5 years for office equipment.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Capital Assets (continued)

	Net Balance at June 30, 2019	Reclassifications & Additions	Reclassifications & Deletions	Less Depreciation	Net Balance at June 30, 2020
Capital Assets, not being depreciated					
Tenant Improvements	$ 390,438	$ -	$ -	$ -	$ 390,438
Pension Administration System	2,553,885	1,218,843	-	-	3,772,728
Rebranding Cost	-	44,417	-	-	44,417
Board Room Expansion	78,335	-	78,335	-	-
Board Room Expansion TI	245,749	-	245,749	-	-
Audio Video System	62,888	-	62,888	-	-
Total Capital Assets, not being depreciated	**3,331,295**	**1,263,260**	**386,972**	**-**	**4,207,583**
Capital Assets, being depreciated					
Tyler Software	-	-	-	-	-
Real Estate Occupied	1,630,546	-	-	18,977	1,611,569
Real Estate Leased	1,087,753	-	-	12,653	1,075,100
Leasehold Improvements	32,452	8,833	-	6,440	34,845
Office Equipment	1,789	-	-	1,022	767
Video Conferencing Equipment	2,015	-	-	864	1,151
Imaging System	520,598	-	-	57,844	462,754
Microfiche Scanner	3,425	-	-	1,111	2,314
Board Room Expansion	-	78,335	-	3,590	74,745
Board Room Expansion TI	-	249,171	-	22,841	226,330
Audio Video System	-	76,474	-	10,014	66,460
Total Capital Assets, being depreciated	3,278,578	412,813	-	135,356	3,556,035
TOTAL	**$ 6,609,873**	**$ 1,676,073**	**$ 386,972**	**$ 135,356**	**$ 7,763,618**

	Net Balance at June 30, 2018	Reclassifications & Additions	Reclassifications & Deletions	Less Depreciation	Net Balance at June 30, 2019
Capital Assets, not being depreciated					
Tenant Improvements	$ 390,438	$ -	$ -	$ -	$ 390,438
Pension Administration System	2,010,712	1,121,615	578,442	-	2,553,885
Board Room Expansion	-	78,335	-	-	78,335
Board Room Expansion TI	-	245,749	-	-	245,749
Audio Video System	-	62,888	-	-	62,888
Total Capital Assets, not being depreciated	**2,401,150**	**1,508,587**	**578,442**	**-**	**3,331,295**
Capital Assets, being depreciated					
Tyler Software	32,342	-	-	32,342	-
Real Estate Occupied	1,650,969	-	1,446	18,977	1,630,546
Real Estate Leased	1,100,864	-	457	12,654	1,087,753
Leasehold Improvements	131,240	-	93,085	5,703	32,452
Office Equipment	2,811	-	-	1,022	1,789
Security & Monitoring Equipment	-	-	-	-	-
Video Conferencing Equipment	2,879	-	-	864	2,015
Imaging System	-	578,442	-	57,844	520,598
Microfiche Scanner	4,536	-	-	1,111	3,425
Total Capital Assets, being depreciated	2,925,641	578,442	94,988	130,517	3,278,578
TOTAL	**$ 5,326,791**	**$ 2,087,029**	**$ 673,430**	**$ 130,517**	**$ 6,609,873**

Administrative Expenses

StanCERA’s administrative expense is funded by the investment income and is limited to 0.21% of StanCERA’s Actuarial Accrued Liability (AAL) pursuant to Government Code Section 31580.2. The law provides exemption from the limitation for the cost of computer consultation, hardware, and software. Total administrative expenses for the fiscal years ending June 30, 2020 and June 30, 2019 were $3,216,625 and $2,557,391, respectively, of which $362,870 and $363,841, respectively, were not subject to the administrative expense limitation.

NOTE 2 - SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES (continued)

Administrative Expenses (continued)

Administrative expenses subject to the limitation amounted to 0.1038% of AAL for the fiscal year ended June 30, 2020 and 0.0828% for the fiscal year ended June 30, 2019.

Income Taxes

StanCERA qualifies as a pension trust under Section 401(a) of the Internal Revenue Code. No provision for income taxes has been made in the accompanying financial statements as the Plan is exempt from Federal and State income taxes under the provisions of the Internal Revenue Code Section 501 and the California Revenue and Taxation Code Section 23701, respectively.

Management's Estimates

The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, contingent assets and liabilities, revenue, and expenses as of the date of the financial statements. Actual results could differ from those estimates.

New Accounting Pronouncements

Governmental Accounting Standards Board (GASB) Statement No. 95, *Postponement of Effective Dates of Certain Authoritative Guidance,* was implemented during the fiscal year ended June 30, 2020. The primary objective of this Statement is to provide temporary relief to governments and other stakeholders in light of the COVID-19 pandemic by postponing the effective dates of certain provisions in Statements and Implementation Guides. These provisions are either first became effective or are scheduled to become effective for periods beginning after June 15, 2018, and later. Providing governments with sufficient time to apply authoritative guidance addressed in this Statement will help safeguard the reliability of their financial statements, which in turn will benefit the users of those financial statements.

In June 2017, GASB issued Statement No. 87, *Leases*, which establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. This statement improves accounting and financial reporting for leases by governments by requiring recognition of certain lease assets and liabilities for leases that previously were classified as operating leases and recognized as inflows of resources or outflows of resources based on the payment provisions of the contract. The requirements of this statement were originally effective for the System's financial statements for the fiscal year ending June 30, 2021. However, in light of the COVID-19 pandemic, GASB postponed implementation of this statement by one year of its effective date. Management is evaluating the requirements of this GASB Statement and its impact to StanCERA financial statements, which will be effective in fiscal year ending June 30, 2022.

Reclassifications

Certain fiscal year 2019 amounts have been reclassified to conform with the fiscal year 2020 presentation.

NOTE 3 – CONTRIBUTIONS RECEIVABLE

Contributions receivable represents withdrawals from employees' salaries and liabilities due by employers for retirement contributions for the month of June that were received in July. Contributions receivable as of June 30, 2020 and June 30, 2019 were $7,270,478 and $6,666,983, respectively.

NOTE 4 – CASH AND INVESTMENTS

The California State Constitution and the CERL give the Board the exclusive authority to invest the assets of StanCERA and the Board may, at its discretion, invest or delegate the authority to invest, such assets through

NOTE 4 – CASH AND INVESTMENTS (continued)

the purchase, holding, or sale of any form or type of investment, financial instrument, or financial transaction when deemed prudent in the informed decision of the Board. StanCERA invests the assets according to a written Investment Policy established by the Board and currently employs external investment managers to manage the assets subject to the guidelines in the Investment Policy.

Deposits in Stanislaus County Treasury

Cash needed for StanCERA's daily operational purposes is pooled with other County funds by the County Treasurer for short-term investment purposes. The County is responsible for the control and safekeeping of all instruments of title and for all investments of the pooled funds. Investments in the County Investment Pool are managed according to the Investment Policy established by the County and are subject to regulatory oversight by the County's Treasury Oversight Committee. Participation in the County Investment Pool is not mandatory. The fair value of StanCERA's shares in the pooled funds is the same as the value of the County Investment Pool. StanCERA's cash invested with the County Treasurer is reported at amortized cost, which approximates fair value totaling $23,197,533 and $13,742,769 at June 30, 2020 and 2019, respectively. Cash and investments included within the County Treasurer's Pool are described in the County's Financial Report.

Investments

Investment Policy – StanCERA's policy in regards to the allocation of invested assets is established and may be amended by the Board. The investments of the Plan are trust funds and are held for the exclusive purpose of providing benefits to the participants in the Plan and their beneficiaries and defraying reasonable expenses of administering the Plan. The investments shall be diversified so as to minimize the risk of loss and to maximize the rate of return.

StanCERA's Investment Program employs three functional sub-portfolios to construct the comprehensive asset allocation: the Liquidity Sub-portfolio, the Growth Sub-portfolio and the Diversifying Sub-portfolio. The Liquidity Sub-portfolio will ensure adequate assets are available to pay benefits over an extended timeframe. The Growth Sub-portfolio will grow the invested assets over the long-term in order to pay future benefits. The Diversifying Sub-portfolio is to offset the investment risk of the Growth Sub-portfolio. The allocations to the Liquidity, Growth and Diversifying Sub-portfolios will vary over time and will be reviewed on an annual basis. The adopted asset allocation for the three Sub-portfolios is:

NOTE 4 – CASH AND INVESTMENTS (continued)

Investments (continued)

Asset Class	June 30, 2020 Target Allocation	June 30, 2019 Target Allocation
Domestic Equities	17.00%	17.00%
International Equities	23.00%	23.00%
Fixed Income	22.00%	22.00%
Real Estate Securities	5.00%	5.00%
Alternatives:		
Private Credit	6.00%	6.00%
Private Equity	6.00%	6.00%
Private Real Estate	5.00%	5.00%
Infrastructure	2.00%	2.00%
Risk Parity	13.00%	13.00%
Cash	1.00%	1.00%
	100.00%	100.00%

Rate of Return – For the fiscal years ended June 30, 2020 and June 30, 2019, the annual money-weighted rate of return on StanCERA's investments was 1.3% and 5.1%, respectively. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Fair Value Measurement

Fair value is the price that would be received to sell an investment in an orderly transaction between market participants at the measurement date. StanCERA follows GASB Statement No. 72 (GASB 72), *Fair Value Measurement and Application*, which addresses accounting and financial reporting issues related to fair value measurement.

StanCERA classifies the fair value measurements within the fair value hierarchy established by generally accepted accounting principles. The fair value measurements are classified according to the following hierarchy:

- Level 1 – Unadjusted quoted prices for identical investments in active markets.
- Level 2 – Quoted prices for similar investments in active markets; quoted prices for identical or similar investments in markets that are not active; and model-derived valuations in which all significant inputs and significant value drivers are observable.
- Level 3 – Investments with valuations derived from valuation techniques in which significant inputs or significant value drivers are unobservable.

Inputs used to measure fair value might fall in different levels of the fair value hierarchy; in which case, StanCERA defaults to the lowest level input that is significant to the fair value measurement in its entirety. In determining the appropriate levels, a detailed analysis was performed of the assets and liabilities that are subject to GASB 72.

NOTE 4 – CASH AND INVESTMENTS (continued)

Fair Value Measurement (continued)

The following tables present fair value measurements as of June 30, 2020 and June 30, 2019:

Investments Measured at Fair Value

Investments by Fair Value Level	06/30/20	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Fixed Income Securities				
Corporate and Other Credit	$ 199,848,144	$ -	$ 199,848,144	$ -
Emerging Market Non-U.S. Bonds	130,606,093	-	130,606,093	-
U.S. Government Agency	75,749,356	-	75,749,356	-
U.S. Treasury	38,276,007	-	38,276,007	-
Total Fixed Income Securities	**444,479,600**	**-**	**444,479,600**	**-**
Equity Securities				
Non-U.S. Equity	394,502,195	394,502,195	-	-
U.S. Equity	139,456,101	139,456,101	-	-
Commingled Equity Funds	403,321,743	-	403,321,743	-
Emerging Market Equity	69,391,979	-	69,391,979	-
Commingled Real Estate Funds	17,918,244	-	17,918,244	-
Total Equity Securities	**1,024,590,262**	**533,958,296**	**490,631,966**	**-**
Collateral from Securities Lending	96,382,659	-	96,382,659	-
Total Investments by Fair Value Level	**$ 1,565,452,521**	**$ 533,958,296**	**$ 1,031,494,225**	**$ -**
Investments Measured at the Net Asset Value (NAV)				
Private Credit	$ 85,029,245			
Private Equity	2,354,578			
Private Real Estate	218,955,534			
Infrastructure	36,156,708			
Risk Parity	313,455,483			
Total Investments Measured at the NAV	**655,951,548**			
Total Investments	**$ 2,221,404,069**			

NOTE 4 – CASH AND INVESTMENTS (continued)

Fair Value Measurement (continued)

Investments Measured at Fair Value

Investments by Fair Value Level	06/30/19	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Fixed Income Securities				
Corporate and Other Credit	$ 231,402,588	$ -	$ 231,402,588	$ -
Emerging Market Non-U.S. Bonds	120,066,422	-	120,066,422	-
U.S. Government Agency	62,959,767	-	62,959,767	-
U.S. Treasury	65,287,287	-	65,287,287	-
Total Fixed Income Securities	**479,716,064**	**-**	**479,716,064**	**-**
Equity Securities				
Non-U.S. Equity	486,264,078	486,264,078	-	-
U.S. Equity	149,746,709	149,746,709	-	-
Commingled Equity Funds	280,245,220	-	280,245,220	-
Emerging Market Equity	66,954,530	-	66,954,530	-
Commingled Real Estate Funds	37,095,763	-	37,095,763	-
Total Equity Securities	**1,020,306,300**	**636,010,787**	**384,295,513**	**-**
Collateral from Securities Lending	144,376,536	-	144,376,536	-
Total Investments by Fair Value Level	**$ 1,644,398,900**	**$ 636,010,787**	**$ 1,008,388,113**	**$ -**
Investments Measured at the Net Asset Value (NAV)				
Private Credit	$ 95,094,309			
Private Real Estate	197,966,376			
Infrastructure	43,388,166			
Risk Parity	309,627,036			
Total Investments Measured at the NAV	**646,075,887**			
Total Investments	**$ 2,290,474,787**			

Fixed Income Securities

Asset-Backed Securities, Mortgage-Backed Securities, and Non-U.S. Bonds are valued using a combination of the discounted cash flow income model and the matrix market model. Two proprietary discounted cash flow models are used: non-volatile tranche and volatile tranche. Prepayment speeds are derived from market participant quotes along with terms and conditions of the tranche and both are entered into the model to determine the evaluated price. Matrices are developed based on trade and quote activity of bonds with similar features including issuer, vintage and purpose of the underlying loan, prepayment speeds and credit ratings in order to identify trades and quotes for similar securities. Corporate Bonds and Municipal Bonds are valued using the matrix market model. Model inputs are derived from the market, brokers, dealer, mutual funds, and vendor client base. Model inputs include, but are not limited to:

NOTE 4 – CASH AND INVESTMENTS (continued)

Fair Value Measurement (continued)

spread benchmark curves, prepayment speeds, inputs to build curves/spreads, comparable trades, bid price or spread, discount rates, quotes, trade reports, and financial reports. US Government Agency and US Treasury Bills are valued using the consensus evaluation model and the matrix evaluation model. These model inputs come from market sources and integrate relative credit information, observed market movements, and sector news.

Prices are updated regularly by obtaining dealer quotes and other market information including live trading levels, when available.

Equity Securities

Equity securities are valued using the NASDAQ Official Closing Price which determines the market specific closing price for NASDAQ listed issues. For equity securities listed on exchanges, the last trade price is used. The last trade price is the price at which a specific security was last traded on the primary exchange. If the NASDAQ Official Closing Price or the last trade price is not available, a bid, ask/offer quote, is obtained from a third-party vendor.

Commingled funds are valued using the NAV which is the fair value of all securities owned by the fund, minus its total liabilities, divided by the number of shares issued. Funds that are valued using the NAV are usually not reported within the fair value hierarchy. However, StanCERA's commingled funds are supported by audited financial statements which provide observable market data. Commingled funds are legally or contractually required to redeem at the NAV and therefore are classified as Level 2.

Investments Measured at the NAV

Investments that are measured at fair value using the net asset value per share (or its equivalent) as a practical expedient are not classified in the fair value hierarchy.

The following tables present fair value measurements as of June 30, 2020 and June 30, 2019:

Investments measured at NAV	6/30/2020 Fair Value	Unfunded Commitment	Redemption Frequency If Curruently Eligible	Remption Notice Period
Private Credit	$ 85,029,245	$ 18,772,135	Not Eligible	Not Applicable
Private Equity	$ 2,354,578	$ 32,750,000	Not Eligible	Not Applicable
Private Real Estate	218,955,534	24,972,809	Quarterly, Not Eligible	5-90 Days, Not Applicable
Infrastructure	36,156,708	7,116,066	Not Eligible	Not Applicable
Risk Parity	313,455,483	-	Monthly	5-15 Days
Total Investment Measured at NAV	**$ 655,951,548**	**$ 83,611,010**		

NOTE 4 – CASH AND INVESTMENTS (continued)

Investments Measured at the NAV (continued)

Investments measured at NAV	6/30/2019 Fair Value	Unfunded Commitment	Redemption Frequency If Curruently Eligible	Remption Notice Period
Private Credit	$ 95,094,309	$ 19,305,108	Not Eligible	Not Applicable
Private Real Estate	197,966,376	38,133,292	Quarterly, Not Eligible	5-90 Days, Not Applicable
Infrastructure	43,388,166	8,251,433	Not Eligible	Not Applicable
Risk Parity	309,627,036	-	Monthly	5-15 Days
Total Investment Measured at NAV	**$ 646,075,887**	**$ 65,689,833**		

Private Credit consist of investments in four limited partnerships. The types of partnership strategies included in these funds are venture capital, growth equity, buyouts, special situations, mezzanine, and distressed debt. These funds are not eligible for redemption. Distributions are received as the underlying funds are liquidated, which can occur over the span of three to seven years. Total commitments for these funds are $170.0 million, of which $18.8 million is unfunded.

Private Equity consist of investments in two limited partnerships. The types of partnership strategies included in these funds are growth equity and buyouts. These funds are not eligible for redemption. Distributions are received as the underlying funds are liquidated, which can occur over the span of ten years. Total commitments for these funds are $35.0 million of which $32.8 million is un-funded.

Private Real Estate consist of investments in five limited partnerships. These funds are mainly invested in US commercial real estate. Shares of three of these funds can be redeemed at the request of the shareholders after a lockout period of up to two years. Distributions from each of these funds will be received as the underlying investments are liquidated. Three of these funds are open-ended and the distributions are reinvested. Liquidation of the underlying investments for one fund can occur over time up to eight years. Total commitments for these funds are $217.0 million, of which $25.0 million is unfunded.

Infrastructure consist of one investment in a limited partnership. This fund is focused on opportunities in the energy, utilities and transportation sectors, and target investments in infrastructure assets globally within the Organization for Economic Cooperation and Development countries. The funds are not eligible for redemption. Distributions from this fund will be received as the underlying investments are liquidated, which can occur over the span of twelve years. Total commitments for this fund are $50.0 million, of which $7.1 million is unfunded.

