



Stanislaus County Employees' Retirement Association

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

AGENDA

BOARD OF RETIREMENT

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

January 28, 2020
1:30 p.m.

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

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

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

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

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

AUDIO/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.

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

1. Call Meeting to Order
2. Pledge of Allegiance
3. Roll Call
4. Announcements
5. Public Comment
6. Consent Items
 - a. Approval of the December 17, 2019 Meeting Minutes [View](#)
 - b. Investment Matrix [View](#)
 - c. 2020 Cost of Living Adjustment
Agenda Item [View](#) Attachment 1 [View](#)
 - d. Legislation Update [View](#)
 - e. Applications for Service Retirement(s) – **Government Code Sections 31499.14, 31670, 31662.2 & 31810**
 1. Broughton, Marisa – Sheriff – Effective 01-01-20
 2. Campidonica, Jon – Public Works – Effective 01-01-20
 3. Cerecerez, Elsa – BHRS– Effective 01-04-20
 4. Conser, Carolyn – CSA – Effective 01-22-20
 5. Davis, Kevin – Sheriff – Effective 01-18-20 *
 6. Fincher, Philip – CSA – Effective 12-01-19
 7. Holly, Eric – Fire Warden OES – Effective 08-17-19 *
 8. Kincheole, Kathy – CSA – Effective 01-17-20

9. Lambaren, Jeffrey – CSA – Effective 01-04-20
10. Lawrence, Marlene – BHRS – Effective 01-04-20
11. Meisner, Janine – CSA – Effective 01-04-20
12. Moebs, Thomas – Sheriff – Effective 01-18-20 *
13. Moore, Barbara – BHRS – Effective 01-18-20
14. Obando, Virginia – HSA – Effective 01-04-20
15. Santoyo, Maria – CSA – Effective 12-18-19
16. Seeman, Dora – CEO – Effective 01-18-20
17. Sissle, Jayne – Public Works – Effective 01-04-20
18. Soares, Edward – Public Works – Effective 01-16-20
19. Stobb, Sondra – Probation – Effective 01-04-20
20. Walsh, James – Sheriff – Effective 01-18-20 *
21. Wapnowski, Michael – Fire Engineer – Effective 12-31-19
22. Wolfe, Thomas – DER – Effective 01-10-20

** Indicates Safety Personnel*

f. Applications for Deferred Retirement(s) – **Government Code Section 31700**

1. Brinkman, Kimberly – Workforce Development – Effective 08-16-19
2. Cooley, Stacy – HSA – Effective 09-13-19
3. Dhaliwal, Sukhdeep – Environmental Resources – Effective 11-29-19
4. Galos, Walter – Probation – Effective 10-25-19
5. Garrett-Scott, Melissa – CSA – Effective 10-08-19
6. Fabela, Jeanette – CSA – Effective 11-29-19
7. Herrema, Brian – CSA – Effective 09-03-19
8. Khan, Bilal – HSA – Effective 08-26-19
9. McLane, Blythe – DA – Effective 12-06-19
10. Tagge, Hilary – CSA – Effective 12-02-19
11. Tummunello, Nathaniel – Public Works – Effective 07-12-19
12. Valencia, Anjelica – HSA – Effective 11-15-19
13. Von de Ahe, Diane – DA – Effective 09-09-19

** Indicates Safety Personnel*

g. Application for Death Benefit – **Government Code Section 31781, 31781.1, 31781.3**

1. Pimentel, Lindsey – Probation – Non-Service Connected – Effective December 19, 2019 – Active Member

h. Application for Disability Retirement – **Government Code Section 31724**

1. Collins, Ronald – City of Ceres Police – Service-Connected – Effective 10-20-2019 *

** Indicates Safety Personnel*

i. Information Technology Solutions (ITS) Project Update
Agenda Item [View](#) Attachment 1 [View](#)

j. 2019 Qtr. 4 Executive Director Goals Update

Agenda Item [View](#) Attachment 1 [View](#)

7. Verus – Investment Consultant

- a. Asset Allocation Process Education [View](#)
- b. December Flash Report [View](#)

8. Investment

None

9. Administrative

a. Executive Director Goals for 2020

Agenda Item [View](#) Attachment 1 [View](#)

b. StanCERA Complaint Log

Agenda Item [View](#) Attachment 1 [View](#)

10. Closed Session

- a. Discussion and Action regarding the Executive Director's Annual Review Public Employment Government Code Section 54954.5
- b. 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)
- c. 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



**BOARD OF RETIREMENT MINUTES
December 17, 2019**

1. Call Meeting to Order

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

2. Pledge of Allegiance

3. Roll Call

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

Trustees Absent: **None**

Alternate Trustee Absent: Rhonda Biesemeier, Alternate Retiree Representative

Staff Present: Rick Santos, Executive Director
Natalie Davis, Fiscal Services Manager
Kellie Gomes, Executive Board Assistant
Stan Conwell, Retirement Investment Officer

Others Present: Fred Silva, General Legal Counsel
Eileen Neil, Verus Investment Consultant

4. Announcements

Kellie Gomes announced that once again the mics have been changed to all hard push on and off.

5. Public Comment

None

6. Consent Items

- a. Approval of the November 26, 2019 Meeting Minutes [View](#)
- b. Investment Matrix [View](#)
- c. Auxiliary Investment Report as of September 30, 2019
 1. AB2833 Auxiliary Report
Agenda Item [View](#) Attachment 1
 2. Investment Fee Summary, Value Added and Cash Flow Reports
Agenda Item [View](#) Attachment 1 [View](#)
- d. Applications for Service Retirement(s) – **Government Code Sections 31499.14, 31670, 31662.2 & 31810**
 1. Acevedo, Estela – HSA – Effective 12-07-19
 2. Carter, Renee – DA – Effective 12-04-19
 3. Clower, Sharon – HSA – Effective 12-05-19
 4. Elness, Bryon – City of Ceres – Effective 12-24-19 *
 5. Eudy, Darren – SR911 – Effective 12-07-19

6. Garcia, Cristina – CSA – Effective 12-07-19
7. Gundlach, Craig – Sheriff – Effective 12-31-19 *
8. Hartzell, Noreen – HSA – Effective 12-31-19
9. Kimbrough, Vincent – Sheriff – Effective 12-07-19 *
10. Lauzon, Suzanne – Superior Court – Effective 12-03-19
11. Olson, Teresa – CSA – Effective 12-11-19
12. Richards, Carol – CSA – Effective 12-03-19
13. Simril, Veronna – Clerk Recorder – Effective 12-10-19
14. Taylor, Sandra – Probation – Effective 12-21-19 *
15. Wever, Lorene – Hospital – Effective 10-29-19
16. Zervos, Michael – Sheriff – Effective 12-19-19 *

** Indicates Safety Personnel*

e. Applications for Deferred Retirement(s) – **Government Code Section 31700**

1. Lambertson, Allison – CEO – Effective 09-13-19
2. Pollinger, Cambria – City of Ceres – Effective 04-05-19
3. Wesner-Donaldson, LeAnn – BHRS – Effective 08-02-19

** Indicates Safety Personnel*

f. Information Technology Solutions (ITS) Project Update

Agenda Item [View](#) Attachment 1 [View](#)

Motion was made by Trustee Gharat and seconded by Trustee Grover to accept the consent items as presented.

Motion carried unanimously

7. Verus – Investment Consultant

- a. 2020 Private Markets Pacing Study presented by Steve Hempler, Verus
- b. November Flash Report presented by Jeffery McClain, CEO Verus

8. Investment

None

9. Administrative

- a. Cheiron's Presentation of the 2019 Preliminary Valuation Results – presented By Graham Schmidt
- b. StanCERA Disability Retirement Summary of Process and Legal Standards – Presented by Ted Cabral, Disability Counsel
- c. Ethics, Fiduciary and Brown Act Review- Presented by Fred Silva, General Counsel

- d. Triennial review of placement agency policy

Motion was made by Trustee Gharat and seconded by Trustee O'Neal to accept the Staff recommendation to approve the submitted policy as presented.

Motion carried unanimously

- e. Triennial review of governing law and jurisdiction policy
- f. Report on Earnings Allocation for Fiscal Year Ended June 30, 2019

10. Committee Reports and Recommendations for Action

STANDING COMMITTEES

- a. Strategic Planning Committee

- 1. Presentation of the 2020-2022 StanCERA Strategic Plan presented by Committee Chair Donna Riley.

Motion was made by Trustee Gharat and seconded by Trustee O'Neal to approve the committee recommendation to accept the proposed StanCERA Strategic Plan for 2020-2022 as presented

Chairman Jim DeMartini Pulled Item 11.a to be brought back to the full board after Fred Silva, General Counsel and Staff has an opportunity to meet with County HR and County Counsel to discuss administering the Director's Salary.

There was no closed session.

11. Closed Session

- a. Discussion and Action regarding the Executive Director's Annual Review Public Employment Government Code Section 54954.5
- b. 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
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- c. Conference with Legal Counsel – Pending Litigation – One Case:
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Government Code Section 54956.9d)(4)

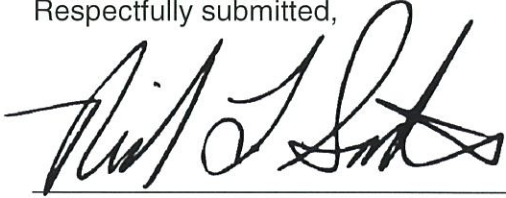
11. Members' Forum (Information and Future Agenda Requests Only)

None

12. Adjournment

Meeting adjourned at 3:45 p.m.

Respectfully submitted,



Rick Santos, Executive Director

APPROVED AS TO FORM:
Fred Silva, GENERAL LEGAL COUNSEL

By: 
Fred Silva, General Legal Counsel



January 28, 2020

Retirement Board Agenda Item

TO: Retirement Board

FROM: Stan Conwell, Retirement Investment Officer

I. SUBJECT: Investment Matrix

II. ITEM NUMBER: 6.b

III. ITEM TYPE: Information Only

IV. STAFF RECOMMENDATION: None.

V. ANALYSIS:

- a) *Investment Program Activities & Governance:* For December, work on the 2020-2022 strategic plan continued into the last phase before review by the planning committee. As in previous months, review of potential private market funds continued in earnest. The close date for one fund was extended due to the holidays. There was a CIO call in December with the main topic of interest involving greater use of shared services across systems during the implementation of private market funds. Staff also worked to complete numerous quarterly investment reports and investment database updates. Staff geared up for issuing a general investment consultant RFP by researching past RFPs and briefly gauging the current marketplace.

Additionally, just prior to the January Board meeting Greenfield VIII is proposing additional changes that are a continuation of the prior firm restructuring that took place about a year ago when the fund transitioned into Grandview Partners. The changes will require approval from about two thirds of LPs and staff is currently gathering additional information and researching the impacts of the proposed changes.

- b) *Money Transfer Report:*

From			To		
Manager	Asset Class	Amount	Manager	Asset Class	Amount
BlackRock Real Estate	Real Estate	\$-6,720,000	American Realty Advisors	Real Estate	\$6,720,000

- c) *Manager Meeting Notes:*

PGIM

Staff arranged an in person meeting with members of the PGIM team at the beginning of December. Kathy Thurston, Executive Director/Assistant Portfolio Manager was joined by StanCERA's new client relations associate, Alexandra Black. The PGIM fund is a US real

estate debt fund with a core/core plus mandate, limited speculative risk, and focus on lower risk assets. StanCERA was considered a founding fund member and participated in a fee break as one of the earlier fund members.

The meeting kicked off with a quarterly update on the recent activities of the fund and firm. Fund growth is continuing at a steady clip and the pace of investment is in line with expectations. The mix of investors in the fund appears to be expanding as well. PGIM is adding resources to the fund to keep up with growth. Several new hires were made recently. Next, an overview of fund investments and the origination process took place. Property type diversification is in line with guidelines with a slight underweight to industrial. PGIM is positioned well from a risk and leverage perspective when compared to competing funds. Benchmarks and future expectations for the fund were discussed to finish up the meeting. As one would expect, if interest rates continue lower, it could translate to slightly lower returns in the fund in the future. Overall, PGIM is a well-managed fund and is performing in line with expectations.

White Oak

Staff took a call from Landy Pheloung from White Oak for a brief update on the fund and an overview of the recent developments at the firm. StanCERA is invested in the White Oak Pinnacle fund which is categorized as a direct lender in the private credit asset class. The investment period for the fund has concluded and it is currently harvesting some investments. Staff discussed StanCERA's pacing schedule for private credit in 2020 and the different options available to allocators to deploy capital to the private credit space. The current market conditions for private credit and direct lending in particular were thoroughly discussed as well. To finish up, an overview of White Oak's lending platform and investment process were discussed as well as White Oak's ability to manage underperforming assets during a downturn.

d) *Trainings/Conferences:*
None

- VI. RISK: None
VII. STRATEGIC PLAN: N/A
VIII. ADMINISTRATIVE BUDGET IMPACT: None.


Stan Conwell, Retirement Investment Officer


Rick Santos, Executive Director



January 28, 2020

Retirement Board Agenda Item

TO: Retirement Board

FROM: Rick Santos, Executive Director

I. SUBJECT: 2020 Cost of Living Adjustment

II. ITEM NUMBER: 6.c

III. ITEM TYPE: Consent

IV. STAFF RECOMMENDATION: Approve Cheiron's recommendation for a 3% Cost of Living Adjustment (COLA) to StanCERA's non-tier 3 retired member's monthly benefit beginning April 1, 2020 for those that retired prior to April 2, 2019. For those non-tier 3 members that retired after April 1, 2019, approve a Cost of Living Adjustment of 2.5%, beginning April 1, 2020. Reduce the carry-over allowances by 0.5% for all non-tier 3 members retired on or before April 1, 2019.

V. EXECUTIVE SUMMARY: Attachment 1 contains Cheiron's recommendation for the Cost of Living Adjustments referenced in staff's recommendation.

Currently, StanCERA bases its COLA increases on the All Urban Consumer Index for the San Francisco/Oakland/San Jose area. The COLA change for retirees' 2020 benefit is based on the change in the December over December measures (2018 to 2019). The 2018 and 2019 measures turned out to be 289.896 and 297.007, respectively. This equates to an increase of 2.453%, which when rounded, results in a final value of 2.5%.

