San Joaquin County Employees
Retirement Association

A G E N D A

BOARD MEETING
SAN JOAQUIN COUNTY EMPLOYEES RETIREMENT ASSOCIATION
BOARD OF RETIREMENT
FRIDAY, FEBRUARY 12, 2021
AT 9:00 AM
Location: Via Zoom

In accordance with current state and local emergency proclamations and orders, this Board Meeting will be held virtually via Zoom Client.

The public may only attend the meeting by (1) clicking here https://us02web.zoom.us/j/81714763309 and following the prompts to enter your name and email, or (2) calling (669) 219-2599 or (669) 900-9128 and entering Meeting ID **81714763309**#.

Persons who require disability-related accommodations should contact SJCERA at (209) 468-9950 or KendraF@sjcera.org at least forty-eight (48) hours prior to the scheduled meeting time.

1.0 ROLL CALL

2.0 PLEDGE OF ALLEGIANCE

3.0 APPROVAL OF MINUTES

3.01 Approval of the minutes for the Board Meeting of January 8, 2021 4

3.02 Approval of the minutes for the CEO Performance Review Committee of January 29, 2021 8

3.03 Board to approve minutes

4.0 PUBLIC COMMENT

4.01 Persons wishing to address the Board of Retirement should follow the steps below. Speakers are limited to three minutes and are expected to be civil and courteous.

If joining via Zoom from your PC or Mac, and you wish to make a Public Comment, please select “Participants” found in the toolbar at the bottom of your screen. From there you will see the option to raise and lower your hand.

If joining via Zoom from your mobile device, and you wish to make a Public Comment, please select the “More” option found in the toolbar at the bottom of your screen. From there you will see the option to raise and lower your hand.

If joining via Zoom from your tablet such as an iPad, and you wish to make a Public Comment, please click on the icon labeled “Participants” typically located at the top right of your screen and then tap the hand icon next to your device in the participants column to raise your digital hand.

If dialing in from a phone for audio only and you wish to make a Public Comment, please dial *9 to “raise your hand”.

Except as otherwise permitted by the Ralph M. Brown Act (California Government Code Sections 54950 et seq.), no deliberation, discussion or action may be taken by the Board on items not listed on the agenda. Members of the Board may, but are not required to: (1) briefly respond to statements made or questions posed by persons addressing the Board; (2) ask a brief question for clarification; or (3) refer the matter to staff for further information.

12.0 COMMENTS

12.01 Comments from the Board of Retirement

13.0 CLOSED SESSION

13.01 PERSONNEL MATTERS
CALIFORNIA GOVERNMENT CODE SECTION 54957
EMPLOYEE DISABILITY RETIREMENT APPLICATIONS (2)

13.02 CONFERENCE WITH LEGAL COUNSEL - ANTICIPATED LITIGATION
CALIFORNIA GOVERNMENT CODE SECTION 54956.9(d)(4)
Initiation of Litigation - 1 Case

13.03 PUBLIC EMPLOYEE PERFORMANCE EVALUATION
CALIFORNIA GOVERNMENT CODE SECTION 54957
TITLE: RETIREMENT ADMINISTRATOR/CHIEF EXECUTIVE OFFICER

14.0 CALENDAR

14.01 Board Meeting, March 12, 2021 at 9:00 AM

14.02 Audit Committee Meeting, March 12, 2021 upon adjournment of the Board Meeting

15.0 ADJOURNMENT

M I N U T E S

BOARD MEETING
SAN JOAQUIN COUNTY EMPLOYEES RETIREMENT ASSOCIATION
BOARD OF RETIREMENT
FRIDAY, JANUARY 8, 2021
AT 9:00 AM
Location: Via Zoom

1.0 ROLL CALL

1.01 **MEMBERS PRESENT**: Phonxay Keokham, Jennifer Goodman, Katherine Miller (in at 9:25 a.m.), Chanda Bassett, Adrian Van Houten, Margo Praus, Raymond McCray, and Michael Restuccia presiding

MEMBERS ABSENT: Emily Nicholas and Michael Duffy

STAFF PRESENT: Chief Executive Officer Johanna Shick, Assistant Chief Executive Officer Kathy Herman, Investment Officer Paris Ba, Information Systems Manager Adnan Khan, Management Analyst III Greg Frank, Department Information Systems Analyst II Lolo Garza, and Information Systems Specialist II Jordan Regevig

OTHERS PRESENT: Deputy County Counsel Jason Morrish, David Sancewich of Meketa Investment Group, Ashley Dunning of Nossaman LLP

2.0 PLEDGE OF ALLEGIANCE

3.0 APPROVAL OF MINUTES

3.01 Approval of the minutes for the Board Meeting of December 11, 2020

3.02 **The Board voted unanimously (6-0) to approve the minutes for the Board Meeting of December 11, 2020. (Motion: Bassett; Second: Van Houten)**

4.0 PUBLIC COMMENT

4.01 There was no public comment.

5.0 CONSENT ITEMS

5.01 Service Retirement (18)

5.02 General (2)

01 **Annual Trustee Education Report**

02 **Earnings Code Retirement-Eligible Ratification Report**

5.03 **The Board voted unanimously (6-0) to approve the Consent Items. (Motion: Van Houten; Second: McCray)**

6.0 ALAMEDA DECISION EARNING CODES REVIEW

6.01 Proposed Resolution 2021-01-01 “Alameda Decision Earning Codes Review”

6.02 **The Board voted unanimously (6-0) to adopt Resolution 2021-01-01 as amended, including Attachment A only. (Motion: Van Houten; Second: Keokham). Attachment B was discussed and will be considered at a future meeting.**

7.0 PRIVATE DEBT INVESTMENT MANAGER PRESENTATION

7.01 Presentation by Ed Mule´ and Eve Teich of Silver Point Capital

7.02 **The Board took no action on the presentation in open session.**

8.0 CLOSED SESSION

THE CHAIR CONVENED CLOSED SESSION AT 10:08 A.M. AND ADJOURNED THE CLOSED SESSION AND RECONVENED THE OPEN SESSION AT 10:58 A.M.

8.01 PURCHASE OR SALE OF PENSION FUND INVESTMENTS
CALIFORNIA GOVERNMENT CODE SECTION 54956.81

8.02 PERSONNEL MATTERS
CALIFORNIA GOVERNMENT CODE SECTION 54957
EMPLOYEE DISABILITY RETIREMENT APPLICATION(S) (1)

01 Disability Retirement Consent (1)

Counsel reported that in Closed Session the Board took the following action on personnel matters:

a Hospital Materials Manager
Hospital Purchasing - Warehouse

The Board voted unanimously (7-0) to grant the applicant a nonservice-connected disability retirement. (Motion: Bassett; Second: Miller)

8.03 PUBLIC EMPLOYEE PERFORMANCE EVALUATION
CALIFORNIA GOVERNMENT CODE SECTION 54957
TITLE: RETIREMENT ADMINISTRATOR/CHIEF EXECUTIVE OFFICER

9.0 CONSULTANT REPORTS PRESENTED BY DAVID SANCEWICH OF MEKETA INVESTMENT GROUP

9.01 Monthly Investment Performance Updates

01 Receive and File Manager Performance Flash Report - November 2020

02 Receive and File Capital Markets Outlook and Risk Metrics - December 2020

9.02 Board accepted and filed reports.

10.0 STAFF REPORTS

10.01 Pending Retiree Accounts Receivable - Fourth Quarter 2020

10.02 Legislative Summary Report - None; No Changes Since 10/2020

10.03 Trustee and Executive Staff Travel

01 Conferences and Events Schedule for 2021

a 2021 Pension Bridge Alternatives Virtual Conference

b 2021 Pension Bridge ESG Summit Virtual Conference

02 Summary of Pending Trustee and Executive Staff Travel - None

03 Summary of Completed Trustee and Executive Staff Travel

10.04 Board accepted and filed reports.

10.05 CEO Report

In addition to the CEO report, CEO Shick shared that Kendra Fenner, SJCERA's new Administrative Secretary will be starting on January 18, 2021. She also mentioned that the interviews for the Communications Officer position will begin within the next few weeks and the phone for the Virtual Assistant is on backorder.

01 2020 Action Plan

CEO Shick stated how impressed she was with staff's accomplishments in light of COVID-19, while running eight percent under budget and with a 97 percent customer satisfaction rate.

SJCERA's six biggest accomplishments include:
1) completing the asset-class review and moving about one-third of our portfolio to more efficient index funds,
2) reinstating our cash overlay program,
3) implementing the enhancements to our Pension Administration System (PAS),
4) implementing work place strategies that kept staff safe and met our customers' needs during the pandemic,
5) strengthening our IT infrastructure, and
6) the progress made year-to-date on implementing the *Alameda* Decision

Three areas that were either deferred until 2021 or SJCERA made progress on but didn't finish:
1) attaining our disability process performance standards,
2) not all of SJCERA's primary procedures were documented, but the PAS processes were all documented and we made significant progress on documenting all of Finance's procedures, and
3) the penetration testing was deferred until 2021 to be in conjunction with the IT audit.

She also stated that SJCERA weathered an amazing year and has become a stronger and more agile organization.

11.0 CORRESPONDENCE

11.01 Letters Received

01 October 1, 2020 SACRS Board of Directors Elections

11.02 Letters Sent

11.03 Market Commentary/Newsletters/Articles

01	NCPERS	The Monitor	December 2020
02	FundFire	Article re: PPP Loans	December 17, 2020

12.0 COMMENTS

12.01 Trustee Keokham asked who will be conducting the IT audit.

12.02 Trustte Restuccia congratulated Trustee Miller on her reappointment to the Board of Retirement.

13.0 CALENDAR

13.01 Board Meeting, February 12, 2021 at 9:00 AM

14.0 ADJOURNMENT

14.01 There being no further business the meeting was adjourned at 11:24 a.m.

Respectfully Submitted:

____

Michael Restuccia, Chair

Attest:

____

Raymond McCray, Secretary

M I N U T E S

CEO PERFORMANCE REVIEW COMMITTEE MEETING
SAN JOAQUIN COUNTY EMPLOYEES RETIREMENT ASSOCIATION
BOARD OF RETIREMENT
FRIDAY, JANUARY 29, 2021
AT 10:33 AM
Location: Via Zoom

1.0 ROLL CALL

1.01 **MEMBERS PRESENT:** Chanda Bassett, Michael Restuccia, Adrian Van Houten, and Jennifer Goodman presiding
MEMBERS ABSENT: None
OTHERS PRESENT: Deputy County Counsel Jason Morrish

2.0 PUBLIC COMMENT

2.01 There was no public comment.

3.0 COMMENTS

3.01 Trustee Restuccia thanked the Committee Chair for her efforts in overseeing the Committee.

4.0 CLOSED SESSION

THE COMMITTEE CHAIR CONVENED A CLOSED SESSION AT 10:36 A.M. THE CHAIR ADJOURNED THE CLOSED SESSION AND RECONVENED THE OPEN SESSION AT 11:15 A.M.

4.01 **PUBLIC EMPLOYEE PERFORMANCE EVALUATION**
CALIFORNIA GOVERNMENT CODE SECTION 54957
TITLE: RETIREMENT ADMINISTRATOR/CHIEF EXECUTIVE OFFICER

5.0 REPORT OUT OF CLOSED SESSION

5.01 Counsel noted there was nothing to report out from closed session.

6.0 ADJOURNMENT

6.01 There being no further business, the meeting was adjourned at 11:16 A.M.

Respectfully Submitted:

____
Jennifer Goodman, Committee Chairperson

5.01 Service Retirement — Consent

01 MARTHA L ARROYO — Outpatient Clinic Assistant, Hosp FP Clinic California St.

Member Type: General
Years of Service: 25y 11m 26d
Retirement Date: 12/31/2020
Comments: incoming reciprocity and concurrent retirement with CalPERS.

02 DANIELLE A CARDOZA — Administrative Assistant II, Correctional Health Services

Member Type: General
Years of Service: 34y 04m 08d
Retirement Date: 12/5/2020

03 JAMES R CLEMENS — Bridge Tender, Public Works-Road Main-North

Member Type: General
Years of Service: 33y 01m 17d
Retirement Date: 12/21/2020

04 RUTH DOMINGUEZ — Child Support Officer II, Child Support Svs

Member Type: General
Years of Service: 31y 00m 23d
Retirement Date: 12/19/2020

05 ROSEMARY FREUND — Juvenile Facility Supervisor, Juvenile Detention

Member Type: Safety
Years of Service: 29y 05m 29d
Retirement Date: 12/21/2020

06 JAMES L GILL — Deferred Member, NA

Member Type: General
Years of Service: 06y 10m 14d
Retirement Date: 12/22/2020
Comments: Deferred from SJCERA since November 2020.

07 JOHN W HARDMAN — Accountant III, Hosp General Accounting

Member Type: General
Years of Service: 05y 00m 11d
Retirement Date: 12/12/2020

08 MAGGIE HERNANDEZ — Accounting Technician I, Behavioral Health Admin

Member Type: General
Years of Service: 15y 11m 21d
Retirement Date: 1/2/2021

09 BILL D HOBBS — Dept Info Systems Analyst II, Health Care Srvcs - BHS IT

Member Type: General
Years of Service: 12y 05m 05d
Retirement Date: 1/2/2021

10 **TERESA L HUFFSTUTLER** Eligibility Worker II
HSA - Eligibility Staff

Member Type: General
Years of Service: 05y 10m 04d
Retirement Date: 12/18/2020

11 **VICTORIA A LOONEY** Staff NurseV-AsstNDptMg-Inpat
Correctional Health Services

Member Type: General
Years of Service: 03y 00m 11d
Retirement Date: 12/19/2020
Comments: Incoming reciprocity and concurrent retirement with StanCERA.

12 **LEANN J MCKELROY** Correctional Officer
Sheriff-Custody-Regular Staff

Member Type: Safety
Years of Service: 24y 08m 25d
Retirement Date: 1/2/2021

13 **CARLA R MECKLER** Staff NurseV-AsstNDptMg-Inpat
Hosp- Trauma Center

Member Type: General
Years of Service: 25y 08m 06d
Retirement Date: 12/20/2020

14 **CHRISTINE M MERITT** Property Technician
Assessor

Member Type: General
Years of Service: 15y 09m 05d
Retirement Date: 1/1/2021

15 **JEANIE D NASH** Senior Office Assistant
Behavioral Health Admin

Member Type: General
Years of Service: 08y 01m 10d
Retirement Date: 1/2/2021

16 **NANCY A NOLETTE** Park Worker
Parks - Recreation

Member Type: General
Years of Service: 14y 05m 20d
Retirement Date: 12/13/2020

17 **GRACE C QUINES** Staff Nurse IV - Inpatient
Hosp Pediatrics

Member Type: General
Years of Service: 13y 07m 09d
Retirement Date: 1/2/2021

18 **SYLVIA ROMERO** Senior Office Assistant
California Childrens Services

Member Type: General
Years of Service: 08y 03m 26d
Retirement Date: 1/2/2021

19 **BRENDA M SCHULTZ**

Special District Class Code
Law Library

Member Type: General
Years of Service: 16y 10m 19d
Retirement Date: 1/2/2021

20 **BRIAN N TAING**

Deputy Director of HSA
HSA - Admin Support

Member Type: General
Years of Service: 32y 06m 03d
Retirement Date: 12/5/2020

21 **ROD G VERCELES**

Deferred Member
NA

Member Type: General
Years of Service: 11y 01m 02d
Retirement Date: 12/18/2020
Comments: Deferred from SJCERA since October 2013.

Agenda Item 5.02-01

February 12, 2021

SUBJECT: 2021 Retiree Cost-of-Living Adjustment (COLA)

SUBMITTED FOR: _X_ CONSENT ___ ACTION ___ INFORMATION

RECOMMENDATION

The Board shall review and adopt Cheiron's determination of a 1.5 percent Cost-of-Living Adjustment.

PURPOSE

In accordance California Government Code 31870.1, the Board is required to determine on an annual basis, before April 1, whether there has been an increase or decrease in the cost of living in the Bureau of Labor Statistics Consumer Price Index (CPI) for All Urban Consumers for that particular County.

DISCUSSION

Because the Bureau of Labor Statistics does not publish a CPI for San Joaquin County, SJCERA uses the CPI for the San Francisco-Oakland-Hayward area. Cheiron has determined that the CPI for All Urban Consumers in the San Francisco-Oakland-Hayward area increased by 1.69 percent, resulting in a COLA of 1.5 percent.

Pursuant to the statute, members' retirement benefits must be adjusted by a COLA equivalent to the CPI percentage change rounded to the nearest one-half of one percent. The COLA, if any, is reflected on members' May 1, 2021 retirement benefit payment.

In years when the change in the CPI is greater than the statutory annual maximum COLA of 3 percent, the percentage over the 3 percent limit is "banked" for use in future years when the COLA is less than 3 percent. Since this year's COLA is less than 3 percent, some retirees will receive a higher COLA using accumulations from their COLA banks as follows.

Retirement Date	2021 COLA
4/2/2019 - 4/1/2021	1.5%
4/2/1988 - 4/1/2019	2.5%
On or before 4/1/1988	3.0%

ATTACHMENT

Annual COLA update from Cheiron dated January 21, 2021

JOHANNA SHICK
Chief Executive Officer

Via Electronic Mail

January 21, 2021

Ms. Johanna Shick
Chief Executive Officer
San Joaquin County Employees' Retirement Association
6 El Dorado Street, Suite 700
Stockton, CA 95202

Re: Cost-of-Living Adjustment (COLA) as of April 1, 2021

Dear Ms. Shick:

Pursuant to the scope of retainer services under Cheiron's agreement to provide actuarial services to SJCERA, we have computed the cost-of-living adjustment (COLA) percentages to be used by the Association as of April 1, 2021. 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 Consumer Price Index (CPI) for All Urban Consumers in the San Francisco-Oakland-Hayward area, using a base period of 1982-1984. The ratio of the annual averages for the prior calendar years is calculated and rounded to the nearest one-half percent. The method for calculating the annual average is to determine the average for all months of data provided by the Bureau of Labor and Statistics (e.g., the sum of six bi-monthly CPI amounts divided by six).