Risk Parity are mutual funds that invest in multiple asset classes represented by equity, fixed income, and commodities strategies in order to generate attractive risk-adjusted returns over time. These are open-ended funds and shares can be redeemed at the end of any given month at the request of the shareholder. Distributions for this fund are reinvested into the fund. Total commitments for this fund are $280.0 million, and they are fully funded.

Securities Lending Program

The Board permits StanCERA to participate in a securities lending program. StanCERA lends bonds and equities to various brokers for collateral that will be returned for the same securities plus a fee in the future. Transactions are collateralized at 102% of fair value for domestic securities and 105% of fair value for international securities.

NOTE 4 – CASH AND INVESTMENTS (continued)

Securities Lending Program (continued)

Collateral received may include cash, letters of credit, or securities. Because the loans were terminable-at-will, their duration did not match the duration of the investments made with cash collateral. Either StanCERA or the borrower can terminate all securities loaned on demand. There are no restrictions on the amount of securities that may be lent.

StanCERA's custodial bank administers its securities lending program. The cash collateral is reported on the financial statements as an asset and as a liability of StanCERA while the non-cash collateral is reported neither as an asset nor a liability in accordance with GASB Statement No. 28. StanCERA does not have the ability to pledge or sell collateral securities delivered absent a borrower default. The contract with the securities lending agent requires them to indemnify StanCERA if the borrower fails to return the securities (or if the collateral is not sufficient to replace the securities lent) or if the borrower fails to pay StanCERA for income distributions while the securities are on loan.

Investments made with cash collateral are classified by risk category. The average maturity of the loans is one week and are rated at least "A1" or "P1" by two nationally recognized statistical rating organizations or, if unrated, be determined by the bank to be of comparable quality. As of June 30, 2020, the fair value of securities on loan was $94.3 million, with collateral received of $96.4 million and non-cash collateral of $21.2 million. As of June 30, 2019, the fair value of the securities on loan was $141.3 million, with collateral received of $144.4 million and non-cash collateral of $29.4 million.

As of June 30, 2020 and 2019, StanCERA had no credit risk exposure to borrowers because the amount StanCERA owes the borrower exceeds the amount the borrower owes StanCERA. StanCERA's pro-rata share of net income derived from the securities lending transactions during fiscal years 2020 and 2019 was $356,218 and $474,718, respectively. These are separate investments made on StanCERA's behalf and not StanCERA's share of pooled investments. At June 30, 2020 and 2019, StanCERA had the following securities out on loan:

	June 30, 2020		June 30, 2019	
	Fair Value of Securities on Loan	Collateral Received	Fair Value of Securities on Loan	Collateral Received
U.S. Equities	$ 30,344,235	$ 30,909,774	$ 43,850,944	$ 44,651,808
U.S. Corporate Fixed	42,892,732	43,822,033	39,238,000	40,126,194
U.S. Agencies	-	-	-	-
U.S. Government Fixed	13,318,027	13,607,754	50,695,450	51,669,485
Non-U.S. Equities	7,702,115	8,043,098	7,547,775	7,929,049
Non-U.S. Government Fixed	-	-	-	-
Non-U.S. Agencies	-	-	-	-
Total Securities	94,257,109	96,382,659	141,332,169	144,376,536
Total Non-Cash Collateral	20,423,240	21,172,485	28,364,054	29,410,706
Total	**$ 114,680,349**	**$ 117,555,144**	**$ 169,696,223**	**$ 173,787,242**

NOTE 4 – CASH AND INVESTMENTS (continued)

Interest Rate Risk

Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. Duration is a measure of the price sensitivity of a fixed income portfolio to changes in market interest rates. Generally, the longer the maturity of an investment the greater the sensitivity of its fair value to changes in market interest rates.

Highly sensitive investments are certain debt investments whose terms may cause their fair value to be highly sensitive to market interest rate changes. Terms include such variables as embedded options, coupon multipliers, benchmark indices and reset dates. StanCERA's fixed income investments have embedded prepayment options that will typically cause prepayments by the obliges of the underlying investments when interest rates fall. Prepayments eliminate the stream of future interest payments and, therefore, diminish the fair value of the fixed income investment.

The following table shows the effective duration of StanCERA's fixed income investments by investment type.

	June 30, 2020		June 30, 2019	
Fixed Income Securities	Fair Value	Effective Duration (in years)	Fair Value	Effective Duration (in years)
Corporate Bonds	$ 199,848,144	3.2	$ 231,402,588	2.8
Emerging Market / Non-U.S. Bonds	130,606,093	2.4	120,066,422	2.4
Government Bonds	38,276,007	1.7	65,287,287	6.3
Government Agencies	75,749,356	0.5	62,959,767	0.8
Total Fixed Income Securities	**$ 444,479,600**		**$ 479,716,064**	

Credit Risk

Credit risk is the risk that an issuer of an investment will not fulfill its obligation to the holder of the investment. This is measured by the assignment of a rating by a nationally recognized statistical rating organization. In cases where credit ratings differ among rating agencies, the manager shall use the lowest of the ratings provided. StanCERA's custodial bank provided ratings for Moody's Investor Service (Moody's) and Standard & Poor's (S&P). Should the rating of a fixed income security fall below investment grade, the manager may continue to hold the security if they believe the security will be upgraded in the future, there is a low risk of default, and buyers will continue to be available throughout the anticipated holding period. The manager has the responsibility of notifying the Board whenever an issue falls below investment grade. Investment grade quality is defined as a Standard & Poor's rating of BBB or higher. The notification should include the manager's assessment of the issue's credit rating and its ongoing role in the portfolio. The Stanislaus County Investment Pool and the short-term investment funds held with fiscal agent are unrated.

NOTE 4 – CASH AND INVESTMENTS (continued)

Credit Risk (continued)

The following table shows the quality of StanCERA's investments in fixed income securities.

	June 30, 2020		June 30, 2019	
S&P/Moody's Credit Rating	Percentage of Total Fixed Income	StanCERA's Fixed Income Securities	Percentage of Total Fixed Income	StanCERA's Fixed Income Securities
Aaa / AAA	2.58%	$ 11,466,221	2.47%	$ 11,830,506
Aa1 / AA+	2.02%	8,993,876	1.22%	5,831,461
Aa2 / AA	1.27%	5,635,174	0.84%	4,022,701
Aa3 / AA-	2.30%	10,236,651	6.41%	30,731,875
A1 / A+	4.41%	19,622,991	8.01%	38,444,477
A2 / A	1.43%	6,353,399	3.96%	19,013,866
A3 / A-	11.15%	49,574,360	8.54%	40,983,675
Baa1 / BBB+	16.36%	72,695,876	16.25%	77,971,974
Baa2 / BBB	20.06%	89,142,189	15.75%	75,572,514
Baa3 / BBB-	8.58%	38,149,311	7.94%	38,099,541
Ba1 / BB+	1.64%	7,286,198		
Ba2 / BB	0.19%	825,288		
N/R	0.97%	4,308,123	14.99%	71,926,187
N/A	27.04%	120,189,943	13.61%	65,287,287
Total	**100.00%**	**$ 444,479,600**	**100.00%**	**$ 479,716,064**

N/R represents securities that are not rated.
N/A represents securities that are not applicable to the rating disclosure requirements.

Concentration of Credit Risk

Concentration of credit risk is the risk of loss due to a large concentration of investments in any one issuer. Investments issued or explicitly guaranteed by the US Government and investments in mutual funds, external investment pools, and other pooled investments are exempt from the disclosure requirements. As of June 30, 2020 and 2019, for separately managed investment accounts, StanCERA did not have investments in any one issuer representing 5% or more of the total portfolio.

Custodial Credit Risk

Custodial credit risk for deposits is the risk that, in the event of the failure of a depository financial institution, a government will not be able to recover its deposits or will not be able to recover collateral securities that are in the possession of an outside party. StanCERA does not have a formal policy for custodial credit risk for deposits. Under California Government Code, a financial institution is required to secure deposits in excess of $250,000 made by state or local government units by pledging securities held in the form of an undivided collateral pool. The fair value of the pledged securities in the collateral pool must equal at least 110% of the total amount deposited by the public agencies. California law also allows financial institutions to secure governmental deposits by pledging first deed mortgage notes having a value of 150% of the secure public deposits. Such collateral is held by the pledging financial institution's trust department or agent in StanCERA's name. At fiscal year-end, StanCERA had no custodial credit risk exposure to any depository financial institution. All deposits are placed with a custodial bank.

NOTE 4 – CASH AND INVESTMENTS (continued)

Custodial Credit Risk (continued)

Custodial credit risk for investments is the risk that, in the event of the failure of the counter-party (e.g., broker-dealer) to a transaction, a government will not be able to recover the value of its investment or collateral securities that are in the possession of another party. StanCERA does not have a formal policy for custodial credit risk for investments. Investment securities are exposed to custodial credit risk if the securities are uninsured, not registered in the governmental entity's name, and held by the counter-party. StanCERA's investment securities are not exposed to custodial credit risk because all securities held by StanCERA's custodial bank are in StanCERA's name.

Foreign Currency Risk

Foreign currency risk is the risk that changes in exchange rates may adversely affect the fair value of an investment. StanCERA's external investment managers may invest in international securities and must follow StanCERA's Investment Guidelines pertaining to these types of investments.

American Depositary Receipts (ADR) are included in the U.S. Dollars. ADR represents underlying securities of non-U.S. companies traded on the US stock exchanges. Although the transactions are denominated in U.S. Dollars and not subject to foreign currency risk, these securities are reflected as part of the non-U.S. equities within International Equity Investments reported in the Statements of Fiduciary Net Position.

StanCERA's exposure to foreign currency risk in U.S. dollars is as follows:

Currency	June 30, 2020 Fair Value (in U.S. $)	June 30, 2019 Fair Value (in U.S. $)
Australian Dollar	$ 14,513,605	$ 24,696,796
Brazilian Real	2,141,074	6,605,690
British Pound	37,370,983	57,702,550
Canadian Dollar	27,806,723	38,168,668
Chilean Peso	1,447,634	1,501,431
Danish Krone	3,550,556	1,625,246
Euro Dollars	108,549,683	130,617,045
Hong Kong Dollar	39,516,247	44,237,396
Hungarian Forint	1,348,048	2,141,903
Indonesian Rupiah	1,269,921	2,447,002
Japanese Yen	77,771,561	83,953,251
Malaysian Renggit	431,379	1,484,859
New Isreali Shekel	843,805	208,126
New Taiwan Dollar	10,824,858	10,129,517
New Zealand Dollar	664,198	935,039
Norwegian Krone	5,403,543	5,142,485
Singapore Dollar	2,682,440	4,758,179
South African Rand	653,271	2,329,773
South Korean Won	10,571,559	12,712,983
Swedish Krona	11,608,036	10,618,115
Swiss Franc	25,917,412	32,707,910
Thailand Baht	512,845	1,590,847
Turkish Lira	1,409,977	1,875,577
U.S. Dollar	77,084,816	75,028,220
TOTAL	**$ 463,894,174**	**$ 553,218,608**

NOTE 4 – CASH AND INVESTMENTS (continued)

Commitments to Private Credit

At June 30, 2020 and June 30, 2019, StanCERA's total capital commitments to private credit partnerships was $170,000,000 and $160,000,000, respectively. Of this amount, $18,772,135 and $19,305,108, respectively, remained unfunded and is not recorded on StanCERA's Statements of Fiduciary Net Position.

Commitments to Private Equity

At June 30, 2020, StanCERA's total capital commitments to private equity partnerships was $35,000,000. Of this amount, $32,750,000 was unfunded and is not recorded in StanCERA's Statement of Fiduciary Net Position.

Commitments to Private Real Estate

At June 30, 2020 and June 30, 2019, StanCERA's total capital commitments to private real estate partnerships was $217,000,000 for both fiscal years. Of this amount, $24,972,809 and $38,133,292, respectively, was unfunded and is not recorded in StanCERA's Statement of Fiduciary Net Position.

Commitments to Infrastructure

At June 30, 2020 and June 30, 2019, StanCERA's total capital commitments to infrastructure was $50,000,000 for both fiscal years. Of this amount, $7,116,066 and $8,251,433, respectively, was unfunded and is not recorded in StanCERA's Statement of Fiduciary Net Position.

Commitments to Risk Parity

At June 30, 2020 and June 30, 2019, StanCERA's total commitments to risk parity was $280,000,000 for both fiscal years. Risk Parity was 100% funded for both fiscal years.

Investment Expense

Investment expense includes fees paid for investment consulting services, fund evaluation services, and securities custodian services. Fees paid are charged against the StanCERA's investment earnings pursuant to Government Code Sections 31596.1 and 31592.5.

Investment Expense

	June 30, 2020	June 30, 2019
Investment Managers	$ 8,239,710	$ 6,278,921
Investment Consultants	514,264	483,103
Custodial Fees	333,477	323,150
Investment Attorney	112,140	21,161
Other Investment Costs	2,427,312	1,758,022
Total Other Investment Expenses	**$ 11,626,903**	**$ 8,864,357**
Actuarial Fees	76,301	144,063
Total Investment Expenses	**$ 11,703,204**	**$ 9,008,420**

NOTE 5 - CONTRIBUTIONS

Contribution Rates

The CERL establishes the basic obligations for employer and member contributions to the retirement plan. The actual employer and member contribution rates in effect each year are based on recommendations made by an independent actuary and adopted by the Board.

StanCERA's policy for employer contributions states that actuarially determined rates expressed as a percentage of annual covered payroll are required to accumulate sufficient assets to pay benefits when due. Level percentage of payroll employer contribution rates are determined using the entry age actuarial cost method. StanCERA also uses the level entry age normal cost method with an UAAL to amortize any unfunded liability.

Member basic rates are based on a formula reflecting the age at entry into the Plan. For Tier 5 Safety, the rates are such as to provide an average monthly annuity at age 50 equal to 1/100 of the FAS. Tier 1 General Members pay rates that will provide an average annuity at age 60 of 1/100 of the FAS. Tier 4 General Members pay rates that will provide an average annuity at age 55 of 1/120 of the FAS. County (and former County agency) Safety and General Members in Tiers 1 and 4 pay one half of the aforementioned rates. General Members in Tier 2 pay rates to provide an average annuity of 1/120 of FAS at age 60. General Members in Tier 3 pay no member contributions. General Members in Tier 5 pay rates to provide an average annuity at age 55 of 1/120 of FAS. Both General and Safety Tier 6 Members pay approximately half of the actuarial determined normal cost rate for the benefit.

Member cost-of-living contributions, expressed as a percentage of their basic rates, are designed to pay for one-half of the cost-of-living liabilities for future service. For members integrated with Social Security, the above contributions are reduced by 1/3 of that portion of such contribution payable with respect to the first $350 of monthly salary. Member contributions are refundable upon termination from the retirement system.

Contributions as a percentage of covered payroll for fiscal year ended June 30, 2020, are shown in the following table:

Employer	Employer Contributions	Member Contributions	Employer Contributions as a % of Covered Payro
Stanislaus County	$ 82,421,316	$ 26,410,956	27.4415%
City of Ceres	5,281,755	1,557,866	1.7585%
Stanislaus Superior Court	4,126,485	1,384,729	1.3739%
Stanislaus Council of Governments	300,600	117,414	0.1001%
East Side Mosquito Abatement District	206,310	68,984	0.0687%
Salida Sanitary District	182,768	54,719	0.0609%
Keyes Commuinity Services District	102,249	31,230	0.0340%
Hills Ferry Cemetery District	63,125	19,747	0.0210%
	$ 92,684,609	**$ 29,645,645**	**30.8586%**
Covered Payroll	**$ 300,352,383**		

NOTE 5 – CONTRIBUTIONS (continued)

Contribution Rates (continued)

Contributions as a percentage of covered payroll for fiscal year ended June 30, 2019, are shown in the following table:

Employer		Employer Contributions		Member Contributions	Employer Contributions as a % of Covered Payro
Stanislaus County	$	78,729,628	$	24,763,793	27.9203%
City of Ceres		5,036,102		1,434,982	1.7860%
Stanislaus Superior Court		3,938,872		1,265,380	1.3969%
Stanislaus Council of Governments		312,482		113,457	0.1108%
East Side Mosquito Abatement District		226,594		70,279	0.0804%
Salida Sanitary District		193,792		52,061	0.0687%
Keyes Community Services District		89,528		24,969	0.0317%
Hills Ferry Cemetery District		62,383		17,942	0.0221%
	$	**88,589,381**	**$**	**27,742,863**	**31.4169%**
Covered Payroll	**$**	**281,979,654**			

NOTE 6 – RESERVES

As required by the CERL or the Board’s policies, the following reserves from Fiduciary Net Position Restricted for Pension Benefits must be established and used to account for the members’ (employees and retirees) contributions.

Active Members’ Reserve

This reserve represents the cumulative contributions made by active members (employees), after deducting refunds to the members, plus the investment earnings credited to the reserve at the assumed rate of return determined by the actuary. For fiscal years ended June 30, 2020 and 2019, the actuarial assumed rate of return was 7.00%. Based on Retirement Board policy when the Plan is below 100% funded on a market basis, the percentage allocated to Active Members’ Reserve is capped at the actuarial assumed rate of return and will determine the semi-annual percent of interest to be posted to individual member account balances in the subsequent fiscal year.

Employer Reserves

These reserves represent the cumulative contributions made by the County and other employers. Interest earnings are credited to these reserves based on StanCERA’s excess earnings policy.

Upon the retirement of an active member, an actuarially determined amount of the member’s vested interest is transferred from the Employer Advance Reserve to the Retired Members’ Pension Reserve.

NOTE 6 – RESERVES (continued)

Retired Members' Pension Reserve

These reserves are established to account for the unpaid retirees' pension benefits. Upon the retirement of an employee, member contributions plus the interest earnings credited to the member's account are transferred from the Active Members' Reserve account to the Retired Members' Annuity and Cost-of-Living Reserve accounts.

From these reserves, StanCERA pays the retiree benefits in an amount computed in accordance with the CERL. Interest earnings are credited to this reserve based on StanCERA's excess earnings policy.

Retiree Burial Allowance Reserve

The burial allowance reserve is a benefit the Board offers which pays the family member of a deceased retiree a lump sum death benefit. This benefit is available for all retirees whose last work in a 1937 Act Retirement System or California Public Employees Retirement System (CalPERS) was with StanCERA. Interest earnings are credited to this reserve based on StanCERA's excess earnings policy.

Contingency Reserve

This optional reserve represents earnings in excess of the total interest credited to contributions of the employer and employee and is funded at a minimum 1% of total valuation reserves prior to excess earnings distribution (Government Code Section 31592). It is used as a reserve against deficiencies in interest earnings in other years, losses on investments, and other contingencies. The Board set this reserve to 1% in May 2012 and it is reviewed and adjusted annually.