However, based on Code Section 31870.1 which StanCERA and its employers adhere to, members are to receive the lesser of 3% or the actual year over year change in the index. Whenever the change is greater than 3%, the overage is banked for use in future years when the change is less than 3%. As of April 1, 2019 all non-tier 3 members that retired prior to April 2, 2019 had at least 1.5% in their accumulated banks. Consequently, all non-tier 3 members should receive a 3% cost of living adjustment to their benefit and a reduction of 0.5% in their accumulated bank.

VI. SUPPLEMENTAL ANALYSIS: As mentioned above, StanCERA bases its COLA increases on the All Urban Consumer Index for the San Francisco/Oakland/San Jose area. Given the differences in many aspects of the economic environment between our region and the San Francisco Bay area, it is natural to infer that inflation differences between the two regions may not be similar.

In the past, StanCERA staff has examined differences between the predictive power of 3 other potential indices that could possibly be used to predict inflation in our specific region. As a proxy for inflation in our region, staff uses data from an annual publication produced by the California Department of Transportation. The following information and exhibit are from staff's most recent analysis in 2018 that showed the San Francisco/Oakland/San Jose index still being the index with the strongest predictive power.

The following exhibit from that prior analysis compares the "R-Square" measure for each potential index. R-Square is a measure between 0% and 100% that quantifies how strong the relationship is between each index and our own regional inflation measure. A measure of 0% means that the potential index has no predictive power concerning changes in our inflation. On the other hand, a measure of 100% means that there is perfect correlation between the index and inflation in our

region (that is, knowing the measure of the change in the index allows one to perfectly predict inflation in our region).

**R-Square Measure between Inflation Indices and Stanislaus County Inflation Data
(2010-2016)**

Index	R-Square
San Francisco	68.2%
West Region	28.0%
Los Angeles	25.0%
All Urban Consumer U.S. Cities	3.4%

As the exhibit shows, of the 4 indices that could potentially be used to predict inflation in our region, the San Francisco/Oakland/San Jose index explains changes in inflation for our region better than the others.

Note that staff chose not to perform a new analysis this year, since the addition of 2 more years of data will not change the outcome of the above results in any meaningful way. However, staff does recommend performing this analysis at least once every five years.

VII. RISK: None

VIII. STRATEGIC PLAN: N/A

IX. ADMINISTRATIVE BUDGET IMPACT: None



Rick Santos, Executive Director

January 16, 2020

Mr. Rick Santos

Executive Director
Stanislaus County Employees' Retirement Association
832 12th Street, Suite 600
Modesto, CA 95354

Re: Cost of Living Adjustment (COLA) as of April 1, 2020

Dear Rick:

Pursuant to the scope of retainer services under Cheiron's agreement to provide actuarial services to the Stanislaus County Employees' Retirement Association (StanCERA), we have computed the Cost of Living Adjustment (COLA) percentages to be used as of April 1, 2020. The calculations outlined herein have been performed in accordance with 31870.1 of the County Employees Retirement Law of 1937.

Background

The cost of living adjustment (COLA) is determined annually based on increases in the December Consumer Price Index (CPI) for All Urban Consumers in the San Francisco-Oakland-Hayward (previously San Francisco-Oakland-San Jose) area, using a base period of 1982-1984. The ratio is calculated, and rounded to the nearest one-half percent.

COLA Calculations

The CPIs described above were 297.007 and 289.896 for December 2019 and December 2018 respectively. This represents an increase of 2.453%, which is rounded to 2.50%. As a point of comparison, the U.S. City CPI increased by 2.29% over the same time period.

Retirees – other than members of Tier 3 - are subject to the provisions of Section 31870.1, which limits annual COLA increases to 3.0% annually. Therefore, these members should receive an increase in benefits of 2.5%, based on the current year change in the CPI. However, due to the accumulated carry-over balances as of April 1, 2019, retirees from these Tiers will receive an increase of 3.0%. The remaining carry-over balances will then be reduced by 0.5%, which is the difference of the rounded CPI increase versus the current year COLA adjustment. The enclosed exhibit summarizes the COLA calculations and carry-over balances for these Tiers. Tier 3 members do not receive an automatic COLA from the Association.

Mr. Rick Santos
January 16, 2020
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Please contact us if you have any questions regarding these calculations.

Sincerely,
Cheiron



Graham A. Schmidt, ASA, FCA, MAAA, EA
Consulting Actuary



Jonathan B. Chipko, FSA, FCA, MAAA, EA
Consulting Actuary

STANISLAUS COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

COST OF LIVING ADJUSTMENTS (COLA) - Section 31870.1

As of April 1, 2020

Maximum Annual COLA: 3.0%

Initial Retirement Date	April 1, 2019		Increase in the Annual Average CPI ¹		April 1, 2020	
	Accumulated Carry-Over		COLA		Accumulated Carry-Over	
			Actual (B)	Rounded (C)		
(A)					(D)	(E)
On or Before 4/1/1970	68.5%		2.45%	2.5%	3.0%	68.0%
04/02/1970 to 04/01/1971	66.0%		2.45%	2.5%	3.0%	65.5%
04/02/1971 to 04/01/1972	64.0%		2.45%	2.5%	3.0%	63.5%
04/02/1972 to 04/01/1973	63.0%		2.45%	2.5%	3.0%	62.5%
04/02/1973 to 04/01/1974	62.5%		2.45%	2.5%	3.0%	62.0%
04/02/1974 to 04/01/1975	59.5%		2.45%	2.5%	3.0%	59.0%
04/02/1975 to 04/01/1976	52.5%		2.45%	2.5%	3.0%	52.0%
04/02/1976 to 04/01/1977	45.5%		2.45%	2.5%	3.0%	45.0%
04/02/1977 to 04/01/1978	43.0%		2.45%	2.5%	3.0%	42.5%
04/02/1978 to 04/01/1979	38.5%		2.45%	2.5%	3.0%	38.0%
04/02/1979 to 04/01/1980	32.0%		2.45%	2.5%	3.0%	31.5%
04/02/1980 to 04/01/1981	26.5%		2.45%	2.5%	3.0%	26.0%
04/02/1981 to 04/01/1982	14.5%		2.45%	2.5%	3.0%	14.0%
04/02/1982 to 04/01/1983	4.5%		2.45%	2.5%	3.0%	4.0%
04/02/1983 to 04/01/1984	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/1984 to 04/01/1985	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/1985 to 04/01/1986	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/1986 to 04/01/1987	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/1987 to 04/01/1988	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/1988 to 04/01/1989	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/1989 to 04/01/1990	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/1990 to 04/01/1991	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/1991 to 04/01/1992	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/1992 to 04/01/1993	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/1993 to 04/01/1994	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/1994 to 04/01/1995	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/1995 to 04/01/1996	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/1996 to 04/01/1997	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/1997 to 04/01/1998	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/1998 to 04/01/1999	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/1999 to 04/01/2000	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/2000 to 04/01/2001	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/2001 to 04/01/2002	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/2002 to 04/01/2003	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/2003 to 04/01/2004	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/2004 to 04/01/2005	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/2005 to 04/01/2006	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/2006 to 04/01/2007	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/2007 to 04/01/2008	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/2008 to 04/01/2009	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/2009 to 04/01/2010	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/2010 to 04/01/2011	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/2011 to 04/01/2012	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/2012 to 04/01/2013	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/2013 to 04/01/2014	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/2014 to 04/01/2015	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/2015 to 04/01/2016	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/2016 to 04/01/2017	2.0%		2.45%	2.5%	3.0%	1.5%
04/02/2017 to 04/01/2018	1.5%		2.45%	2.5%	3.0%	1.0%
04/02/2018 to 04/01/2019	1.5%		2.45%	2.5%	3.0%	1.0%
04/02/2019 to 04/01/2020	0.0%		2.45%	2.5%	2.5%	0.0%

¹ All Urban Consumers, San Francisco-Oakland-Hayward Area (1982-84 base). (G.C. 31870.1)



January 28, 2020

Retirement Board Agenda Item

TO: Retirement Board

FROM: Lisa Frazer, Member and Employer Services Manager

- I. SUBJECT: Legislation Update
- II. ITEM NUMBER: 6.d
- III. ITEM TYPE: Information Only
- IV. STAFF RECOMMENDATION: None
- V. ANALYSIS:

Assembly Bill 672, Cervantes. Adds Section 21233 to Government Code

Became law January 1, 2020

AB672, applies to Public Employees' Retirement Law (PERL), prohibits a person who has retired for disability, from being re-employed by any employer without reinstatement from retirement if the position includes the same duties the person was prohibited from performing at the time of retirement.

Assembly Bill 931, Boerner Horvath. Local boards and commissions: representations: appointments.

Became law January 1, 2020

Beginning January 1, 2030, AB931 prohibits cities, with populations of 50,000 or more, from having nonelected board and commission members comprised of more than 60% of the same gender identity if the board or commission has five or more members. Under the bill, a covered city cannot appoint a member to a board or commission if that individual has the same gender identity as more than 60% of the board or commission's then-existing membership. For smaller boards and commissions with four or fewer nonsalaried, nonelected members, AB931 prohibits them from being comprised exclusively of members of the same gender identity.

Assembly Bill 1320, Nazarian. Public employee retirement systems: prohibited investments: Turkey.

Became law January 1, 2020

AB1320 prohibits CalPERS and CalSTRS from making or renewing investments in vehicles owned, issued, controlled, or managed by the government of Turkey if the federal government imposes sanctions on the government of Turkey for failing to officially acknowledge its responsibility for the Armenian Genocide. *(The US House of Representatives and US Senate recently voted to recognize the Armenian Genocide, however sanctions were not imposed so AB1320 was not triggered in California.)*

VI. RISK: None

VII. STRATEGIC PLAN: N/A

VIII. ADMINISTRATIVE BUDGET IMPACT: None



Lisa Frazer, Member and Employer Services Manager



Rick Santos, Executive Director



January 28, 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.i

III. ITEM TYPE: Information Only

IV. STAFF RECOMMENDATION: None

V. ANALYSIS: The Pension Administration System (PAS) Project continues to advance. The testing and sign-off of the R15 release into Arrivos has been completed, which includes the following processes: Periodic Payroll General Ledger Integration, Payroll Run Calendar, Payroll Process Interface, Periodic Payroll Process Additional Reports, Health Deduction Upload and Payment Summary Screen.

Staff is currently reviewing four (4) Business and Systems Requirement Documents (BSRD's). These include the following: Actuarial Extract, Lump Sum Payroll Process, General Ledger Integration – Lump Sum Payroll and General Ledger Integration – Employer Reporting. Internal testing of the system and data conversion clean up continues on a daily basis.

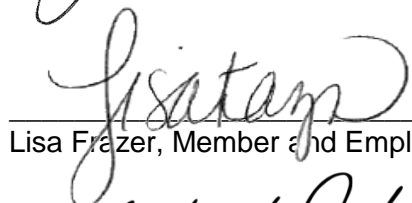
VI. RISK: None

VII. STRATEGIC PLAN: N/A

VIII. ADMINISTRATIVE BUDGET IMPACT: None



Jamie Borba, Member and Employer Services Specialist



Lisa Frazer, Member and Employer Services Manager



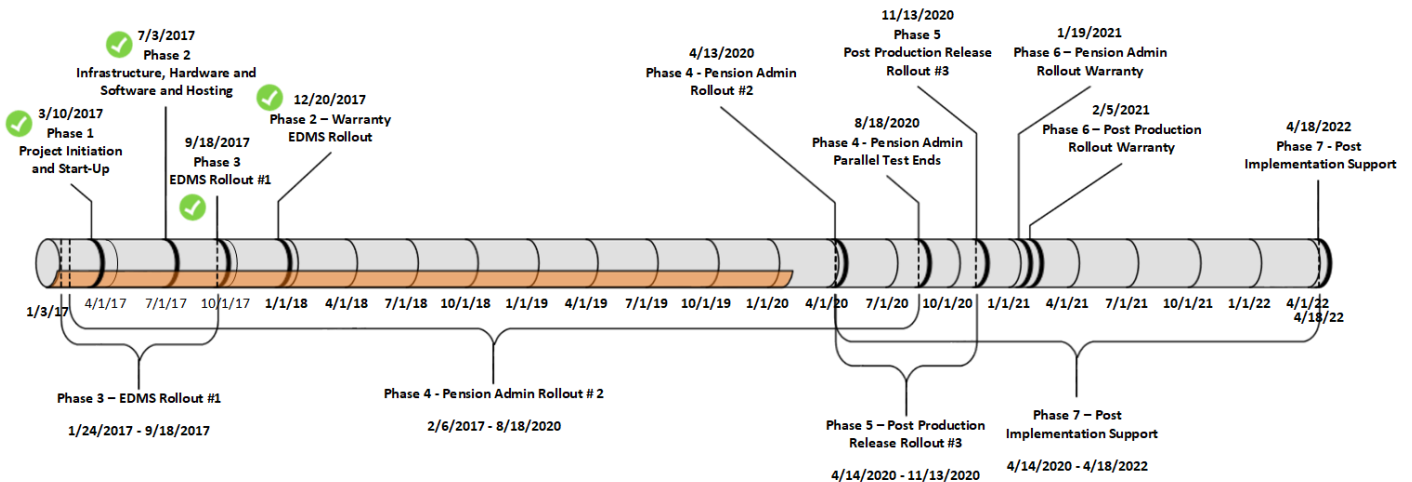
Rick Santos, Executive Director



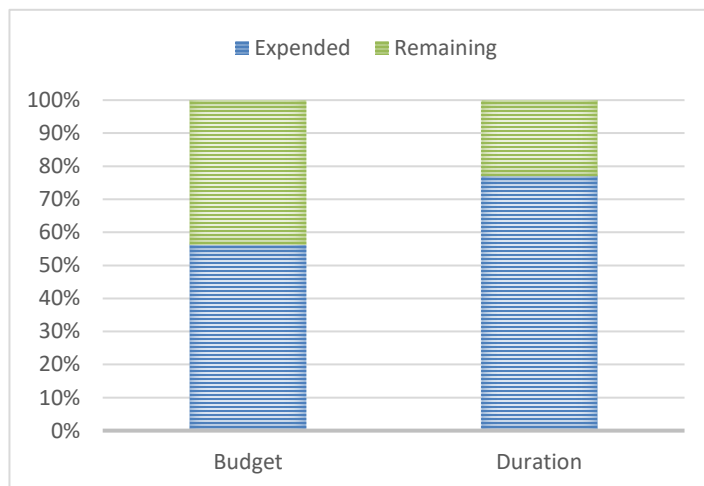
PAS IMPLEMENTATION LINEA BI-WEEKLY STATUS UPDATE



SPONSOR: Rick Santos **REPORT DATE:** 01-24-2020



Baseline 12/01/2016 STATUS



Linea Budget as of 12/31/19

Risks & Issues:

Five months remain until projected go-live.