COLA Calculations

The annual average CPIs described above were 300.4 and 295.4 for 2020 and 2019, respectively. This represents an increase of 1.69%, which is subsequently rounded to 1.50%. As a point of comparison, the annual U.S. City Average CPI increased by 1.23% over the same time period.

SJCERA members are subject to the provisions of Section 31870.1, which limits annual COLA increases to 3.0% annually. Based on the accumulated carry-over balances as of April 1, 2020, members who retired prior to April 2, 1988 will receive a 3.0% increase on April 1, 2021. Their accumulated carry-over balances will be reduced by 1.5%. Members who retired on or after April 2, 1988 but prior to April 2, 2019 will receive a 2.5% increase on April 1, 2021. Their accumulated carry-over balances will be reduced by 1.0%. Those who retired on or after April 2, 2019 will receive a 1.5% increase in their benefits, with no change in the carry-over balances. The enclosed exhibit summarizes the COLA calculations and carry-over balances.

Please contact us if you have any questions regarding these calculations.

Sincerely,
Cheiron

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

Timothy S. Doyle, ASA, MAAA, EA
Associate Actuary

Attachment

cc: Anne D. Harper, FSA, MAAA, EA

EXHIBIT A
COST-OF-LIVING ADJUSTMENTS (COLA)
As of April 1, 2021

Maximum Annual COLA: 3.0%

Initial Retirement Date	**April 1, 2020**		Increase in the Annual Average CPI [1]		**April 1, 2021**		
	Accum-ulated Carry-Over w/o PPP [2] (A)	Accum-ulated Carry-Over w/PPP Adjust. (B)	Actual (C)	Rounded (D)	**COLA (E)**	Accum-ulated Carry-Over w/o PPP (F)	Accum-ulated Carry-Over w/PPP Adjust. (G)
On or Before 04/01/1970	71.5%	14.0%	1.69%	1.5%	**3.0%**	70.0%	12.5%
04/02/1970 to 04/01/1971	69.0%	14.0%	1.69%	1.5%	**3.0%**	67.5%	12.5%
04/02/1971 to 04/01/1972	67.0%	14.0%	1.69%	1.5%	**3.0%**	65.5%	12.5%
04/02/1972 to 04/01/1973	66.0%	14.0%	1.69%	1.5%	**3.0%**	64.5%	12.5%
04/02/1973 to 04/01/1974	65.5%	14.0%	1.69%	1.5%	**3.0%**	64.0%	12.5%
04/02/1974 to 04/01/1975	62.5%	14.0%	1.69%	1.5%	**3.0%**	61.0%	12.5%
04/02/1975 to 04/01/1976	55.5%	14.0%	1.69%	1.5%	**3.0%**	54.0%	12.5%
04/02/1976 to 04/01/1977	48.5%	14.0%	1.69%	1.5%	**3.0%**	47.0%	12.5%
04/02/1977 to 04/01/1978	46.0%	14.0%	1.69%	1.5%	**3.0%**	44.5%	12.5%
04/02/1978 to 04/01/1979	41.5%	14.0%	1.69%	1.5%	**3.0%**	40.0%	12.5%
04/02/1979 to 04/01/1980	35.0%	14.0%	1.69%	1.5%	**3.0%**	33.5%	12.5%
04/02/1980 to 04/01/1981	29.5%	14.0%	1.69%	1.5%	**3.0%**	28.0%	12.5%
04/02/1981 to 04/01/1982	17.5%	14.0%	1.69%	1.5%	**3.0%**	16.0%	12.5%
04/02/1982 to 04/01/1983	7.5%	N/A	1.69%	1.5%	**3.0%**	6.0%	N/A
04/02/1983 to 04/01/1984	5.0%	N/A	1.69%	1.5%	**3.0%**	3.5%	N/A
04/02/1984 to 04/01/1985	5.0%	N/A	1.69%	1.5%	**3.0%**	3.5%	N/A
04/02/1985 to 04/01/1986	2.5%	N/A	1.69%	1.5%	**3.0%**	1.0%	N/A
04/02/1986 to 04/01/1987	1.5%	N/A	1.69%	1.5%	**3.0%**	0.0%	N/A
04/02/1987 to 04/01/1988	1.5%	N/A	1.69%	1.5%	**3.0%**	0.0%	N/A
04/02/1988 to 04/01/1989	1.0%	N/A	1.69%	1.5%	**2.5%**	0.0%	N/A
04/02/1989 to 04/01/1990	1.0%	N/A	1.69%	1.5%	**2.5%**	0.0%	N/A
04/02/1990 to 04/01/1991	1.0%	N/A	1.69%	1.5%	**2.5%**	0.0%	N/A
04/02/1991 to 04/01/1992	1.0%	N/A	1.69%	1.5%	**2.5%**	0.0%	N/A
04/02/1992 to 04/01/1993	1.0%	N/A	1.69%	1.5%	**2.5%**	0.0%	N/A
04/02/1993 to 04/01/1994	1.0%	N/A	1.69%	1.5%	**2.5%**	0.0%	N/A
04/02/1994 to 04/01/1995	1.0%	N/A	1.69%	1.5%	**2.5%**	0.0%	N/A
04/02/1995 to 04/01/1996	1.0%	N/A	1.69%	1.5%	**2.5%**	0.0%	N/A
04/02/1996 to 04/01/1997	1.0%	N/A	1.69%	1.5%	**2.5%**	0.0%	N/A
04/02/1997 to 04/01/1998	1.0%	N/A	1.69%	1.5%	**2.5%**	0.0%	N/A
04/02/1998 to 04/01/1999	1.0%	N/A	1.69%	1.5%	**2.5%**	0.0%	N/A
04/02/1999 to 04/01/2000	1.0%	N/A	1.69%	1.5%	**2.5%**	0.0%	N/A
04/02/2000 to 04/01/2001	1.0%	N/A	1.69%	1.5%	**2.5%**	0.0%	N/A
04/02/2001 to 04/01/2002	1.0%	N/A	1.69%	1.5%	**2.5%**	0.0%	N/A
04/02/2002 to 04/01/2003	1.0%	N/A	1.69%	1.5%	**2.5%**	0.0%	N/A
04/02/2003 to 04/01/2004	1.0%	N/A	1.69%	1.5%	**2.5%**	0.0%	N/A
04/02/2004 to 04/01/2005	1.0%	N/A	1.69%	1.5%	**2.5%**	0.0%	N/A
04/02/2005 to 04/01/2006	1.0%	N/A	1.69%	1.5%	**2.5%**	0.0%	N/A
04/02/2006 to 04/01/2007	1.0%	N/A	1.69%	1.5%	**2.5%**	0.0%	N/A
04/02/2007 to 04/01/2008	1.0%	N/A	1.69%	1.5%	**2.5%**	0.0%	N/A
04/02/2008 to 04/01/2009	1.0%	N/A	1.69%	1.5%	**2.5%**	0.0%	N/A
04/02/2009 to 04/01/2010	1.0%	N/A	1.69%	1.5%	**2.5%**	0.0%	N/A
04/02/2010 to 04/01/2011	1.0%	N/A	1.69%	1.5%	**2.5%**	0.0%	N/A
04/02/2011 to 04/01/2012	1.0%	N/A	1.69%	1.5%	**2.5%**	0.0%	N/A
04/02/2012 to 04/01/2013	1.0%	N/A	1.69%	1.5%	**2.5%**	0.0%	N/A
04/02/2013 to 04/01/2014	1.0%	N/A	1.69%	1.5%	**2.5%**	0.0%	N/A
04/02/2014 to 04/01/2015	1.0%	N/A	1.69%	1.5%	**2.5%**	0.0%	N/A
04/02/2015 to 04/01/2016	1.0%	N/A	1.69%	1.5%	**2.5%**	0.0%	N/A
04/02/2016 to 04/01/2017	1.0%	N/A	1.69%	1.5%	**2.5%**	0.0%	N/A
04/02/2017 to 04/01/2018	1.0%	N/A	1.69%	1.5%	**2.5%**	0.0%	N/A
04/02/2018 to 04/01/2019	1.0%	N/A	1.69%	1.5%	**2.5%**	0.0%	N/A
04/02/2019 to 04/01/2020	0.0%	N/A	1.69%	1.5%	**1.5%**	0.0%	N/A
04/02/2020 to 04/01/2021	0.0%	N/A	1.69%	1.5%	**1.5%**	0.0%	N/A

[1] All Urban Consumers, San Francisco-Oakland-Hayward Area (1982-84 base). (G.C. 31870.1)
For a full description of the Consumer Price Index visit the Bureau of Labor Statistics' website http://stats.bls.gov/cpi/cpifaq.htm

[2] Purchasing Power Protection (PPP) benefits were implemented in 2000 (75% level) and 2001 (80% level) for allowances with an "initial retirement date" of 04/01/1982 or earlier. A "one-time" permanent increase was added to the monthly allowance amount to restore purchasing power to 80% of the purchasing power of the original allowance, determined as of 4/01/2001. These monthly allowances, including the PPP benefit, are adjusted each year by the annual COLA. (PPP reference: G.C. Section 31874.3)

Column A: The COLA Bank as of April 1, 2020, without adjustment for the PPP benefits. For allowances with an Initial Retirement Date on or before 04/01/1982, the values in this column and Column F represent what the total loss of purchasing power would be without the PPP benefits.

Column B: The COLA Bank as of April 1, 2020, with adjustment to reflect implementation of PPP benefits for allowances with an Initial Retirement Date on or before 04/01/1982.

Column E: The cost-of-living adjustment, effective April 1, 2021, to be applied to allowances included in each Initial Retirement Date period.

Column F: The COLA Bank as of April 1, 2021, available for future use, without adjustment for the PPP benefits. For allowances with an Initial Retirement Date on or before 04/01/1982, the values in this column represent what the total loss of purchasing power would be without the PPP benefits. The values in this column equal the value of Column A, less the difference between Columns D and E.

Column G: The COLA Bank as of April 1, 2021, available for future use, with adjustment to reflect implementation of the PPP benefits for allowances with an Initial Retirement Date on or before 04/01/1982. The values in this column equal the value of Column B less the difference between Columns D and E.

San Joaquin County Employees' Retirement Association

TO: Board of Retirement Trustees

FROM: Chanda Bassett CMB
Alameda Decision Ad Hoc Committee Chair

DATE: February 12, 2021

SUBJECT: *Alameda* Decision Ad Hoc Committee Report

At its January 8, 2021, meeting, the Board of Retirement responded to the California Supreme Court's *Alameda* decision and the Court of Appeal's subsequent related *Marin* decision by voting to exclude certain earnings codes from retirement-eligible earnings on a prospective basis as detailed in Resolution 2021-01-01. At the Board meeting, the Committee's recommendation regarding Attachment B (the Cafeteria Allowance) was pulled from consideration, pending additional discussion by the *Alameda* Decision Ad Hoc Committee.

The Committee met on January 21, 2021. Following discussion and consultation with counsel, the committee determined (by a vote of 2-0 with one abstention) that no changes should be made to the retirement eligibility of Cafeteria Allowance or the Confidential 10% Supplement earnings codes.

The committee determined that neither of these codes met the criteria that would support recommending the Board exercise its discretionary authority to change the existing retirement eligibility of these codes. Both codes are currently retirement eligible for Tier 1 members and excluded for Tier 2 members. Because the committee is not recommending a change, there is no further action for the Board to take. With this decision, the Committee has completed its work, and the Board Chair may disband the Committee.

A summary of the information the committee considered that led to its conclusions follows.

<u>Cafeteria Allowance</u>
Employees who are Tier 1 members receive the Cafeteria Allowance as earnings and are able to choose how to use it: they are not required to use it to purchase health insurance. Regardless of how they use it, the entire amount is paid as earnings and SJCERA has consistently considered it retirement eligible. The Committee determined it should not be considered as an "in kind conversion" because the money is paid directly to the employee and the employee has control over the use of that money. The Committee also determined that the Cafeteria Allowance as administered in this County is not subject to manipulation, nor is it paid to enhance a retirement benefit, because the entire amount has been considered retirement eligible, whether the employee buys insurance with it or chooses to keep it all as cash.

Employees who are Tier 2 members also receive the Cafeteria Allowance as described above; however, Government Code Section 7522.34(c)(7) excludes such allowances from PEPRA

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members' pensionable compensation. As a result, SJCERA has always been treated the Cafeteria Allowance as ineligible for retirement for Tier 2 members.

Confidential 10% Supplement. The Board of Supervisors' resolution adopting this supplemental pay makes clear that this earnings type derived from the Cafeteria Allowance. As such, its retirement eligibility is defined in the same way as the Cafeteria Allowance.

Alameda Decision
Tier 2B Education Session

Board of Retirement Meeting

February 12, 2021

Agenda

- Board's Constitutional Role
- PEPRA & Its Intent
- SJCERA's Implementation of PEPRA
- *Alameda* Decision - Constitutionality of Compensation Earnable Amendments
- Opportunity to Streamline Administration
- Decrease risk of gamesmanship/spiking

CA Constitution: Article XVI, Section 17 (a)

- The retirement board shall…have… responsibility to administer the system in a manner that will ensure prompt delivery of benefits and related services
- The assets of a public pension…shall be held for the exclusive purpose of providing benefits…and defraying reasonable expenses of administering the system.

SAN JOAQUIN
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PEPRA

- Effective 1/1/2013 for new members (not previously a member of a CA retirement system.)
- Goals:
  - Control pension spiking
    - 3-year FAC, limit pensionable pay
  - Reduce pension costs; still provide DB
    - Require members pay 50% of normal cost
    - Raise Retirement Age
    - Prohibit retroactive increases

Implementation of PEPRA

- *Ventura*: vested rights, include special pays unless specifically excluded by law.
- PEPRA: Base pay or normal rate of pay
  - – Base pay: clear (hourly rate, no special pays)
  - – Normal Monthly Rate of Pay: Less clear
    - Synonymous with Base Pay?
    - Regular and recurring?
    - Ventura pays except if excluded?

SJCERA PEPRA (Tier 2) Special Pay Examples

- Educational or Training Supplements
- Special Driver’s License
- Longevity Pay
- Bilingual Pay
- Shift Differential
- Holiday Pay (1.5x)

Missed Opportunities

- Goal of PEPRA
  - control pension spiking
  - reduce cost of new members' pensions
- Opportunities missed in 2012 decisions
  - SJCERA: adopt Base Pay as definition of pensionable compensation for PEPRA
  - County: adopt a lower COLA

Now What?

- *Alameda* & *Marin* clarify BOR's authority to refine retirement eligible pay items

- Tier 2 B proposal
  - Capture previously missed opportunity to adopt Base Pay as definition for pensionable compensation

  - Apply it only to future members (date TBD)

  - No take-aways from existing SJCERA members

What Does Tier 2B Propose?

- Same benefit formula as Tier 2
- Same retirement eligibility as Tier 2
- What changes?
  - Retirement benefit will be based on base pay
  - Tier 2B members may still receive special pays, but won't pay contributions on them (increases take-home pay)

To Whom Would Tier 2B Apply?

- New Members (no impact on existing SJCERA Tier 1 and Tier 2 members)
- Hired on or after a certain date (e.g., July 1, 2021)

Can BOR Do This?

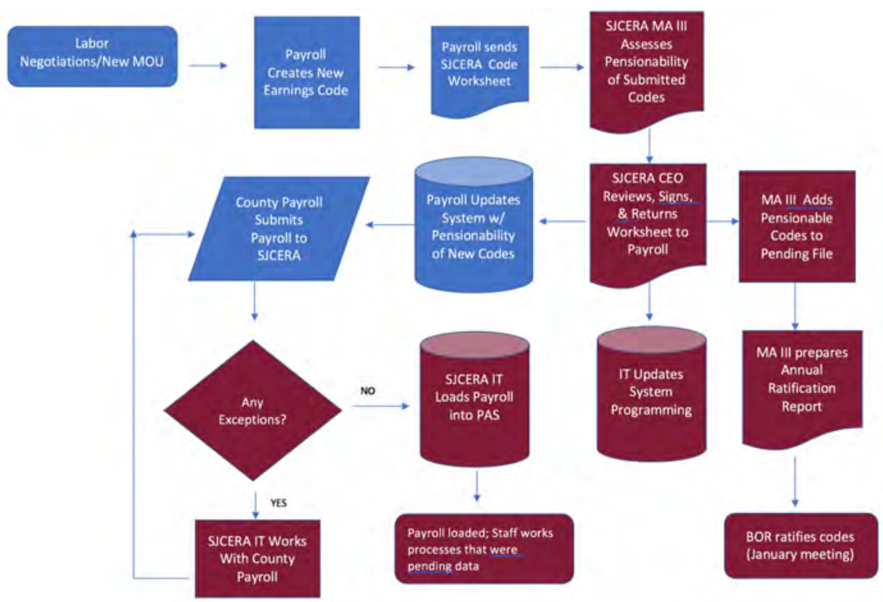
- YES!
  - It's not a new benefit formula tier
  - It just changes the retirement eligibility of earnings codes for new members who first join SJCERA on a future date TBD
  - Earnings code eligibility is the Board of Retirement's exclusive authority, so long as the eligibility determination is consistent with statute
  - Calling it Tier 2B simply identifies the group to whom base pay applies for pensionable compensation

Why Adopt a Base Pay Approach?