Undistributed Earnings/(Losses)

This "designation" account was established on June 30, 2003. It was used to minimize the impact of actuarial smoothing of assets and contains an accumulation of earnings or losses, which have not been distributed to any other reserve. This reserve has undistributed losses of $2,233,184 and $0 as of June 30, 2020 and June 30, 2019, respectively.

NOTE 6 – RESERVES (continued)

Other Reserves

These reserves are for Retirees' Special Cost-of-Living, Tier 3 Disability and Legal Contingencies.

Reserve Account Balances are as follows:

	June 30, 2020	June 30, 2019
Active Members' Reserve	$ 602,434,277	$ 588,122,376
Employer Advance Reserve	275,348,308	292,437,886
Employer Transfer from Non-Valuation Reserve	167,007,137	167,007,137
Retired Members' Pension Reserve	1,135,722,429	1,132,162,574
Valuation Reserve (Loss)	(2,233,184)	-
Retiree Burial Allowance Reserve	3,874,727	5,085,657
Contingency Reserve	21,813,486	21,347,701
Other Reserves		
Legal Contingency Reserve	1,897,499	2,076,541
Tier 3 Disability Reserve	1,560	1,560
Total Reserves	**$ 2,205,866,239**	**$ 2,208,241,432**

NOTE 7 – LITIGATION

StanCERA is a defendant in various lawsuits and claims arising in the ordinary course of its operations. StanCERA's management and legal counsel estimate the ultimate outcome of such litigation will not have a material effect on StanCERA's financial statements.

NOTE 8 – NET PENSION LIABILITY OF PARTICIPATING EMPLOYERS

Actuarial Assumptions

The actuarial assumptions used in the June 30, 2019 valuation were based on the results of an actuarial experience study for the period July 1, 2015 through June 30, 2018. Measurements as of the reporting date are based on the fair value of assets as of June 30, 2020, and the Total Pension Liability as of the valuation date, June 30, 2019, using update procedures to roll forward to StanCERA's fiscal year end of June 30, 2020. There were no significant events between the valuation date and the measurement date, so the roll forward procedures only included the addition of service cost offset by actual benefit payments.

NOTE 8 – NET PENSION LIABILITY OF PARTICIPATING EMPLOYERS (continued)

Actuarial Assumptions (continued)

The components of the Net Pension Liability of StanCERA at June 30, 2020 and June 30, 2019 were as follows:

	June 30, 2020	June 30, 2019
Total Pension Liability	$ 3,021,191,459	$ 2,868,469,377
Plan Fiduciary Net Position	$ (2,205,866,239)	$ (2,208,241,432)
Net Pension Liability	$ 815,325,220	$ 660,227,945
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	73.0%	77.0%

The Total Pension Liability was determined based on the June 30, 2019 and June 30, 2018 actuarial valuations rolled forward to June 30, 2020 and June 30, 2019, using the following actuarial assumptions, applied to all periods included in the measurement:

ACTUARIAL VALUATION ASSUMPTIONS

Measurement Date	June 30, 2020	June 30, 2019
Investment Rate of Return	7.00%, net of investment expenses	7.00%, net of investment expenses
Projected Salary Increases	3.00%, per year plus merit component based on employee classification and years of service	3.00%, per year plus merit component based on employee classification and years of service
Attributed to Inflation	2.75%	2.75%
Cost-of-Living Adjustments	100% of Consumer Price Index (CPI) up to 3.0% annually with banking, 2.6% annual increases assumed	100% of Consumer Price Index (CPI) up to 3.0% annually with banking, 2.6% annual increases assumed

Post-retirement mortality rates for active Members are specified by the California Public Employees Retirement System (CalPERS) Pre-Retirement Non-Industrial Mortality table adjusted by 97.2% for males and 101.6% for females with generational mortality improvements projected from 2009 using Scale MP-2018. Duty related mortality rates are only applicable for Safety Active Members and are based on the CalPERS Pre-Retirement Industrial Death table without adjustment or projection.

NOTE 8 – NET PENSION LIABILITY OF PARTICIPATING EMPLOYERS (continued)

Actuarial Assumptions (continued)

Rates of mortality for retired Members and their beneficiaries are specified by the CalPERS Healthy Annuitant table adjusted by 104.5% for females and no adjustment for males with generational mortality improvements projected from 2009 using Scale MP-2018.

The long-term defined benefit pension plan return expectations were determined using a building-block approach. An inflation forecast is the baseline and various real return premiums (e.g., bonds, equities, etc.) are added to create nominal return expectations for each asset class. These expectations are combined to produce the long-term expected rate of return by weighting the expected nominal rates of return by the target asset allocation percentages and including an expected return from rebalancing uncorrelated asset classes.

Best estimates of geometric real rates of return for each major asset class included in the target asset allocation as of June 30, 2020 and June 30, 2019 are summarized in the following table:

Asset Class	2020 Long-Term Expected Real Rate of Return	2019 Long-Term Expected Real Rate of Return
Domestic Equities		
U.S. Large Cap	6.30%	5.80%
U.S. Small Cap	6.80%	5.40%
International Equities		
Int'l Development	6.70%	7.70%
Emerging Market Equity	9.10%	8.60%
U.S. Fixed Income		
Core fixed income	1.30%	3.30%
U.S. Treasury	0.60%	2.70%
Short-term Gov/Credit	1.70%	2.80%
Real Estate		
Core	4.40%	6.10%
Value-add	5.30%	8.10%
Risk Parity	3.60%	7.10%
Private Equity	10.40%	8.80%
Private Credit	6.80%	7.70%
Infrastructure	5.90%	7.90%
Cash	0.60%	2.10%

Discount Rate

The discount rate used to measure the total pension liability for the fiscal years ended June 30, 2020 and June 30, 2019 were 7.00% for both fiscal years. The projection of cash flows used to determine the discount rate assumed that contributions from plan members will be made at the current contribution rate and that contributions from the employers will be made at contractually required rates, actuarially determined. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

NOTE 8 – NET PENSION LIABILITY OF PARTICIPATING EMPLOYERS (continued)

Sensitivity of the Net Pension Liability to Changes in the Discount Rate

The following presents the net pension liability of StanCERA calculated using the discount rate of 7.00% for both fiscal years, as well as what the Plan's net pension liability would be if it were calculated using a discount rate that is one percentage point lower (6.00%) or one percentage point higher (8.00%) than the current rate for fiscal years ending June 30, 2020 and 2019:

Sensitivity of Net Pension Liability to Changes in Discount Rate

		1% Decrease 6.00%	Current Discount Rate 7.00%	1% Increase 8.00%
June 30, 2020	Net Pension Liability	$ 1,237,265,070	$ 815,325,220	$ 470,881,948
	Fiduciary Net Postion as a Percentage of Total Pension Liability	64.1%	73.0%	82.4%
		1% Decrease 6.00%	Prior Discount Rate 7.00%	1% Increase 8.00%
June 30, 2019	Net Pension Liability	$ 1,062,692,654	$ 660,227,945	$ 331,678,933
	Fiduciary Net Postion as a Percentage of Total Pension Liability	67.5%	77.0%	86.9%

NOTE 9 – SUBSEQUENT EVENTS

In late July 2020, the California State Supreme Court issued its decision in a case generally referred to as the "Alameda Decision". The case combined several outstanding issues brought by various labor associations around the State regarding the inclusion of certain types of pay elements in the calculation of FAS. FAS ultimately determines the size of a member's retirement benefit and, the larger the FAS, the larger the retirement benefit.

In the Alameda Decision, the Court said that any pay element associated with on-call service should not have been or be used in the calculation of FAS and ultimately, the member's retirement benefit. This ruling may apply to current active members today and those that retired on or after January 1, 2013. It was on this date that the California Legislature enacted AB 197, which changed the definition of pensionable salary and was a companion to the PEPRA (Public Employee Pension Reform Act) legislation at that time.

At the August 20, 2020 Board of Retirement meeting, StanCERA's Board approved three action items as a result of the Alameda Decision effective September 1, 2020:

1. Immediately discontinue deducting active member contributions from pay coded as on-call to the extent that it is paid for services rendered outside normal working hours.
2. Recalculation of retiree benefits to be paid as of the next full retiree payroll cycle to members who retired on and after January 1, 2013 to eliminate that portion of the benefits attributable to on-call pay that was paid for services rendered outside normal working hours.
3. Immediately discontinue including on-call pay to the extent paid for services rendered outside normal working hours as compensation earnable for calculating the retirement benefits of members and their beneficiaries.

Schedule of Changes in Net Pension Liability and Related Ratios

	June 30, 2020	June 30, 2019	June 30, 2018	June 30, 2017	June 30, 2016	June 30, 2015	June 30, 2014
Total Pension Liability							
Service cost	$ 63,771,013	$ 59,957,490	$ 58,007,036	$ 57,465,280	$ 55,351,509	$ 48,242,363	$ 46,209,346
Interest (includes interest on service cost)	198,170,462	198,460,567	190,493,637	179,875,553	171,938,615	154,850,353	147,384,248
Changes of benefit terms	-	-	-	-	-	-	-
Differences between expected and actual experience	30,766,201	15,206,475	(12,172,006)	28,801,984	(6,424,597)	2,148,638	-
Changes of assumptions (3)	-	(46,047,924)	-	-	269,752,272	-	-
Benefit payments, including refunds of member contributions	(139,985,594)	(131,774,689)	(123,172,116)	(116,843,858)	(108,165,810)	(101,858,156)	(94,782,471)
Net change in total pension liability	152,722,082	95,801,919	113,156,551	149,298,959	382,451,989	103,383,198	98,811,123
Total pension liability - beginning	2,868,469,377	2,772,667,458	2,659,510,907	2,510,211,948	2,127,759,959	2,024,376,761	1,925,565,638
Total pension liability - ending	$ 3,021,191,459	$2,868,469,377	$2,772,667,458	$2,659,510,907	$2,510,211,948	$2,127,759,959	$2,024,376,761
Fiduciary Net Position							
Contributions - employer	$ 92,684,609	$ 88,589,381	$ 76,966,471	$ 63,024,560	$ 58,196,310	$ 53,849,031	$ 46,763,996
Contributions - member (1)	29,645,645	27,742,863	26,746,289	25,463,745	23,916,508	22,960,235	21,867,911
Total investment income (loss)	18,496,772	99,280,525	154,988,199	252,309,705	(31,322,276)	68,722,781	274,896,108
Benefit payments, including refunds of member contributions	(139,985,594)	(131,774,691)	(123,172,116)	(116,843,858)	(108,165,810)	(101,858,156)	(94,782,471)
Administrative expense	(3,216,625)	(2,557,391)	(2,791,409)	(2,644,554)	(2,315,223)	(2,378,966)	(2,249,260)
Net change in fiduciary net position	(2,375,193)	81,280,687	132,737,434	221,309,598	(59,690,491)	41,294,925	246,496,284
Fiduciary net position - beginning	2,208,241,432	2,126,960,745	1,994,223,311	1,772,913,713	1,832,604,204	1,791,309,279	1,544,812,995
Fiduciary net position - ending	$ 2,205,866,239	$2,208,241,432	$2,126,960,745	$1,994,223,311	$1,772,913,713	$1,832,604,204	$1,791,309,279
Net pension liability - ending	$ 815,325,220	$ 660,227,945	$ 645,706,713	$ 665,287,596	$ 737,298,235	$ 295,155,755	$ 233,067,482
Fiduciary net position as a percentage of the total pension liability	73.0%	77.0%	76.7%	75.0%	70.6%	86.1%	88.5%
Covered payroll (2)	$ 300,352,383	$ 281,979,654	$ 268,009,042	$ 255,646,515	$ 245,751,576	$ 237,263,160	$ 221,863,110
Net pension liability as a percentage of covered payroll	271.5%	234.1%	240.9%	260.2%	300.0%	124.4%	105.1%

Note: Trend Information: Schedule will ultimately show information for ten years. Additional years will be displayed as they become available.

(1) In accordance with GASB Statement No. 82, employer-paid member contributions are classified as Member Contributions.

(2) In accordance with GASB Statement No. 82, Covered Payroll is the payroll on which contributions are based.

(3) In 2016, amounts reported as changes of assumptions resulted primarily from changes to the assumed earnings rate from 7.75% to 7.25% and from adjustments to assumed life expectancies as a result of adopting are based. StanCERA has elected early implementation of GASB Statement No. 82. mortality tables with generational improvements.
In 2019, amounts reported as changes of assumptions resulted primarily from changes to the assumed earnings rate from 7.25% to 7.00% and from adjustments to mortality rates disability rates and retirement rates.

REQUIRED SUPPLEMENTARY INFORMATION (continued)

Schedule of Employer Contributions
Last 10 Fiscal Years for Fiscal Years Ending June 30
(Dollar amounts in thousands)

	2020	2019	2018	2017	2016
Actuarially Determined Contributions	$ 92,685	$ 88,589	$ 76,966	$ 63,025	$ 58,196
Contributions in Relation to the Actuarially Determined Contributions	92,685	88,589	76,966	63,025	58,196
Contribution Deficiency/(Excess)	$ -	$ -	$ -	$ -	$ -
Covered Payroll (1)	$ 300,352	$ 281,980	$ 268,009	$ 255,647	$ 245,752
Contributions as a Percentage of Covered Payroll	30.86%	31.42%	28.72%	24.65%	23.68%

	2015	2014	2013	2012	2011
Actuarially Determined Contributions	$ 53,849	$ 46,764	$ 39,077	$ 41,614	$ 47,657
Contributions in Relation to the Actuarially Determined Contributions	53,849	46,764	39,077	41,614	47,657
Contribution Deficiency/(Excess)	$ -	$ -	$ -	$ -	$ -
Covered Payroll (1)	$ 237,263	$ 221,863	$ 217,491	$ 215,057	$ 221,541
Contributions as a Percentage of Covered Payroll	22.70%	21.08%	17.97%	19.35%	21.51%

(1) In accordance with GASB Statement No. 82, Covered Payroll is the payroll on which contributions are based.

Schedule of Investment Returns
Last 10 Fiscal Years for Fiscal Years ending June 30

	2020	2019	2018	2017	2016
Annual money-weighted rate of return, net of investment expense	1.30%	5.10%	8.10%	14.40%	-1.70%

	2015	2014	2013	2012	2011
Annual money-weighted rate of return, net of investment expense	4.20%	18.20%	14.50%	0.70%	22.90%

NOTES TO REQUIRED SUPPLEMENTARY INFORMATION

Changes of benefit terms

There were no changes of benefit terms for fiscal year ended June 30, 2020.

Changes of assumptions

There were no changes of assumptions for fiscal year ended June 30, 2020.

Methods and Assumptions Used in Calculations of Actuarially Determined Contributions

The actuarially determined contribution amounts in the schedule of employer contributions are calculated as of June 30, 2018, two years prior to the end of the fiscal year in which contributions are reported. The following actuarial methods and assumptions were used to determine contribution rates reported in that schedule:

ACTUARIAL VALUATION METHODS AND ASSUMPTIONS

Valuation Date	June 30, 2018
Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percent of Pay
Remaining Amortization Period	Closed period - 18 Years
Asset Valuation Method	Actuarial value: Excess earnings smoothed over five years, 80% / 120% corridor around market
Actuarial Assumptions	
Investment Rate of Return	7.00%, net of investment expenses
Projected Salary Increases	3.00%, plus service-based rates
Attributed to Inflation	2.75%
Cost-of-Living Adjustments	100% of CPI to 3.0% annually with banking, 2.6% annual increases assumed
Mortality	Rates of ordinary death for active Members are specified by the CalPERS Pre-Retirement Non-Industrial Mortality table, adjusted by 97.2% for males and 101.6% for females, with generational mortality improvements projected from 2009 using Scale MP-2018. Duty related mortality rates are only applicable for Safety Active Members, and are based on the CalPERS Pre-Retirmeent Individual Death table without adjustment or projection.
	Rates of motality for healthy retired Members and their beneficiaries are specified by the CalPERS Healthy Annuitant table, adjusted by 97.2% for males and 104.1% for females, with generational mortality improvements projected from 2009 using Scale MP-2018. Separate mortality assumptions are used for disabled retirees.

A complete description of the methods and assumptions used to determine contribution rates for the year ending June 30, 2020 can be found in the June 30, 2018 actuarial valuation report located on StanCERA's website, www.stancera.org.