Risk level (low/medium/high) of known project risks may increase as go-live approaches. Risks and issues are being continuously reviewed by the project team in planning for go-live.

Risks currently of concern for go-live:

- StanCERA Resource Allocation/Availability
- Employer Reporting Transmittal Files
- Resources for Testing
- Sufficient Staff Training

Accomplishments:

- Continued progress in testing Ceres, Courts, and County transmittal test files, including issuance of additional items for employer investigation. City of Ceres began providing consecutive test files.
- Detailed go-live planning began through multiple meetings of the project team to map the path to go-live and evaluate project risks.
- Testing for R17 UAT release was completed.

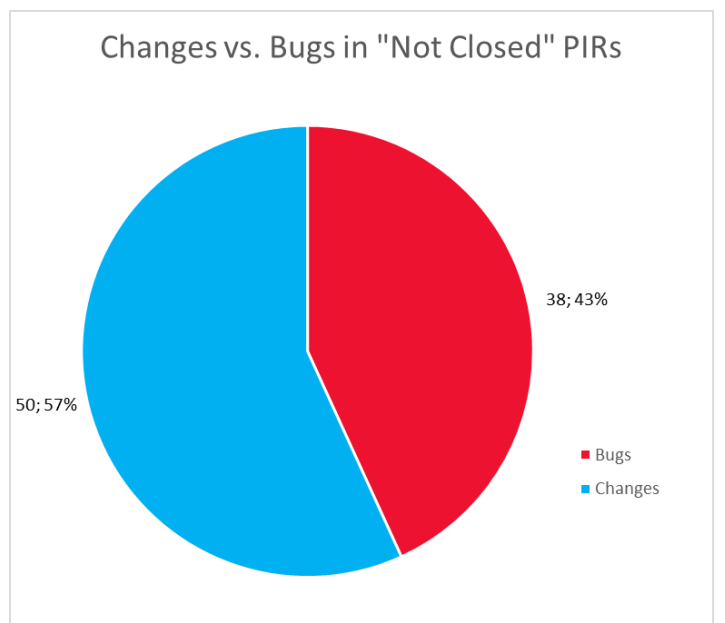
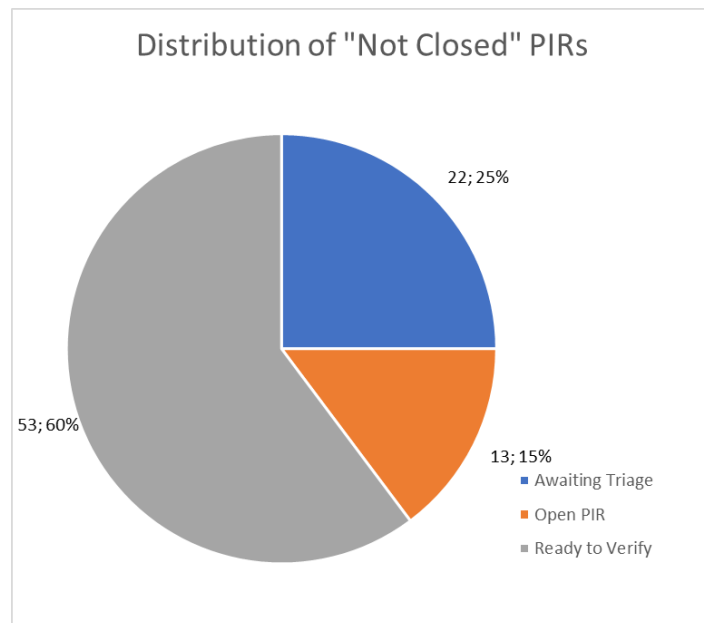
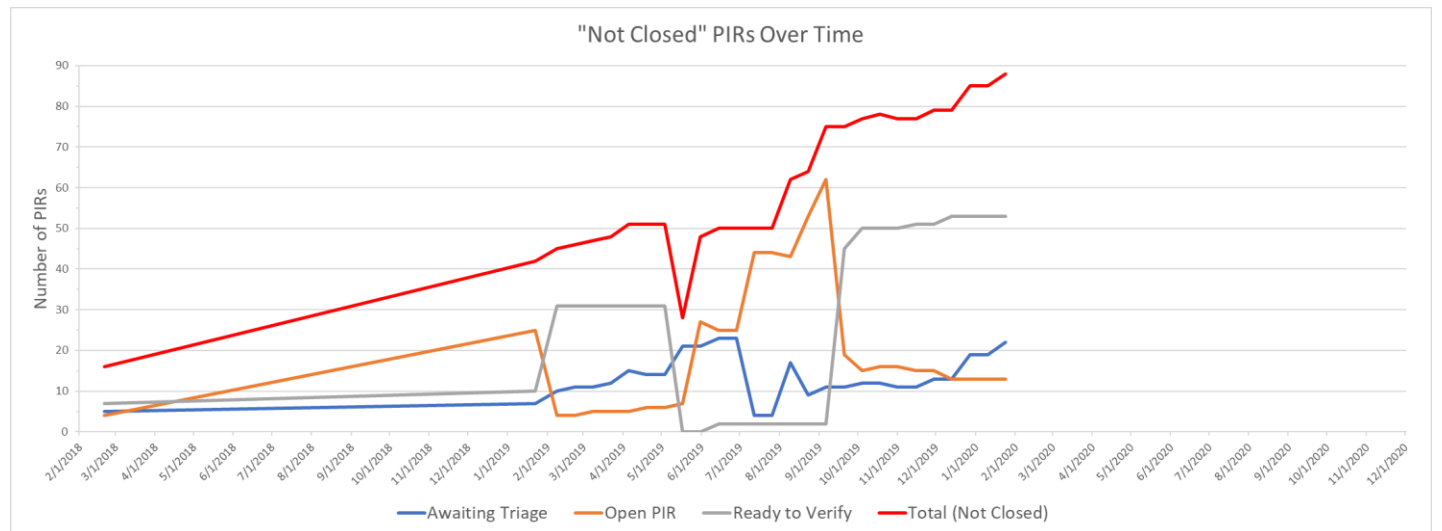
Upcoming:

- Retesting of R13 and R14 resolved PIRs.
- Continued analysis and evaluation of upload employer test files being received for consecutive pay periods.
- StanCERA to begin parallel payroll testing.
- Ongoing go-live planning and evaluation.
- R18 UAT release and testing to begin 01/27/20.

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 (BSR038, BSR040, BSR061, BSR070, BSR072).
- 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





January 28, 2020

Retirement Board Agenda Item

TO: Retirement Board

FROM: Rick Santos, Executive Director

- I. SUBJECT: 2019 Executive Director Goals Update - Quarter 4
- II. ITEM NUMBER: 6.j
- III. ITEM TYPE: Information Only
- IV. STAFF RECOMMENDATION: None
- V. ANALYSIS: This is the Quarter 4 Executive Director goals update for 2019 (attachment 1). This item represents the final report staff will provide related to the 2017-2019 strategic plan. Late last year, staff presented and Committee and the full Board approved, the strategic plan for 2020-2022. Staff has completed all the items on tap for this year and for the entire 2017-2019 Strategic Plan except for the following:

- A formalized peer review process
- Data conversion to the new StanCERA website

Both of these items are very closely aligned with the Pension Administration System project and are actually at near completion today. Consequently, staff feels that the progress and completed work related to the 2017-2019 strategic plan was very successful. Member & Employer Services, Fiscal and Investments have worked diligently over these past few years to realize this level of success.

All of the ongoing and transitional tasks for 2019 were completed as well. These include revision of all internal policies, the RFP for general counsel and the filling of 3 key positions within the Organization. Outstanding disabilities have risen slightly above the average over the past 3 years and the culprit is the amount of time spent gathering and assimilating data for analysis. Staff is currently looking at a solution to resolve the issue.

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

Rick Santos, Executive Director



Strategic Goals 2019

(Attachment 1)

General and/or Ongoing Items

1. Continued communication, outreach and transparency with major stakeholders such as County, County BOS, Local Governments, Special Districts and Employee Groups
 - Meetings with StanCERA plan sponsors focused on pension system implementation
 - Several meetings with County on 415(b) issues
2. Maintenance of StanCERA's asset allocation targets
 - StanCERA asset allocation within current targets
3. Continued progress on the System data clean-up project
 - Ongoing member file audit work. This project has slowed a bit, since the Organization lost 2 of its part-time staff at the same time. StanCERA is in the process of replacing the two individuals and still have a goal of 65% completion by go-live and 85% completion by the end of the year 2020
4. Continued monitoring of StanCERA lawsuits
5. Director Professional Development
 - Attendance of the 2019 Society of Actuaries Annual Conference
6. Facilitate RFP for General Legal Counsel
 - RFP Complete
7. Oversee Information Technology Solutions Project
 - Maintain high level oversight with StanCERA staff, Tegrity staff and Linea consultants
 - Require at least one line staff from their respective functional area to attend functionality design meetings
 - 2 meetings with the IT Security Committee to discuss the desired functionality to build into the member web portal
8. Oversee and completion of day to day administrative functions
 - All normal administrative functions completed on time
 - Outstanding disabilities (as of 1/9/2020): 17
9. Completion of internal policy revisions
10. Complete hiring of MESS Manager, IT Specialist and Retirement Investment Officer



Items Tied to the Strategic Plan

Strategic Objective #1

Invest StanCERA assets in such a way that efficiently maximizes the ability to meet current and future benefit obligations while balancing the need for contribution stability and sustainability

Strategic Plan Objective #1: Action Plan with Deliverables

1. Implementation of Functionally Focused Portfolio Concept
 - ✓ Training of new investment staff on FFP process and maintenance of reporting projection and process tools
 - Training ongoing in Quarter 4
2. Maintain awareness of the cash flow process
 - ✓ Creation and maintenance of a database specifically designed to house contribution and benefit data
 - Data has been gathered and validated. Staff has determined that the way contribution and benefit data is currently stored is sufficient for the Organization's needs at this time (Quarter 4)

Strategic Objective #2

Develop efficient and effective processes for the evaluation, monitoring, and disposition of StanCERA's active managers

Strategic Plan Objective #2: Action Plan with Deliverables

1. Maintain and improve the comprehensive internal investment governance process
 - ✓ Train internal investment staff on general processes and procedures of the data collection process
 - Training complete on alternative data maintenance procedures (Quarter 1)
 - ✓ Enhance the fee reconciliation process for the alternative investments
 - Fee reconciliation process complete (Quarter 1)
 - ✓ Monitor IPS compliance
 - Compliance policy complete; annual compliance review complete (Quarter 4)
 - ✓ Creation of a policy regarding Organizational views on philosophy, monitoring and maintenance of investment manager thesis



Executive Director Goals | 2019

- Task complete (Quarters 1 and 4)
- ✓ Monitor and analyze all documentation from investment managers including SOC/ADV reports, contract changes, quarterly and fiscal year end reports and MFN clauses
 - Contract changes monitored regularly (Quarter 1)
 - MFN Clauses monitored as needed (Quarter 1)
 - All quarterly reports monitored and reconciled (Quarter 2)
- ✓ Research the Organization's capacity to effectively monitor manager trading costs
 - Staff determined that the ability to effectively monitor trading costs is severely limited because most of the costs are implicit and would require a professional consultant to monitor and report out. Staff does not believe at this time that the benefits would exceed the costs of such a regular analysis. Note that these types of analyses are generally undertaken (and have been in the past) when a large chunk of the portfolio is transitioned into a new asset class. Staff still can monitor explicit trading costs and their trends (Quarter 4)
- 2. Maintain a comprehensive internal investment data repository
 - ✓ Develop written processes for downloading, storing and maintaining investment data
 - Written process for alternative data gathering and uploading complete (Quarter 1)



Strategic Objective # 3

Continue to foster an organizational culture that values and promotes team work, education, awareness, accountability, and achievement.

Strategic Plan Objective #3: Action Plan with Deliverables

1. Standardize communication and establish a formal peer-review process for internal and external documents and external communications.
 - ✓ Formalize StanCERA's peer review process (to be completed in 2020)

Strategic Objective # 4

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

Strategic Plan Objective #4: Action Plan with Deliverables

1. Implementation of Electronic Member Filing Content Management System
 - ✓ Permanent EDMS solution developed (implementation to take place in 2020)
 - Solution developed and currently being populated and maintained (Late 2018 and Quarter 1)
 - Work flow processes currently being developed (Quarters 2, 3 and 4)
2. Design and rollout of new StanCERA Website
 - ✓ Complete RFP process for a web designer
 - RFP Complete (Quarter 3)
 - ✓ Contract with new vendor
 - Contract in place (Quarter 3)
 - ✓ Convert data to new website
 - Process to be completed in March of 2020



January 28, 2020

Retirement Board Agenda Item

TO: Retirement Board

FROM: Stan Conwell, Retirement Investment Officer

I. SUBJECT: Asset Allocation Process Education and Initial Recommendations

II. ITEM NUMBER: 7.a

III. ITEM TYPE: Information Only

IV. STAFF RECOMMENDATION: None.

V. ANALYSIS:

An asset/liability study is scheduled for StanCERA in 2020. Given the importance of the study in setting the asset allocation and overall status of the system, staff and Verus wanted to spend some time reviewing the process to provide an opportunity for the Board to increase their familiarity with the topic. Today Eileen Neill will be presenting the first in a series of presentations about Verus's approach to asset/liability studies. Before any meaningful discussion can be had regarding the attributes and merits of individual asset classes, it's important to first review the objectives of the pension system and outline the appropriate context in which the asset allocation decisions will be made. To that end, some time will be spent on defining risk and exploring investment philosophy. The role of StanCERA's liquidity sub-portfolio will also be reviewed. In the months to come, individual asset classes, the growth and risk-diversifying sub-portfolios, risk tolerances and other related topics will be covered. The asset/liability study is scheduled to be completed in June with recommendations given to the Board at that time.