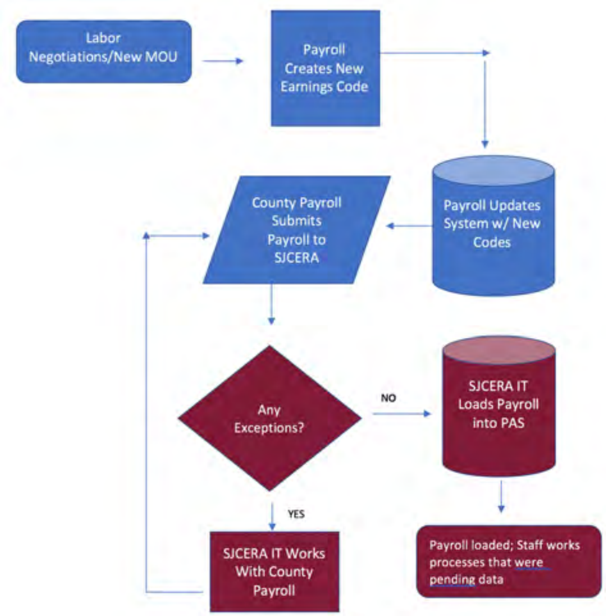
Advantages of a Base Pay Approach
Streamlines administration for SJCERA & Employers
Prevents pension spiking & other potential gamesmanship
Increases take-home pay for Tier 2B employees
Sets solid foundation for future
Decreases Normal Cost
Lowers overall plan risk; lowers investment risk needed to fund benefit
Increases transparency
Aligns with PEPRA Legislative Intent

Streamlines Administration

Current Process



Tier 2B Process



- Eliminates 7 steps
- Decreases risk of exceptions
- Up to 18 new pay codes per year

What's the Effect on Employers?

- Decrease in employer contributions (~$1.7M)
- Decrease long-term liabilities
- County might create some new job classes
  - Ex: Detective & Supervising Attorney
    - Current: People assigned duties receive special pay instead of a promotion
  - OR: Keep special pay approach
    - Employees receive special pay, they just don't pay contributions on it (increases net pay/excludes those earning from retirement calculation).

What's the Effect on Tier 2B Members?

- Increased Take-Home Pay (~$1.7M less in contributions)
- Benefit compared to Tier 2
  - The same for many (who don't get special pays)
  - Lower for those who receive special pays
- Still a generous benefit
  - General: 1%@52; 2%@62; 2.7%@67
  - Safety: 2%@50; 2.7%@57
- Greater than Other West Coast States
  - Oregon: 1.5%@65 (G); 1.8%@60 (S)
  - Washington: 2%@ 65 (G); 2%@53(S)

Which CERL Systems Use Base Pay?

- Sacramento
- Stanislaus

Base Pay Experience

StanCERA	Sacramento
Streamlined administration	
Streamlined Monitoring	
Effectively prevents pension spiking	
Eliminates subjective elements	
No identified recruitment/retention issues	
Did not result in pay increases	
No litigation	2019: DSA initiated litigation re SCERS authority to implement base pay when they had at one time included one allowance in addition to base pay.

Often-Cited Concerns

- Tier Jealousy
  - Not borne out with other tier changes
- Recruitment/Retention issues
  - Neither Sacramento nor Stanislaus reported increased issues
- Result in increased salaries
  - Base pay approach did not drive salary increases in Sacramento or Stanislaus

Recap

Pros	Cons
Streamlines Administration for SJCERA & Employers	Possible litigation risk
Prevents pension spiking & other potential gamesmanship	
Increases take-home pay for Tier 2B employees	
Sets solid foundation for future	
Decreases Normal Cost	
Lowers overall plan risk; lowers investment risk needed to fund benefit	
Increases transparency	
Aligns with PEPRA Legislative Intent	

Staff Seeks Direction

- Place Tier 2B on a future agenda for the Board to consider adopting?
  - Develop a resolution making all special pay codes retirement-ineligible for new members hired on or after a specified future date
- Provide Board additional requested information?

OR

- Discontinue research/consideration of Tier 2B?

San Joaquin County Employees Retirement Association (SJCERA)

Preliminary Monthly Flash Report (Net)[1] — December 2020

	Commitment ($000)	Sub-Segment	Market Value	Physical % of Total	Policy Target %	1-Mo	3-Mos	YTD	1-Yr	3-Yrs	5-Yrs	SI Return	SI Date
TOTAL PLAN[1]			$ 3,501,574,904	100.0%	100.0%	3.5	7.6	8.3	8.3	6.3	7.4	7.8	Apr-90
Policy Benchmark [4]						*1.8*	*7.2*	*10.3*	*10.3*	*7.7*	*8.5*	*7.7*	
Difference:						1.7	0.4	-2.0	-2.0	-1.4	-1.1	0.1	
75/25 Portfolio [5]						*3.8*	*11.9*	*19.6*	*19.6*	*10.3*	*10.8*	*7.6*	
Difference:			.			-0.3	-4.3	-11.3	-11.3	-4.0	-3.4	0.2	
Broad Growth			$ 2,562,760,867	73.2%	75.0%	4.2	10.2	8.3	8.3	7.1	9.1	8.4	Jan-95
Aggressive Growth Lag[2]			$ 251,595,426	7.2%	10.0%	7.0	7.0	4.6	4.6	9.0	8.2	-5.5	Feb-05
MSCI ACWI +2% Lag						*-3.0*	*8.8*	*13.2*	*13.2*	*8.6*	*8.8*	*0.0*	
Difference:						10.0	-1.8	-8.6	-8.6	0.4	-0.6	-5.5	
BlackRock Global Energy&Power Lag[3]	*$50,000*	*Global Infrastructure*	$ 10,508,546	0.3%		0.2	0.2	2.6	--	--	--	11.2	Jul-19
MSCI ACWI +2%Lag						*-3.0*	*8.8*	*13.2*	--	--	--	*12.2*	
Difference:						3.2	-8.6	-10.6	--	--	--	-1.0	
Ocean Avenue II Lag[3]	*$40,000*	*PE Buyout FOF*	$ 40,233,755	1.1%		19.7	19.7	11.7	11.7	16.7	16.6	10.4	May-13
MSCI ACWI +2% Lag						*-3.0*	*8.8*	*13.2*	*13.2*	*8.6*	*8.8*	*8.9*	
Difference:						22.7	10.9	-1.5	-1.5	8.1	7.8	1.5	
Ocean Avenue III Lag[3]	*$50,000*	*PE Buyout FOF*	$ 55,242,527	1.6%		3.8	3.8	1.6	1.6	28.2	--	19.3	Apr-16
MSCI ACWI +2% Lag						*-3.0*	*8.8*	*13.2*	*13.2*	*8.6*	--	*8.8*	
Difference:						6.8	-5.0	-11.6	-11.6	19.6	--	10.5	
Ocean Avenue IV Lag[3]	*$50,000*	*PE Buyout*	$ 10,946,023	0.3%		8.4	8.4	27.4	--	--	--	25.0	Dec-19
MSCI ACWI +2% Lag						*-3.0*	*8.8*	*13.2*	--	--	--	*14.5*	
Difference:						11.4	-0.4	14.2	--	--	--	10.5	
Morgan Creek III Lag[3]	*$10,000*	*Multi-Strat FOF*	$ 7,294,473	0.2%		1.8	1.8	-19.9	-19.9	-4.6	-2.4	-3.1	Feb-15
MSCI ACWI +2% Lag						*-3.0*	*8.8*	*13.2*	*13.2*	*8.6*	*8.8*	*8.8*	
Difference:						4.8	-7.0	-33.1	-33.1	-13.2	-11.2	-11.9	
Morgan Creek V Lag[3]	*$12,000*	*Multi-Strat FOF*	$ 10,853,870	0.3%		10.9	10.9	4.3	4.3	11.0	9.2	12.5	Jun-13
MSCI ACWI +2% Lag						*-3.0*	*8.8*	*13.2*	*13.2*	*8.6*	*8.8*	*8.9*	
Difference:						13.9	2.1	-8.9	-8.9	2.4	0.4	3.6	
Morgan Creek VI Lag[3]	*$20,000*	*Multi-Strat FOF*	$ 23,118,259	0.7%		7.5	7.5	8.8	8.8	15.4	9.7	6.1	Feb-15
MSCI ACWI +2% Lag						*-3.0*	*8.8*	*13.2*	*13.2*	*8.6*	*8.8*	*8.8*	
Difference:						10.5	-1.3	-4.4	-4.4	6.8	0.9	-2.7	
Opportunistic Private Real Estate													
Greenfield V[3]	*$30,000*	*Opportunistic Pvt. RE*	$ 240,220	0.0%		0.0	0.0	-24.4	-24.4	-6.1	-5.3	-3.1	Jul-08
NCREIF ODCE + 1% Lag Blend						*0.4*	*0.5*	*1.5*	*1.5*	*5.3*	*6.7*	*8.3*	
Difference:						-0.4	-0.5	-25.9	-25.9	-11.4	-12.0	-11.4	
Greenfield VI[3]	*$20,000*	*Opportunistic Pvt. RE*	$ 244,302	0.0%		3.7	3.7	-42.3	-42.3	-32.1	-19.2	-7.2	Apr-12
NCREIF ODCE + 1% Lag Blend						*0.4*	*0.5*	*1.5*	*1.5*	*5.3*	*6.7*	*12.9*	
Difference:						3.3	3.2	-43.8	-43.8	-37.4	-25.9	-20.1	
Greenfield VII[3]	*$19,100*	*Opportunistic Pvt. RE*	$ 13,301,258	0.4%		1.1	1.1	4.3	4.3	10.3	11.9	11.2	Oct-14
NCREIF ODCE + 1% Lag Blend						*0.4*	*0.5*	*1.5*	*1.5*	*5.3*	*6.7*	*11.9*	
Difference:						0.7	0.6	2.8	2.8	5.0	5.2	-0.7	
Grandview[3]	*$30,000*	*Opportunistic Pvt. RE*	$ 19,912,513	0.6%		13.8	13.8	36.3	36.3	--	--	5.6	Apr-18
NCREIF ODCE + 1% Lag Blend						*0.4*	*0.5*	*1.5*	*1.5*	*5.3*	*6.7*	*8.0*	
Difference:						13.4	13.3	34.8	34.8	--	--	-2.4	
Miller Global Fund V[3]	*$15,000*	*Opportunistic Pvt. RE*	$ 5,542	0.0%		-35.9	-35.9	-59.6	-59.6	-18.7	-9.8	-16.3	Oct-05
NCREIF ODCE + 1% Lag Blend						*0.4*	*0.5*	*1.5*	*1.5*	*5.3*	*6.7*	*10.5*	
Difference:						-36.3	-36.4	-61.1	-61.1	-24.0	-16.5	-26.8	
Miller Global Fund VI[3]	*$30,000*	*Opportunistic Pvt. RE*	$ 358,937	0.0%		92.1	92.1	-71.9	-71.9	-30.0	-16.3	-7.2	May-08
NCREIF ODCE + 1% Lag Blend						*0.4*	*0.5*	*1.5*	*1.5*	*5.3*	*6.7*	*8.4*	
Difference:						91.7	91.6	-73.4	-73.4	-35.3	-23.0	-15.6	
Miller Global Fund VII[3]	*$15,000*	*Opportunistic Pvt. RE*	$ 235,588	0.0%		68.8	68.8	-6.2	-6.2	-11.6	-2.3	23.2	Dec-12
NCREIF ODCE + 1% Lag Blend						*0.4*	*0.5*	*1.5*	*1.5*	*5.3*	*6.7*	*12.4*	
Difference:						68.4	68.3	-7.7	-7.7	-16.9	-9.0	10.8	

[1] Returns are preliminary and are finalized during each quarterly reporting cycle. Monthly returns since previous quarter are provided by the managers. Market values are provided by Northern Trust.
[2] Total class returns are as of 12/31/20, and lagged 1 quarter.
[3] Manager returns are as of 12/31/20, and lagged 1 quarter. Since Inception date reflects one quarter lag.
[4] 4/1/20 to present benchmark is **32%** MSCI ACWI IMI, **10%** BB Aggregate Bond Index, **17%** *50%* BB High Yield/*50%* S&P Leveraged Loans, 6% NCREIF ODCE +1% lag; **10%** T-Bill +4%, **10%** MSCI ACWI +2%, **15%** CRO Custom Benchmark. Prior to 4/1/20 benchmark is legacy policy benchmark.
[5] 4/1/20 to present **75%** MSCI ACWI, **25%** BB Global Aggregate. Prior to 4/1/20 60% MSCI ACWI, 40% BB Global Aggregate.

San Joaquin County Employees Retirement Association (SJCERA)

Preliminary Monthly Flash Report (Net)[1] December 2020

	Commitment ($000)	Sub-Segment	Market Value	Physical % of Total	Policy Target %	1-Mo	3-Mos	YTD	1-Yr	3-Yrs	5-Yrs	SI Return	SI Date
Opportunistic Private Real Estate (continued)													
Walton Street V[3]	*$30,000*	*Opportunistic Pvt. RE*	$ 2,462,348	0.1%		-1.8	-1.8	-17.4	-17.4	-14.6	-8.6	-4.4	Nov-06
NCREIF ODCE + 1% Lag Blend						*0.4*	*0.5*	*1.5*	*1.5*	*5.3*	*6.7*	*9.6*	
Difference:						-2.2	-2.3	-18.9	-18.9	-19.9	-15.3	-14.0	
Walton Street VI[3]	*$15,000*	*Opportunistic Pvt. RE*	$ 4,720,114	0.1%		0.3	0.3	-10.1	-10.1	-1.6	-0.5	7.0	Jul-09
NCREIF ODCE + 1% Lag Blend						*0.4*	*0.5*	*1.5*	*1.5*	*5.3*	*6.7*	*11.3*	
Difference:						-0.1	-0.2	-11.6	-11.6	-6.9	-7.2	-4.3	
Value-Added Private Real Estate													
AG Core Plus IV[3]	*$20,000*	*Value-Added Pvt. RE*	$ 20,050,687	0.6%		2.0	2.0	4.8	4.8	7.7	7.2	4.1	Sep-15
NCREIF ODCE + 1% Lag Blend						*0.4*	*0.5*	*1.5*	*1.5*	*5.3*	*6.7*	*11.0*	
Difference:						1.6	1.5	3.3	3.3	2.4	0.5	-6.9	
Almanac Realty VI[3]	*$30,000*	*Value-Added Pvt. RE*	$ 3,824,321	0.1%		0.6	0.6	-28.8	-28.8	-11.6	-1.0	24.3	Feb-13
NCREIF ODCE + 1% Lag Blend						*0.4*	*0.5*	*1.5*	*1.5*	*5.3*	*6.7*	*12.8*	
Difference:						0.2	0.1	-30.3	-30.3	-16.9	-7.7	11.5	
Colony Realty III[3]	*$21,000*	*Value-Added Pvt. RE*	$ 222,987	0.0%		6.7	6.7	-1.2	-1.2	-8.2	-4.3	17.9	Dec-09
NCREIF ODCE + 1% Lag Blend						*0.4*	*0.5*	*1.5*	*1.5*	*5.3*	*6.7*	*11.3*	
Difference:						6.3	6.2	-2.7	-2.7	-13.5	-11.0	6.6	
Colony Realty IV[3]	*$21,000*	*Value-Added Pvt. RE*	$ 222,269	0.0%		-5.8	-5.8	-93.6	-93.6	-28.0	-14.5	0.2	Mar-13
NCREIF ODCE + 1% Lag Blend						*0.4*	*0.5*	*1.5*	*1.5*	*5.3*	*6.7*	*12.8*	
Difference:						-6.2	-6.3	-95.1	-95.1	-33.3	-21.2	-12.6	
Stockbridge RE III[3]	*$45,000*	*Value-Added Pvt. RE*	$ 27,630,069	0.8%		3.4	3.4	3.7	3.7	--	--	1.3	Jul-18
NCREIF ODCE + 1% Lag Blend						*0.4*	*0.5*	*1.5*	*1.5*	*5.3*	*6.7*	*8.4*	
Difference:						3.0	2.9	2.2	2.2	--	--	-7.1	
Traditional Growth[2]			$ 1,259,644,195	36.0%	32.0%	5.0	15.4	8.7	8.7	7.2	10.9	9.3	Jan-95
MSCI ACWI IMI Net						*5.0*	*15.7*	*18.0*	*18.0*	*11.0*	*13.1*	*8.1*	
Difference:						0.0	-0.3	-9.3	-9.3	-3.8	-2.2	1.2	
Global Equity			$ 1,220,796,581	34.9%									
Northern Trust MSCI World IMI		*All Cap Global*	$ 1,086,429,414	31.0%		4.7	--	--	--	--	--	11.5	Sep-20
MSCI World IMI Net						*4.6*	--	--	--	--	--	*11.3*	
Difference:						0.1	--	--	--	--	--	0.2	
SJCERA Transition		*All Cap Global*	$ 442,264	0.0%		NM	NM	NM	--	--	--	NM	Jul-20
Emerging Markets			$ 133,924,903										
GQG Active Emerging Markets		*Emerging Markets*	$ 66,032,133	1.9%		7.0	15.9	--	--	--	--	18.6	Aug-20
MSCI Emerging Markets Index Net						*7.4*	*19.7*	--	--	--	--	*20.4*	
Difference:						-0.4	-3.8	--	--	--	--	-1.8	
PIMCO RAE Fundamental Emerging Markets		*Emerging Markets*	$ 67,892,770	1.9%		10.1	26.3	1.6	1.6	0.4	11.7	4.7	Apr-07
MSCI Emerging Markets Index						*7.4*	*19.8*	*18.7*	*18.7*	*6.6*	*13.2*	*5.2*	
Difference:						2.7	6.5	-17.1	-17.1	-6.2	-1.5	-0.5	
REITS			$ 38,847,614	1.1%									
Invesco All Equity REIT		*Core US REIT*	$ 38,847,614	1.1%		1.7	4.6	-10.2	-10.2	3.1	5.0	8.4	Aug-04
FTSE NAREIT Equity Index						*3.3*	*11.6*	*-8.0*	*-8.0*	*3.4*	*4.8*	*8.1*	
Difference:						-1.6	-7.0	-2.2	-2.2	-0.3	0.2	0.3	

[1] Returns are preliminary and are finalized during each quarterly reporting cycle. Monthly returns since previous quarter are provided by the managers. Market values are provided by Northern Trust.