OTHER SUPPLEMENTAL INFORMATION

SCHEDULE OF ADMINISTRATIVE EXPENSES

For the Fiscal Years Ended June 30, 2020 and 2019

	2020	2019
Personnel Services:		
Salaries and Employee Benefits	$ 1,703,135	$ 1,491,409
Total Personnel Services	1,703,135	1,491,409
Professional Services:		
Computer and Software Services and Support	302,702	256,265
Outside Legal Counsel	534,068	102,356
Disability Hearing Officer/Medical Exams and Reviews	6,500	10,388
External Audit Fees	48,182	47,624
Other Professional Services	9,549	1,025
Total Professional Services	901,001	417,658
Office Expenses:		
Office Supplies	14,654	13,160
Minor Equipment and Computer Supplies	15,078	31,473
Stanislaus County Support Services	156,540	168,869
Contract Services	54,247	32,771
Communications	72,868	56,742
Publications	6,579	4,841
Total Office Expenses	319,966	307,856
Miscellaneous:		
Fiduciary and Staff - Education/Travel	57,086	117,425
Fiduciary and Staff - Meetings/Other Travel	8,200	8,300
Insurance	79,187	77,852
Memberships	12,694	6,374
Depreciation	135,356	130,517
Total Miscellaneous	292,523	340,468
TOTAL ADMINISTRATIVE EXPENSES	**$ 3,216,625**	**$ 2,557,391**

OTHER SUPPLEMENTAL INFORMATION (continued)
SCHEDULE OF INVESTMENT MANAGEMENT FEES AND OTHER INVESTMENT EXPENSES
For the Fiscal Years Ended June 30, 2020 and 2019

	2020	2019
Investment Management Fees:		
Domestic Equity	$ 736,104	$ 796,475
International Equity	1,290,164	1,338,231
Fixed Income	497,084	520,469
Private Credit	696,650	(202,297)
Private Equity	294,894	-
Private Real Estate	3,077,952	2,088,524
Infrastructure	406,933	636,451
Real Estate Securities & Special Situations	90,412	67,413
Risk Parity	1,149,517	1,033,655
Total Investment Management Fees	8,239,710	6,278,921
Investment Consulting Fees	514,264	483,103
Investment Custodian Fees	333,477	323,150
Investment Legal Fees	112,140	21,161
Other Investment Related Expenses	2,427,312	1,758,022
Total Other Investment Expenses	3,387,193	2,585,436
Actuarial Fees	76,301	144,063
TOTAL INVESTMENT EXPENSES	**$ 11,703,204**	**$ 9,008,420**

SCHEDULE OF PAYMENTS TO CONSULTANTS
For the Fiscal Years Ended June 30, 2020 and 2019

	2020	2019
Investment Professional Service Fees:		
Investment Consultants	$ 514,264	$ 483,103
Custodial Fees	333,477	323,150
Investment Attorney	112,140	21,161
Actuarial Fees	76,301	144,063
Total Investment Professional Service Fees	**$ 1,036,182**	**$ 971,477**

	2020	2019
Administrative Professional Services Fees:		
Computer and Software Services and Support	$ 302,702	$ 256,265
Outside Legal Counsel	534,068	102,356
Disability Hearing Officer/Medical Exams and Reviews	6,500	10,388
External Audit Fees	48,182	47,624
Other Professional Services	9,549	1,025
Total Administrative Professional Services Fees	**$ 901,001**	**$ 417,658**

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Investment Section

NEPC, LLC

Daniel Hennessy, CFA, CAIA
Senior Consultant
September 23, 2020

Board of Retirement
Stanislaus County Employees' Retirement System
832 12th Street, Suite 600
Modesto, CA 95354

Dear Board Members:

The overall objective of the Stanislaus County Employees' Retirement System (StanCERA) is to ensure continued access to retirement, disability and survivor benefits for current and future StanCERA participants. To ensure a solid foundation for the future of the Fund, StanCERA carefully plans and implements an investment program designed to produce superior long-term investment returns, while prudently managing the risk in the portfolio. Investment policy and asset allocation are reviewed and revised by the Board of Retirement, at least annually, to reflect the Fund's actuarial assumptions, accrued liabilities, and economic and investment outlook. The following is a report on the performance of the Fund for the year ended June 30, 2020 with background on the underlying capital market environment.

Market Review for the Year Ended June 30, 2020

The fiscal year ended 2020 saw the end of the longest U.S. economic expansion on record. Economies around the world were disrupted because of COVID-19 and markets reacted with historically fast-paced declines. Governments and central banks worldwide took extraordinary measures to stimulate shuttered economies. In the U.S., fiscal stimulus reached over 12% of GDP while Germany, Japan, France and the U.K. had materially larger stimulus packages relative to the size of their economies. The Federal Reserve provided additional support by reducing the Fed Funds Rate to a targeted range of 0.00% to 0.25%, resuming quantitative easing, and flooding markets with liquidity. Similar actions were taken by other central banks. These stimulus measures, along with optimism around a potential vaccine for COVID-19 and easing of lockdown restrictions, resulted in a historically dramatic reversal in risk assets in the fourth fiscal quarter. U.S. stocks posted their eleventh consecutive year of positive returns and outperformed international equities, returning +7.5% as measured by the S&P 500 Index. International developed-markets equities (-5.1% for the year) lagged domestic equities by 12.6%. U.S. equity outperformance was primarily driven by a few large technology stocks which benefitted from a demand surge in the wake of the pandemic. Emerging markets equities returned -3.4%, underperforming U.S. equities and outperforming international-developed markets equities. Driven by declining interest rates and demand for safe-haven assets, U.S. high quality fixed income investments generated a positive 8.7% return in the fiscal year as measured by the Bloomberg Barclays U.S. Aggregate Bond Index.

The StanCERA Investment Portfolio

StanCERA's total investment portfolio return, net of fees, was +1.3% for the year ended June 30, 2020. The median fund in the Investor Force peer group universe of large public pension funds also returned 1.3% in the same period. The Fund's five-year net of fees return for the period ended June 30, 2020 was +5.3% annualized which is below the current actuarial assumed rate of 7%. However, over the last 10 years, the Fund's return of 8.3% outperforms the fund's actuarial rate of return and ranks in the 29th percentile in its peer group of large public pension funds. This relative outperformance was produced in part by a tolerance for slightly higher volatility than average for peer pension plans. The plan's 10-year standard deviation, a measure of risk, ranked in the 76th percentile in its peer group, resulting in a risk-adjusted return (as measured by the Sharpe Ratio) of 0.89, which ranked in the 60th percentile in its peer group.

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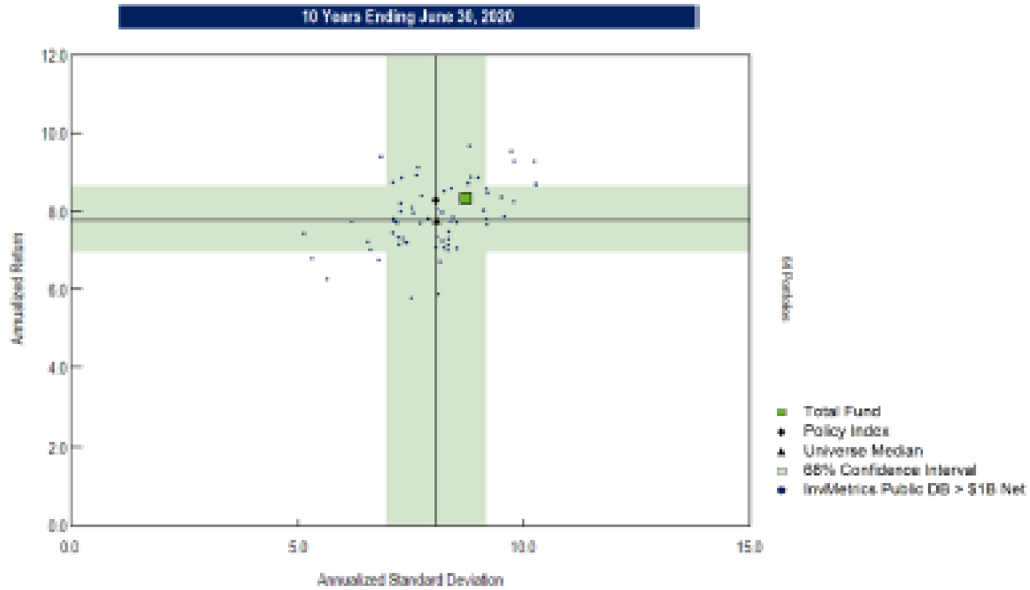
NEPC, LLC

InvMetrics Public Funds Greater than $1 Billion Universe[1] Risk-Return Comparison (Net of Fees)
10 Years Ended June 30, 2020



While the recent performance of risk assets has been encouraging, significant headwinds still surround the global economy. We expect heightened volatility to continue across capital markets given the wide range of possible economic outcomes. We believe that thoughtful diversification across asset classes can help protect investment portfolios from significant declines, and that StanCERA's portfolio is well-positioned to take advantage of future investment opportunities.

NEPC, LLC serves as StanCERA's independent investment consultant and provides StanCERA with asset allocation guidance, quarterly economic and investment market updates and performance reviews, and investment manager monitoring and selection advice. NEPC confirmed the underlying performance data used in this report using data provided by the plan's custodian bank and investment managers. Rates of return are represented using a time-weighted rate of return methodology based upon market values.

Sincerely,

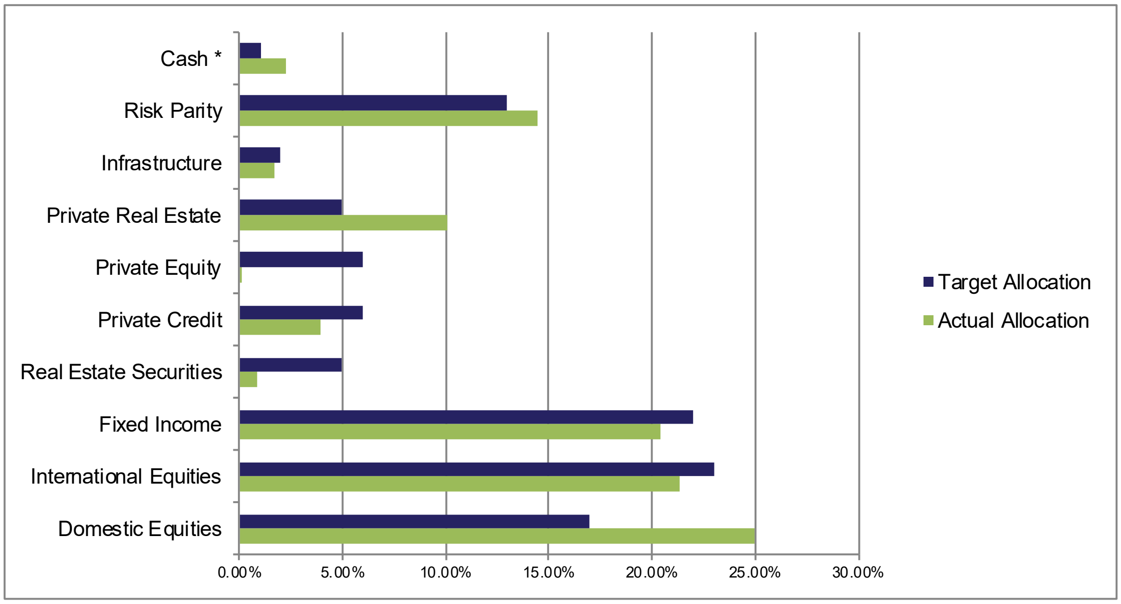
Daniel Hennessy, Senior Consultant

ASSET ALLOCATION
JUNE 30, 2020

Asset Class	Fair Value	Actual Allocation	Target Allocation
Domestic Equities	$ 542,777,843	24.97%	17.00%
International Equities	463,894,174	21.34%	23.00%
Fixed Income	444,479,601	20.44%	22.00%
Real Estate Securities	17,918,244	0.82%	5.00%
Private Credit	85,029,244	3.91%	6.00%
Private Equity	2,354,578	0.11%	6.00%
Private Real Estate	218,955,535	10.07%	5.00%
Infrastructure	36,156,708	1.66%	2.00%
Risk Parity	313,455,483	14.42%	13.00%
Cash *	49,099,734	2.26%	1.00%
TOTAL PORTFOLIO**	**$ 2,174,121,144**	**100.00%**	**100.00%**

* Excludes Pooled Cash in County Treasury of $23,197,533.
** Excludes Securities Lending Cash Collateral.

StanCERA's Asset Allocation



SCHEDULE OF INVESTMENT RETURNS
As of June 30, 2020

Investment Managers	One Year	Three Year	Five Year	Ten Year
DOMESTIC EQUITY				
Northern Trust Russell 3000	6.5%	11.8%	11.3%	14.3%
Russell 3000	*6.5%*	*10.0%*	*10.0%*	*13.7%*
Dodge & Cox	-7.2%	2.3%	5.6%	11.5%
Russell 1000 Value Index	*-8.8%*	*1.8%*	*4.6%*	*10.4%*
BlackRock R1000 Value	-8.6%	2.0%	4.7%	10.5%
Russell 1000 Value Index	*-8.8%*	*1.8%*	*4.6%*	*10.4%*
BlackRock R1000 Growth	23.3%	19.0%	15.9%	17.3%
Russell 1000 Growth Index	*23.3%*	*19.0%*	*15.9%*	*17.2%*
Capital Prospects	-18.0%	-4.0%	1.1%	8.6%
Russell 2000 Value Index	*-17.5%*	*4.3%*	*1.3%*	*7.8%*
FIXED INCOME				
Dimensional Fund Advisors	3.9%	N/A	N/A	N/A
BBgBarc US Govt/Credit 1-3yr TR	*4.2%*	*N/A*	*N/A*	*N/A*
Insight	7.7%	4.8%	N/A	N/A
BBgBarc US Credit Int TR	*7.0%*	*4.9%*	*N/A*	*N/A*
Northern Trust Intermediate Gov't Bond	7.0%	N/A	N/A	N/A
BBgBarc US Govt Int TR	*7.0%*	*N/A*	*N/A*	*N/A*
Northern Trust Long Term Gov't Bond	25.0%	N/A	N/A	N/A
BBgBarc US Govt Long TR	*25.1%*	*N/A*	*N/A*	*N/A*
INTERNATIONAL EQUITY				
LSV Asset Management	-9.2%	-2.4%	0.7%	4.6%
Fidelity Asset Management	-2.2%	2.0%	2.9%	5.9%
MSCI ACWI ex US Index	*-4.8%*	*1.1%*	*2.3%*	*5.0%*
REAL ESTATE SECURITIES				
BlackRock US Real Estate Index	-17.7%	-2.0%	2.4%	N/A
DJ US Select RESI TR USD	*-17.7%*	*-2.0%*	*2.4%*	*N/A*
PRIVATE CREDIT *				
Medley Opportunity Fund II	-2.6%	N/A	N/A	N/A
9% Per Year	*9.0%*	*9.0%*	*9.0%*	*N/A*
Owl Rock First Lien	N/A	N/A	N/A	N/A
9% Per Year	*N/A*	*N/A*	*N/A*	*N/A*
Raven Opportunity Fund I	-7.2%	N/A	N/A	N/A
9% Per Year	*9.0%*	*9.0%*	*9.0%*	*N/A*
Raven Opportunity Fund III	4.0%	N/A	N/A	N/A
9% Per Year	*9.0%*	*9.0%*	*9.0%*	*N/A*
White Oak Global Advisors	6.0%	N/A	N/A	N/A
9% Per Year	*9.0%*	*N/A*	*N/A*	*N/A*
PRIVATE EQUITY				
Insight Patners XI	N/A	N/A	N/A	N/A
Russell 3000 + 3bp	*N/A*	*N/A*	*N/A*	*N/A*
PRIVATE REAL ESTATE *				
Prime Property Fund	1.6%	5.7%	N/A	N/A
NCREIF ODCE	*2.2%*	*5.7%*	*N/A*	*N/A*
PGIM Real Estate U.S. Debt Fund	4.9%	N/A	N/A	N/A
NCREIF ODCE +1%	*5.9%*	*N/A*	*N/A*	*N/A*
American Strategic Value Realty	5.4%	7.8%	9.9%	N/A
NCREIF Property Index	*2.7%*	*5.4%*	*6.8%*	*N/A*
Greenfield Acquisition Partners VII	12.9%	12.9%	11.9%	N/A
Greenfield Acquisition Partners VIII	23.9%	N/A	N/A	N/A
NCREIF ODCE +1%	*3.2%*	*6.7%*	*8.4%*	*N/A*
INFRASTRUCTURE *				
North Haven Partners II	8.6%	15.6%	10.3%	N/A
CPI + 5%	*5.7%*	*6.8%*	*6.6%*	*N/A*
RISK PARITY				
AQR Global Risk Premium - EL	-0.2%	N/A	N/A	N/A
60% MSCI ACWI	*3.4%*	*N/A*	*N/A*	*N/A*
PanAgora Risk Parity Multi Asset	2.7%	N/A	N/A	N/A
60% MSCI ACWI	*3.4%*	*N/A*	*N/A*	*N/A*
TOTAL FUND	1.3%	4.8%	N/A	N/A
Policy Index	*3.3%*	*5.7%*	*6.2%*	*8.4%*

Note: % taken from Verus Quarterly Report presented to Board of Retirement on 8/27/2019.
Using time-weighted rate of return based on the market rate of return.
Does not include Securitites Lending Collateral.

* IRR since inception is reported. One, three, five, and ten year returns are not available for these investments.

SCHEDULE OF INVESTMENTS BY ASSET CLASS AND MANAGER
As of June 30, 2020

Investment Managers	Asset Class	Assets Under Management	% of Fund
DOMESTIC EQUITY			
Dodge & Cox	Large Cap Value	$ 77,267,407	3.55%
BlackRock R1000 Value	Large Cap Value	76,931,363	3.54%
BlackRock R1000 Growth	Large Cap Growth	188,156,624	8.65%
Northern Trust Russell 1000	Large Cap Growth	-	0.00%
Northern Trust Russell 3000	Private Equity	138,233,757	6.36%
Capital Prospects	Small Cap Value	62,188,693	2.86%
FIXED INCOME			
Dimensional Fund Advisors	Core Bond	169,325,553	7.79%
Insight	Core Bond	205,354,870	9.45%
NT Intermediate Bond	Core Bond	49,149,570	2.26%
NT Long Term Bond	Core Bond	20,649,607	0.95%
INTERNATIONAL EQUITY			
LSV Asset Management	Equity Value	220,281,781	10.13%
Fidelity Asset Management	Equity Growth	243,612,393	11.21%
REAL ESTATE SECURITIES			
BlackRock US Real Estate	Real Estate Index	17,918,244	0.82%
PRIVATE CREDIT			
Medley Opportunity Fund II	Private Equity	8,504,766	0.39%
Raven Opportunity Fund I	Private Equity	4,625,221	0.21%
Raven Opportunity Fund III	Private Equity	42,510,248	1.96%
White Oak Global Advisors	Private Equity	24,365,945	1.12%
Owl Rock First Lien	Private Equity	5,023,065	0.23%
PRIVATE REAL ESTATE			
American Realty Advisors	Private Real Estate	68,253,503	3.14%
Greenfield Acquisition Partners VII LP	Private Real Estate	10,318,259	0.47%
Greenfield Acquisition Partners VIII LP	Private Real Estate	23,325,077	1.07%
PGIM	Private Real Estate	58,859,661	2.71%
Prime Property Fund	Private Real Estate	58,199,034	2.68%
PRIVATE EQUITY			
Insight Partners XI	Private Equity	2,525,420	0.12%
(1) Vista Foundation IV Fund	Private Equity	(170,842)	-0.01%
INFRASTRUCTURE			
North Haven Partners II LP	Infrastructure	36,156,708	1.66%
RISK PARITY			
AQR	Risk Parity	155,503,811	7.15%
PanAgora	Risk Parity	157,951,672	7.27%
Total Assets Under Management		2,125,021,410	
Cash and Short-Term Investments	90 Day T-Bill	49,099,734	2.26%
Total Fund		**$ 2,174,121,144**	**100.00%**

Note: Does not include Securities Lending Collateral.
Does not include cash in Treasury Pool.

(1) Vista is a new fund that hasn't been funded, but incurred expenses.