VI. RISK: None

VII. STRATEGIC PLAN: N/A

VIII. ADMINISTRATIVE BUDGET IMPACT: None.

Stan Conwell, Retirement Investment Officer

Rick Santos, Executive Director



PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS



Asset Allocation Process Education and Initial Recommendations
Stanislaus County Employees Retirement Association
JANUARY 28, 2020

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Objectives

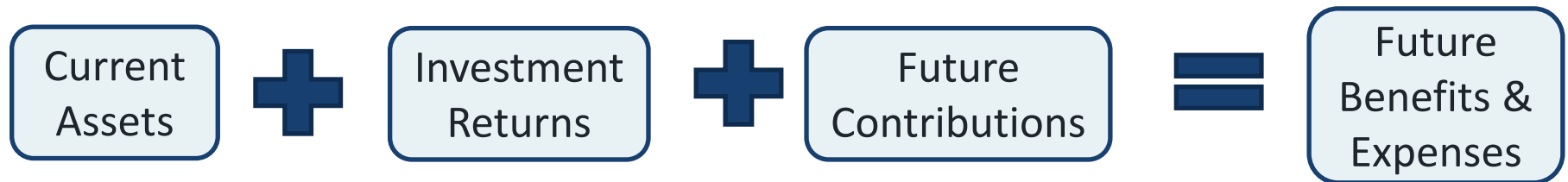
- Arrive at common understanding of:
 - how fiduciaries should define “risk”
 - asset-liability decision making framework
 - “best practices” approach to selecting appropriate asset allocation policy
- Develop consensus on Board’s investment philosophy
- Review role of liquidity sub-portfolio
- Determine next steps

What is risk?

How should a pension fund fiduciary think about risk?

“Risk is any uncertainty with respect to investments that has potential to negatively affect financial welfare.”¹

- Key risk = inability to sufficiently fund promised benefit obligations (projected benefit payments for current fund population)



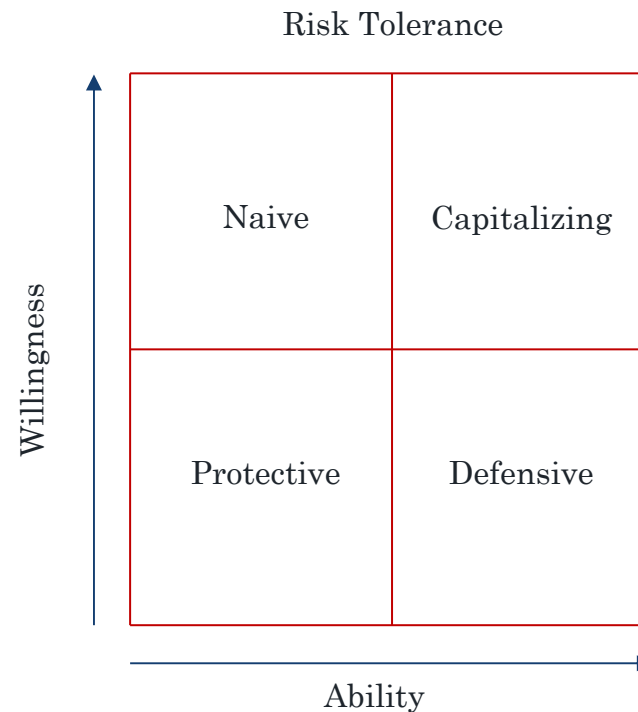
Risk: Contributions + Assets + Returns < Promised Benefit Payments

- Public pension funds only directly control assets through investment decisions
 - No direct control of contributions, but these are impacted through results of investment decisions

¹ Source: FINRA (Financial Industry Regulatory Authority)

Enterprise risk tolerance in context

- Properly assessing Enterprise Risk Tolerance has important and practical implications for investment strategy development
- Identifying appropriate risk tolerance for plan involves viewing risk in terms of Plan's willingness and ability to bear risk
- Ability to bear risk depends on financial circumstances, while willingness to bear risk is generally based on investor's attitudes and beliefs about investments
- Although StanCERA Board's duty is clearly to beneficiaries of the Association, assessing County's financial situation and ability to make contributions to Plan is one component in evaluating Plan's ability to take on risk



What determines risk tolerance?

- *Time horizon* – longer time horizon means can take greater risk
 - As an ongoing plan, StanCERA has a very long time horizon (30+ years)
- *Probability of loss* – what is the likely occurrence of a severely negative outcome? (e.g., 2008)
 - Although a low probability event, when it occurs, it has potential long-term impact due to severity
- *Magnitude of loss* – what is the impact of a bad outcome?
 - Losses can be so great as to cause permanent failure to achieve financial goals

Trick is to take enough risk to maximize ability to achieve financial goals. *How do we know how much risk is enough?*

Answer: *asset allocation process*

Asset/liability study process

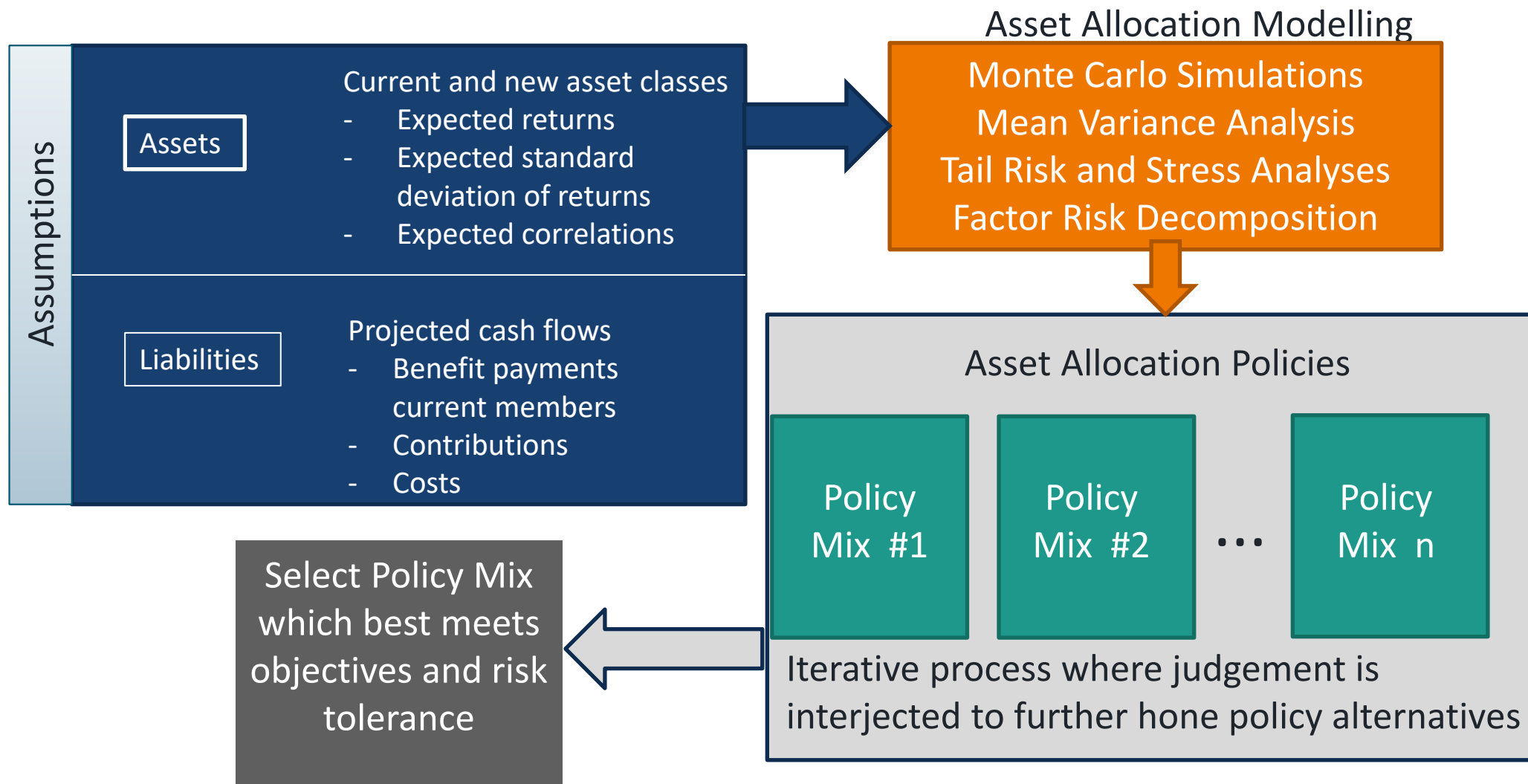
Introduction

- Building long-term portfolios requires multiple approaches to ensure robust analysis
- Asset classes are typical underlying building blocks of portfolios
 - Relationships between asset classes must be considered
- Embedded in asset classes are factor risks which drive capital market results
- StanCERA follows current best practices of grouping asset classes and sub-asset classes by common risk drivers
- When setting asset allocation policy, pension plans must integrate liabilities into the asset allocation process to ensure key metrics such as funded status volatility are evaluated for different potential policy alternatives

Asset allocation process outline

- **Define investment goals –**
 - (1) improve funding ratio
 - (2) preservation of capital over the long term
 - (3) earn real rate of return above inflation
- **Define risk –** inability to meet promised benefit payments to current fund members
- **Time horizon –** long; 30+ years
- **Assess alternative policy allocations** relative to current policy and actual portfolio allocations in terms of investment goals and risk tolerance
- **Identify reasonable policy alternatives** which may better achieve investment goals given associated risk and fund's unique requirements (statutory or otherwise)
- **Select most appropriate policy** given investment goals and risk tolerance
- **Implement** selected policy using a dollar cost averaging approach adjusting for market conditions
- **Regularly monitor and re-balance** back to policy when necessary
- **Re-engage in asset allocation process every 3 to 5 years**

Verus employs “best practices” approach to asset allocation for public pension funds



Monte Carlo simulation

What

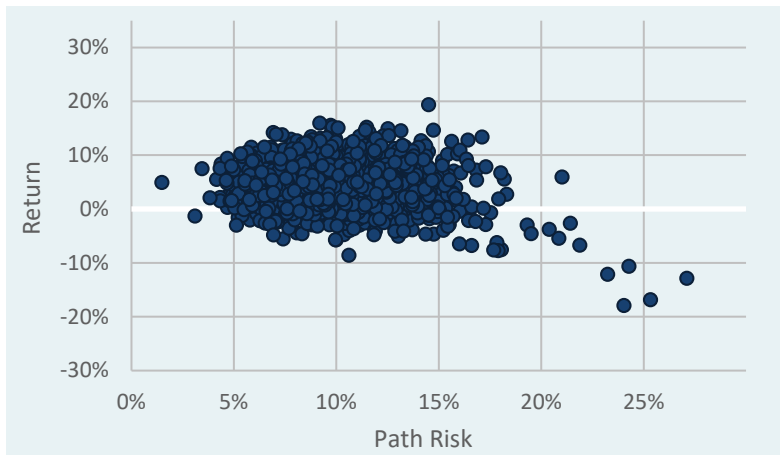
- Verus capital market assumptions are used as inputs to model which simulates total portfolio mix returns and volatility 2,000 times for 10-year period

Why

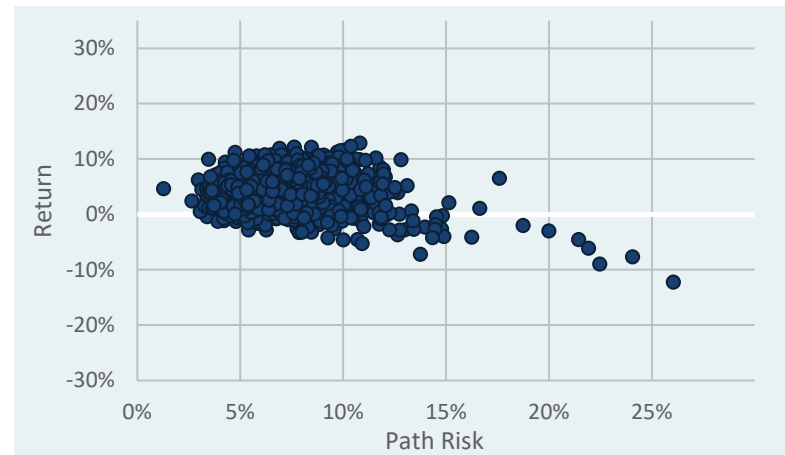
- Examine possible tail risks in portfolio that may not be apparent from single risk-return perspective
- Determine probability of meeting a given return

Output

70/30 S&P 500/BC Agg



50/50 S&P 500/BC Agg



Mean Variance analysis

What

- Disciplined framework for analyzing investment portfolios from asset-only perspective
- Based upon Modern Portfolio Theory: Investors prefer to minimize risk for any combination of asset classes they are considering allocating to

Why

- Identify highest returning portfolio for level of risk reflected by combining varying asset class exposures
- Efficient, objective approach to whittling down feasible portfolio mixes to consider from Monte Carlo Simulation process

Output

	Current	PA 50% UST	100% Long Treas	Reduced Risk	2020 CMA's (10 Yr)		
					Return (g)	Standard Deviation	Sharpe Ratio
US Large	27.2	24.8	0.0	22.0	5.5	15.4	0.23
US Small	3.0	2.8	0.0	1.0	5.7	21.1	0.18
Total Domestic Equity	30	28	0	23			
International Developed	18.6	16.9	0.0	16.0	7.0	17.5	0.29
Emerging Markets	3.7	3.4	0.0	2.5	7.6	25.6	0.22
China	2.5	2.3	0.0	1.5	8.0	29.4	0.21
Total Int'l Equity	25	23	0	20			
Total Equity	55	50	0	43			
Core Plus Fixed Income	15.0	15.0	0.0	0.0	2.7	8.3	0.10
US Treasury	0.0	8.5	100.0	33.5	1.7	6.7	-0.03
Total Fixed Income	15	24	100	34			
Core Real Estate	5.0	5.0	0.0	5.0	6.6	12.4	0.38
Value Add Real Estate	5.0	5.0	0.0	5.0	8.6	17.7	0.38
Total Real Assets	10	10	0	10			
Hedge Fund	10.0	10.0	0.0	10.0	4.0	7.7	0.27
Portable Alpha	0.0	8.5	0.0	8.5	3.0	3.9	0.28
Private Equity	10.0	10.0	0.0	7.0	8.5	25.3	0.26
Private Credit	0.0	5.0	0.0	5.0	7.0	10.0	0.51
Total Non-Public Investments	20	34	0	31			
Cash	0.0	-17.0	0.0	-17.0	0.0	0.0	-
Total Allocation	100	100	100	100			
	Current	PA 50% UST	100% Long Treas	Reduced Risk			
Mean Variance Analysis							
Forecast 10 Year Return	6.4	6.9	1.7	6.2			
Standard Deviation	12.6	12.1	6.8	9.7			
Return/Std. Deviation	0.5	0.6	0.2	0.6			
1st percentile ret. 1 year	-18.9	-17.7	-13.0	-14.1			
Sharpe Ratio	0.41	0.46	0.00	0.48			