[2] MSCI ACWI IMI Net as of 4/1/2020, MSCI ACWI Gross prior.

[3] Manager returns are as of 9/30/20, and lagged 1 quarter. Since Inception date reflects one quarter lag.

NM = Returns not meaningful

San Joaquin County Employees Retirement Association (SJCERA)

Preliminary Monthly Flash Report (Net)[1] — December 2020

	Commitment ($000)	Sub-Segment	Market Value	Physical % of Total	Policy Target %	1-Mo	3-Mos	YTD	1-Yr	3-Yrs	5-Yrs	SI Return	SI Date
Stabilized Growth			$ 1,051,521,246	30.0%	33.0%	2.5	5.3	8.6	8.6	6.4	7.1	4.0	Jan-05
Risk Parity			$ 409,233,348	11.7%		3.5	8.9	11.6	11.6	7.7	9.2	5.1	
T-Bill +4%						*0.3*	*1.0*	*4.7*	*4.7*	*5.7*	*5.2*	*4.6*	
Difference:						3.2	7.9	6.9	6.9	2.0	4.0	0.5	
Bridgewater All Weather		*Risk Parity*	$ 199,175,722	5.7%		3.5	8.2	9.6	9.6	6.7	8.3	5.4	Mar-12
T-Bill +4%						*0.3*	*1.0*	*4.7*	*4.7*	*5.7*	*5.2*	*5.6*	
Difference:						3.2	7.2	4.9	4.9	1.0	3.1	-0.2	
PanAgora Diversified Risk Multi-Asset		*Risk Parity*	$ 210,057,626	6.0%		3.5	9.6	13.6	13.6	8.6	--	9.1	Apr-16
T-Bill +4%						*0.3*	*1.0*	*4.7*	*4.7*	*5.7*	--	*5.3*	
Difference:						3.2	8.6	8.9	8.9	2.9	--	3.8	
Liquid Credit			$ 218,054,141	6.2%		1.5	5.0	3.8	3.8	4.1	4.8	2.3	Oct-06
50% BB High Yield, 50% S&P/LSTA Leveraged Loans						*1.6*	*5.1*	*5.1*	*5.1*	*5.1*	*6.9*	*6.0*	
Difference:						-0.1	-0.1	-1.3	-1.3	-1.0	-2.1	-3.7	
Neuberger Berman		*Global Credit*	$ 90,752,684	2.6%		1.7	5.7	5.8	5.8	--	--	6.9	Feb-19
33% ICE BofA HY Constrained, 33% S&P/LSTA LL, 33% JPM EMBI Glbl Div.						*1.7*	*5.3*	*4.8*	*4.8*	--	--	*6.9*	
Difference:						0.0	0.4	1.0	1.0	--	--	0.0	
Stone Harbor Absolute Return		*Absolute Return*	$ 127,301,457	3.6%		1.3	4.5	2.4	2.4	3.2	4.3	3.0	Oct-06
3-Month Libor Total Return						*0.0*	*0.1*	*1.1*	*1.1*	*1.9*	*1.5*	*1.5*	
Difference:						1.3	4.4	1.3	1.3	1.3	2.8	1.5	
Private Credit Lag[2]			$ 264,705,514	7.6%		1.8	1.8	0.1	0.1	1.2	2.3	3.2	
50% BB High Yield, 50% S&P/LSTA Leveraged Loans						*-0.2*	*4.4*	*2.2*	*2.2*	*3.7*	*5.4*	*5.8*	
Difference:						2.0	-2.6	-2.1	-2.1	-2.5	-3.1	-2.6	
BlackRock Direct Lending Lag[3]	*$100,000*	*Direct Lending*	$ 14,637,063	0.4%		4.0	4.0	4.0	---	---	---	7.2	May-20
50% BB High Yield, 50% S&P/LSTA Leveraged Loans						*-0.2*	*4.4*	*4.4*	---	---	---	*-0.3*	
Difference:						4.2	-0.4	-0.4	---	---	---	7.5	
Mesa West RE Income III Lag[3]	*$45,000*	*Comm. Mortgage*	$ 2,163,970	0.1%		-0.5	-0.5	-3.9	-3.9	4.7	6.6	4.9	Sep-13
CPI +6% Annual Blend[4]						*0.6*	*2.4*	*7.4*	*7.4*	*8.0*	*8.4*	*4.0*	
Difference:						-1.1	-2.9	-11.3	-11.3	-3.3	-1.8	0.9	
Mesa West RE Income IV Lag[3]	*$75,000*	*Comm. Mortgage*	$ 46,154,019	1.3%		1.4	1.4	7.6	7.6	8.3	--	7.5	Mar-17
CPI +6% Annual Blend[4]						*0.6*	*2.4*	*7.4*	*7.4*	*8.0*	--	*8.6*	
Difference:						0.8	-1.0	0.2	0.2	0.3	--	-1.1	
Crestline Opportunity II Lag[3]	*$45,000*	*Opportunistic*	$ 20,770,292	0.6%		1.7	1.7	-6.7	-6.7	-2.2	2.0	4.0	Nov-13
CPI +6% Annual Blend[4]						*0.6*	*2.4*	*7.4*	*7.4*	*8.0*	*8.4*	*8.6*	
Difference:						1.1	-0.7	-14.1	-14.1	-10.2	-6.4	-4.6	
Davidson Kempner Distr Opp V Lag[3]	*$50,000*	*Opportunistic*	$ 5,454,652	0.0%		21.1	--	--	--	--	--	21.1	Oct-20
CPI +6% Annual Blend[4]						*0.6*	--	--	--	--	--	*2.4*	
Difference:						20.5	--	--	--	--	--	18.7	
Oaktree Lag	*$50,000*	*Leveraged Direct*	$ 9,995,355	0.3%		5.8	5.8	17.6	17.6	--	--	9.0	Mar-18
MSCI ACWI +2% Lag						*-3.0*	*8.8*	*13.2*	*13.2*	--	--	*8.6*	
Difference:						8.8	-3.0	4.4	4.4	--	--	0.4	
HPS EU Asset Value II Lag[3]	*$50,000*	*Direct Lending*	$ 2,657,609	0.1%		7.9	7.9	--	--	--	--	-6.9	Aug-20
CPI +6% Annual Blend[4]						*0.6*	*2.4*	--	--	--	--	*4.0*	
Difference:						7.3	5.5	--	--	--	--	-10.9	
Raven Opportunity II Lag[3]	*$45,000*	*Direct Lending*	$ 11,793,860	0.3%		1.2	1.2	-20.2	-20.2	-0.5	-3.9	-4.8	Aug-14
CPI +6% Annual Blend[4]						*0.6*	*2.4*	*7.4*	*7.4*	*8.0*	*8.4*	*8.5*	
Difference:						0.6	-1.2	-27.6	-27.6	-8.5	-12.3	-13.3	
Raven Opportunity III Lag[3]	*$50,000*	*Direct Lending*	$ 43,949,728	1.3%		3.4	3.4	2.1	2.1	7.8	--	1.7	Nov-15
CPI +6% Annual Blend[4]						*0.6*	*2.4*	*7.4*	*7.4*	*8.0*	--	*8.4*	
Difference:						2.8	1.0	-5.3	-5.3	-0.2	--	-6.7	

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[2] Total class returns are as of 12/31/20, and lagged 1 quarter.
[3] Manager returns are as of 12/31/20, and lagged 1 quarter. Since Inception date reflects one quarter lag.
[4] 9% Annual until 7/1/2018 then CPI +6% Annual thereafter.

San Joaquin County Employees Retirement Association (SJCERA)

Preliminary Monthly Flash Report (Net)[1] December 2020

	Commitment ($000)	Sub-Segment	Market Value	Physical % of Total	Policy Target %	1-Mo	3-Mos	YTD	1-Yr	3-Yrs	5-Yrs	SI Return	SI Date
Private Credit Lag (continued)													
Medley Opportunity II Lag[3]	*$50,000*	*Direct Lending*	$ 11,750,156	0.3%		-9.9	-9.9	-19.9	-19.9	-15.5	-8.5	-2.4	Jul-12
CPI +6% Annual Blend[4]						*0.6*	*2.4*	*7.4*	*7.4*	*8.0*	*8.4*	*8.6*	
Difference:						-10.5	-12.3	-27.3	-27.3	-23.5	-16.9	-11.0	
White Oak Summit Peer Fund Lag[3]	*$50,000*	*Direct Lending*	$ 45,691,444	1.3%		1.7	1.7	4.7	4.7	6.4	--	7.1	Mar-16
CPI +6% Annual Blend[4]						*0.6*	*2.4*	*7.4*	*7.4*	*8.0*	--	*8.3*	
Difference:						1.1	-0.7	-2.7	-2.7	-1.6	--	-1.2	
White Oak Yield Spectrum Master V Lag[3]	*$50,000*	*Direct Lending*	$ 49,687,366	1.4%		2.0	2.0	---	---	---	--	-1.8	Mar-20
CPI +6% Annual Blend[4]						*0.6*	*2.4*	---	---	---	--	*6.2*	
Difference:						1.4	-0.4	---	---	---	--	-8.0	
Core Private Real Estate Lag			$ 159,528,243	4.6%									
Principal US[3]	*$25,000*	*Core Pvt. RE*	$ 33,760,920	1.0%		0.0	0.0	0.2	0.2	4.9	--	6.3	Jan-16
NCREIF ODCE + 1% Lag Blend						*0.4*	*0.5*	*1.5*	*1.5*	*5.3*	*6.7*	*10.2*	
Difference:						-0.4	-0.5	-1.3	-1.3	-0.4	--	-3.9	
Prologis Logistics[3]	*$35,000*	*Core Pvt. RE*	$ 75,235,969	2.1%		6.1	6.1	5.8	5.8	14.0	15.6	6.4	Dec-07
NCREIF ODCE + 1% Lag Blend						*0.4*	*0.5*	*1.5*	*1.5*	*5.3*	*6.7*	*8.9*	
Difference:						5.7	5.6	4.3	4.3	8.7	8.9	-2.5	
RREEF America II[3]	*$45,000*	*Core Pvt. RE*	$ 50,531,354	1.4%		0.0	0.0	2.3	2.3	5.5	--	6.7	Jul-16
NCREIF ODCE + 1% Lag Blend						*0.4*	*0.5*	*1.5*	*1.5*	*5.3*	*6.7*	*9.8*	
Difference:						-0.4	-0.5	0.8	0.8	0.2	--	-3.1	
Diversifying Strategies			$ 787,377,330	22.5%	25.0%	1.5	0.1	4.6	4.6	3.3	2.5	6.5	Oct-90
Principal Protection			$ 330,529,281	9.4%	10.0%	1.1	2.0	2.7	2.7	4.2	4.2	6.5	Oct-90
BB Aggregate Bond Index						*0.1*	*0.7*	*7.5*	*7.5*	*5.3*	*4.4*	*6.1*	
Difference:						1.0	1.3	-4.8	-4.8	-1.1	-0.2	0.4	
Dodge & Cox		*Core Fixed Income*	$ 118,102,197	3.4%		0.6	2.5	9.3	9.3	6.3	5.8	7.3	Oct-90
BB Aggregate Bond Index						*0.1*	*0.7*	*7.5*	*7.5*	*5.3*	*4.4*	*6.1*	
Difference:						0.5	1.8	1.8	1.8	1.0	1.4	1.2	
DoubleLine Capital		*MBS*	$ 111,091,311	3.2%		0.4	1.0	3.3	3.3	4.2	4.3	5.2	Feb-12
BB Aggregate Bond Index						*0.1*	*0.7*	*7.5*	*7.5*	*5.3*	*4.4*	*3.3*	
Difference:						0.3	0.3	-4.2	-4.2	-1.1	-0.1	1.9	
PRIMA Lag		*Comm. Mortgage*	$ 101,335,773	2.9%		2.5	2.5	-4.7	-4.7	1.9	2.6	3.9	Jul-08
BB Aggregate Bond Index Lag						*-0.1*	*0.6*	*7.0*	*7.0*	*5.2*	*4.2*	*4.3*	
Difference:						2.6	1.9	-11.7	-11.7	-3.3	-1.6	-0.4	

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[3] Manager returns are as of 12/31/20, and lagged 1 quarter. Since Inception date reflects one quarter lag.

[4] 9% Annual until 7/1/2018 then CPI +6% Annual thereafter.

San Joaquin County Employees Retirement Association (SJCERA)

Preliminary Monthly Flash Report (Net)[1] — December 2020

	Commitment ($000)	Sub-Segment	Market Value	Physical % of Total	Policy Target %	1-Mo	3-Mos	YTD	1-Yr	3-Yrs	5-Yrs	SI Return	SI Date
Crisis Risk Offset			$ 456,848,049	13.0%	15.0%	1.7	-1.2	5.1	5.1	2.6	1.0	6.7	Jan-05
CRO Custom Benchmark [2]						*1.2*	*1.5*	*9.3*	*9.3*	*5.9*	*4.5*	*5.6*	
Difference:						0.5	-2.7	-4.2	-4.2	-3.3	-3.5	1.1	
Long Duration			$ 162,968,976	4.7%		-1.2	-2.7	16.9	16.9	9.4	--	5.7	
BB US Long Duration Treasuries						*-1.2*	*-3.0*	*17.7*	*17.7*	*9.9*	--	*6.9*	
Difference:						0.0	0.3	-0.8	-0.8	-0.5	--	-1.2	
Dodge & Cox Long Duration		*Long Duration*	$ 162,968,976	4.7%		-1.2	-2.7	16.9	16.9	9.4	--	5.7	Feb-16
BB US Long Duration Treasuries						*-1.2*	*-3.0*	*17.7*	*17.7*	*9.9*	--	*6.9*	
Difference:						0.0	0.3	-0.8	-0.8	-0.5	--	-1.2	
Systematic Trend Following			$ 170,798,154	4.9%		9.2	11.0	7.1	7.1	0.5	-3.3	8.0	
BTOP50 Index						*4.3*	*6.5*	*5.1*	*5.1*	*2.2*	*0.3*	*4.3*	
Difference:						4.9	4.5	2.0	2.0	-1.7	-3.6	3.7	
Mt. Lucas Managed Futures - Cash		*Systematic Trend Following*	$ 84,243,040	2.4%		12.0	13.9	12.8	12.8	-0.2	-5.5	7.2	Jan-05
BTOP50 Index						*4.3*	*6.5*	*5.1*	*5.1*	*2.2*	*0.3*	*4.3*	
Difference:						7.7	7.4	7.7	7.7	-2.4	-5.8	2.9	
Graham Tactical Trend		*Systematic Trend Following*	$ 86,555,114	2.5%		6.6	8.4	1.8	1.8	1.1	--	0.0	Apr-16
SG Trend Index						*6.6*	*8.5*	*6.3*	*6.3*	*2.6*	--	*0.1*	
Difference:						0.0	-0.1	-4.5	-4.5	-1.5	--	-0.1	
Alternative Risk Premia			$ 123,080,919	3.5%		-3.7	-12.6	-10.4	-10.4	-3.4	-1.8	7.3	
5% Annual						*0.4*	*1.2*	*5.0*	*5.0*	*5.0*	*5.0*	*6.4*	
Difference:						-4.1	-13.8	-15.4	-15.4	-8.4	-6.8	0.9	
AQR Style Premia		*Alternative Risk Premia*	$ 24,368,496	0.7%		2.4	-4.2	-27.1	-27.1	-17.6	--	-9.0	May-16
5% Annual						*0.4*	*1.2*	*5.0*	*5.0*	*5.0*	--	*5.0*	
Difference:						2.0	-5.4	-32.1	-32.1	-22.6	--	-14.0	
PE Diversified Global Macro		*Alternative Risk Premia*	$ 37,286,801	1.1%		-9.4	-22.6	-13.5	-13.5	-5.3	--	-2.3	Jun-16
5% Annual						*0.4*	*1.2*	*5.0*	*5.0*	*5.0*	--	*5.0*	
Difference:						-9.8	-23.8	-18.5	-18.5	-10.3	--	-7.3	
Lombard Odier		*Alternative Risk Premia*	$ 61,425,622	1.8%		-2.4	-8.6	-7.3	-7.3	--	--	-3.6	Jan-19
5% Annual						*0.4*	*1.2*	*5.0*	*5.0*	--	--	*5.0*	
Difference:						-2.8	-9.8	-12.3	-12.3	--	--	-8.6	
Cash[3]			$ 108,278,286	3.1%	0.0%	0.0	0.0	0.3	0.3	1.1	1.0	2.4	Sep-94
US T-Bills						*0.0*	*0.0*	*0.7*	*0.7*	*1.6*	*1.2*	*2.4*	
Difference:						0.0	0.0	-0.4	-0.4	-0.5	-0.2	0.0	
Northern Trust STIF		*Collective Govt. Short Term*	$ 83,053,005	2.4%		0.0	0.0	0.4	0.4	1.1	1.0	2.7	Jan-95
US T-Bills						0.0	0.0	0.7	0.7	1.6	1.2	*2.4*	
Difference:						0.0	0.0	-0.3	-0.3	-0.5	-0.2	0.3	
Parametric Overlay[4]		*Cash Overlay*	$ 43,158,421	1.2%		0.0	0.0	0.0	--	--	--	0.0	Jan-20

[1] Returns are preliminary and are finalized during each quarterly reporting cycle. Monthly returns since previous quarter are provided by the managers. Market values are provided by Northern Trust.
[2] Benchmark is (1/3) BB Long Duration Treasuries, (1/3) BTOP50 Index, (1/3) 5% Annual.
[3] Includes lagged cash.
[5] **60%** MSCI ACWI, **40%** BB Universal
[4] Given daily cash movement returns may vary from those shown above.