LARGEST BOND HOLDINGS (BY FAIR VALUE)
JUNE 30, 2020

Shares	Bond	Fair Value
4,185,000	BANK OF MONTREAL FRN BNDS DUE 08-27-2021	$ 4,215,687
3,122,000	JPMORGAN CHASE & CO NT DUE 05-01-2028/10-25-2017	3,484,432
3,008,000	FIRST ENERGY CORP DUE 07-15-2027	3,402,867
2,917,000	ANHEUSER-BUSCH DUE 04-13-2028	3,366,528
2,952,000	PVTPL SANTANDER UK GROUP HLDGS DUE 09-15-2025 BEO	3,198,610
2,873,000	ANGLO AMERN CAP DUE 04-10-2027	3,197,689
2,845,000	CAMPBELL SOUP CO DUE 03-15-2025	3,195,178
2,861,000	DUKE ENERGY CORP DUE 08-15-2027	3,168,193
2,928,000	APPALACHIAN PWR CO DUE 06-01-2027	3,160,250
2,817,000	WASTE MGMT INC DEL DUE 11-15-2027	3,153,333
2,852,000	COOPERATIEVE DUE 07-21-2026	3,142,301
2,715,000	VALERO ENERGY DUE 12-15-2026	3,078,137
2,693,000	COLUMBIA PIPELN DUE 06-01-2025	3,059,053
2,641,000	THERMO FISHER DUE 12-15-2025	2,982,864
2,619,000	HSBC HLDGS PLC DUE 11-23-2026	2,917,286
2,503,000	PVTPL CIGNA CORP NEW DUE 02-25-2026	2,911,752
2,552,000	BARCLAYS PLC DUE 01-12-2026	2,873,603
2,690,000	UNITED STATES TREAS NTS WI TREASURY DUE 11-30-2023	2,866,531
2,725,000	CBS CORP NEW DUE 01-15-2027	2,860,540
2,843,000	NOBLE ENERGY INC DUE 01-15-2028	2,746,773

LARGEST STOCK HOLDINGS (BY FAIR VALUE)
JUNE 30, 2020

Shares	Stock	Fair Value
20,600	ROCHE HLDGS AG GENUSSCHEINE NPV	$ 7,138,420
46,841	NESTLE SA CHF	5,177,697
14,072	ROCHE HLDGS AG GENUSSCHEINE NPV	4,876,303
33,126	SAP SE	4,625,384
45,200	SANOFI	4,601,972
485,400	AIA GROUP LTD NPV	4,528,049
103,100	SAMSUNG ELECTRONIC	4,525,652
446,500	TECHTRONIC INDUSTR NPV	4,366,805
481,900	ENEL SPA	4,155,687
137,000	KON AHOLD DELHAIZE	3,732,924
122,400	KDDI CORP NPV	3,669,107
169,200	GLAXOSMITHKLINE ORD	3,421,534
33,372	SANOFI	3,397,722
140,600	NIPPON TELEGRAPH & TELEPHONE CORP NPV	3,278,299
20,200	FEDEX CORP COM	2,832,444
7,707	ASML HOLDING NV	2,829,685
13,600	MICROSOFT CORP COM	2,767,736
69,600	TOTAL S.E EUR2.5	2,655,868
1,825	ALPHABET INC CAP STK	2,579,838
162,200	VOLVO AB SER'B'NPV	2,540,074

A complete list of portfolio holdings is available on StanCERA's website at www.stancera.org or upon request.

SCHEDULE OF INVESTMENT MANAGEMENT FEES
For the Fiscal Years Ended June 30, 2020 and 2019

		2020	2019
Domestic Equities			
BlackRock		$ 55,767	$ 22,733
Capital Prospects		537,413	601,752
Dodge & Cox		172,683	172,696
Jackson Square Partners		-	-
Legato Capital Management		-	-
Mellon Capital Management		-	-
NT Russell 1000		26,009	22,027
	Total Domestic Equities	**791,872**	**819,208**
International Equities			
LSV Asset Management		602,051	663,439
Fidelity Asset Management		688,113	674,792
	Total International Equities	**1,290,164**	**1,338,231**
Fixed Income			
Dimensional Fund Advisors		209,144	234,977
Dodge & Cox		-	-
Insight		259,436	259,478
NT Intermediate Bond		20,591	19,429
NT Long Term Bond		7,913	6,585
PIMCO		-	-
	Total Fixed Income	**497,084**	**520,469**
Real Estate Securities			
BlackRock US Real Estate Index		34,644	44,680
	Total Real Estate Securities	**34,644**	**44,680**
Private Credit			
Medley Opportunity Fund Ii		93,622	156,129
Raven Opportunity Fund I		72,508	230,841
Raven Opportunity Fund III		666,129	686,551
Owl Rock First		193,015	-
White Oak Global Advisors		(328,624)	(1,275,818)
	Total Direct Lending	**696,650**	**(202,297)**
Private Real Estate			
American Realty Advisors		576,229	446,111
Greenfield Acquisition Partners VII		231,113	379,303
Greenfield Acquisition Partners VIII		1,244,094	465,114
Prime Property Fund		574,932	525,789
PGIM		451,584	272,207
	Total Private Real Estate	**3,077,952**	**2,088,524**
Private Equity			
Insight Partners XI		150,938	-
Vista Foundation IV		143,956	-
	Total Private Equity	**294,894**	-
Infrastructure			
North Haven Partners, LP		406,933	636,451
	Total Infrastructure	**406,933**	**636,451**
Risk Parity			
AQR		600,047	544,002
PanAgora		549,470	489,653
	Total Infrastructure	**1,149,517**	**1,033,655**
	Total Investment Management	**8,239,710**	**6,278,921**
Other Investment Fees and Expenses			
Consultant Fees		514,264	483,103
Custodial Fees		333,477	323,150
Investment Attorney		112,140	21,161
Other Investment Costs		2,427,312	1,758,022
Actuarial Fees		76,301	144,063
	Total Other Investment Expenses	**3,463,494**	**2,729,499**
Total Investment Fees and Expenses		**$11,703,204**	**$ 9,008,420**

Schedule of Investment Broker Commissions

StanCERA participates in a commission recapture program administered by Cowen. The strategic objective of the Commission Recapture Program is to recapture a portion of trade commissions paid to brokers. The primary goal is to ensure that investment managers provide the best effort to optimize use of StanCERA's assets for the benefit of the members and beneficiaries by recapturing commissions paid on a specific percentage of trades sent to correspondent brokers on a timely basis. For fiscal years ending June 30, 2020 and 2019, Commission Recapture Income was $25,624 and $22,395, respectively.

Below are the commissions paid by StanCERA for fiscal year ending June 30:

		2020		
		# Shares	Commissions	Per Share
Domestic Equities				
Capital Prospects		570,990	$ 15,104	$ 0.026
Dodge & Cox		-	-	-
	Total Domestic Equities	**570,990**	**15,104**	**0.026**
International Equities				
LSV Asset Management		-	-	-
Fidelity Asset Management		12,447,623	96,438	0.008
	Total International Equities	**12,447,623**	**96,438**	**-**
	Total Investment Broker Commissions	**13,018,613**	**$ 111,542**	**$ 0.009**

		2019		
		# Shares	Commissions	Per Share
Domestic Equities				
Capital Prospects		3,314,459	$ 91,389	$ 0.028
Dodge & Cox		698,941	6,146	0.009
	Total Domestic Equities	**4,013,400**	**97,535**	**0.024**
International Equities				
LSV Asset Management		33,261,797	55,302	0.002
Fidelity Asset Management		21,927,235	175,868	0.008
	Total International Equities	**55,189,032**	**231,170**	**0.004**
	Total Investment Broker Commissions	**59,202,432**	**$ 328,705**	**$ 0.006**

Actuarial Section

StanCERA

Via Electronic Mail

September 24, 2020

Actuarial Certification

This is the Actuary's Certification Letter for the Actuarial Section of the Comprehensive Annual Financial Report (CAFR) for the StanCERA Retirement Plan (the Plan) as of June 30, 2020. This letter includes references to two documents produced by Cheiron for the Plan: the Actuarial Valuation Report as of June 30, 2019 (transmitted February 19, 2020) and the GASB 67/68 Report as of June 30, 2020 (transmitted September 24, 2020).

Actuarial Valuation Report as of June 30, 2019

The purpose of the annual Actuarial Valuation Report as of June 30, 2019 is to determine the actuarial funding status of StanCERA on that date and to calculate recommended contribution rates for the participating employers and Plan members for the Fiscal Year 2020-2021. The prior review was conducted as of June 30, 2018, and included recommended contribution rates for the Fiscal Year 2019-2020.

Actuarial funding is based on the Entry Age Normal Cost Method. Under this method, the employer contribution rate provides for current cost (normal cost) plus a level percentage of payroll to amortize the Unfunded Actuarial Accrued Liability (UAAL) plus expected administrative expenses. As of the valuation date (June 30, 2019), the amortization period is 17 years.

The funding objective of the Plan is to accumulate sufficient assets over each Member's working life to provide for Plan benefits after termination of employment or retirement. For actuarial valuation purposes, Plan assets are valued at actuarial value. Under this method, the assets used to determine employer contribution rates take into account market value by spreading all investment gains and losses (returns above or below expected returns) over a period of five years. The actuarial value is limited to no less than 80% and no more than 120% of market value.

The Board of Retirement is responsible for establishing and maintaining the funding policy of the Plan, subject to the laws of the State of California enacted under the County Employees Retirement Law of 1937 and subsequent legislation.

We prepared the following schedules, which we understand will be included in the Actuarial Section of the CAFR, based on the June 30, 2019 actuarial valuation. All historical information prior to the June 30, 2008 actuarial valuation shown in these schedules is based on information reported by the prior actuary, Buck Consultants.

- Summary of Current Actuarial Assumptions and Methods

- Membership Information (Active, Deferred, and Retired)
- Schedule of Retirees and Beneficiaries Added to and Removed from Rolls
- Analysis of Financial Experience: Change in Unfunded Actuarial Liability
- Schedule of Funded Liabilities by Type (formerly referred to as the Solvency Test)
- Schedule of Funding Progress
- Summary of Plan Provisions

We reviewed the actuarial assumptions shown in the schedules and found them to be reasonably appropriate for use under the Plan. The assumptions used in this report reflect the results of an Experience Study performed by Cheiron covering the period from July 1, 2015 through June 30, 2018, and approved by the Board. The assumptions used in the most recent valuation are intended to produce results that, in the aggregate, reasonably approximate the anticipated future experience of the Plan. The next experience analysis is expected to cover the years through 2021.

We certify that the valuation was performed in accordance with generally accepted actuarial principles and practices. In particular, the assumptions and methods used for funding purposes meet the requirements of the Actuarial Standards of Practice (ASOPs), in particular ASOPs No. 4, 27, 35, and 44.

GASB 67/68 Report as of June 30, 2020

The purpose of GASB 67/68 Report as of June 30, 2020 is to provide accounting and financial reporting information under GASB 67 for StanCERA and under GASB 68 for Stanislaus County and the other participating employers. This report is not appropriate for other purposes, including the measurement of funding requirements for StanCERA.

For financial reporting purposes, the Total Pension Liability is based on the June 30, 2019 actuarial valuation updated to the measurement date of June 30, 2020. There were no significant events of which we were aware between the valuation date and the measurement date so the update procedures only included the addition of service cost and interest cost offset by actual benefit payments.

Please refer to our GASB 67/68 report as of June 30, 2020 for additional information related to the financial reporting of the System. We prepared the following schedules for inclusion in the Financial Section of the CAFR based on the June 30, 2020 GASB 67/68 report:

- Change in Net Pension Liability
- Sensitivity of Net Pension Liability to Changes in Discount Rate
- Schedule of Changes in Net Pension Liability and Related Ratios
- Schedule of Employer Contributions
- Notes to the Schedule of Employer Contributions

We certify that the report was performed in accordance with generally accepted actuarial principles and practices. In particular, the assumptions and methods used for disclosure purposes have been prepared in accordance with our understanding of generally accepted accounting principles as promulgated by the GASB.

Disclaimers

In preparing our reports, we relied on information (some oral and some written) supplied by StanCERA. This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

Future actuarial measurements may differ significantly from the current measurements due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; and, changes in plan provisions or applicable law.

These reports are for the use of StanCERA and its auditor in preparing financial reports in accordance with applicable law and accounting requirements. Any other user of these reports is not an intended user and is considered a third party.

Cheiron's reports were prepared solely for StanCERA for the purposes described herein, except that the Plan's auditor may rely on these reports solely for the purpose of completing an audit related to the matters herein. They are not intended to benefit any third party, and Cheiron assumes no duty or liability to any such party.

These reports and their contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinions contained in these reports. These reports do not address any contractual or legal issues. We are not attorneys and our firm does not provide any legal services or advice.

Respectfully Submitted,

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SUMMARY OF ASSUMPTIONS AND FUNDING METHODS

The following assumptions along with the post-retirement and pre-retirement demographic experiences are based on StanCERA's actuarial experience study from July 1, 2015 through June 30, 2018, approved by the StanCERA Board of Retirement on January 22, 2019. The actuarial valuation for fiscal year ending June 30, 2019 was approved by the StanCERA Board of Retirement on February 19, 2020, which incorporated the following assumptions. The purpose of the annual actuarial valuation report as of June 30, 2019 is to determine the actuarial funding status of StanCERA on that date and to calculate recommended contribution rates for the participating employers and StanCERA members for the fiscal year 2020-2021. The prior actuarial valuation conducted as of June 30, 2018 included recommended contribution rates for the fiscal year 2019-2020 which was approved by the StanCERA Board of Retirement on February 26, 2019.

Plan Description

A summary of plan provisions can be found in Note 1 of the Notes to Basic Financial Statements.

Actuarial Methods

Actuarial Cost Method

Annual contributions are computed under the Entry Age Normal Actuarial Cost Method, computed to the final decrement. A schedule of actuarially determined contributions compared to actual contributions can be found in the Required Supplementary Information section following the Notes to the Basic Financial Statements.

The excess of the Actuarial Accrued Liability over Plan assets is the Unfunded Actuarial Accrued Liability. The liability for each valuation group is amortized as a level percentage of payroll over a closed period (17 years as of the current valuation).

Actuarial Value of Plan Assets

The Actuarial Value of Plan Assets is a modified market-related value. The fair value of assets is adjusted to recognize, over a five-year period, differences between actual investment earnings and the assumed investment return. The Actuarial Value of Plan Assets is limited to no less the 80% and no more than 120% of the fair value. As of June 30, 2011, the Actuarial Value was reset to equal fair value.

ACTUARIAL VALUATION METHODS AND ASSUMPTIONS

Valuation Date	June 30, 2019	June 30, 2018
Actuarial Cost Method	Entry Age Normal	Entry Age Normal
Amortization Method	Level percent of Pay	Level percent of Pay
Remaining Amortization Period	17 Years	18 Years
Asset Valuation Method	Modified Market-Related Value smoothed over a five year period	Modified Market-Related Value smoothed over a five year period

Actuarial Assumptions

1. Rate of Return – The annual rate of return is assumed to be 7.00% net of investment expenses.
2. Cost of Living – The cost of living is assumed to be 2.75% per year as measured by the Consumer Price Index.
3. Administrative Expenses – An allowance of $2,903,330 has been included in the annual cost calculation.
4. Interest Credited to Employee Accounts – 0.25% annually.
5. Increases in Pay – Base salary increase is assumed at 3.00%. Assumed pay increases for active Members consist of increases due to salary adjustments (as noted above), plus service-based increases due to longevity and promotion, as shown below.

Service	Safety	General
0	7.00%	5.00%
1	6.00%	5.00%
2	5.00%	5.00%
3	4.00%	5.00%
4	3.00%	5.00%
5	2.00%	3.50%
6	1.75%	2.50%
7	1.50%	1.50%
8	1.25%	1.25%
9	1.00%	1.00%
10	0.75%	0.75%
11+	0.50%	0.50%

6. PEPRA Compensation Limit – Assumption used for increasing the compensation limit that applies to PEPRA members is 2.75%.
7. Post Retirement COLA – 100% of Consumer Price Index up to 3% annually with banking, 2.6% annual increases assumed.
8. Social Security Wage Base – For projecting the Social Security Benefit, the annual Social Security Wage Base increase is assumed to be 3.00% per year. General Tier 3 members have their benefits offset by an assumed Social Security Benefit.
9. Internal Revenue Code Section 415 Limit – have been applied to the benefits for members currently in pay status, as the limited benefits have been provided by StanCERA for valuation purposes.
10. Internal Revenue Code Section 401(a)(17) – not reflected in the valuation for funding purposes.
11. Family Composition – Spouses of male members are assumed to be three years younger than the member. Spouses of female members are assumed to be two years older than the member.

Percent Married	
Gender	Percentage
Males	80%
Females	50%

Actuarial Assumptions (continued)

12. Accumulated Vacation Time Load – Active members' service retirement and related benefits are loaded by 1.75% for Safety Members and 1.00% for General Members.

13. Rates of Separation – Separate rates of termination are assumed among Safety and General Members. Termination rates do not apply once a member is eligible for retirement.

	Safety	General
Service	All	All
0	18.0%	18.0%
1	12.0%	14.0%
2	9.0%	11.7%
3	7.0%	9.4%
4	6.0%	7.1%
5	5.0%	5.0%
10	5.0%	3.5%
15	3.4%	2.9%
20	0.0%	1.5%
25	0.0%	1.3%
30+	0.0%	0.0%

14. Withdrawal – Rates of withdrawal apply to active Members who terminate their employment and withdraw their member contributions. 50% of all General Member terminations with less than ten years of service and 20% of those with ten or more years of service are assumed to take a refund of contributions. 35% of all Safety Member terminations with less than ten years of service and 10% of those with ten or more years of service are assumed to take a refund of contributions.

15. Vested Termination – Rates of vested termination apply to active Members who terminate their employment after five years of service and leave their member contributions on deposit with the Plan. Tier 3 General Members are assumed to begin receiving benefits at age 65; all other General Members at age 58. Safety Members are assumed to begin receiving benefits at age 53. 50% of vested terminated General members are assumed to be reciprocal, and 65% of vested Safety members are assumed to be reciprocal. Reciprocal members are assumed to receive 3.75% annual pay increases from the date of transfer to the assumed retirement date.

16. Service Connected-Disability – Separate rates are assumed among Safety and General Members. Rates for both sexes for Safety Members are combined.