Tail risk and stress tests

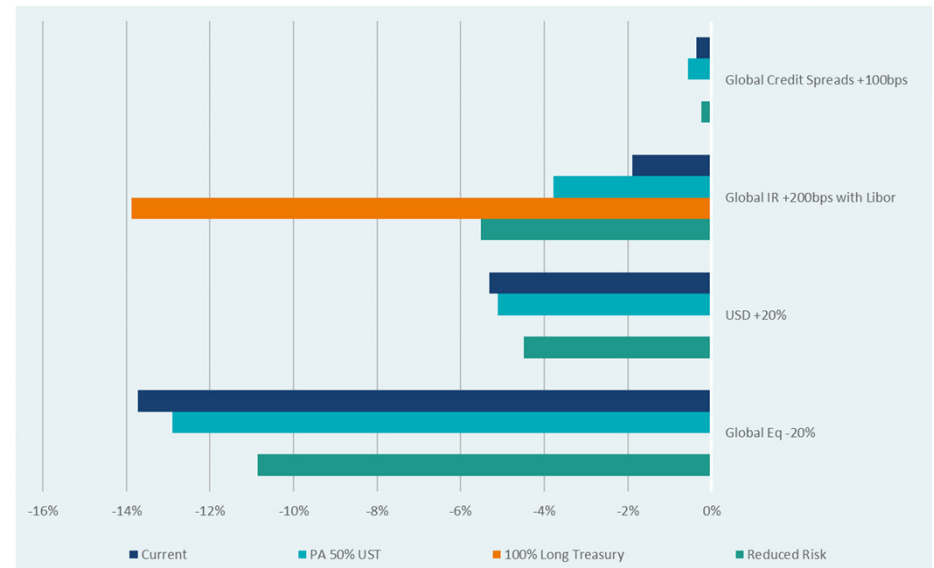
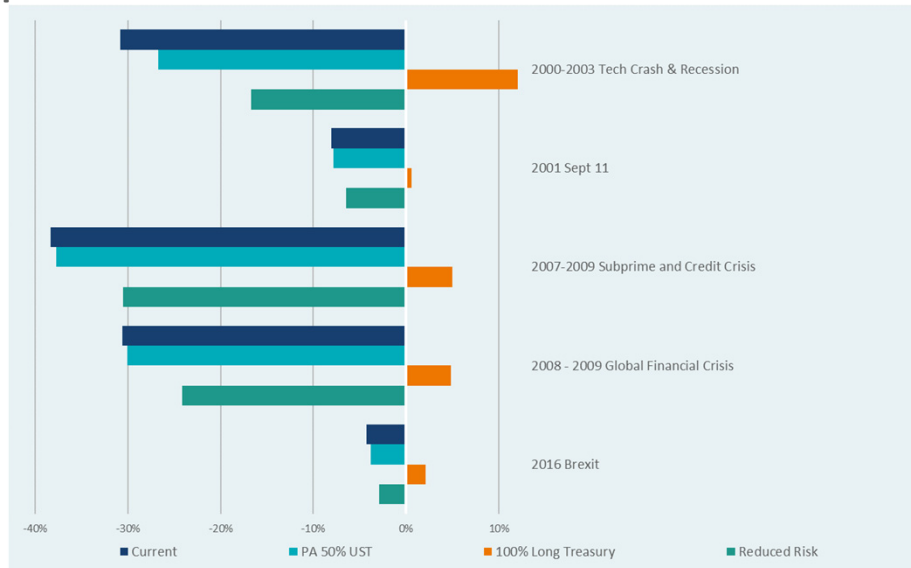
What

- In Verus' tail risk tool, factor shocks are used to calculate portfolio performance in times of financial stress such as the 2008 financial crisis or the 2001 tech bubble
- Verus' stress test tool uses a proprietary model to instantly shock portfolio risk factors and determine how a portfolio is expected to have performed

Why

- Examine risk in a portfolio by looking at how a portfolio would have performed during historical periods of market stress or how a portfolio might be expected to perform if certain factors were shocked

Output



Risk decomposition analysis

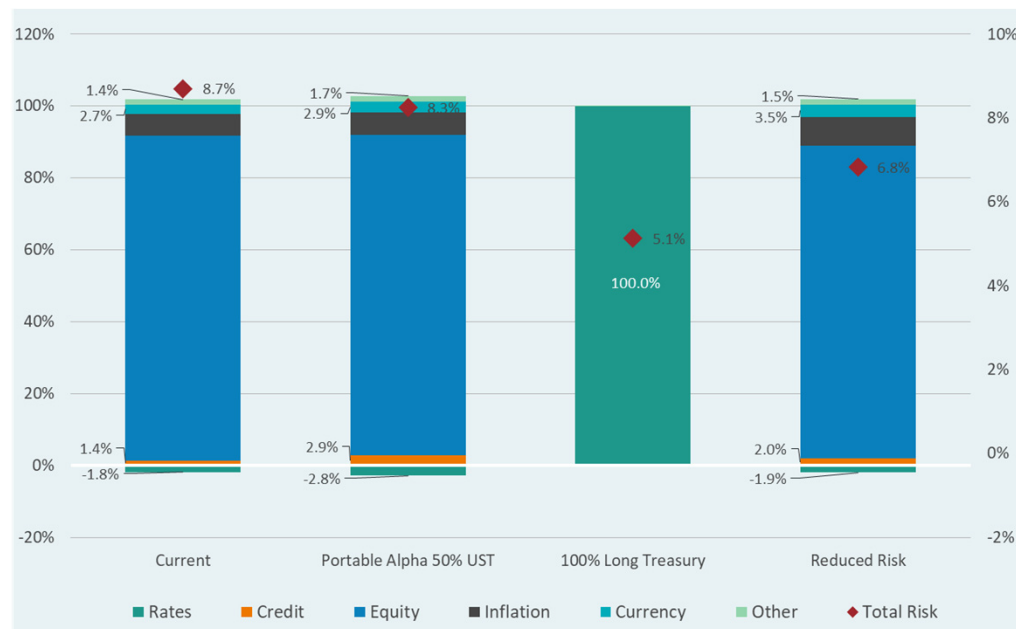
What

- Verus uses top industry risk analytics provider's (BarraOne) proprietary model to determine diversification benefit between key risk factors

Why

- Examine contribution of each risk factor to total portfolio risk to gauge true diversification not based upon how assets are allocated but risk which ultimately drives returns

Output



Board investment philosophy

Why should Board adopt investment philosophy?

- Risk must be taken in order to grow assets sufficiently to meet objective (i.e., funding benefit payments)
- There are many investment risks the Board and Staff must manage effectively. Key is identifying risks with sufficient rewards to justify taking the risk
- Investment risks to be considered:
 - Market
 - Equity – highest source of growth
 - Interest rates – (bonds) best source of income, stable growth
 - Credit – combination of growth and income
 - Currency – comes with investing outside U.S. border
 - Country – ditto
 - Default
 - Liquidity
 - Concentration (lack of diversification)
 - Inflation
- Establishment of investment philosophy provides framework for consistency in Board's investment risk management and decision making

Components of Board investment philosophy statement














































- Investment philosophy is not prescriptive but rather a credo which guides Board's investment decision making. At least, Board philosophy statement should include the following:
 - Statement regarding types of risks which will be taken and those which will be avoided
 - Articulation of beliefs regarding efficient and inefficient markets and strategies to be pursued based upon these beliefs
 - Recognition that behavioral biases exist and how Board will minimize behavioral risk impacts
 - Beliefs regarding diversification
 - Importance of rebalancing
 - Importance of benchmarking, what are considered acceptable benchmarks and how benchmarks will be selected
 - Articulation of how peer universes are perceived and used
 - Recognition of fee impacts and how fees will be managed
- Current Philosophy section within IPS is broad and should be expanded to incorporate elements outlined above

More about behavioral biases

- Behavioral risk is key risk Boards must strive to manage
- Examples of behavioral risk are:
 - ‘herd mentality’ (also, maintaining status quo)
 - loss aversion
 - reacting to short term market events
 - making decisions based upon emotion rather than objectively based upon theory and analysis (also, ‘familiarity’ bias)
 - hindsight bias (i.e., chasing historical performance)
- Investment philosophy can specifically address these risks and how Board will manage them
- Behavioral risk management framework should be developed prior to undertaking asset allocation policy setting process (asset/liability study)

Role of liquidity sub-portfolio

The role of asset classes

	RETURN ROLES				DIVERSIFICATION & VOLATILITY ROLES			HOW MACRO OUTLOOK/GDP AFFECTS ROLE	
	Benefit from GDP Growth	Earn Risk Premium	Produce Stable Income	Hedge Against Inflation	Low Absolute Volatility	Low Corr. To Other Assets	Reduce Portfolio Volatility	Elements of Return for Asset Class	Sensitivity to GDP
Public Equities								PEs, Dividends, Earnings Growth	
Private Equities								PEs (exits), Financing, Opportunity Set	
Fixed (Treasury)								Direct Link to Yields	
Fixed (Credit)								Direct Link to Yields, Credit Spreads	
Real Estate								Unemployment, Vacancies, Cap Rates	
MAGNITUDE	 High	 Med-High	 Medium	 Low	 None				

The role of the Liquidity Sub-Portfolio

- At the May 2016 Board Meeting, Board adopted “Functionally Focused Portfolio 6-yr” asset allocation and methodology. Implementation began in 2017
- Objective of this approach is to allocate portion of fund assets to highly liquid, low risk, short duration fixed income strategies (i.e., Liquidity Sub-Portfolio) which match a set number of years (currently 9 years) of projected net benefit payments
 - Ensures cash is available to meet plan obligations in any market environment no matter how stressed
- By explicitly funding near term net benefit payments, additional risk can be assumed throughout remainder of portfolio
- Asset allocation is re-visited annually to determine whether its necessary to adjust size of Liquidity Sub-Portfolio based on projected net benefit payments

Current Liquidity Sub-Portfolio structure

	Market Value	% of Portfolio	YTD	FYTD	1 Yr	3 Yr	5 YR	10 Yr	Since Inception	Since Inception Date
Liquidity Sub-Portfolio	\$246,941,449	11.2%	6.7%	1.5%	7.4%	2.7%	2.0%	NA	9.7%	Apr-11
<i>StanCERA Custom benchmark ¹</i>			3.3%	0.7%	4.4%	1.8%	1.5%	NA	1.3%	Apr-11
Cash	\$24,432,511	1.2%	1.1%	0.6%	1.6%	1.3%	1.2%	NA	9.2%	Apr-11
<i>FTSE T-Bill 1-Month</i>			1.8%	0.5%	2.3%	1.5%	0.9%	NA	0.6%	Apr-11
Short-Term Gov't/Credit	\$220,508,938	10.0%	7.4%	1.6%	8.2%	NA	NA	NA	3.8%	Jun-17
<i>BloombergBarclays US G/C 1-3 Yr</i>			3.4%	0.7%	4.6%	NA	NA	NA	2.3%	Jul-17
Insight	\$220,508,938	10.0%	7.4%	1.6%	8.2%	NA	NA	NA	3.8%	Jun-17

Next steps

- **February** – Review and discussion of role of public markets strategies within Growth portfolio
 - Active vs. passive and other implementation approaches
- **March** – Review and discussion of role of private markets strategies within Growth portfolio
 - Benchmarking private markets
 - Current pacing plan
 - Initiate Board survey to gather input for asset/liability study
- **April** – Review and discussion of role of Diversifying Sub-Portfolio
 - Review draft Board investment philosophy
- **May** – Present initial asset/liability study results; elicit Board feedback
 - Finalize Board investment philosophy
- **June** – Present final asset/liability study results and recommendations

Appendix

Verus asset allocation tools

We utilize the following combination of “lenses” to reach robust recommendations

Asset Allocation Tool	Output	Data used	Model Type	Construction
Verus Capital Market Assumptions	Return, volatility, and correlation forecast	Current + Long-term historical market data	Forecast	Determine the 10-year return, risk, and correlation expectations of each asset class based on the underlying drivers of returns as well as current and past behavior
Scenario Analysis	Return forecast	Long-term historical market data	Forecast	Using the Verus Capital Market Assumptions, determine the 10-year return expectations of each asset class if the drivers of return were to exhibit a +/- 1 standard deviation move in either a weaker or stronger direction, based on the historical behavior of each return driver
Monte Carlo Simulation	Return & volatility forecast	Verus Capital Market Assumptions	Stochastic analysis	Examine the possible 10-year distribution of portfolio performance assuming Verus Capital Market Assumptions were perfectly accurate in terms of return, risk, and correlation
Tail Risk Analysis	Historical return	BarraOne + Historical returns	Backtest	Calculate how a portfolio would have performed historically in times of market stress (i.e. 2008 financial crisis, 2001 tech bubble, oil crisis, etc.) Scenarios are often customized for clients to provide unique insights into portfolio sensitivities.
Stress Tests	Return forecast	BarraOne	Factor shock	Model how a portfolio might perform if certain risk factors are shocked up or down (i.e. global equity +/- 20%, global rates +/- 200 bps) based on the current risk sensitivities of the portfolio. Scenarios are often customized for clients to provide unique insights into portfolio sensitivities.
Risk Decomposition	Risk exposure forecast	BarraOne	Factor model	Determine each asset classes' current contribution to total portfolio risk using BarraOne model.

Mean variance analysis remains one of the most widely used forecasting tools

But, the mean variance optimization process is prone to generating errors.

So we use a variety of “lenses” in our asset allocation studies.