Capital Markets Outlook & Risk Metrics

As of December 31, 2020

Capital Markets Outlook

Takeaways

- December capped off one of the most unusual periods in modern history. Despite a global pandemic and widespread economic shutdowns, 2020 proved to be rewarding for nearly all risk-seeking investors. With monthly gains of roughly 3-9% for most equity markets, the full calendar year saw equity returns generally in the 10-40% range (with considerable variation based on market cap, style, and region).
- With unprecedented monetary stimulus, traditional safe haven assets (e.g., US Treasury bonds) also produced strong returns during 2020, although their performance during December and Q4 were generally flat to marginally negative.
- Despite some catch-up over the quarter, there continues to be a high degree of divergence among equity regions/styles/capitalizations, and this is exemplified at the extremes with US large cap growth stocks outperforming US small cap value stocks by over 33% in 2020.
- The US Treasury yield curve saw longer-term yields tick up over the month, with the 10-year yield approaching 1.0% for the first time since March 2020 (it has since increased above 1.10%). As a reminder, with yields at historically low levels, even marginal moves can cause noteworthy changes to bond prices.
- Real yields in the US declined during December. Shorter-term TIPS saw yields decline by roughly 20-30 basis points whereas longer-term yields (e.g., 10+ years) experienced more modest declines of approximately 2-15 basis points. The entire real yield curve continues to remain in negative territory.

Capital Markets Outlook

Takeaways

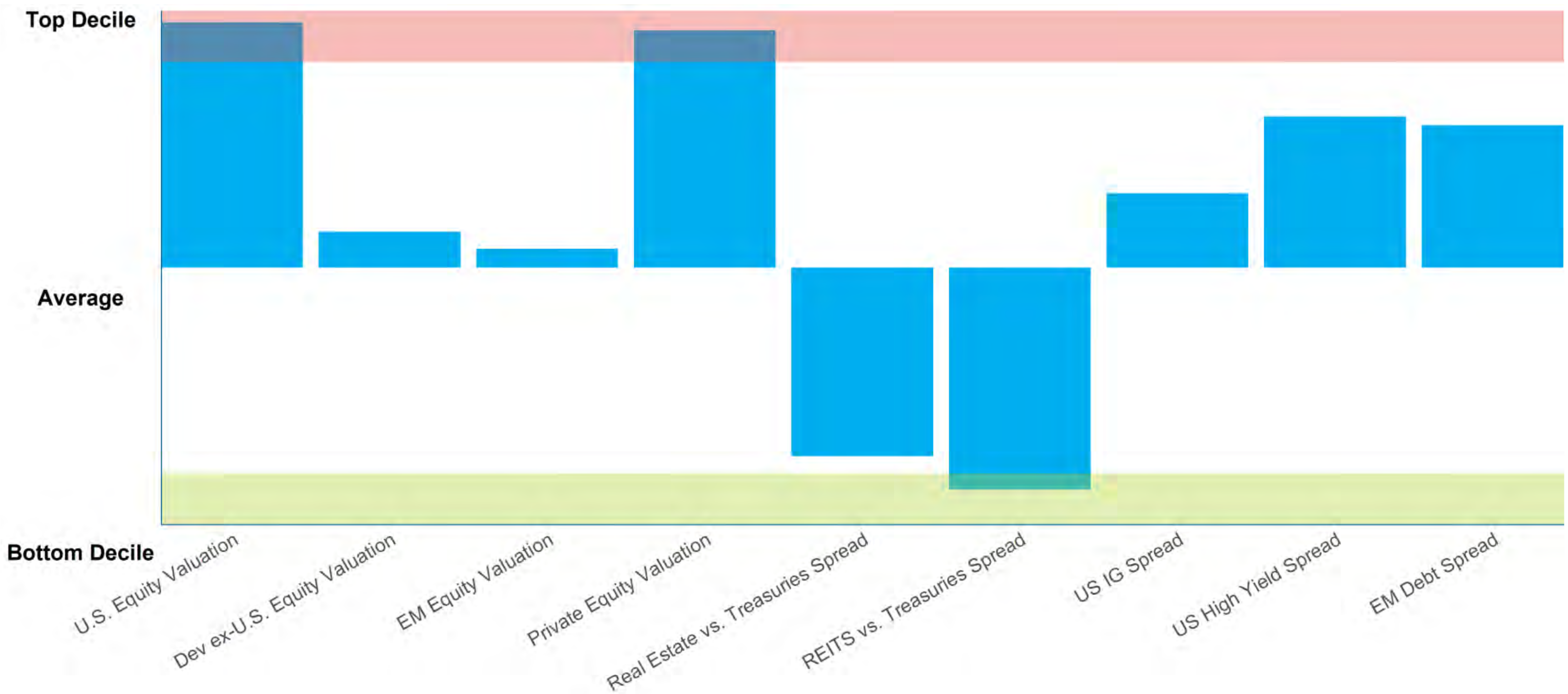
- Q3 GDP and other economic data indicated that an economic recovery was well underway. However, recent increases in COVID-related cases/deaths, recent payroll/unemployment data, and increased shutdowns across the globe represent headwinds to the recovery.
- While the markets do appear as though they are looking past COVID (largely due to successful vaccine development), the next several months are projected to be challenging from an economic standpoint as cases are expected to increase and the widespread distribution of the vaccine will not be immediate. Returning to pre-COVID levels of economic activity is not expected to occur until mid-2021 at the earliest.
- As the US government prepares to enter a new administration, investors will be examining guidance and action as it relates to monetary and fiscal policy, with a particular focus on individual stimulus, taxation, and broad infrastructure spending.
- Implied equity market volatility[1] was relatively stable throughout December as it hovered just above the long-term historical average (~20) for the entire month. While our Systemic Risk measure declined during the month, implied fixed income volatility[2] did increase.
- With strong price appreciation for nearly all risk-oriented asset classes in 2020, coupled with imperfect information regarding corporate earnings and solvencies, investors should remain cautious as they examine traditional valuation metrics across the global capital markets.
- The Market Sentiment Indicator[3] remained green (i.e., positive) at month-end.

[1] As measured by VIX Index.

[2] As measured by MOVE Index.

[3] See Appendix for the rationale for selection and calculation methodology used for the risk metrics.

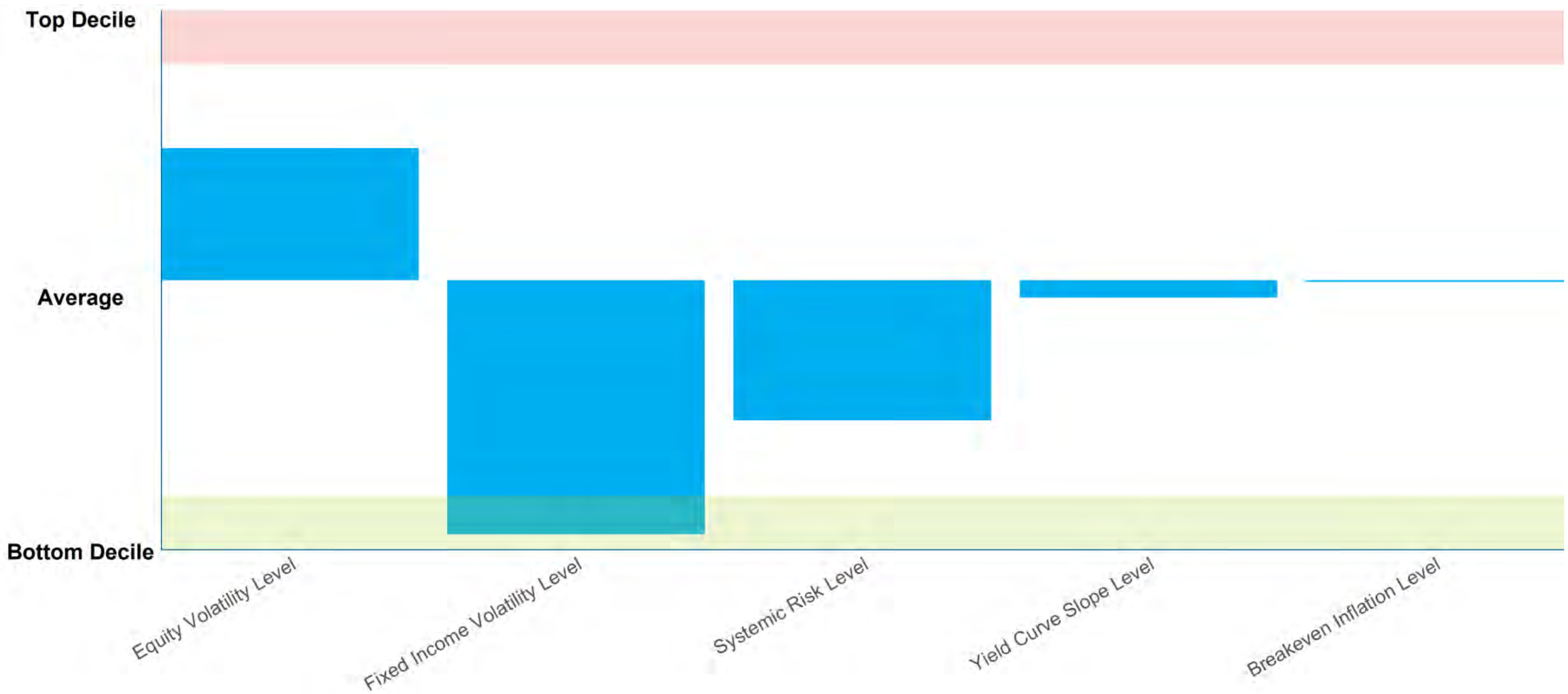
Risk Overview/Dashboard (1)
(As of December 31, 2020)[1]



- Dashboard (1) summarizes the current state of the different valuation metrics per asset class relative to their own history.

[1] With the exception of Private Equity Valuation, that is YTD as of December 31, 2019.

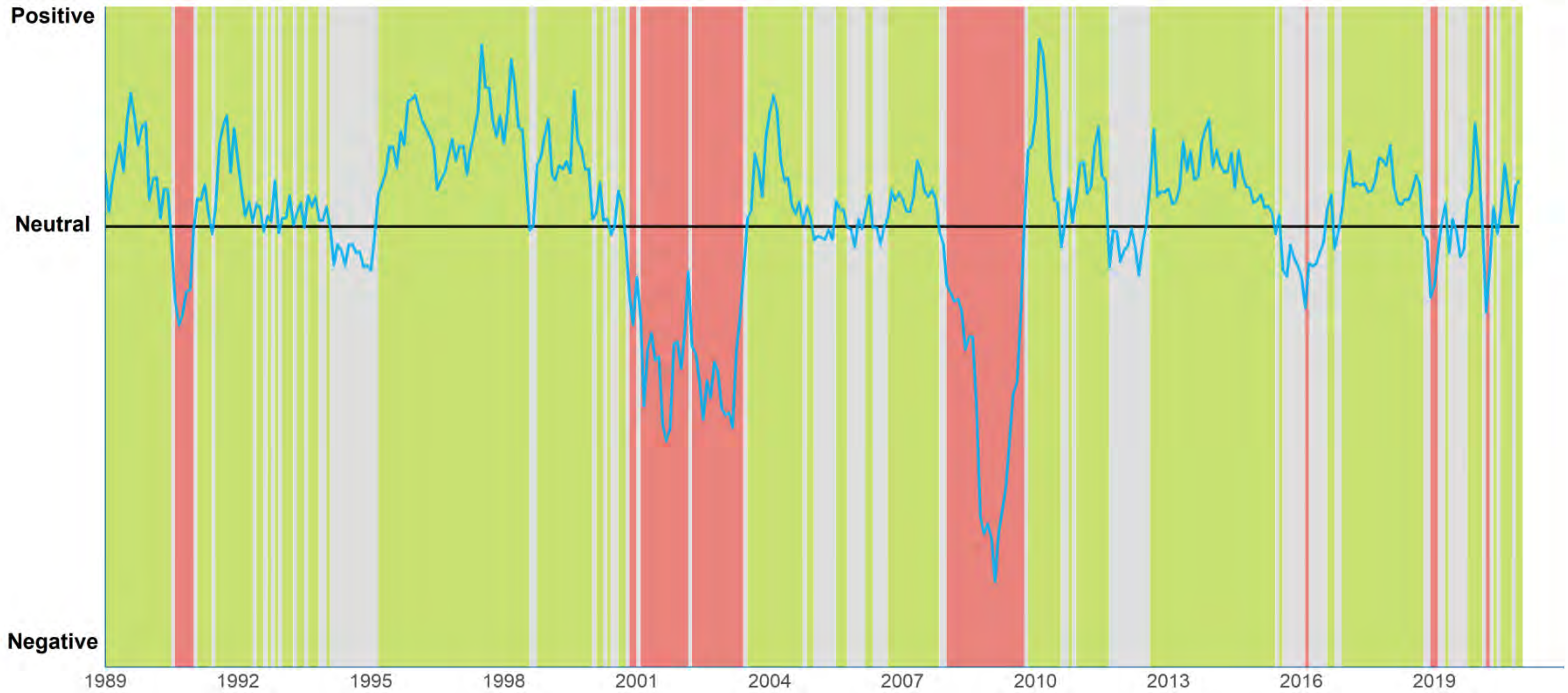
Risk Overview/Dashboard (2)
(As of December 31, 2020)



- Dashboard (2) shows how the current level of each indicator compares to its respective history.

Market Sentiment Indicator (All History)

(As of December 31, 2020)



Market Sentiment Indicator (Last Three Years)
(As of December 31, 2020)

US Equity Cyclically Adjusted P/E[1]
(As of December 31, 2020)

- This chart details one valuation metric for US equities. A higher (lower) figure indicates more expensive (cheaper) valuation relative to history.

[1] US Equity Cyclically Adjusted P/E on S&P 500 Index. Source: Robert Shiller, Yale University, and Meketa Investment Group.

Small Cap P/E vs. Large Cap P/E[1]
(As of December 31, 2020)

- This chart compares the relative attractiveness of small cap US equities vs. large cap US equities on a valuation basis. A higher (lower) figure indicates that large cap (small cap) is more attractive.

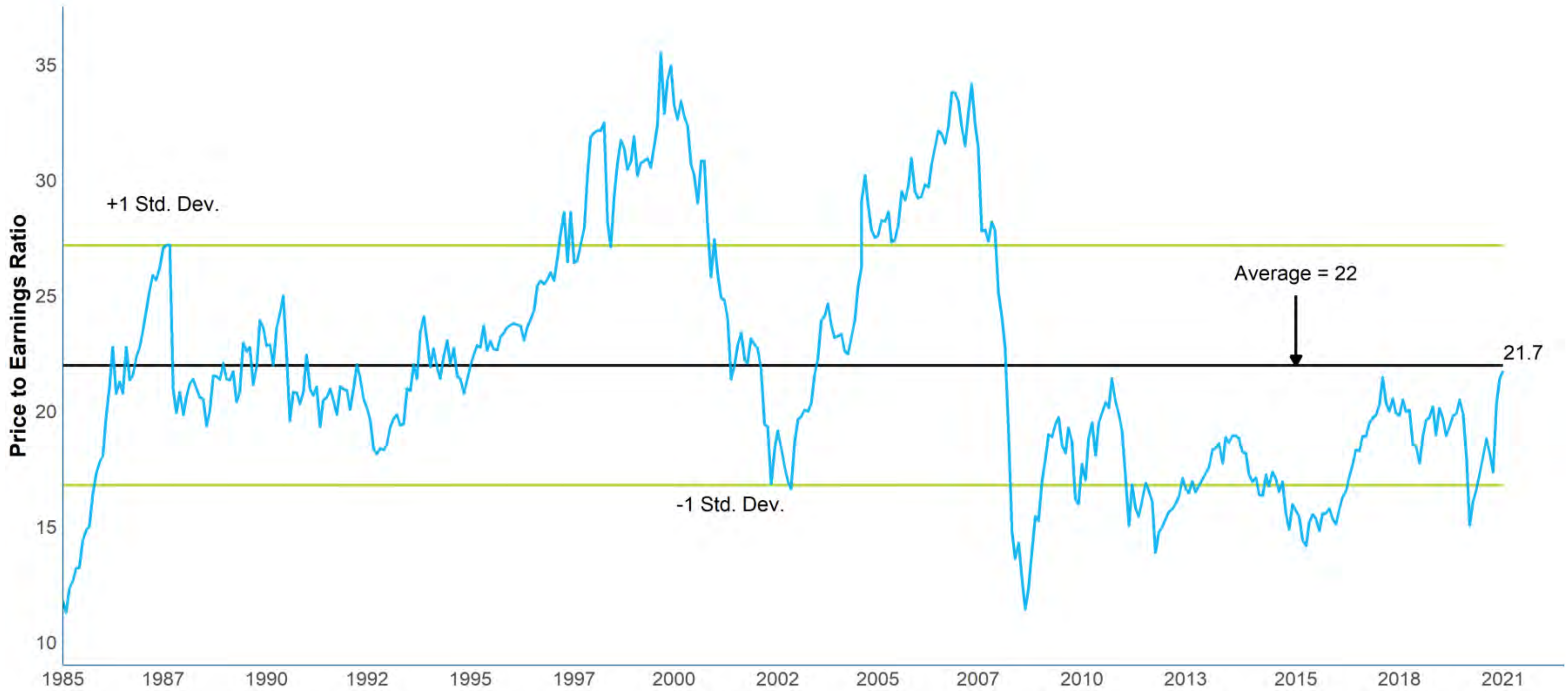
[1] Small Cap P/E (Russell 2000 Index) vs. Large Cap P/E (Russell 1000 Index) - Source: Russell Investments. Earnings figures represent 12-month "as reported" earnings.