Service-Connected Disability			
	Safety	General	
Age	All	Female	Male
20	0.0020%	0.0002%	0.0043%
25	0.0760%	0.0004%	0.0102%
30	0.1700%	0.0008%	0.0211%
35	0.2640%	0.0024%	0.0284%
40	0.3600%	0.0056%	0.0401%
45	0.4570%	0.0101%	0.0613%
50	0.5570%	0.0162%	0.0897%
55	0.6580%	0.0249%	0.1227%
60	0.7620%	0.0349%	0.1637%
65	0.8690%	0.0000%	0.0000%

Actuarial Assumptions (continued)

17. Non Service-Connected Disability - Separate rates are assumed among Safety and General Members. Rates for both sexes for Safety Members are combined. Rates shown are applied after five years of service.

Non Service-Connected Disability			
	Safety	General	
Age	All	Female	Male
20	0.0100%	0.0100%	0.0170%
25	0.0100%	0.0100%	0.0170%
30	0.0200%	0.0240%	0.0190%
35	0.0300%	0.0710%	0.0390%
40	0.0400%	0.1350%	0.1020%
45	0.0500%	0.1880%	0.1510%
50	0.0800%	0.1990%	0.1580%
55	0.1300%	0.1490%	0.1580%
60	0.2000%	0.1050%	0.1530%
65	0.2000%	0.0880%	0.1280%
70+	-	0.0840%	0.1020%

18. Rates for Mortality for Healthy Lives – Rates of mortality for active Members are specified by the CalPERS Pre-Retirement Non-Industrial Mortality table, adjusted by 97.2% for males and 101.6% for females, with generational mortality improvements projected from 2009 using SOA Scale MP-2018.

Mortality Rates			
	Duty Death	Ordinary Death - General & Safety	
Age	Safety All	Female	Male
20	0.0030%	0.0215%	0.0320%
25	0.0070%	0.0248%	0.0413%
30	0.0100%	0.0269%	0.0505%
35	0.0120%	0.0378%	0.0588%
40	0.0130%	0.0539%	0.0774%
45	0.0140%	0.0766%	0.1094%
50	0.0150%	0.1079%	0.1600%
55	0.0160%	0.1550%	0.2353%
60	0.0170%	0.2261%	0.3446%
65	0.0180%	0.3324%	0.4949%
70	0.0190%	0.4747%	0.6891%

Actuarial Assumptions (continued)

19. Disabled Member Mortality –

    Nonservice-Connected Disability Members are specified by the CalPERS Non-Industrial Disable Annuitant Mortality table, adjusted 104.5% for females, with generational mortality improvements projected from 2009 using SOA Scale MP-2018.

    Service-Connected Disability Members are adjusted by 101.9% for males using the same table and scale.

Diabled Mortality Rates				
	NonService Connected		Service Connected	
Age	Female	Male	Female	Male
45	0.892%	1.297%	0.298%	0.344%
50	1.285%	1.784%	0.495%	0.542%
55	1.327%	2.095%	0.460%	0.648%
60	1.578%	2.634%	0.633%	0.884%
65	2.138%	3.120%	1.066%	1.455%
70	2.941%	3.890%	1.775%	2.254%
75	4.041%	5.398%	2.952%	3.908%
80	6.287%	8.230%	4.978%	6.754%
85	10.327%	13.166%	7.959%	10.587%
90	16.806%	18.469%	12.335%	16.493%

20. Retired Member and Beneficiary Mortality - specified by the CalPERS Non-Industrial Disable Annuitant Mortality table, adjusted by 97.2% for males and 104.1% for females, with generational mortality improvements projected from 2009 using Scale MP-2018.

Retired Mortality Rates		
Age	Female	Male
45	0.221%	0.234%
50	0.515%	0.517%
55	0.479%	0.618%
60	0.556%	0.794%
65	0.779%	1.026%
70	1.317%	1.717%
75	2.283%	2.900%
80	3.847%	5.128%
85	6.949%	9.165%
90	12.841%	15.733%

21. Mortality Improvement – The mortality assumptions employ a fully generational mortality improvement projection from base year 2009 using Scale MP-2018.

Actuarial Assumptions (continued)

22. Service Retirement – Assumed to occur among eligible members in accordance with the following table for non-PEPRA tiers 1 through 5.

Service Retirement - General			
	Years of Service		
Age	0-9	10-29	30+
40-44	0.00%	0.00%	0.00%
45-49	0.00%	0.00%	10.00%
50-54	0.00%	5.00%	10.00%
55	0.00%	7.50%	20.00%
56	0.00%	7.50%	20.00%
57	0.00%	7.50%	20.00%
58	0.00%	12.50%	20.00%
59	0.00%	12.50%	20.00%
60	0.00%	12.50%	25.00%
61	0.00%	20.00%	25.00%
62	0.00%	25.00%	40.00%
63	0.00%	20.00%	25.00%
64	0.00%	25.00%	25.00%
65	0.00%	35.00%	35.00%
66	0.00%	45.00%	45.00%
67	0.00%	20.00%	25.00%
68	0.00%	20.00%	25.00%
69	0.00%	20.00%	25.00%
70	50.00%	50.00%	100.00%
71	50.00%	50.00%	100.00%
72	50.00%	50.00%	100.00%
73	50.00%	50.00%	100.00%
74	50.00%	50.00%	100.00%
75+	100.00%	100.00%	100.00%

Service Retirement - Safety			
	Years of Service		
Age	0-9	10-19	20+
40-48	0.00%	0.00%	5.00%
49	0.00%	0.00%	20.00%
50	0.00%	10.00%	30.00%
51	0.00%	10.00%	20.00%
52	0.00%	10.00%	20.00%
53	0.00%	10.00%	20.00%
54	0.00%	10.00%	20.00%
55	0.00%	10.00%	30.00%
56	0.00%	10.00%	30.00%
57	0.00%	10.00%	30.00%
58	0.00%	10.00%	30.00%
59	0.00%	10.00%	30.00%
60	0.00%	25.00%	100.00%
61	0.00%	25.00%	100.00%
62	0.00%	25.00%	100.00%
63	0.00%	25.00%	100.00%
64	0.00%	25.00%	100.00%
65	0.00%	100.00%	100.00%
66	0.00%	100.00%	100.00%
67	0.00%	100.00%	100.00%
68	0.00%	100.00%	100.00%
69	0.00%	100.00%	100.00%
70+	100.00%	100.00%	100.00%

Actuarial Assumptions (continued)

23. PEPRA – Retirement for members in PEPRA, Tier 6, are assumed to occur among eligible members in accordance with the sample rates below, from the full tables CALPERS Public Agency Miscellaneous 2% @ 62 table for General and the CALPERS Public Agency Safety Police 2.7% @ 57 table for Safety:

Service Retirement - General (PEPRA)				
	Years of Service			
Age	5	10	25	35
50-51	0.00%	0.00%	0.00%	0.00%
52	0.50%	0.80%	1.90%	3.80%
53	0.70%	1.10%	2.10%	4.80%
54	0.70%	1.10%	2.30%	5.40%
55	1.00%	1.90%	6.10%	15.20%
56	1.40%	2.60%	7.50%	16.70%
57	1.80%	2.90%	7.40%	14.30%
58	2.30%	3.50%	7.30%	13.50%
59	2.50%	3.80%	9.20%	17.50%
60	3.10%	5.10%	11.10%	18.30%
61	3.80%	5.80%	12.10%	23.20%
62	4.40%	7.40%	16.40%	27.10%
63	7.70%	10.50%	19.20%	26.60%
64	7.20%	10.10%	18.70%	27.60%
65	10.80%	14.10%	23.90%	34.80%
66	13.20%	17.20%	29.20%	42.60%
67	13.20%	17.20%	29.20%	40.50%
68	12.00%	15.60%	26.50%	38.70%
69	12.00%	15.60%	26.50%	36.80%
70	12.00%	15.60%	26.50%	38.70%
71	12.00%	15.60%	26.50%	38.70%
72	12.00%	15.60%	26.50%	38.70%
73	12.00%	15.60%	26.50%	38.70%
74	12.00%	15.60%	26.50%	38.70%
75+	100.00%	100.00%	100.00%	100.00%

Service Retirement - Safety (PEPRA)				
	Years of Service			
Age	5	10	25	35
50	5.00%	5.00%	5.00%	11.00%
51	4.00%	4.00%	5.75%	13.92%
52	3.80%	3.80%	5.80%	13.21%
53	3.80%	3.80%	7.74%	28.98%
54	3.80%	3.80%	9.31%	33.25%
55	6.84%	6.84%	13.40%	38.76%
56	6.27%	6.27%	12.28%	34.49%
57	6.00%	6.00%	11.75%	32.00%
58	8.00%	8.00%	13.75%	35.00%
59	8.00%	8.00%	14.00%	40.00%
60	15.00%	15.00%	15.00%	35.00%
61	14.40%	14.40%	14.40%	26.40%
62	15.00%	15.00%	15.00%	33.00%
63	15.00%	15.00%	15.00%	40.00%
64	15.00%	15.00%	15.00%	52.50%
65+	100.00%	100.00%	100.00%	100.00%

24. Changes in actuarial assumptions – Details of all assumption changes can be found in the Actuarial Experience Study Report on StanCERA's website at http://www.stancera.org for the period covering July 1, 2015 through June 30, 2018. The proposed assumptions were summarized and reviewed with the Board at the January 22, 2019 Board meeting, at which the Board provided direction to proceed with the valuation based on those assumptions.

Participant data on active and inactive Members and their beneficiaries as of the valuation date was supplied by the Plan staff on direction of the Executive Director on electronic media. Member data was neither verified nor audited.

SCHEDULE OF ACTIVE MEMBER VALUATION DATA
FOR FISCAL YEARS ENDED JUNE 30

Valuation Date	Plan Type	Number	Annual Salary	Average Annual Salary	% Increase (Decrease) in Average Salary	Number of Employers
6/30/2010	General	3,464	$ 202,200,198	$ 58,372	5.26%	
	Safety	685	46,630,275	68,073	6.64%	
	Total	4,149	$ 248,830,473	$ 59,974	5.45%	8
6/30/2011	General	3,232	$ 184,906,498	$ 57,211	-1.99%	
	Safety	637	41,800,298	65,621	-3.60%	
	Total	3,869	$ 226,706,796	$ 58,596	-2.30%	8
6/30/2012	General	3,233	$ 179,260,736	$ 55,447	-3.08%	
	Safety	661	41,657,273	63,022	-3.96%	
	Total	3,894	$ 220,918,009	$ 56,733	-3.18%	8
6/30/2013	General	3,230	$ 176,437,755	$ 54,625	-1.48%	
	Safety	694	42,590,563	61,370	-2.62%	
	Total	3,924	$ 219,028,318	$ 55,818	-1.61%	8
6/30/2014	General	3,303	$ 179,606,090	$ 54,377	-0.45%	
	Safety	689	43,422,198	63,022	2.69%	
	Total	3,992	$ 223,028,288	$ 55,869	0.09%	8
6/30/2015	General	3,421	$ 188,550,804	$ 55,116	1.36%	
	Safety	723	49,166,923	68,004	7.91%	
	Total	4,144	$ 237,717,727	$ 57,364	2.68%	8
6/30/2016	General	3,521	$ 198,457,059	$ 56,364	2.26%	
	Safety	727	52,020,521	71,555	5.22%	
	Total	4,248	$ 250,477,580	$ 58,964	2.79%	8
6/30/2017	General	3,552	$ 201,758,423	$ 56,801	0.78%	
	Safety	757	54,385,261	71,843	0.40%	
	Total	4,309	$ 256,143,684	$ 59,444	0.81%	8
6/30/2018	General	3,658	$ 211,919,963	$ 57,933	1.99%	
	Safety	794	58,835,257	74,100	3.14%	
	Total	4,452	$ 270,755,220	$ 60,817	2.31%	8
6/30/2019	General	3,690	$ 220,393,008	$ 59,727	3.10%	
	Safety	814	63,615,295	78,151	5.47%	
	Total	4,504	$ 284,008,303	$ 63,057	3.68%	8

Note: The annual salary presented here is annualized historical salary. The covered payroll shown in the Notes to the Basic Financial Statements is actual pensionable salaries. Salary shown in the schedule of Funding Progress is based on projected salary from the actuarial valuation.

Note: The employers participating in the Plan include Stanislaus County, Stanislaus County Superior Court, City of Ceres and five small districts.

SCHEDULE OF FUNDING PROGESS
FOR FISCAL YEARS ENDED JUNE 30

Actuarial Valuation Date	Valuation Assets [1]	Actuarial Accrued Liability (AAL)	Unfunded AAL	Funded Ratio	Covered Payroll	Unfunded AAL as a % of Covered Payroll
2010	$1,325,801,000	$1,737,824,000	$ 412,023,000	76.3%	$ 248,830,473	165.6%
2011	$1,372,046,000	$1,757,718,000	$ 385,672,000	78.1%	$ 226,706,796	170.1%
2012	$1,451,764,000	$1,888,713,000	$ 436,949,000	76.9%	$ 220,918,009	197.8%
2013	$1,524,076,000	$1,919,227,000	$ 395,151,000	79.4%	$ 219,028,318	180.4%
2014	$1,644,077,000	$2,026,371,000	$ 382,294,000	81.1%	$ 223,028,288	171.4%
2015	$1,763,629,000	$2,391,522,000	$ 627,893,000	73.7%	$ 237,717,727	264.1%
2016	$1,845,764,000	$2,537,067,000	$ 691,303,000	72.8%	$ 250,477,580	276.0%
2017	$1,968,231,000	$2,648,162,000	$ 679,931,000	74.3%	$ 256,143,684	265.4%
2018	$2,100,278,000	$2,749,068,000	$ 648,790,000	76.4%	$ 270,755,220	239.6%
2019	$2,199,956,000	$2,897,223,000	$ 697,267,000	75.9%	$ 284,008,303	245.5%

[1] Excludes value of Non-Valuation Reserves.

RETIREES AND BENEFICIARIES ADDED TO
AND REMOVED FROM RETIREE PAYROLL
FOR FISCAL YEARS ENDED JUNE 30

Actuarial Valuation Date	At Beginning of Year	Added During Year	Allowances Added	Removed During Year	Allowances Removed	At End of Year	Retiree Payroll	% Increase in Retiree Payroll	Average Annual Allowance
2010	2,751	159	$ 3,349,900	80	$ 751,427	2,830	$ 71,464,735	7.11%	$ 25,334
2011	2,830	263	$ 4,724,416	78	$ 1,194,042	3,015	$ 74,826,404	4.70%	$ 25,732
2012	3,015	226	$ 3,565,634	99	$ 978,729	3,142	$ 80,157,222	7.12%	$ 26,737
2013	3,142	198	$ 6,036,138	91	$ 1,144,584	3,249	$ 89,975,736	12.25%	$ 27,694
2014	3,249	222	$ 6,703,273	86	$ 1,725,066	3,385	$ 96,405,454	7.15%	$ 28,480
2015	3,385	237	$ 7,778,716	83	$ 2,043,313	3,539	$ 104,052,097	7.93%	$ 29,402
2016	3,539	211	$ 7,066,750	99	$ 2,160,689	3,651	$ 111,260,240	6.93%	$ 30,474
2017	3,651	202	$ 6,749,973	107	$ 2,471,229	3,746	$ 117,901,627	5.97%	$ 31,474
2018	3,746	233	$ 7,555,825	123	$ 3,109,178	3,856	$ 124,995,337	6.02%	$ 32,416
2019	3,856	242	$ 8,421,538	97	$ 2,580,158	4,001	$ 133,601,799	6.89%	$ 33,392

SCHEDULE OF FUNDED LIABILITIES BY TYPE
SOLVENCY TEST
FOR FISCAL YEARS ENDED JUNE 30

Valuation Date		Actuarial Accrued Liabilities (AAL) for: 1 Active Member Contributions	2 Retirees & Beneficiaries	3 Active Members Employer Portion	Actuarial Accrued Liabilities	Reported Assets	Portion of Accrued Liabilities Covered by Reported Assets 1	2	3
2010		$ 323,940,000	$ 829,323,000	$ 584,561,000	$ 1,737,824,000	$ 1,325,801,000	100%	100%	30%
2011		$ 337,201,000	$ 897,384,000	$ 523,133,000	$ 1,757,718,000	$ 1,372,046,000	100%	100%	26%
2012		$ 351,569,000	$ 987,546,000	$ 549,598,000	$ 1,888,713,000	$ 1,451,764,000	100%	100%	20%
2013	1	$ 191,968,000	$ 1,065,792,000	$ 661,466,000	$ 1,919,227,000	$ 1,524,076,000	100%	100%	40%
2014		$ 193,301,000	$ 1,144,734,000	$ 688,335,000	$ 2,026,371,000	$ 1,644,077,000	100%	100%	44%
2015		$ 196,074,000	$ 1,328,846,000	$ 850,510,000	$ 2,391,522,000	$ 1,763,629,000	100%	100%	28%
2016		$ 200,960,000	$ 1,427,166,000	$ 908,941,000	$ 2,537,067,000	$ 1,845,764,000	100%	100%	24%
2017		$ 206,386,000	$ 1,510,151,000	$ 931,625,000	$ 2,648,162,000	$ 1,968,231,000	100%	100%	27%
2018		$ 213,223,000	$ 1,590,078,000	$ 945,767,000	$ 2,749,068,000	$ 2,100,278,000	100%	100%	31%
2019		$ 219,369,000	$ 1,695,484,000	$ 982,369,000	$ 2,897,223,000	$ 2,199,956,000	100%	100%	29%

[1] Reflects tranfer as of June 30, 2008 of $50 million from Non-Valuation to Valuation Reserves.

ACTUARIAL ANALYSIS OF FINANCIAL EXPERIENCE
FOR FISCAL YEARS ENDED JUNE 30

Plan Year Ending		Actuarial (Gains)/Losses: Asset Sources	Liability Sources	Total	Changes in Plan Provisions	Changes in Assumption/ Methods
2010		$ (76,507,113)	$ 37,492,978	$ 39,014,135	$ -	$ (51,743,766)
2011		$ 49,205,018	$ (2,387,353)	$ 46,817,665	$ -	$ (72,085,966)
2012		$ (5,283,786)	$ 6,191,029	$ 907,243	$ -	$ 52,606,350
2013		$ 10,200,000	$ 8,500,000	$ 18,700,000	$ -	$ (63,400,000)
2014		$ (22,600,000)	$ 6,100,000	$ (16,500,000)	$ -	$ 400,000
2015		$ (20,600,000)	$ (5,600,000)	$ (26,200,000)	$ -	$ 269,800,000
2016	1	$ 16,300,000	$ 28,900,000	$ 45,200,000	$ -	$ -
2017		$ (20,800,000)	$ (8,900,000)	$ (29,700,000)	$ -	$ -
2018		$ (12,400,000)	$ 16,800,000	$ 4,400,000	$ -	$ (37,800,000)
2019		$ 28,700,000	$ 30,800,000	$ 59,500,000	$ -	$ -

[1] Changes due to Actuarial Audit included as Liability Loss of $700,000.