Methodology

CORE INPUTS

- We use a fundamental building block approach based on several inputs, including historical data and academic research to create asset class return forecasts.
- For most asset classes, we use the long-term historical volatility after adjusting for autocorrelation.
- Correlations between asset classes are calculated based on the last 10 years. For illiquid assets, such as private equity and private real estate, we use BarraOne correlation estimates.

Asset	Return Methodology	Volatility Methodology*
Inflation	25% weight to the University of Michigan Survey 5-10 year ahead inflation expectation and the Survey of Professional Forecasters (Fed Survey), and the remaining 50% to the market's expectation for inflation as observed through the 10-year TIPS breakeven rate	-
Cash	Real yield estimate + inflation forecast	Long-term volatility
Bonds	Nominal bonds: current yield; Real bonds: real yield + inflation forecast	Long-term volatility
International Bonds	Current yield	Long-term volatility
Credit	Current option-adjusted spread + U.S. 10-year Treasury – effective default rate	Long-term volatility
International Credit	Current option-adjusted spread + foreign 10-year Treasury – effective default rate	Long-term volatility
Private Credit	Bank loan forecast + 1.75% private credit premium**	Long-term volatility
Equity	Current yield + real earnings growth (historical average) + inflation on earnings (inflation forecast) + expected P/E change	Long-term volatility
Intl Developed Equity	Current yield + real earnings growth (historical average) + inflation on earnings (intl. inflation forecast) + expected P/E change	Long-term volatility
Private Equity	US large cap domestic equity forecast * 1.85 beta adjustment	1.2 * Long-term volatility of U.S. small cap
Commodities	Collateral return (cash) + spot return (inflation forecast) + roll return (assumed to be zero)	Long-term volatility
Hedge Funds	Return coming from traditional betas + 15-year historical idiosyncratic return	Long-term volatility
Core Real Estate	Cap rate + real income growth – capex + inflation forecast	65% of REIT volatility
REITs	Core real estate	Long-term volatility
Value-Add Real Estate	Core real estate + 2%	Volatility to produce Sharpe Ratio (g) equal to core real estate
Opportunistic Real Estate	Core real estate + 4%	Volatility to produce Sharpe Ratio (g) equal to core real estate
Infrastructure	Current yield + real income growth + inflation on earnings (inflation forecast)	Long-term volatility
Risk Parity	Expected Sharpe Ratio * target volatility + cash rate	Target volatility

*Long-term historical volatility data is adjusted for autocorrelation (see Appendix)

**The private credit premium is generated by illiquidity, issuer size, and lack of credit rating

10-year return & risk assumptions

Asset Class	Index Proxy	Ten Year Return Forecast		Standard Deviation Forecast	Sharpe Ratio Forecast (g)	Sharpe Ratio Forecast (a)	10-Year Historical Sharpe Ratio (g)	10-Year Historical Sharpe Ratio (a)
		Geometric	Arithmetic					
Equities								
U.S. Large	S&P 500	5.5%	6.6%	15.4%	0.23	0.31	1.01	1.02
U.S. Small	Russell 2000	5.7%	7.7%	21.1%	0.18	0.28	0.62	0.67
International Developed	MSCI EAFE	7.0%	8.4%	17.5%	0.29	0.37	0.30	0.37
International Small	MSCI EAFE Small Cap	7.2%	9.3%	21.8%	0.24	0.34	0.46	0.52
Emerging Markets	MSCI EM	7.6%	10.4%	25.6%	0.22	0.33	0.17	0.25
Global Equity	MSCI ACWI	6.4%	7.7%	16.8%	0.27	0.34	0.59	0.63
Private Equity*	Cambridge Private Equity	8.5%	11.3%	25.3%	0.26	0.37	-	-
Fixed Income								
Cash	30 Day T-Bills	1.9%	1.9%	1.2%	-	-	-	-
U.S. TIPS	BBgBarc U.S. TIPS 5-10	2.1%	2.2%	5.4%	0.04	0.06	0.65	0.66
U.S. Treasury	BBgBarc Treasury 7-10 Year	1.7%	1.9%	6.7%	-0.03	0.00	0.68	0.69
Global Sovereign ex U.S.	BBgBarc Global Treasury ex U.S.	0.1%	0.6%	9.7%	-0.19	-0.13	0.10	0.14
Global Aggregate	BBgBarc Global Aggregate	1.2%	1.4%	6.2%	-0.11	-0.08	0.39	0.37
Core Fixed Income	BBgBarc U.S. Aggregate Bond	2.2%	2.4%	6.3%	0.05	0.08	1.08	1.09
Core Plus Fixed Income	BBgBarc U.S. Corporate IG	2.7%	3.0%	8.3%	0.10	0.14	1.21	1.22
Short-Term Gov't/Credit	BBgBarc U.S. Gov't/Credit 1-3 Year	1.7%	1.8%	3.6%	-0.06	-0.03	1.16	1.17
Short-Term Credit	BBgBarc Credit 1-3 Year	1.9%	2.0%	3.6%	0.01	0.03	1.76	1.78
Long-Term Credit	BBgBarc Long U.S. Corporate	3.0%	3.4%	9.4%	0.12	0.16	0.93	0.94
High Yield Corp. Credit	BBgBarc U.S. Corporate High Yield	3.3%	4.0%	11.3%	0.12	0.18	1.25	1.26
Bank Loans	S&P/LSTA Leveraged Loan	5.3%	5.8%	10.0%	0.34	0.39	1.47	1.50
Global Credit	BBgBarc Global Credit	1.4%	1.6%	7.4%	-0.07	-0.03	0.77	0.78
Emerging Markets Debt (Hard)	JPM EMBI Global Diversified	5.0%	5.7%	12.4%	0.25	0.31	1.03	1.03
Emerging Markets Debt (Local)	JPM GBI-EM Global Diversified	5.7%	6.4%	12.0%	0.32	0.37	0.17	0.22
Private Credit	Bank Loans + 175bps	7.0%	7.5%	10.0%	0.51	0.56	-	-
Other								
Commodities	Bloomberg Commodity	3.8%	4.9%	15.4%	0.12	0.20	-0.36	-0.29
Hedge Funds*	HFRI Fund Weighted Composite	4.0%	4.3%	7.7%	0.27	0.31	0.55	0.56
Real Estate Debt	BBgBarc CMBS IG	4.0%	4.3%	7.6%	0.27	0.31	1.55	1.58
Core Real Estate	NCREIF Property	6.6%	7.3%	12.4%	0.38	0.44	1.84	1.89
Value-Add Real Estate	NCREIF Property + 200bps	8.6%	10.0%	17.7%	0.38	0.46	-	-
Opportunistic Real Estate	NCREIF Property + 400bps	10.6%	12.9%	23.0%	0.38	0.48	-	-
REITs	Wilshire REIT	6.6%	8.2%	19.1%	0.25	0.33	0.80	0.83
Global Infrastructure	S&P Global Infrastructure	7.2%	8.6%	17.8%	0.30	0.38	0.52	0.56
Risk Parity	Risk Parity	6.9%	7.4%	10.0%	0.50	0.55	-	-
Currency Beta	MSCI Currency Factor Index	1.8%	1.8%	3.6%	-0.04	-0.02	0.19	0.21
Inflation		1.9%	-	-	-	-	-	-

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

*Return expectations differ depending on method of implementation

Correlation assumptions

	Cash	US Large	US Small	Intl Large	Intl Small	EM	Global Equity	PE	US TIPS	US Treasury	Global Sovereign	US Core	Core Plus	Short-Term Gov't/Credit	Short-Term Credit	Long-Term Credit	US HY	Bank Loans	Global Credit	EMD USD	EMD Local	Commodities	Hedge Funds	Real Estate	REITs	Infrastructure	Risk Parity	Currency Beta
Cash	1.0																											
US Large	0.0	1.0																										
US Small	-0.1	0.9	1.0																									
Intl Large	0.0	0.9	0.7	1.0																								
Intl Small	-0.1	0.8	0.7	1.0	1.0																							
EM	0.0	0.7	0.6	0.8	0.8	1.0																						
Global Equity	0.0	1.0	0.8	1.0	0.9	0.9	1.0																					
PE	-0.2	0.6	0.6	0.6	0.6	0.5	0.6	1.0																				
US TIPS	0.0	0.0	-0.1	0.1	0.1	0.2	0.1	0.0	1.0																			
US Treasury	0.1	-0.4	-0.5	-0.3	-0.3	-0.2	-0.4	-0.2	0.7	1.0																		
Global Sovereign	0.1	0.2	0.0	0.3	0.3	0.4	0.3	0.0	0.5	0.4	1.0																	
US Core	0.1	-0.2	-0.3	-0.1	-0.1	0.0	-0.1	-0.1	0.8	0.9	0.5	1.0																
Core Plus	0.1	0.1	0.0	0.2	0.2	0.3	0.2	0.0	0.8	0.7	0.6	0.9	1.0															
Short-Term Gov't/Credit	0.3	-0.1	-0.2	0.0	0.0	0.1	0.0	-0.1	0.7	0.7	0.6	0.8	0.7	1.0														
Short-Term Credit	0.2	0.2	0.1	0.4	0.3	0.4	0.3	0.0	0.6	0.4	0.6	0.6	0.8	0.8	1.0													
Long-Term Credit	0.1	0.0	-0.1	0.1	0.1	0.2	0.1	-0.1	0.7	0.7	0.5	0.8	1.0	0.6	0.6	1.0												
US HY	0.0	0.7	0.7	0.8	0.8	0.8	0.8	0.4	0.3	-0.2	0.3	0.1	0.5	0.2	0.6	0.4	1.0											
Bank Loans	-0.1	0.6	0.6	0.6	0.6	0.6	0.6	0.4	0.1	-0.3	0.0	-0.1	0.2	-0.1	0.3	0.1	0.8	1.0										
Global Credit	0.1	0.5	0.3	0.7	0.7	0.7	0.6	0.2	0.5	0.2	0.8	0.5	0.7	0.5	0.8	0.6	0.7	0.4	1.0									
EMD USD	0.0	0.4	0.3	0.6	0.5	0.7	0.6	0.2	0.5	0.3	0.6	0.5	0.7	0.4	0.6	0.6	0.7	0.3	0.8	1.0								
EMD Local	0.1	0.5	0.4	0.7	0.6	0.8	0.6	0.2	0.4	0.1	0.6	0.2	0.5	0.3	0.5	0.4	0.6	0.4	0.8	0.8	1.0							
Commodities	0.0	0.5	0.5	0.6	0.6	0.6	0.6	0.3	0.1	-0.3	0.4	-0.1	0.1	0.1	0.3	0.0	0.6	0.4	0.5	0.4	0.6	1.0						
Hedge Funds	0.0	0.8	0.7	0.8	0.8	0.7	0.9	0.6	0.1	-0.3	0.1	-0.1	0.2	0.0	0.3	0.1	0.7	0.6	0.5	0.4	0.4	0.5	1.0					
Real Estate	-0.1	0.6	0.5	0.5	0.5	0.4	0.6	0.4	0.2	0.0	0.1	0.1	0.1	0.0	0.1	0.1	0.4	0.3	0.2	0.3	0.3	0.2	0.5	1.0				
REITs	0.0	0.6	0.6	0.6	0.5	0.5	0.6	0.4	0.3	0.1	0.3	0.3	0.4	0.2	0.4	0.4	0.6	0.5	0.5	0.5	0.5	0.3	0.5	0.7	1.0			
Infrastructure	0.0	0.7	0.6	0.9	0.8	0.8	0.8	0.7	0.3	-0.1	0.5	0.1	0.4	0.2	0.5	0.3	0.8	0.5	0.7	0.7	0.7	0.5	0.7	0.3	0.7	1.0		
Risk Parity	0.0	0.5	0.4	0.6	0.5	0.6	0.6	0.4	0.6	0.3	0.5	0.5	0.7	0.5	0.6	0.6	0.7	0.4	0.7	0.7	0.6	0.6	0.6	0.3	0.5	0.6	1.0	
Currency Beta	0.0	0.2	0.2	0.1	0.0	0.1	0.1	0.2	-0.1	-0.2	-0.1	-0.1	-0.1	-0.1	0.0	-0.1	0.2	0.1	0.0	0.0	0.0	0.1	0.1	0.0	0.2	0.1	0.0	1.0

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

30-year return & risk assumptions

- Occasionally investors may have a specific need for longer-term capital market forecasts. We have developed a set of 30-year assumptions to meet those needs.
- The return forecasts below have been constructed using our existing building block approach, but with longer-term inputs. Risks and correlations are estimated using the same approach as our 10-year forecasts, using full-history autocorrelation-adjusted realized risk and past 10 year realized correlations.
- These return figures must be thought of separately from our 10-year forecasts, and are not meant to imply performance for the 20 years *beyond* our 10 year forecasts.
- Please reach out to your Verus consultant with questions regarding whether 30-year Capital Market Assumptions might be appropriate for your needs.