Growth P/E vs. Value P/E[1]
(As of December 31, 2020)

- This chart compares the relative attractiveness of US growth equities vs. US value equities on a valuation basis. A higher (lower) figure indicates that value (growth) is more attractive.

[1] Growth P/E (Russell 3000 Growth Index) vs. Value (Russell 3000 Value Index) P/E - Source: Bloomberg, MSCI, and Meketa Investment Group. Earnings figures represent 12-month "as reported" earnings.

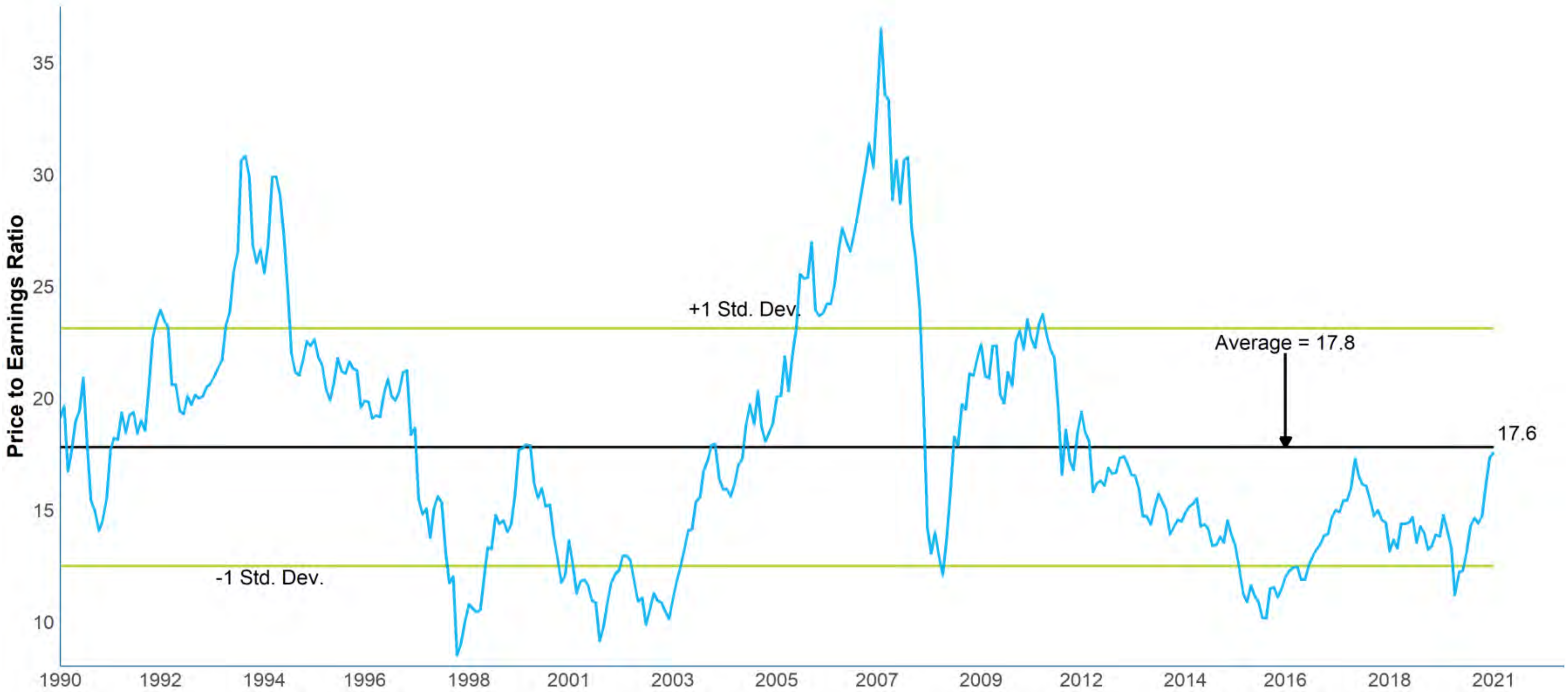
Developed International Equity Cyclically Adjusted P/E[1]
(As of December 31, 2020)



- This chart details one valuation metric for developed international equities. A higher (lower) figure indicates more expensive (cheaper) valuation relative to history.

[1] Developed International Equity (MSCI EAFE ex Japan Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly "as reported" earnings over the previous ten years.

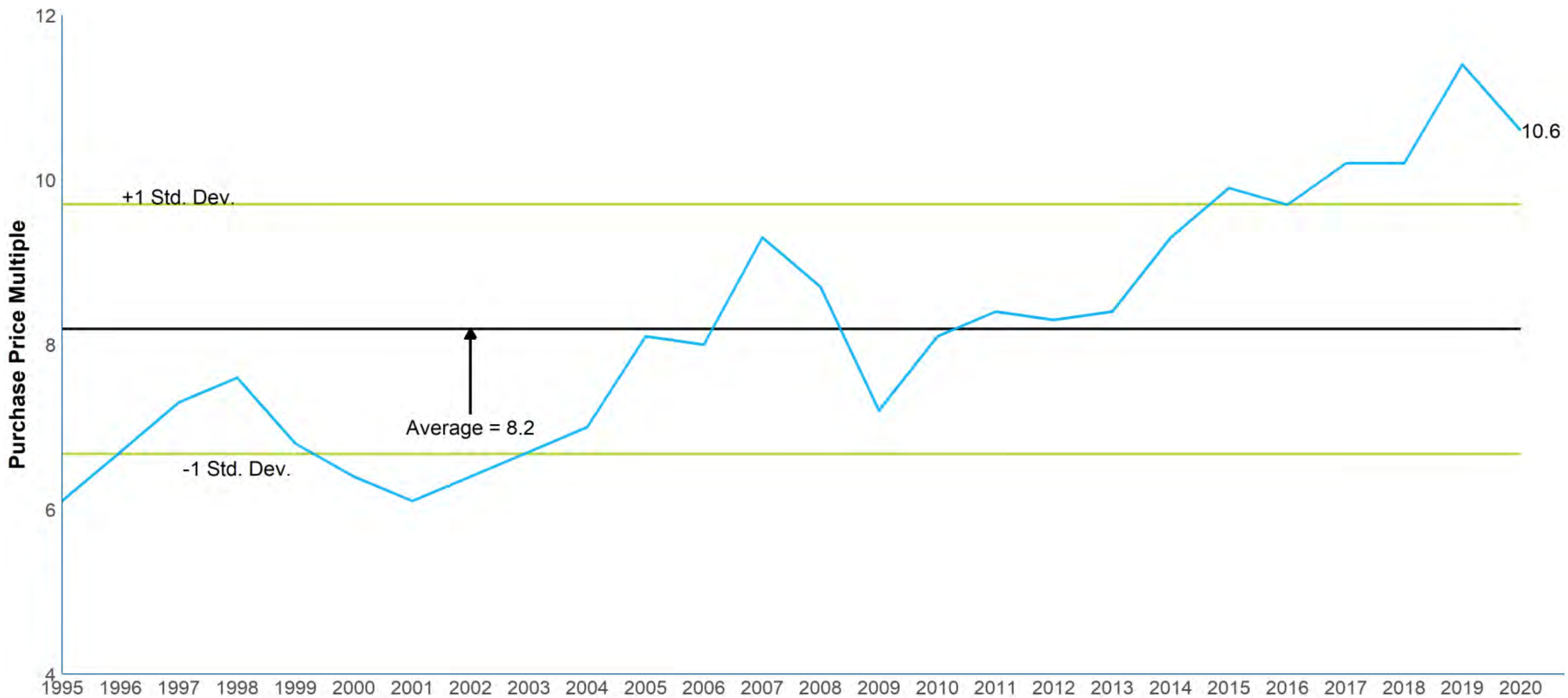
Emerging Market Equity Cyclically Adjusted P/E[1]
(As of December 31, 2020)



- This chart details one valuation metric for emerging markets equities. A higher (lower) figure indicates more expensive (cheaper) valuation relative to history.

[1] Emerging Market Equity (MSCI Emerging Markets Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly "as reported" earnings over the previous ten years.

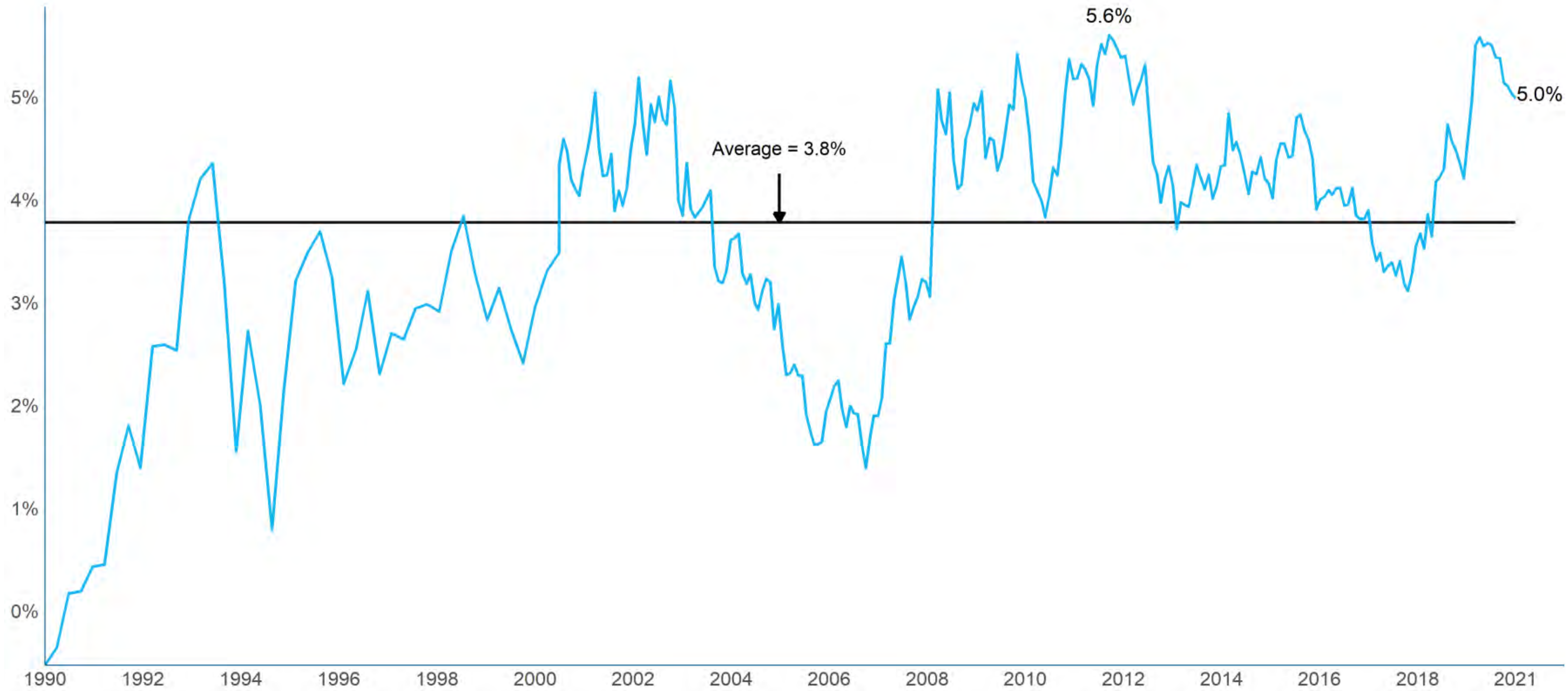
Private Equity Multiples[1]
(As of February 29, 2020)[2]



- This chart details one valuation metric for the private equity market. A higher (lower) figure indicates more expensive (cheaper) valuation relative to history.

[1] Private Equity Multiples – Source: S&P LCD Average EBITDA Multiples Paid in All LBOs.
[2] Annual figures, except for 2020 (YTD).

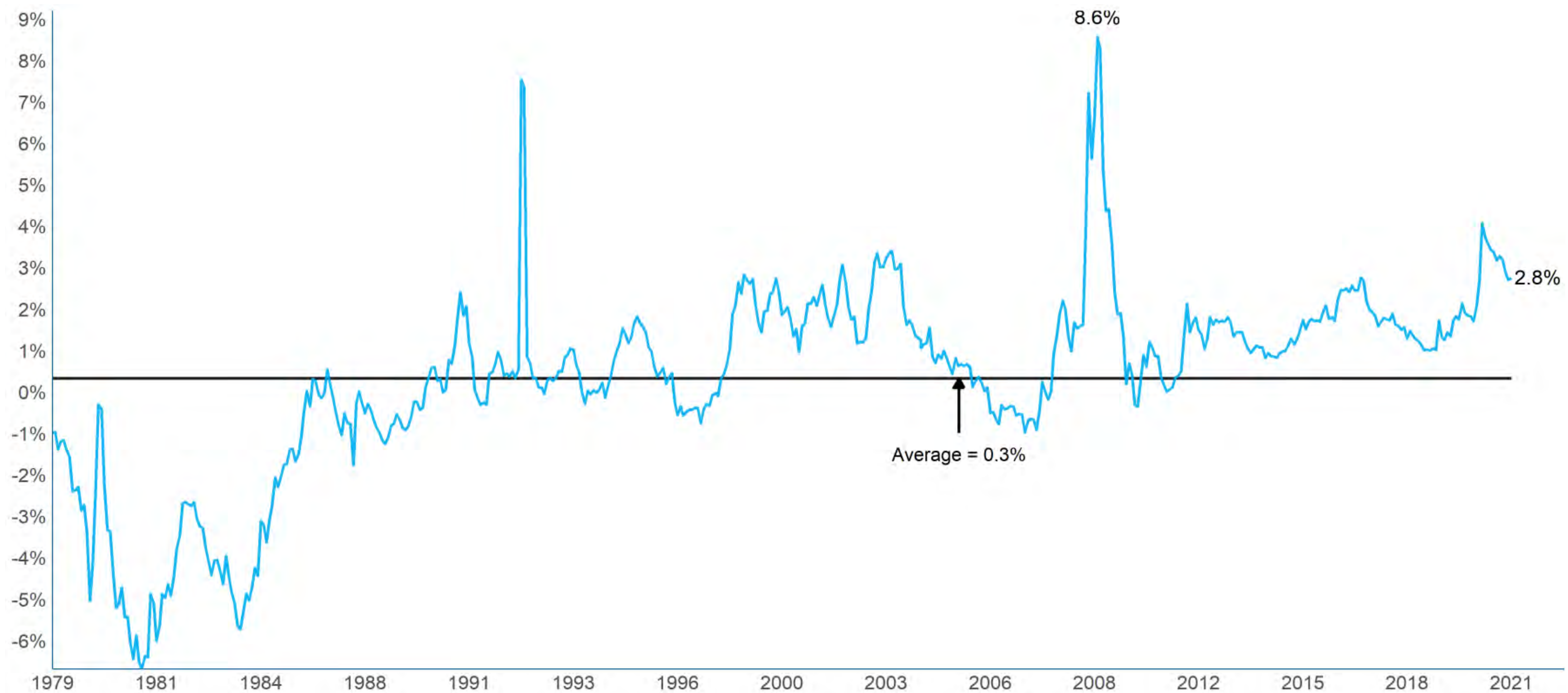
Core Real Estate Spread vs. Ten-Year Treasury[1]
(As of December 31, 2020)



- This chart details one valuation metric for the private core real estate market. A higher (lower) figure indicates cheaper (more expensive) valuation.

[1] Core Real Estate Spread vs. Ten-Year Treasury – Source: Real Capital Analytics, US Treasury, Bloomberg, and Meketa Investment Group. Core Real Estate is proxied by weighted sector transaction based indices from Real Capital Analytics and Meketa Investment Group.