A 10 year schedule of actuarially determined contributions compared to actual contributions can be found in the Required Supplementary Information to the Financial Statements on page 46.

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Statistical Section

STATISTICAL INFORMATION

This section provides a multi-year trend of financial and demographic information to facilitate a more comprehensive understanding of this year's financial statements, note disclosures, and supplementary information covering StanCERA's Plan. The financial and operating information provides additional perspective, context, and detail for StanCERA's Fiduciary Net Position, revenues and expenses by source, number of retirees by benefit type, payments made to retirees by benefit type, membership history, and the participating employers. The financial and operating trend information is located below and on the following pages.

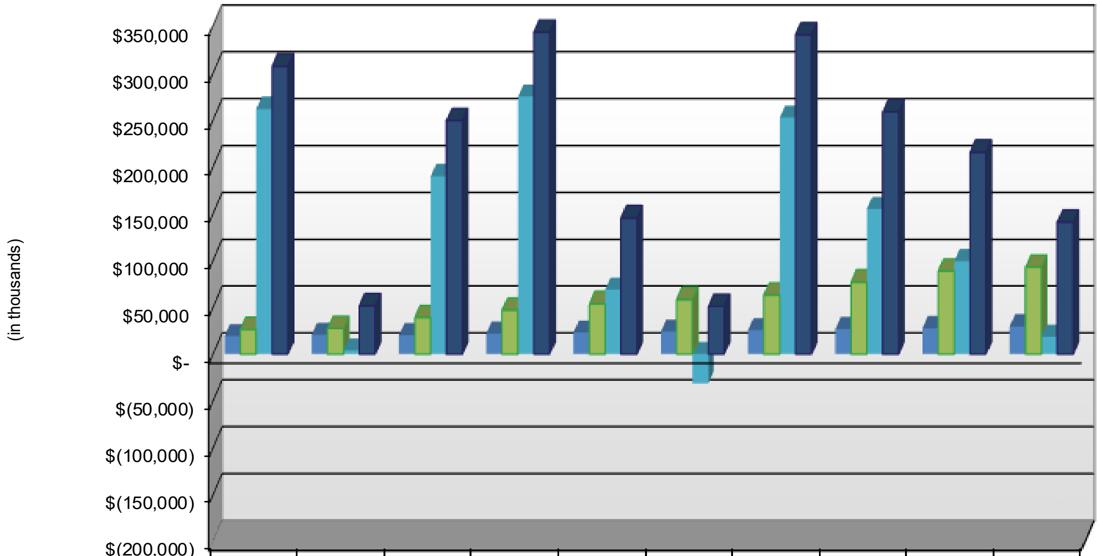
CHANGES IN FIDUCIARY NET POSITION

Last Ten Fiscal Years ending June 30

Additions To Fiduciary Net Position	2020	2019	2018	2017	2016
Employer Contributions	$ 92,684,609	$ 88,589,381	$ 76,966,471	$ 63,024,559	$ 58,196,310
Plan Member Contributions	29,645,645	27,742,863	26,746,289	25,463,745	23,916,508
Net Investment Income (Loss)	18,496,773	99,280,525	154,988,199	252,309,706	(31,322,276)
Total Additions	$ 140,827,027	$ 215,612,769	$ 258,700,959	$ 340,798,010	$ 50,790,542
Deductions From Fiduciary Net Position					
Pension Benefits	$ 138,223,922	$ 129,100,668	$ 121,138,269	$ 114,290,758	$ 106,928,097
Refunds	1,761,673	2,674,023	2,033,847	2,553,100	1,237,713
Administrative Expense	3,216,625	2,557,391	2,791,409	2,644,554	2,315,223
Total Deductions	$ 143,202,220	$ 134,332,082	$ 125,963,525	$ 119,488,412	$ 110,481,033
Change in Fiduciary Net Position Restricted for Pension Benefits	$ (2,375,193)	$ 81,280,687	$ 132,737,434	$ 221,309,598	$ (59,690,491)
Fiduciary Net Position Restricted for Pension Benefits					
Beginning of Year	2,208,241,432	2,126,960,745	1,994,223,311	1,772,913,713	1,832,604,204
End of Year	$ 2,205,866,239	$ 2,208,241,432	$ 2,126,960,745	$ 1,994,223,311	$ 1,772,913,713

Additions To Fiduciary Net Position	2015	2014	2013	2012	2011
Employer Contributions	$ 53,849,031	$ 46,763,996	$ 39,077,480	$ 27,314,032	$ 26,256,729
Plan Member Contributions	22,960,235	21,867,911	20,285,888	20,525,295	19,197,052
Net Investment Income (Loss)	68,722,781	274,896,108	189,988,287	3,724,754	261,842,492
Total Additions	$ 145,532,047	$ 343,528,015	$ 249,351,655	$ 51,564,081	$ 307,296,273
Deductions From Fiduciary Net Position					
Pension Benefits	$ 99,811,849	$ 93,076,127	$ 86,722,499	$ 80,062,975	$ 74,725,248
Refunds	2,046,307	1,706,344	1,926,062	1,927,058	2,007,309
Administrative Expense	2,378,966	2,249,260	2,065,345	2,144,748	2,037,167
Total Deductions	$ 104,237,122	$ 97,031,731	$ 90,713,906	$ 84,134,781	$ 78,769,724
Change in Fiduciary Net Position Restricted for Pension Benefits	$ 41,294,925	$ 246,496,284	$ 158,637,749	$ (32,570,700)	$ 228,526,549
Fiduciary Net Position Restricted for Pension Benefits					
Beginning of Year	1,791,309,279	1,544,812,995	1,386,175,246	1,418,745,946	1,190,219,397
End of Year	$ 1,832,604,204	$ 1,791,309,279	$ 1,544,812,995	$ 1,386,175,246	$ 1,418,745,946

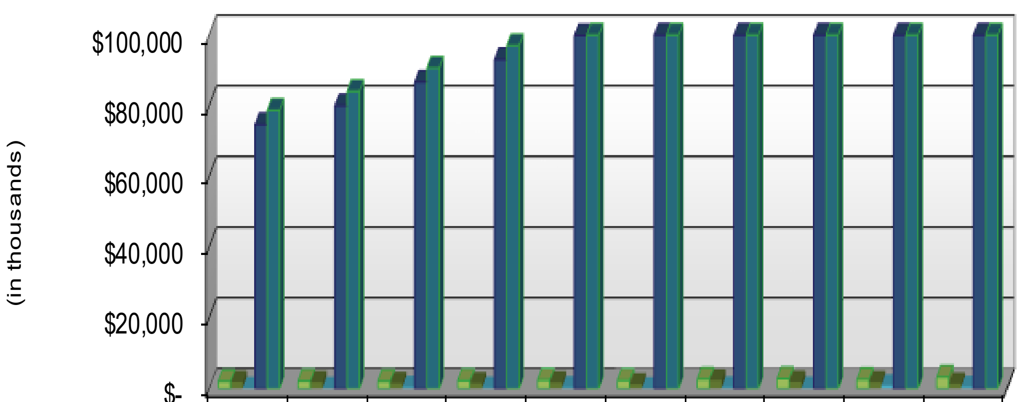
Additions by Source
(for years ending June 30)



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Plan Member Contrib.	$19,197	$20,525	$20,286	$21,868	$22,960	$23,917	$25,464	$26,747	$27,743	$29,645
Employer Contrib.	$26,257	$27,314	$39,077	$46,764	$53,849	$58,196	$63,024	$76,966	$88,589	$92,685
Investments	$261,842	$3,725	$189,988	$274,896	$68,723	$(31,322)	$252,310	$154,988	$99,281	$18,497
Total	$307,296	$51,564	$249,351	$343,528	$145,532	$50,791	$340,798	$258,701	$215,613	$140,827

Data Source: CAFR Financial Section, Statement of Changes in Fiduciary Net Position in Management Discussion

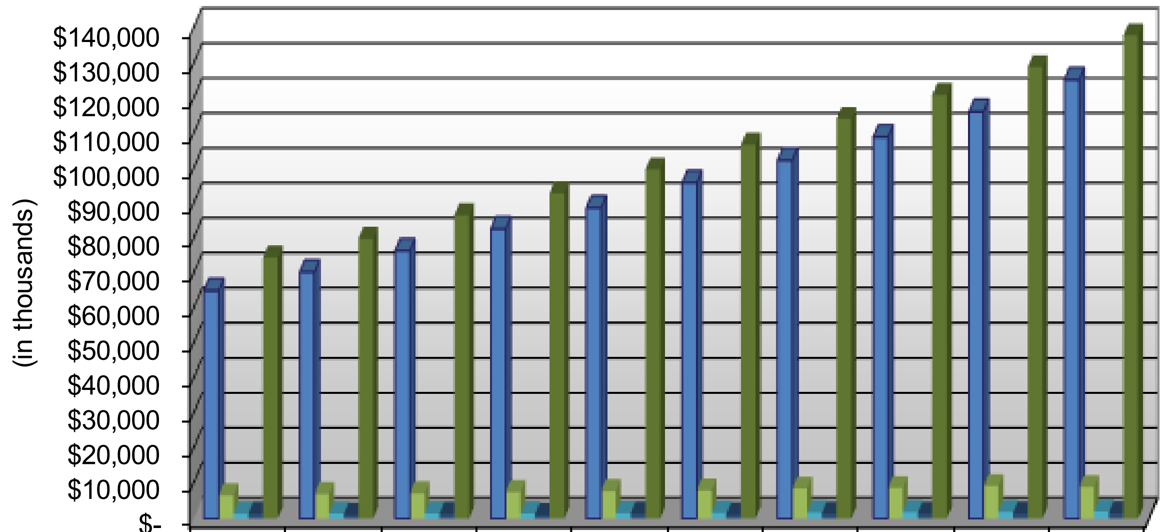
Deductions by Type
(for years ending June 30)



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Administrative	$2,037	$2,145	$2,065	$2,249	$2,379	$2,315	$2,644	$2,792	$2,557	$3,216
Refunds - Separation	$1,906	$1,833	$1,546	$1,516	$1,759	$1,219	$2,298	$1,906	$1,826	$1,352
Refunds - Death	$102	$94	$380	$191	$287	$19	$255	$128	$848	$410
Benefits	$74,725	$80,063	$86,723	$93,076	$99,812	$106,928	$114,291	$121,138	$129,101	$138,224
Total	$78,770	$84,135	$90,714	$97,032	$104,237	$110,481	$119,488	$125,964	$134,332	$143,202

Data Source:
CAFR Financial Section, Statement of Changes in Fiduciary Net Position

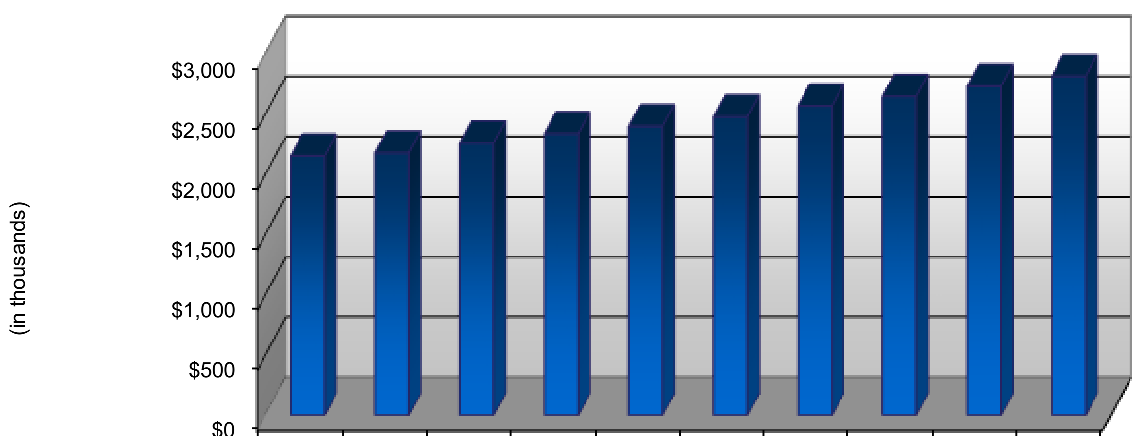
Benefit Expense by Type
(for years ending June 30)



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Service	$65,210	$70,525	$76,629	$82,899	$88,905	$96,058	$102,484	$109,159	$116,406	$125,521
Serv. Conn. Dis.	$6,672	$7,020	$7,271	$7,636	$7,911	$8,072	$8,591	$8,752	$9,328	$9,061
Non-Serv. Dis.	$1,446	$1,471	$1,475	$1,526	$1,577	$1,631	$1,819	$1,869	$1,934	$2,123
Surv. Death Ben.	$1,397	$1,047	$1,348	$1,015	$1,419	$1,167	$1,397	$1,358	$1,433	$1,519
Total	$74,725	$80,063	$86,723	$93,076	$99,812	$106,928	$114,291	$121,138	$129,101	$138,224

Data Source: StanCERA Pension Administration System

Average Monthly Retirement Benefits
(for years ending June 30)



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Monthly Allowance	$2,153	$2,177	$2,260	$2,337	$2,398	$2,478	$2,568	$2,646	$2,731	$2,814

Data Source: StanCERA Pension Administration System

RETIRED MEMBERS BY BENEFIT TYPE
as of June 30, 2020

Amount Monthly Benefit	Total # Retirees	Service Retirement	Service Connected Disability	Non-Service Disability	Survivors
General Members					
$0-500	367	346	1	12	8
501-1,000	482	430	3	30	19
1,001-1,500	537	474	13	41	9
1,501-2,000	413	358	32	19	4
2,001-2,500	337	301	27	7	2
2,501-3,000	268	246	16	5	1
3,001-3,500	188	181	6	0	1
3,501-4,000	160	155	2	1	2
4,001-4,500	136	134	2	0	0
4,501-5,000	105	103	1	1	0
over 5,000	399	395	3	0	1
Totals	3,392	3,123	106	116	47
Safety Members					
$0-500	36	18	17	1	0
501-1,000	34	26	5	1	2
1,001-1,500	38	36	0	1	1
1,501-2,000	47	38	5	4	0
2,001-2,500	47	37	6	3	1
2,501-3,000	54	25	28	0	1
3,001-3,500	95	38	55	1	1
3,501-4,000	61	37	24	0	0
4,001-4,500	53	40	12	0	1
4,501-5,000	30	28	2	0	0
over 5,000	206	188	18	0	0
Totals	701	511	172	11	7
TOTALS	**4,093**	**3,634**	**278**	**127**	**54**

Data Source: StanCERA Pension Administration System

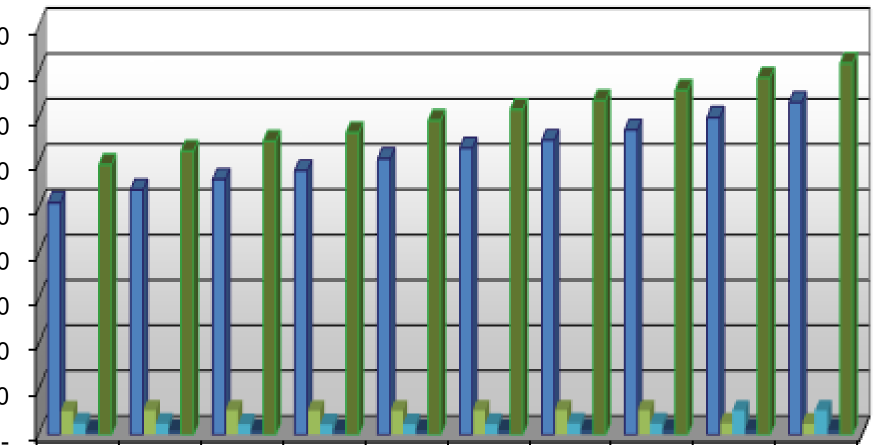
AVERAGE BENEFIT PAYMENTS

As of Fiscal Year End June 30

	Beneficiaries & Dro's	0-5	5-10	10-15	15-20	20-25	25-30	30+
		Service Years Credited						
Fiscal Year Ending June 30, 2011								
Average Monthly Benefit	$1,362	$621	$1,044	$1,192	$1,843	$2,581	$3,785	$5,260
Avg Final Average Salary	$1,176	$3,840	$3,286	$2,862	$3,009	$3,364	$3,790	$5,232
Number of Active Retirees	389	169	350	574	454	424	331	298
Fiscal Year Ending June 30, 2012								
Average Monthly Benefit	$1,405	$596	$1,040	$1,212	$1,918	$2,654	$3,860	$5,152
Avg Final Average Salary	$2,612	$4,848	$3,857	$3,620	$3,963	$4,393	$4,812	$5,815
Number of Active Retirees	383	176	366	606	484	446	335	320
Fiscal Year Ending June 30, 2013								
Average Monthly Benefit	$1,430	$657	$1,100	$1,295	$2,003	$2,792	$4,007	$5,309
Avg Final Average Salary	$2,662	$5,058	$4,110	$3,748	$4,047	$4,516	$4,962	$5,872
Number of Active Retirees	387	195	376	634	498	469	344	331
Fiscal Year Ending June 30, 2014								
Average Monthly Benefit	$1,467	$651	$1,124	$1,354	$2,082	$2,836	$4,088	$5,427
Avg Final Average Salary	$2,745	$5,272	$4,205	$3,927	$4,235	$4,596	$5,089	$5,948
Number of Active Retirees	389	206	394	680	524	488	353	349
Fiscal Year Ending June 30, 2015								
Average Monthly Benefit	$1,508	$638	$1,143	$1,403	$2,164	$2,938	$4,217	$5,566
Avg Final Average Salary	$2,846	$5,627	$4,328	$4,055	$4,379	$4,675	$5,175	$6,047
Number of Active Retirees	399	222	407	699	551	511	375	360
Fiscal Year Ending June 30, 2016								
Average Monthly Benefit	$1,548	$652	$1,186	$1,462	$2,231	$3,034	$4,342	$5,669
Avg Final Average Salary	$2,901	$5,766	$4,535	$4,187	$4,513	$4,779	$5,297	$6,061
Number of Active Retirees	412	230	420	699	573	525	398	380
Fiscal Year Ending June 30, 2017								
Average Monthly Benefit	$1,620	$791	$1,203	$1,520	$2,338	$3,172	$4,482	$5,790
Avg Final Average Salary	$3,006	$5,453	$4,588	$4,293	$4,666	$4,946	$5,413	$6,076
Number of Active Retirees	378	274	438	716	593	547	413	384
Fiscal Year Ending June 30, 2018								
Average Monthly Benefit	$1,768	$801	$1,208	$1,551	$2,406	$3,289	$4,600	$5,912
Avg Final Average Salary	$3,617	$5,738	$4,679	$4,379	$4,776	$5,123	$5,512	$6,102
Number of Active Retirees	333	281	461	732	614	548	430	397
Fiscal Year Ending June 30, 2019								
Average Monthly Benefit	$1,851	$891	$1,222	$1,616	$2,503	$3,493	$4,713	$6,057
Avg Final Average Salary	$3,674	$6,014	$4,734	$4,487	$4,907	$5,361	$5,574	$6,203
Number of Active Retirees	351	298	470	753	642	572	440	408
Fiscal Year Ending June 30, 2020								
Average Monthly Benefit	$1,796	$1,288	$1,374	$2,970	$3,319	$5,264	$11,881	$6,857
Avg Final Average Salary	$3,422	$6,235	$4,843	$4,592	$5,039	$5,495	$5,775	$6,290
Number of Active Retirees	445	308	486	771	665	604	464	425