Asset Class	Index Proxy	Thirty Year Return Forecast		Standard Deviation Forecast	Sharpe Ratio Forecast (g)	Sharpe Ratio Forecast (a)
		Geometric	Arithmetic			
Equities						
U.S. Large	S&P 500	5.5%	6.6%	15.4%	0.25	0.32
U.S. Small	Russell 2000	6.1%	8.1%	21.1%	0.21	0.30
International Developed	MSCI EAFE	6.7%	8.0%	17.5%	0.29	0.36
International Small	MSCI EAFE Small Cap	6.2%	8.3%	21.8%	0.21	0.31
Emerging Markets	MSCI EM	6.8%	9.6%	25.6%	0.20	0.31
Global Equity	MSCI ACWI	6.0%	7.3%	16.8%	0.26	0.34
Private Equity*	Cambridge Private Equity	8.7%	11.5%	25.3%	0.28	0.39
Fixed Income						
Cash	30 Day T-Bills	1.7%	1.7%	1.2%	-	-
U.S. TIPS	BBgBarc U.S. TIPS 5 - 10	2.1%	2.3%	5.4%	0.08	0.11
U.S. Treasury	BBgBarc Treasury 7-10 Year	2.1%	2.3%	6.7%	0.07	0.10
U.S. 30-year Treasuries	BBgBarc U.S. Treasury 20+ Year	2.1%	2.9%	12.5%	0.04	0.10
Global Sovereign ex U.S.	BBgBarc Global Treasury ex U.S.	0.7%	1.1%	9.7%	-0.10	-0.06
Global Aggregate	BBgBarc Global Aggregate	1.1%	1.3%	6.2%	-0.09	-0.06
Core Fixed Income	BBgBarc U.S. Aggregate Bond	3.0%	3.2%	6.3%	0.21	0.24
Core Plus Fixed Income	BBgBarc U.S. Corporate IG	3.6%	4.0%	8.3%	0.24	0.28
Short-Term Gov't/Credit	BBgBarc U.S. Gov't/Credit 1 - 3 year	2.3%	2.3%	3.6%	0.17	0.18
Short-Term Credit	BBgBarc Credit 1-3 Year	2.9%	2.9%	3.6%	0.33	0.35
Long-Term Credit	BBgBarc Long U.S. Corporate	3.5%	3.9%	9.4%	0.20	0.24
High Yield Corp. Credit	BBgBarc U.S. Corporate High Yield	5.3%	5.9%	11.3%	0.32	0.37
Bank Loans	S&P/LSTA Leveraged Loan	4.7%	5.2%	10.0%	0.30	0.35
Global Credit	BBgBarc Global Credit	0.8%	1.1%	7.4%	-0.12	-0.08
Emerging Markets Debt (Hard)	JPM EMBI Global Diversified	6.1%	6.8%	12.4%	0.35	0.41
Emerging Markets Debt (Local)	JPM GBI EM Global Diversified	5.7%	6.4%	12.0%	0.34	0.39
Private Credit	Bank Loans + 175bps	6.4%	6.9%	10.0%	0.48	0.52
Other						
Commodities	Bloomberg Commodity	3.2%	4.4%	15.4%	0.10	0.18
Hedge Funds*	HFRI Fund Weighted Composite	4.5%	4.8%	7.7%	0.37	0.40
Real Estate Debt	BBgBarc IG CMBS	4.1%	4.4%	7.6%	0.32	0.35
Core Real Estate	NCREIF Property	6.8%	7.5%	12.4%	0.41	0.47
Value-Add Real Estate	NCREIF Property + 200bps	8.8%	10.2%	17.7%	0.40	0.48
Opportunistic Real Estate	NCREIF Property + 400bps	10.8%	13.0%	23.0%	0.40	0.49
REITs	Wilshire REIT	6.8%	8.4%	19.1%	0.27	0.35
Global Infrastructure	S&P Global Infrastructure	7.0%	8.4%	17.8%	0.30	0.38
Risk Parity	Risk Parity	7.1%	7.6%	10.0%	0.54	0.59
Currency Beta	MSCI Currency Factor Index	2.2%	2.2%	3.6%	0.14	0.15
Inflation		1.6%	-	-	-	-

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

*Private Equity and Hedge Fund return expectations differ if implemented through a direct program versus a fund of funds vehicle

Glossary of Terms

Glossary of Terms

Alpha: The excess return of a portfolio after adjusting for market risk, usually attributable to manager skill.

Beta: A measure of systematic, or market, risk. This is risk that is attributable to general market movements.

Correlation: A measure of the relative movement of returns of one asset class relative to another over time. A correlation of 1 means the asset class returns move in lock step; a correlation of -1 means the asset class returns move in the exact opposite direction. Correlation is used to help maximize the benefits of diversification when constructing a total fund portfolio.

Idiosyncratic: Unique or individual. Idiosyncratic implies evidence of skill, and not market exposures, as the driver of risk and return.

Mean: Equivalent to the average of a set of numbers. Can be distorted by extremes, so it is important to understand distribution of the set.

Risk Premium: Expected return over the risk-free rate (i.e., cash return) earned for bearing risk. The greater the risk borne (e.g., equities), the greater the risk premium. Not all assets have a risk premium – some assets offer inconsistent excess returns over cash and should be avoided.

Sharpe Ratio: A measure of portfolio efficiency. The Sharpe Ratio indicates excess portfolio return over cash for each unit of risk associated with achieving the excess return. The higher the Sharpe Ratio, the more efficient the portfolio.

Standard Deviation: A measure of volatility, or risk, inherent in a portfolio. The standard deviation measures the extent to which actual returns differ from the expected mean return. For example, if a portfolio has an average expected rate of return of 7% and a standard deviation of 12%, then one would expect to receive an annual rate of return of between 19% and -5% at least 2/3 of the time.

Systematic: Market driven. Cannot be diversified away. Measured by beta. Investors can often achieve systematic returns and exposures through low cost index funds or derivatives, such as futures.

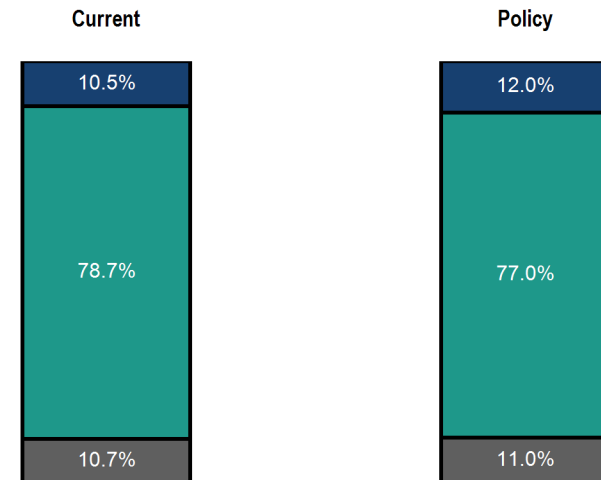
Tail Risk: The risk that arises when the possibility that an investment will move more than three standard deviations from the mean is greater than what is shown by a normal distribution

Total Fund Flash Report (Net of Fees) - Preliminary

Period Ending: December 31, 2019

	Market Value	% of Portfolio	1 Mo	YTD	Fiscal YTD
Total Fund	2,303,281,180	100.0	2.0	17.3	5.8
<i>Policy Index</i>			2.1	16.7	5.6
Liquidity Sub-Portfolio	242,763,981	10.5	0.4	7.7	2.5
<i>StanCERA Liquidity Blended BM</i>			0.2	3.9	1.3
Cash	28,165,783	1.2	0.1	1.6	1.1
<i>FTSE T-Bill 1 Month TR</i>			0.1	2.2	1.0
Short-Term Gov't/Credit	214,598,198	9.3	0.4	8.5	2.7
<i>BBgBarc US Gov't/Credit 1-3 Yr. TR</i>			0.2	4.0	1.3
<i>Insight</i>	214,598,198	9.3	0.4	8.5	2.7
<i>BBgBarc US Gov't/Credit 1-3 Yr. TR</i>			0.2	4.0	1.3
Growth Sub-Portfolio	1,813,449,519	78.7	2.5	20.8	6.9
<i>StanCERA Growth Blended BM</i>			2.6	20.4	6.8
US Large	341,656,803	14.8	3.0	30.6	11.0
<i>Russell 1000</i>			2.9	31.4	10.6
<i>BlackRock Russell 1000 Growth</i>	171,322,717	7.4	3.0	36.4	12.3
<i>Russell 1000 Growth</i>			3.0	36.4	12.3
<i>BlackRock Russell 1000 Value</i>	84,448,120	3.7	2.8	26.7	8.9
<i>Russell 1000 Value</i>			2.8	26.5	8.9
<i>Dodge & Cox-Equity</i>	85,885,966	3.7	3.3	23.9	10.1
<i>Russell 1000 Value</i>			2.8	26.5	8.9
US Small	83,482,336	3.6	3.2	25.1	6.8
<i>Russell 2000</i>			2.9	25.5	7.3
<i>Capital Prospects</i>	83,482,336	3.6	3.2	25.1	6.8
<i>Russell 2000 Value</i>			3.5	22.4	7.9
Private Equity Proxy	145,752,551	6.3	2.9	31.1	10.4
<i>Russell 3000 +3%</i>			3.3	34.0	12.3
<i>Northern Trust Russell 3000</i>	145,752,551	6.3	2.9	31.1	10.4
<i>Russell 3000</i>			2.9	31.0	10.4

	Current	%	Policy	%
Liquidity Sub-Portfolio	\$242,763,981	10.5%	\$276,393,742	12.0%
Cash	\$28,165,783	1.2%	\$23,032,812	1.0%
Short-Term Gov't/Credit	\$214,598,198	9.3%	\$253,360,930	11.0%
Growth Sub-Portfolio	\$1,813,449,519	78.7%	\$1,773,526,509	77.0%
US Large	\$341,656,803	14.8%	\$322,459,365	14.0%
US Small	\$83,482,336	3.6%	\$69,098,435	3.0%
Private Equity Proxy	\$145,752,551	6.3%	\$138,196,871	6.0%
Int'l Developed	\$543,519,419	23.6%	\$529,754,671	23.0%
Core Real Estate	\$146,771,352	6.4%	\$115,164,059	5.0%
Value Add Real Estate	\$90,790,962	3.9%	\$115,164,059	5.0%
Risk Parity	\$324,180,593	14.1%	\$299,426,553	13.0%
Infrastructure	\$43,310,598	1.9%	\$46,065,624	2.0%
Private Credit	\$93,984,904	4.1%	\$138,196,871	6.0%
Risk-Diversifying Sub-Portfolio	\$247,067,681	10.7%	\$253,360,930	11.0%
US Treasury	\$63,572,025	2.8%	\$69,098,435	3.0%
Short Term Gov't/Credit	\$183,495,656	8.0%	\$184,262,494	8.0%
Total	\$2,303,281,180	100.0%	\$2,303,281,180	100.0%



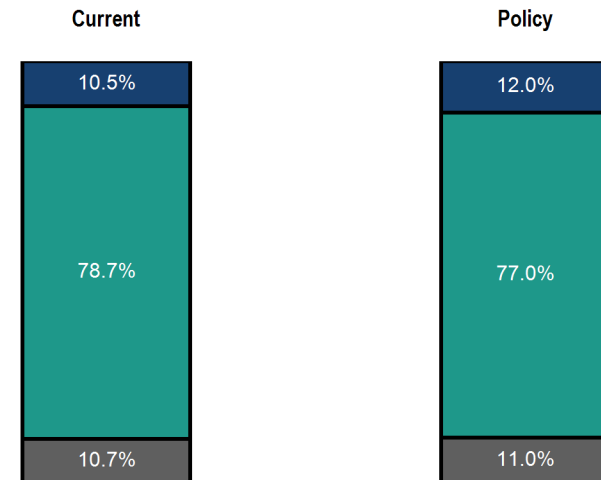
Policy Index (5/31/2019): 14% Russell 1000, 3% Russell 2000, 6% Russell 3000 + 3%, 23% MSCI ACWI ex-USA, 19% BBgBarc US Gov't/Credit 1-3 Yr, 3% BBgBarc US Treasury 7-10 Yr, 5% NCREIF Property, 5% NCREIF Property +2%, 2% CPI +5%, 6% S&P/LSTA Leveraged Loan Index + 2%, 13% 60% MSCI ACWI / 40% BBgBarc Global Aggregate, 1% Citi 1 Month T-Bills. All data is preliminary.

Total Fund Flash Report (Net of Fees) - Preliminary

Period Ending: December 31, 2019

	Market Value	% of Portfolio	1 Mo	YTD	Fiscal YTD
Int'l Developed	543,519,419	23.6	4.2	21.8	7.9
MSCI ACWI ex USA Gross			4.4	22.1	7.1
LSV Asset Mgt	274,235,603	11.9	4.7	20.8	9.3
MSCI ACWI ex USA Gross			4.4	22.1	7.1
Fidelity	269,283,817	11.7	3.7	22.8	6.5
MSCI ACWI ex USA Gross			4.4	22.1	7.1
Core Real Estate	146,771,352	6.4	0.4	9.4	3.1
Prime Property Fund	58,942,128	2.6	1.5	6.2	3.0
NCREIF-ODCE			N/A	N/A	N/A
BlackRock US Real Estate	30,865,770	1.3	-0.9	23.1	5.5
DJ US Select RESI TR USD			-0.9	23.1	5.5
PGIM Real Estate US Debt Fund	56,963,455	2.5	N/A	N/A	N/A
Gilberto-Levy Commercial Mortgage Performance Index			N/A	N/A	N/A
Value Add Real Estate	90,790,962	3.9	N/A	N/A	N/A
NCREIF Property Index +2%			N/A	N/A	N/A
American Strategic Value Realty	59,375,541	2.6	N/A	N/A	N/A
NCREIF Property Index			N/A	N/A	N/A
Greenfield Gap VII	10,182,961	0.4	N/A	N/A	N/A
NCREIF ODCE + 1%			N/A	N/A	N/A
Greenfield Gap VIII	21,232,460	0.9	N/A	N/A	N/A
NCREIF ODCE + 1%			N/A	N/A	N/A
Risk Parity	324,180,593	14.1	1.5	22.0	4.7
60% MSCI ACWI Net/40% BBgBarc Global Aggregate			2.3	18.6	5.8
AQR Global Risk Premium - EL	164,315,559	7.1	2.5	21.9	5.4
60% MSCI ACWI Net/40% BBgBarc Global Aggregate			2.3	18.6	5.8
PanAgora Risk Parity Multi Asset	159,865,034	6.9	0.4	22.1	4.0
60% MSCI ACWI Net/40% BBgBarc Global Aggregate			2.3	18.6	5.8

	Current	%	Policy	%
Liquidity Sub-Portfolio	\$242,763,981	10.5%	\$276,393,742	12.0%
Cash	\$28,165,783	1.2%	\$23,032,812	1.0%
Short-Term Gov't/Credit	\$214,598,198	9.3%	\$253,360,930	11.0%
Growth Sub-Portfolio	\$1,813,449,519	78.7%	\$1,773,526,509	77.0%
US Large	\$341,656,803	14.8%	\$322,459,365	14.0%
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Private Credit	\$93,984,904	4.1%	\$138,196,871	6.0%
Risk-Diversifying Sub-Portfolio	\$247,067,681	10.7%	\$253,360,930	11.0%
US Treasury	\$63,572,025	2.8%	\$69,098,435	3.0%
Short Term Gov't/Credit	\$183,495,656	8.0%	\$184,262,494	8.0%
Total	\$2,303,281,180	100.0%	\$2,303,281,180	100.0%