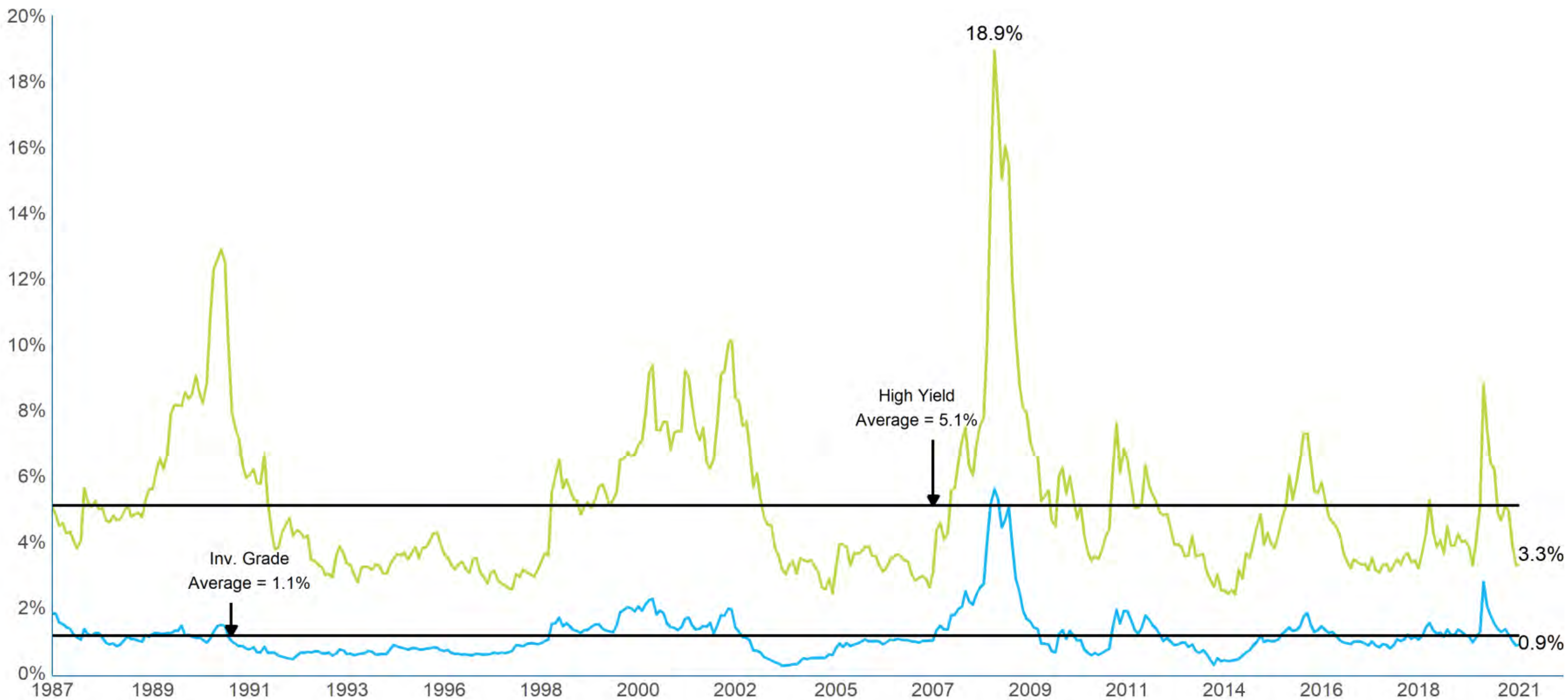
REITs Dividend Yield Spread vs. Ten-Year Treasury[1]
(As of December 31, 2020)



- This chart details one valuation metric for the public REITs market. A higher (lower) figure indicates cheaper (more expensive) valuation.

[1] REITs Dividend Yield Spread vs. Ten-Year Treasury – Source: NAREIT, US Treasury. REITs are proxied by the yield for the NAREIT Equity index.

Credit Spreads[1]
(As of December 31, 2020)



- This chart details one valuation metric for the US credit markets. A higher (lower) figure indicates cheaper (more expensive) valuation relative to history.

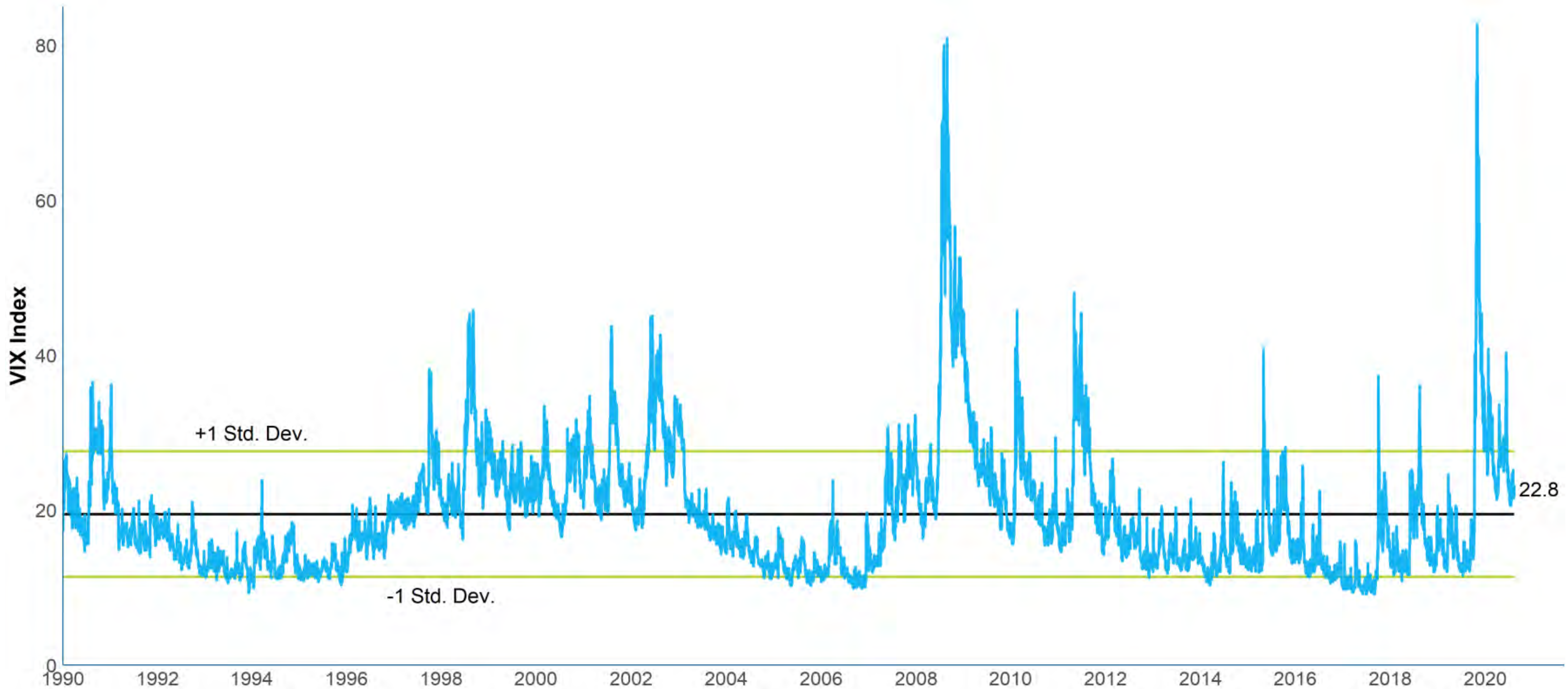
[1] Credit Spreads – Source: Barclays Capital. High Yield is proxied by the Barclays High Yield index and Investment Grade Corporates are proxied by the Barclays US Corporate Investment Grade index. Spread is calculated as the difference between the Yield to Worst of the respective index and the 10-Year US Treasury yield.

Emerging Market Debt Spreads[1]
(As of December 31, 2020)

- This chart details one valuation metric for the EM debt markets. A higher (lower) figure indicates cheaper (more expensive) valuation relative to history.

[1] EM Spreads – Source: Bloomberg. Option Adjusted Spread (OAS) for the Bloomberg Barclays EM USD Aggregate Index.

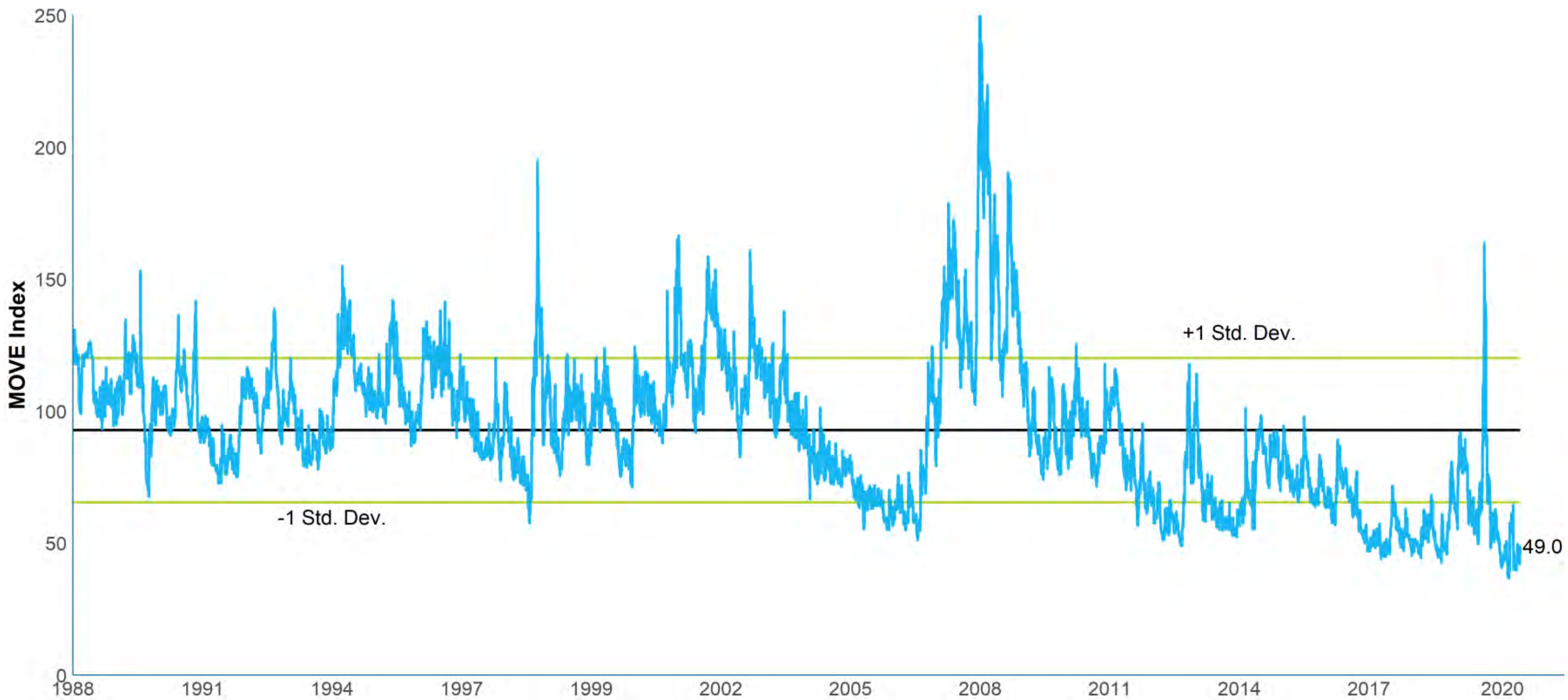
Equity Volatility[1]
(As of December 31, 2020)



- This chart details historical implied equity market volatility. This metric tends to increase during times of stress/fear and while declining during more benign periods.

[1] Equity Volatility – Source: Bloomberg, and Meketa Investment Group. Equity Volatility proxied by VIX Index, a Measure of implied option volatility for US equity markets.

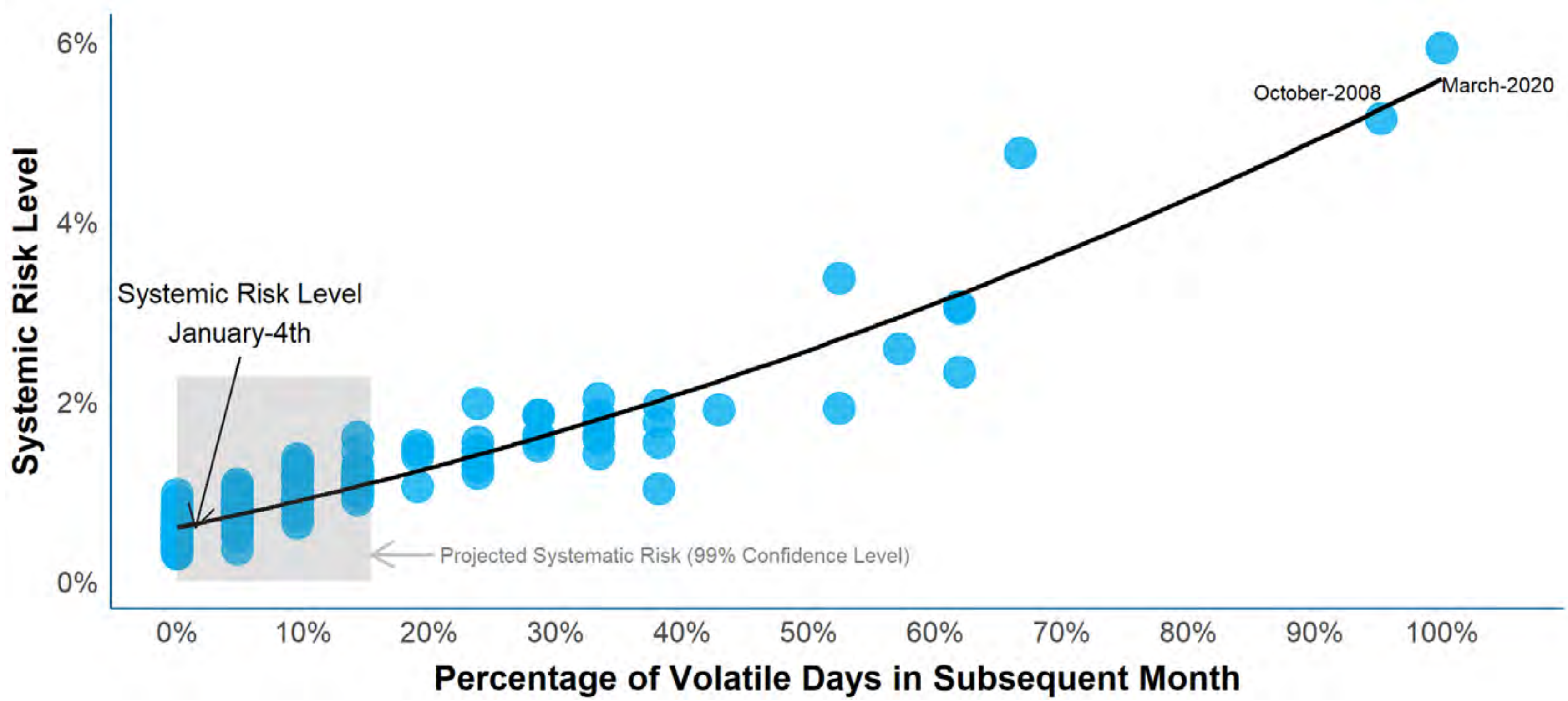
Fixed Income Volatility[1]
(As of December 31, 2020)



- This chart details historical implied fixed income market volatility. This metric tends to increase during times of stress/fear and while declining during more benign periods.

[1] Fixed Income Volatility – Source: Bloomberg, and Meketa Investment Group. Fixed Income Volatility proxied by MOVE Index, a Measure of implied option volatility for US Treasury markets.

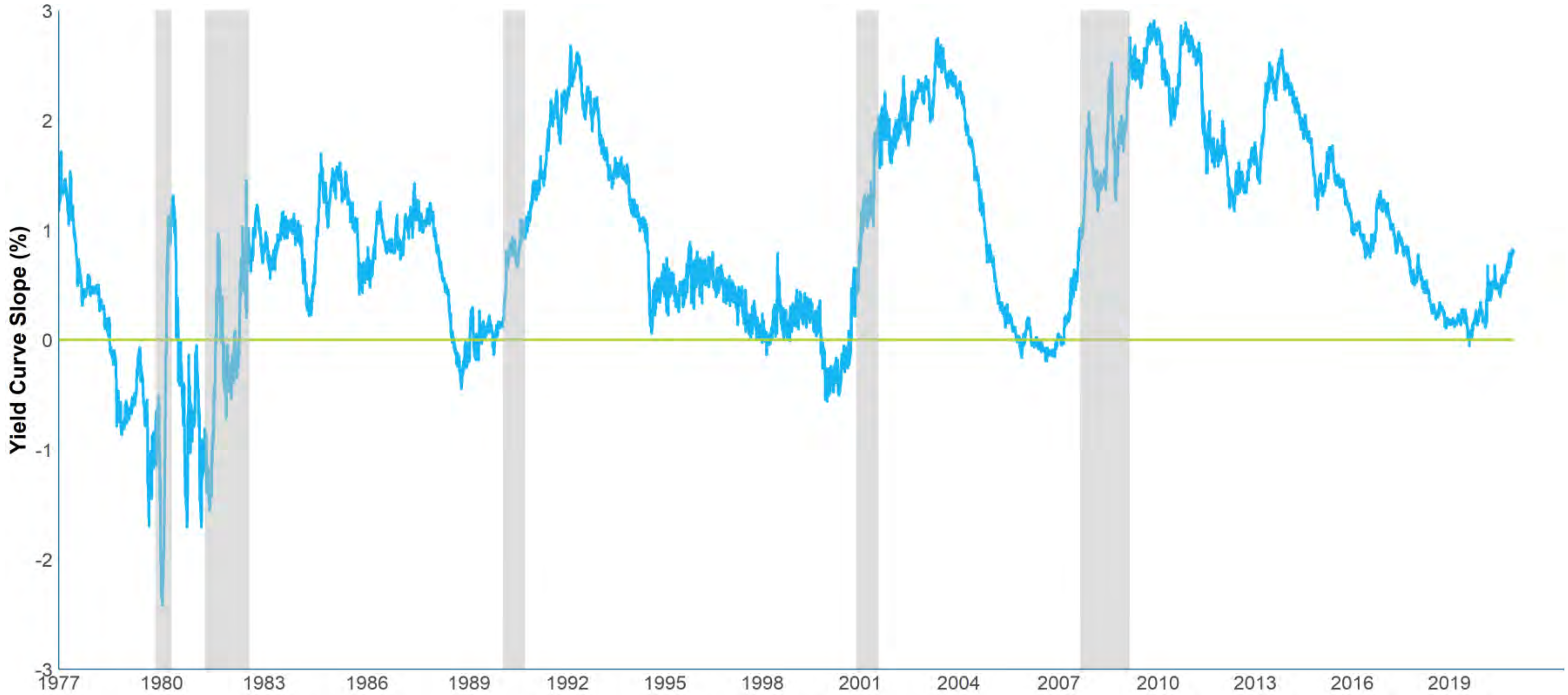
Systemic Risk and Volatile Market Days[1]
(As of December 31, 2020)



- Systemic Risk is a measure of 'System-wide' risk, which indicates herding type behavior.