Membership History (Retired)

(for years ending June 30)

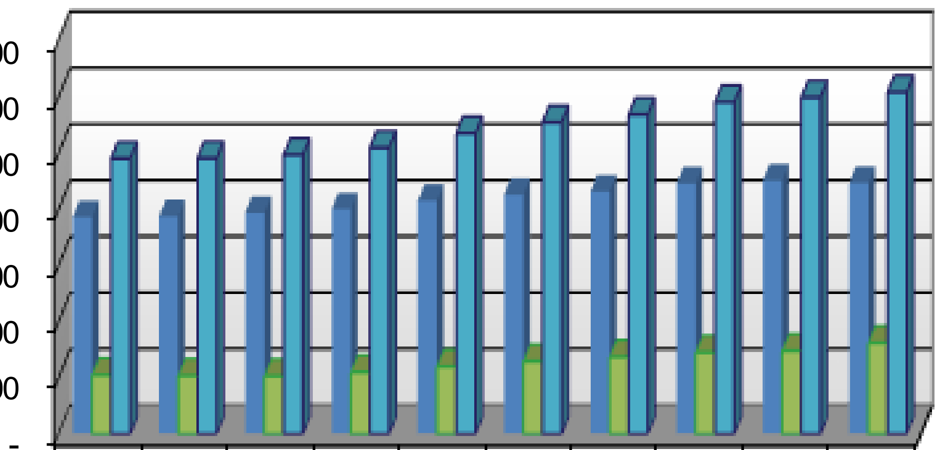


	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Service	2,558	2,697	2,814	2,910	3,043	3,157	3,245	3,359	3,497	3,661
Serv. Conn. Dis.	254	262	262	260	260	262	264	262	121	117
Non-Serv. Dis.	122	119	113	112	113	114	121	120	261	262
Surv. Death Ben.	42	45	45	46	48	49	53	55	55	53
Total	2,976	3,123	3,234	3,328	3,464	3,582	3,683	3,796	3,934	4,093

Data Source: StanCERA Pension Administration System

Membership History (Active & Deferred)

(for years ending June 30)



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Active Members	3,854	3,868	3,931	3,993	4,145	4,249	4,309	4,452	4,504	4,459
Inactive Members	1,042	1,032	1,028	1,095	1,198	1,289	1,367	1,445	1,476	1,615
Total	4,896	4,900	4,959	5,088	5,343	5,538	5,676	5,897	5,980	6,074

Data Source: StanCERA Pension Administration System

PARTICIPATING EMPLOYERS AND ACTIVE MEMBERS WITH PERCENTAGE OF TOTAL SYSTEM

for years ended June 30

	2020		2019		2018		2017		2016	
Stanislaus County:										
General Members	3,273	73.4%	3,305	73.4%	3,307	74.3%	3,202	74.3%	3,156	74.3%
Safety Members	726	16.3%	734	16.3%	721	16.2%	676	15.7%	645	15.2%
Total	3,999		4,039		4,028		3,878		3,801	
Participating Agencies:										
Stanislaus County Superior Court	234	5.2%	239	5.3%	219	4.9%	217	5.0%	228	5.4%
City of Ceres	186	4.2%	185	4.1%	171	3.8%	180	4.2%	184	4.3%
East Side Mosquito Abatement District	9	0.2%	10	0.2%	9	0.2%	9	0.2%	10	0.2%
Hills Ferry Cemetery	3	0.1%	3	0.1%	3	0.1%	3	0.1%	3	0.1%
Keyes Community Services District	7	0.2%	7	0.2%	6	0.1%	6	0.1%	6	0.2%
Salida Sanitary District	7	0.2%	7	0.2%	6	0.1%	7	0.2%	7	0.2%
Stanislaus Council of Governments	14	0.3%	14	0.3%	10	0.2%	9	0.2%	10	0.2%
Total	460		465		424		431		448	
Total Active Membership	**4,459**		**4,504**		**4,452**		**4,309**		**4,249**	

	2015		2014		2013		2012		2011	
Stanislaus County:										
General Members	3,062	73.9%	2,963	74.2%	2,903	73.8%	2,852	73.7%	2,841	73.7%
Safety Members	643	15.5%	602	15.1%	606	15.4%	574	14.8%	553	14.3%
Total	**3,705**		**3,565**		**3,509**		**3,426**		**3,394**	
Participating Agencies:										
Stanislaus County Superior Court	224	5.4%	212	5.3%	205	5.2%	229	5.9%	245	6.4%
City of Ceres	181	4.4%	181	4.5%	178	4.5%	173	4.5%	173	4.5%
East Side Mosquito Abatement District	8	0.2%	9	0.2%	10	0.3%	10	0.3%	11	0.3%
Hills Ferry Cemetery	3	0.1%	3	0.1%	4	0.1%	4	0.1%	4	0.1%
Keyes Community Services District	6	0.1%	6	0.1%	5	0.2%	6	0.2%	6	0.2%
Salida Sanitary District	7	0.2%	7	0.2%	7	0.2%	7	0.2%	7	0.2%
Stanislaus Council of Governments	11	0.3%	10	0.3%	13	0.3%	13	0.3%	14	0.4%
Total	440		428		422		442		460	
Total Active Membership	**4,145**		**3,993**		**3,931**		**3,868**		**3,854**	

Data Source: StanCERA Pension Administration System

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Vision:

Empowering Our Members Through Education and Technology to Play a Proactive Role in Understanding and Managing their Retirement Benefits

StanCERA

Mission;

Provide and Promote Comprehensive and Financially Sound Retirement in a Professional, Efficient and Courteous Manner

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

REPORT TO THE BOARD OF RETIREMENT AND INTERNAL GOVERNANCE COMMITTEE

FOR THE FISCAL YEAR ENDED JUNE 30, 2020

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

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REGISTERED with the Public Company Accounting Oversight Board and MEMBER of the American Institute of Certified Public Accountants

BROWN ARMSTRONG

Certified Public Accountants

REQUIRED COMMUNICATION TO THE MEMBERS OF THE BOARD OF RETIREMENT AND INTERNAL GOVERNANCE COMMITTEE IN ACCORDANCE WITH PROFESSIONAL STANDARDS (SAS 114)

To the Board of Retirement and Internal Governance Committee of
Stanislaus County Employees' Retirement Association
Modesto, California

We have audited the financial statements of the Stanislaus County Employees' Retirement Association (StanCERA) as of and for the fiscal year ended June 30, 2020, and have issued our report dated November 12, 2020. Professional standards require that we provide you with information about our responsibilities under auditing standards generally accepted in the United States of America and *Government Auditing Standards*, as well as certain information related to the planned scope and timing of our audit. We have communicated such information in our letter to you dated June 18, 2020. Professional standards also require that we communicate to you the following information related to our audit.

Significant Audit Matters

Qualitative Aspects of Accounting Practices
Management is responsible for the selection and use of appropriate accounting policies. The significant accounting policies used by StanCERA are described in Note 2, Summary of Significant Accounting Policies, to the financial statements. No new accounting policies were adopted and the application of existing policies was not changed during the fiscal year ended June 30, 2020. As described in Note 2, StanCERA adopted Governmental Accounting Standards Board (GASB) Statement No. 95, *Postponement of the Effective Dates of Certain Authoritative Guidance*, during the year ended June 30, 2020. We noted no transactions entered into by StanCERA during the fiscal year for which there is a lack of authoritative guidance or consensus. All significant transactions have been recognized in the financial statements in the proper period.

Accounting estimates are an integral part of the financial statements prepared by management and are based on management's knowledge and experience about past and current events and assumptions about future events. Certain accounting estimates are particularly sensitive because of their significance to the financial statements and because of the possibility that future events affecting them may differ significantly from those expected. The most sensitive estimates affecting StanCERA's financial statements were:

- Management's estimate of the fair value of investments, which was derived by various methods as detailed in the notes to the financial statements. We evaluated the key factors and assumptions used to develop the estimate of the fair value of investments in determining that it is reasonable in relation to the financial statements taken as a whole.

- The contribution amounts and net pension liability as detailed in the notes to the financial statements, which are based on the actuarially-presumed interest rate and assumptions. We evaluated the key factors and assumptions used to develop the estimates of contribution amounts and net pension liability in determining that they are reasonable in relation to the financial statements taken as a whole.

Certain financial statement disclosures are particularly sensitive because of their significance to financial statement users. The most sensitive disclosures affecting the financial statements were:

- The disclosures for cash and investments in Notes 2 and 4 to the financial statements, Summary of Significant Accounting Policies and Cash and Investments, respectively, were derived from StanCERA's investment policy. Management's estimate of the fair value of investments was derived by various methods as detailed in the notes to the financial statements.

- Additionally, the disclosures related to the funding policies, net pension liability, and actuarial methods and assumptions in Note 1, Description of Plan; Note 5, Contributions; and Note 8, Net Pension Liability of Participating Employers were derived from actuarial valuations, which involved estimates of the value of reported amounts and probabilities about the occurrence of future events far into the future.

The financial statement disclosures are neutral, consistent, and clear.

Difficulties Encountered in Performing the Audit
We encountered no significant difficulties in dealing with management in performing and completing our audit.

Corrected and Uncorrected Misstatements
Professional standards require us to accumulate all known and likely misstatements identified during the audit, other than those that are clearly trivial, and communicate them to the appropriate level of management. We did not identify any misstatements as a result of our audit procedures.

Disagreements with Management
For purposes of this letter, a disagreement with management is a financial accounting, reporting, or auditing matter, whether or not resolved to our satisfaction, that could be significant to the financial statements or the auditor's report. We are pleased to report that no such disagreements arose during the course of our audit.

Management Representations
We have requested certain representations from management that are included in the management representation letter dated November 12, 2020.

Management Consultations with Other Independent Accountants
In some cases, management may decide to consult with other accountants about auditing and accounting matters, similar to obtaining a "second opinion" on certain situations. If a consultation involves application of an accounting principle to StanCERA's financial statements or a determination of the type of auditor's opinion that may be expressed on those statements, our professional standards require the consulting accountant to check with us to determine that the consultant has all the relevant facts. To our knowledge, there were no such consultations with other accountants.

Other Audit Findings or Issues
We generally discuss a variety of matters, including the application of accounting principles and auditing standards, with management each year prior to retention as StanCERA's auditors. However, these discussions occurred in the normal course of our professional relationship and our responses were not a condition to our retention.

Other Matters
We applied certain limited procedures to the Management's Discussion and Analysis, Schedule of Changes in Net Pension Liability and Related Ratios, Schedule of Employer Contributions, Schedule of Investment Returns, and Notes to the Required Supplementary Information (RSI), which are RSI that supplement the basic financial statements. Our procedures consisted of inquiries of management regarding the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during the audit of the basic financial statements. We did not audit the RSI and do not express an opinion or provide any assurance on the RSI.

We were engaged to report on the Schedule of Administrative Expenses, Schedule of Investment Management Fees and Other Investment Expenses, and Schedule of Payments to Consultants, which accompany the financial statements but are not RSI. With respect to this other supplemental information, we made certain inquiries of management and evaluated the form, content, and methods of preparing the information to determine that the information complies with accounting principles generally accepted in the United States of America. The method of preparing it has not changed from the prior period, and the information is appropriate and complete in relation to our audit of the financial statements. We compared and reconciled the other supplemental information to the underlying accounting records used to prepare the financial statements or to the financial statements themselves.

We were not engaged to report on the introductory, investment, actuarial, and statistical sections, which accompany the financial statements but are not RSI. We did not audit or perform other procedures on this other information and we do not express an opinion or provide any assurance on it.

Restriction on Use

This information is intended solely for the use of the Board of Retirement, Internal Governance Committee, and management of StanCERA and is not intended to be, and should not be, used by anyone other than these specified parties.

BROWN ARMSTRONG
ACCOUNTANCY CORPORATION

Brown Armstrong
Accountancy Corporation

Bakersfield, California
November 12, 2020

BROWN ARMSTRONG

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BROWN ARMSTRONG

Certified Public Accountants

INDEPENDENT AUDITOR'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH *GOVERNMENT AUDITING STANDARDS*

To the Board of Retirement and Internal Governance Committee of
Stanislaus County Employees' Retirement Association
Modesto, California

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of the Stanislaus County Employees' Retirement Association (StanCERA) as of and for the fiscal year ended June 30, 2020, and the related notes to the financial statements, which collectively comprise StanCERA's basic financial statements, and have issued our report thereon dated November 12, 2020.

Internal Control Over Financial Reporting

In planning and performing our audit of the financial statements, we considered StanCERA's internal control over financial reporting (internal control) as a basis for designing audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of StanCERA's internal control. Accordingly, we do not express an opinion on the effectiveness of StanCERA's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of StanCERA's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

Compliance and Other Matters

As part of obtaining reasonable assurance about whether StanCERA's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts, and agreements, noncompliance with which could have a direct and material effect on the financial statements. However, providing an opinion on compliance with those provisions was not an objective of our audit and, accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

Purpose of this Report

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of StanCERA's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering StanCERA's internal control and compliance. Accordingly, this report is not suitable for any other purpose.

BROWN ARMSTRONG
ACCOUNTANCY CORPORATION

Brown Armstrong
Accountancy Corporation

Bakersfield, California
November 12, 2020

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AGREED UPON CONDITIONS REPORT DESIGNED TO IMPROVE EFFICIENCY, INTERNAL CONTROLS, AND/OR FINANCIAL REPORTING (MANAGEMENT LETTER)

To the Internal Governance Committee of
Stanislaus County Employees' Retirement Association
Modesto, California

We have audited the financial statements of the Stanislaus County Employees' Retirement Association (StanCERA) as of and for the fiscal year ended June 30, 2020, and have issued our report dated November 12, 2020. In planning and performing our audit of the financial statements of StanCERA, we considered its internal control structure over financial reporting (internal control) as a basis for designing our auditing procedures for the purpose of expressing our opinion on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of StanCERA's internal control. Accordingly, we do not express an opinion on the effectiveness of StanCERA's internal control.

A deficiency in internal control exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A material weakness is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the entity's financial statements will not be prevented, or detected and corrected on a timely basis.

Our consideration of internal control was for the limited purpose described in the first paragraph and was not designed to identify all deficiencies in internal control that might be material weaknesses. In addition, because of inherent limitations in internal control, including the possibility of management override of controls, misstatements due to error or fraud may occur and not be detected by such controls. Given these limitations during our audit, we did not identify any deficiencies in internal control that we considered to be material weaknesses. However, material weaknesses may exist that have not been identified.

During our audit, we became aware of one matter that is an opportunity for strengthening internal controls and operating efficiencies. The recommendation listed in this report summarizes our comment and suggestion regarding this matter.

We will review the status of the comment during our next audit engagement. We have already discussed the comment and suggestion with various StanCERA personnel, and we will be pleased to discuss this in further detail at your convenience, to perform any additional study of these matters, or to assist you in implementing the recommendations.

Restriction on Use

This report is intended solely for the information and use of the Internal Governance Committee and management of StanCERA and is not intended to be, and should not be, used by anyone other than these specified parties.

BROWN ARMSTRONG
ACCOUNTANCY CORPORATION

Brown Armstrong
Accountancy Corporation

Bakersfield, California
November 12, 2020

Current Year Agreed Upon Condition and Recommendation

Agreed Upon Condition 1 – Cost Methodology and Reconciliation

As a result of a past observation, StanCERA implemented a process to reconcile the cost for its alternative investment managers and created a detailed spreadsheet for each manager. In reviewing the cost reconciliation spreadsheet, we noted it did not reconcile to StanCERA's Custodian. The reconciliation noted differences between their records and the Custodian. It is common practice to reconcile with the Custodian (the book of record), to ensure the cost value is accurately reported by StanCERA.

Recommendation

We recommend StanCERA consult with the Custodian to ensure the Custodian follows the same recording process, which should in turn minimize the reconciliation differences between StanCERA and the Custodian.

Management Response

StanCERA concurs with the recommendation and will consult with the Custodian to ensure the Custodian follows the same recording process. StanCERA will also perform a reconciliation not only with the investment managers but with the custodial bank as well.

Prior Year Agreed Upon Condition and Recommendation

Agreed Upon Condition 1 – Cost Methodology and Reconciliation

As a result of a past observation, StanCERA implemented a process to reconcile the cost for its alternative investment managers and created a detailed spreadsheet for each manager. In reviewing the cost reconciliation spreadsheet, we noted it did not reconcile to StanCERA's Custodian. The reconciliation noted differences between their records and the Custodian. It is common practice to reconcile with the Custodian (the book of record), to ensure the cost value is accurately reported by StanCERA.

Recommendation

We recommend StanCERA consult with the Custodian to ensure the Custodian follows the same recording process, which should in turn minimize the reconciliation differences between StanCERA and the Custodian.

Management Response

StanCERA concurs with the recommendation and will consult with the Custodian to ensure the Custodian follows the same recording process. StanCERA will also perform a reconciliation not only with the investment managers but with the custodial bank as well.

Current Year Status

StanCERA staff is in the process of working with the alternative investment managers and the Custodian regarding the reporting process. This is a repeat recommendation in current year. See Agreed Upon Condition # 1 above.