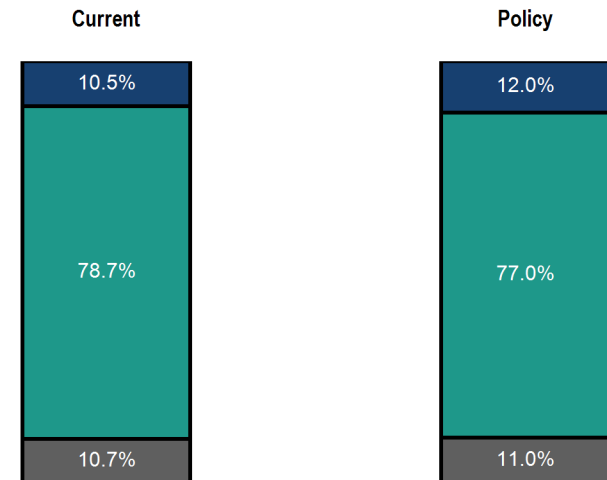
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Total Fund Flash Report (Net of Fees) - Preliminary

Period Ending: December 31, 2019

	Market Value	% of Portfolio	1 Mo	YTD	Fiscal YTD
Infrastructure	43,310,598	1.9	N/A	N/A	N/A
CPI + 5%			0.3	7.4	2.8
MS Infrastructure Partners II	43,310,598	1.9	N/A	N/A	N/A
CPI + 5%			0.3	7.0	2.4
Private Credit	93,984,904	4.1	N/A	N/A	N/A
S&P/LSTA Leveraged Loan Index+2%			1.8	10.8	3.8
Medley Capital	10,505,757	0.5	N/A	N/A	N/A
S&P/LSTA Leveraged Loan Index+2%			1.8	10.8	3.8
Owl Rock First Lien Fund	4,088,385	0.2	N/A	N/A	N/A
S&P/LSTA Leveraged Loan Index+2%			1.8	--	--
Raven Capital	14,330,002	0.6	N/A	N/A	N/A
S&P/LSTA Leveraged Loan Index+2%			1.8	10.8	3.8
Raven Opportunity III	38,869,797	1.7	N/A	N/A	N/A
S&P/LSTA Leveraged Loan Index+2%			1.8	10.8	3.8
White Oak Pinnacle	26,190,963	1.1	N/A	N/A	N/A
S&P/LSTA Leveraged Loan Index+2%			1.8	10.8	3.8
Risk-Diversifying Sub-Portfolio	247,067,681	10.7	0.0	5.9	1.7
StanCERA Risk-Diversifying Blended BM			0.0	5.3	1.3
US Treasury	63,572,025	2.8	-0.8	7.6	1.8
BBgBarc US Treasury 7-10 Yr TR			-0.7	8.5	1.5
Northern Trust Intermediate Gov't Bond	46,479,024	2.0	0.0	5.2	1.2
BBgBarc US Govt Int TR			0.0	5.2	1.2
Northern Trust Long Term Gov't Bond	17,093,001	0.7	-2.7	14.7	3.5
BBgBarc US Govt Long TR			-2.8	14.7	3.5
Short-Term Gov't/Credit	183,495,656	8.0	0.2	5.4	1.6
BBgBarc US Govt/Credit 1-3 Yr. TR			0.2	4.0	1.3
DFA	183,495,656	8.0	0.2	5.4	1.6
BBgBarc US Govt/Credit 1-3 Yr. TR			0.2	4.0	1.3

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Blended Benchmark Compositions

- StanCERA Liquidity Blended BM (8/31/2019): 92% BBgBarc US Govt/Credit 1-3 Yr. TR and 8% FTSE T-Bill 1 Month TR.
- StanCERA Growth Blended BM (8/31/2019): 18% Russell 1000, 4% Russell 2000, 8% Russell 3000 + 3%, 30% MSCI ACWI ex-US Gross, 6% NCREIF Property, 6% actual private Value Add Real Estate returns, 17% 60% MSCI ACWI/40% BBgBarc Global Aggregate, 3% actual Infrastructure returns, and 8% actual Private Credit returns.
- StanCERA Risk-Diversifying Blended BM (8/31/2019): 27% BBgBarc US Treasury 7-10 Yr. TR and 73% BBgBarc US Govt/Credit 1-3 Yr. TR.



January 28, 2020

Retirement Board Agenda Item

TO: Retirement Board

FROM: Rick Santos, Executive Director

- I. SUBJECT: Executive Director Goals 2020
- II. ITEM NUMBER: 9.a
- III. ITEM TYPE: Discussion and Action
- IV. STAFF RECOMMENDATION: Accept the Executive Director Goals (Attachment 1) for 2020
- V. ANALYSIS: This item sets forth Executive Director Goals for calendar year 2020. The goals set for 2020 come from the new 3-year Strategic Plan put forth by staff and approved by Committee and the full Board late last year. The item also includes general and/or ongoing items that appear at semi-regular times or are a normal part of routine StanCERA business.

Strategic Objective Goals

The strategic goals for this year are centered around the development of our new Organizational Structure, successful implementation of our Pension Administration System and documentation of StanCERA's investment governance process. While the goals slated to be accomplished this year appear to be numerous, they are necessary and staff has already been working on them since mid to late 2019.

Organizational Structure – StanCERA will be devoting considerable time this year to implementing its new Org Structure. The Org Structure as presented late last year, focuses on succession planning and eventually introduces a new functional area to the Organization designed to move StanCERA into the next phase of its growth

Successful Implementation of the Pension Administration System (PAS) – Successful implementation of the PAS goes without saying. The goals for 2020 simply define those practices that StanCERA will employ to achieve this goal. Additionally, it sets goals that create efficiencies for the dispensation of pension information to our members

Documentation of the Investment Governance Process – An important aspect of the Strategic Plan is the documentation of the way StanCERA administers investment governance. The investment process that the Organization has become accustomed to over the past several years has grown to a point where it is hard to track. This goal documents and standardizes all the critical processes and researches and sources a knowledge management system that can also be used in other areas of the Organization

General and/or Ongoing Items

General goals include the typical administrative duties that have been a staple of each Executive Director goals in the past. This year, new general items include the Biennial by-law review, administering an RFP for a general investment consultant and the completion of the triennial asset-liability review.

- VI. RISK: NONE
- VII. STRATEGIC PLAN: N/A
- VIII. ADMINISTRATIVE BUDGET IMPACT: While this agenda item does produce cost impacts on the budget, there is no marginal cost increase due specifically to this agenda item. In fact, costs for administering aspects of this item have already been built into StanCERA's annual budget.



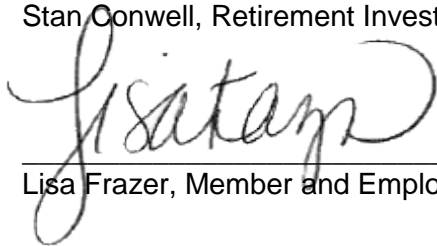
Rick Santos, Executive Director



Natalie Davis, Fiscal Services Manager



Stan Conwell, Retirement Investment Officer



Lisa Frazer, Member and Employer Services Manager



Strategic Goals 2020

(Attachment 1)

General and/or Ongoing Items

1. Continued communication, outreach and transparency with major stakeholders such as County, County BOS, Local Governments, Special Districts and Employee Groups
2. Maintenance of StanCERA's asset allocation targets
3. Continued progress on the System data clean-up project
4. Director Professional Development
5. Facilitate RFP for General Investment Consultant
6. Oversee Information Technology Solutions Project
7. Oversee and completion of day to day administrative functions
8. Biennial By-Law Review
9. Completion of asset liability review

Items Tied to the Strategic Plan

Strategic Objective #1

Develop an Organizational Structure reflective of our operational capabilities and succession planning needs

Strategic Plan Objective #1, Deliverables

1. Present the new Organizational Structure to StanCERA staff
2. Evaluate job descriptions of StanCERA positions to ensure they are still relevant and upholding the Mission, Vision and business practices and processes of the Organization by Fiscal Services and Member and Employer Services Manager
3. Develop the Job Description for the Organizational Support Manager position by StanCERA leadership
4. Evaluate StanCERA's internal operational needs as it supports the new Organizational Structure by StanCERA leadership
 - ✓ Define workflow processes in the new Pension Administration System that promote teamworking styles and mentorship
5. Phased implementation of the new Organizational Structure by StanCERA leadership
 - ✓ Soft implementation by summer 2020
 - ✓ Complete implementation by end of 2020



Strategic Objective # 2

Successful implementation/completion of the Pension Administration System (PAS)

Strategic Plan Objective #2, Deliverables

1. Integrate staff into all aspects of the PAS. Create an atmosphere of “ownership” of the project by employees
 - ✓ Maintain an internal PAS project manager position with at least 75% of the position’s time spent on the project
 - ✓ Create and implement a process whereby all line employees participate (within their relevant program area) in documenting current processes, assist in the creation of new processes, test system functionality and ultimately be required to sign off on releases of the new system functionality
 - ✓ Require at least one StanCERA manager participate in all process workflow development meetings
 - ✓ Require staff redundancy (more than 1) in all phases of the documentation and development of system functionality
2. Develop and instill trust in the PAS so that Organizational “buyoff” of the system is achieved, thereby maximizing the potential efficiencies the System can offer
 - ✓ Maximize the number of test cases that are performed and analyzed regarding benefit estimation and calculation
 - ✓ Parallel test the Arrivos System (PAS) with the Tyler System (StanCERA’s current system) for at least 2 weeks after “go live”
 - ✓ Staff training with live demos, data and actual cases/scenarios prior to “go live”
 - ✓ Management to maintain a high degree of transparency amongst staff regarding all aspects of the project
 - ✓ Maintain communication and encourage involvement by the Steering Committee and the Board regarding new functionality and business process changes inherent in the PAS
 - ✓ Create and maintain a Committee of no less than 2 trustees to oversee the electronic integration of customer service opportunities into the PAS
3. Strive to unlock the full value inherent in the PAS for both internal and external constituents
 - ✓ 65-70% of all data audits complete by “go live”
 - ✓ 85% of all data audits complete by end of 2020
 - ✓ Creation of short online webinars members can use to understand their retirement benefits
 - ✓ Revamp/revise the way information is dispensed to members at the Pre-Retirement Seminars. Consider more personalized (and less general) information and integrate the capabilities of the PAS at seminars
 - ✓ Consider mid-career retirement seminars



Strategic Objective # 3

Development and implementation of a formalized succession plan for StanCERA

Strategic Plan Objective #3 Deliverables

1. Documentation of all StanCERA business processes and policies
 - ✓ Build training guidelines for each role that supports the Organizational Structure's natural progression
 - ✓ Research and source an appropriate knowledge management system meant to house the documentation of StanCERA's business processes and policies (this task is assigned within Strategic Objective #5)

Strategic Objective #4

Development of a formalized Operational Risk Management Plan

Strategic Plan Objective #4 Deliverables

1. Reach out to other pension systems to gain further understanding of the requirements of an Operational Risk Management Plan
2. Define StanCERA's operational objectives and objectives for each of the strategies within the strategic plan
3. Identify the risks within the Organization and determine the type of risk, the level of risk, cause of risk effect of the risk and the controls in place regarding the risk

Strategic Objective # 5

Process documentation and standardization of the Investment Governance Process

Strategic Plan Objective #5 Deliverables

1. Develop and maintain a comprehensive list of critical investment governance processes
 - ✓ Identify and categorize tasks that require documentation
 - ✓ Create a master calendar for investment governance
2. Research and source an appropriate knowledge management system
 - ✓ Determine the design and scope of the desired system
 - ✓ Identify and select a system that provides the required functionality while also remaining compatible with the Organization's existing systems and resource constraints
3. Standardize the documentation process
 - ✓ Research methods to capture implicit knowledge in the documentation process
 - ✓ Create a procedure template appropriate for investment governance tasks



January 28, 2020

Retirement Board Agenda Item

TO: Retirement Board

FROM: Natalie Davis, Fiscal Services Manager

- I. SUBJECT: Complaint Log
- II. ITEM NUMBER: 9.b
- III. ITEM TYPE: Discussion and Action
- IV. STAFF RECOMMENDATION: Discontinue the complaint log as it is today to be revisited upon go-live with the Web Portal.
- V. ANALYSIS: The complaint log for StanCERA was implemented in August 2003. Since that initial implementation there have been 391 complaints logged. Not all of these are complaints. Several of them are notes of phone calls received requesting information. 275 of these complaints (70%) are health insurance related and are not complaints towards StanCERA. Total customer service complaints, complaints regarding the way StanCERA staff interacts with our members, were 8 between May 2005 and December 2017. The last three calendar years there have been 5 or fewer complaints per year. See Attachment 1 for 2019 Quarter 4 Complaint Log.
Because staff enters these types of complaints, as well as all the other types of complaints, there is an inherent incentive not to record complaints directed towards StanCERA staff. In order to ensure we can provide excellent customer service to our members, StanCERA needs to provide access to our members for reporting their complaints. With the implementation of the Pension Administration System, the new website and the member portal, staff will be able to provide the capability for members to comment on administration issues. This will empower our members, both retired and active, to report their concerns in an anonymous manner if they so choose. StanCERA staff recommends discontinuing the complaint log as it is today and research and implement access to our members through the new website and/or the web portal.
- VI. RISK: None
- VII. STRATEGIC PLAN: N/A
- VIII. ADMINISTRATIVE BUDGET IMPACT: NONE

Natalie Davis, Fiscal Services Manager

Rick Santos, Executive Director



Stanislaus County Employees' Retirement Association

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

January 28, 2020

TO: Retirement Board

FROM: Alaine Taa, Administrative Assistant

SUBJECT: StanCERA Complaint Log

There was one complaint between October 1 and December 31, 2019. Staff keeps a tally of duplicate complaints to better gauge the extent of any problems. A summary of these complaints follows:

Quarter 4 – 2019

NUMBER OF COMPLAINTS	CALLER STATUS	NATURE OF COMPLAINT
0	Retiree	None
1	Active	Member unhappy about the Retirement Estimate turn around time (3-6 months)

Quarter 3 - 2019

NUMBER OF COMPLAINTS	CALLER STATUS	NATURE OF COMPLAINT
1	Retiree	A Retiree expected a benefit increase after her spouse passed away. The option she chose is irrevocable and her benefit will not increase.
0	Active	None