[1] Source: Meketa Investment Group. Volatile days are defined as the top 10 percent of realized turbulence, which is a multivariate distance between asset returns.

Yield Curve Slope (Ten Minus Two)[1]
(As of December 31, 2020)



- This chart details the historical difference in yields between ten-year and two-year US Treasury bonds/notes. A higher (lower) figure indicates a steeper (flatter) yield curve slope.

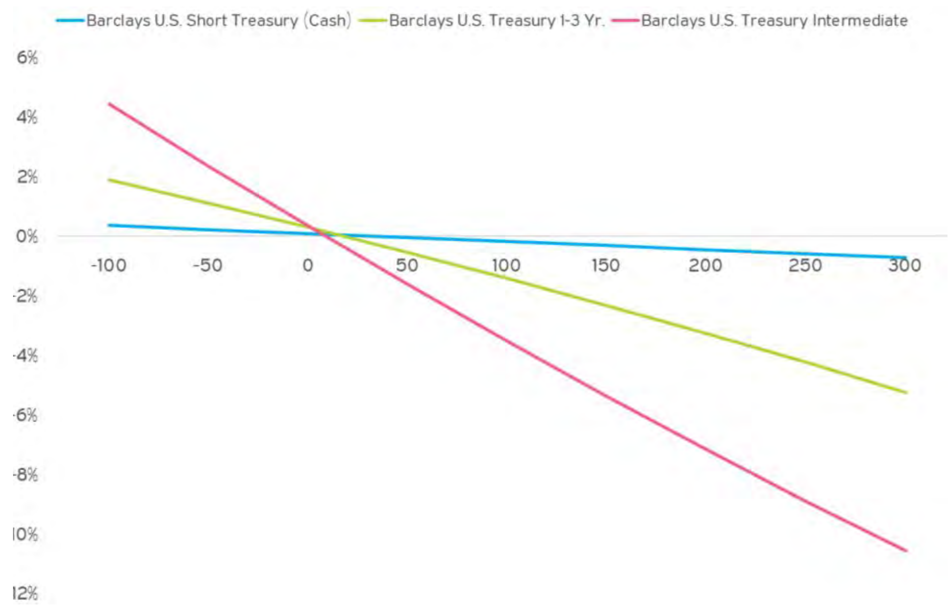
[1] Yield Curve Slope (Ten Minus Two) – Source: Bloomberg, and Meketa Investment Group. Yield curve slope is calculated as the difference between the 10-Year US Treasury Yield and 2-Year US Treasury Yield.

Ten-Year Breakeven Inflation[1]
(As of December 31, 2020)

- This chart details the difference between nominal and inflation-adjusted US Treasury bonds. A higher (lower) figure indicates higher (lower) inflation expectations.

[1] Ten-Year Breakeven Inflation – Source: US Treasury and Federal Reserve. Inflation is measured by the Consumer Price Index (CPI-U NSA).

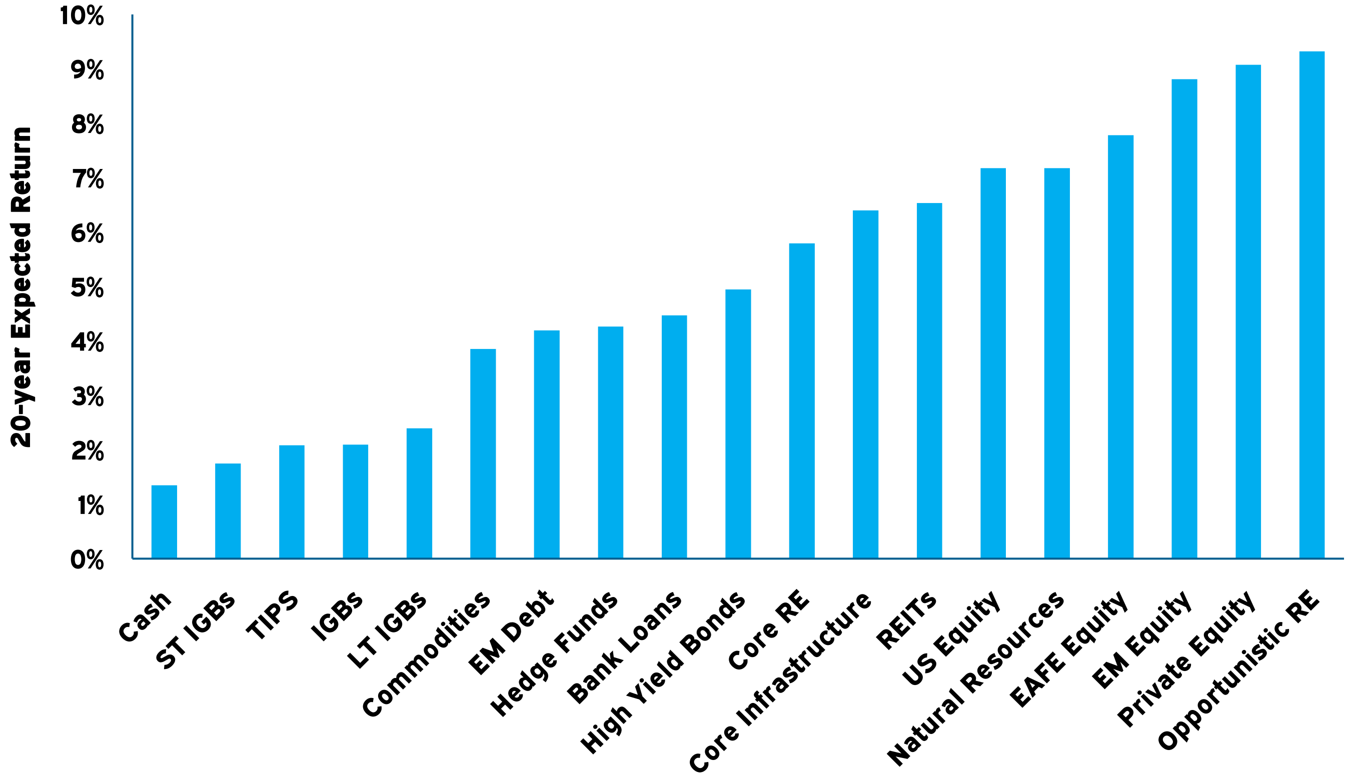
Total Return Given Changes in Interest Rates (bps)[1]
(As of November 30, 2020)



	Total Return for Given Changes in Interest Rates (bps)									Statistics	
	-100	-50	0	50	100	150	200	250	300	Duration	YTW
Barclays US Short Treasury (Cash)	0.3%	0.2%	0.1%	-0.1%	-0.2%	-0.3%	-0.5%	-0.6%	-0.7%	0.27	0.07%
Barclays US Treasury 1-3 Yr.	1.9%	1.1%	0.3%	-0.6%	-1.4%	-2.3%	-3.3%	-4.3%	-5.3%	1.65	0.28%
Barclays US Treasury Intermediate	4.4%	2.3%	0.3%	-1.6%	-3.5%	-5.4%	-7.2%	-8.9%	-10.6%	3.98	0.32%
Barclays US Treasury Long	23.0%	11.7%	1.5%	-7.5%	-15.5%	-22.3%	-27.9%	-32.4%	-35.8%	19.24	1.51%

[1] Data represents the expected total return from a given change in interest rates (shown in basis points) over a 12-month period assuming a parallel shift in rates. Source: Bloomberg, and Meketa Investment Group.

Long-Term Outlook – 20-Year Annualized Expected Returns[1]



- This chart details Meketa's long-term forward-looking expectations for total returns across asset classes.

[1] Source: Meketa Investment Group's 2020 Annual Asset Study.

Appendix

Data Sources and Explanations[1]

- US Equity Cyclically Adjusted P/E on S&P 500 Index – Source: Robert Shiller and Yale University.
- Small Cap P/E (Russell 2000 Index) vs. Large Cap P/E (Russell 1000 Index) - Source: Russell Investments. Earnings figures represent 12-month "as reported" earnings.
- Growth P/E (Russell 3000 Growth Index) vs. Value (Russell 3000 Value Index) P/E - Source: Bloomberg, MSCI, and Meketa Investment Group. Earnings figures represent 12-month "as reported" earnings.
- Developed International Equity (MSCI EAFE ex Japan Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly "as reported" earnings over the previous ten years.
- Emerging Market Equity (MSCI Emerging Markets Index) Cyclically Adjusted P/E – Source: MSCI and Bloomberg. Earnings figures represent the average of monthly "as reported" earnings over the previous ten years.
- Private Equity Multiples – Source: S&P LCD Average EBITDA Multiples Paid in All LBOs.
- Core Real Estate Spread vs. Ten-Year Treasury – Source: Real Capital Analytics, US Treasury, Bloomberg, and Meketa Investment Group. Core Real Estate is proxied by weighted sector transaction based indices from Real Capital Analytics and Meketa Investment Group.

[1] All Data as of December 31, 2020 unless otherwise noted.

Appendix

Data Sources and Explanations[1]

- REITs Dividend Yield Spread vs. Ten-Year Treasury – Source: NAREIT, US Treasury. REITs are proxied by the yield for the NAREIT Equity index.
- Credit Spreads – Source: Barclays Capital. High Yield is proxied by the Barclays High Yield index and Investment Grade Corporates are proxied by the Barclays US Corporate Investment Grade index.
  - Spread is calculated as the difference between the Yield to Worst of the respective index and the 10-Year Treasury Yield.
- EM Debt Spreads – Source: Bloomberg, and Meketa Investment Group. Option Adjusted Spread (OAS) for the Bloomberg Barclays EM USD Aggregate Index.
- Equity Volatility – Source: Bloomberg, and Meketa Investment Group. Equity Volatility proxied by VIX Index, a Measure of implied option volatility for US equity markets.
- Fixed Income Volatility – Source: Bloomberg, and Meketa Investment Group. Equity Volatility proxied by MOVE Index, a Measure of implied option volatility for US Treasury markets.
- Systemic Risk and Volatile Market Days – Source: Meketa Investment Group. Volatile days are defined as the top 10 percent of realized turbulence, which is a multivariate distance between asset returns.
- Systemic Risk, which measures risk across markets, is important because the more contagion of risk that exists between assets, the more likely it is that markets will experience volatile periods.

[1] All Data as of December 31, 2020 unless otherwise noted.

Appendix

Data Sources and Explanations[1]

- Yield Curve Slope (Ten Minus Two) – Source: Bloomberg, and Meketa Investment Group. Yield curve slope is calculated as the difference between the 10-Year US Treasury Yield and 2-Year US Treasury Yield.
- Ten-Year Breakeven Inflation – Source: US Treasury and Federal Reserve. Inflation is measured by the Consumer Price Index (CPI-U NSA).

[1] All Data as of December 31, 2020 unless otherwise noted.

Meketa Market Sentiment Indicator

Explanation, Construction and Q&A

Meketa has created the MIG Market Sentiment Indicator (MIG-MSI) to complement our valuation-focused Risk Metrics. This measure of sentiment is meant to capture significant and persistent shifts in long-lived market trends of economic growth risk, either towards a risk-seeking trend or a risk-aversion trend.

This appendix explores:

- What is the Meketa Market Sentiment Indicator?
- How do I read the indicator graph?
- How is the Meketa Market Sentiment Indicator constructed?
- What do changes in the indicator mean?

Meketa has created a market sentiment indicator for monthly publication (the MIG-MSI – see below) to complement Meketa's Risk Metrics.

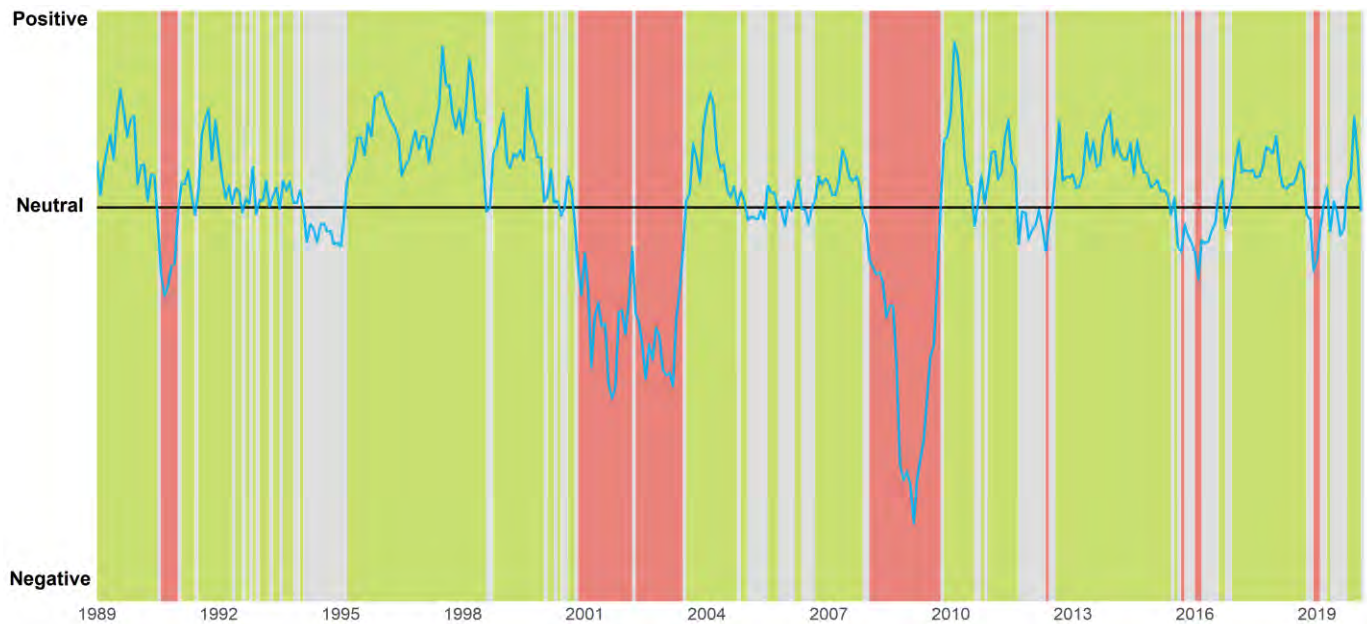
- Meketa's Risk Metrics, which rely significantly on standard market measures of relative valuation, often provide valid early signals of increasing long-term risk levels in the global investment markets. However, as is the case with numerous valuation measures, the Risk Metrics may convey such risk concerns long before a market corrections take place. The MIG-MSI helps to address this early-warning bias by measuring whether the markets are beginning to acknowledge key Risk Metrics trends, and / or indicating non-valuation based concerns. Once the MIG-MSI indicates that the market sentiment has shifted, it is our belief that investors should consider significant action, particularly if confirmed by the Risk Metrics. Importantly, Meketa believes the Risk Metrics and MIG-MSI should always be used in conjunction with one another and never in isolation. The questions and answers below highlight and discuss the basic underpinnings of the Meketa MIG-MSI:

What is the Meketa Market Sentiment Indicator (MIG-MSI)?

- The MIG-MSI is a measure meant to gauge the market's sentiment regarding economic growth risk. Growth risk cuts across most financial assets, and is the largest risk exposure that most portfolios bear. The MIG-MSI takes into account the momentum (trend over time, positive or negative) of the economic growth risk exposure of publicly traded stocks and bonds, as a signal of the future direction of growth risk returns; either positive (risk seeking market sentiment), or negative (risk averse market sentiment).

How do I read the Meketa Market Sentiment Indicator graph?

- Simply put, the MIG-MSI is a color-coded indicator that signals the market's sentiment regarding economic growth risk. It is read left to right chronologically. A green indicator on the MIG-MSI indicates that the market's sentiment towards growth risk is positive. A gray indicator indicates that the market's sentiment towards growth risk is neutral or inconclusive. A red indicator indicates that the market's sentiment towards growth risk is negative. The black line on the graph is the level of the MIG-MSI. The degree of the signal above or below the neutral reading is an indication the signal's current strength.
- Momentum as we are defining it is the use of the past behavior of a series as a predictor of its future behavior.



How is the Meketa Market Sentiment Indicator (MIG-MSI) Constructed?

- The MIG-MSI is constructed from two sub-elements representing investor sentiment in stocks and bonds:
  - Stock return momentum: Return momentum for the S&P 500 Equity Index (trailing 12-months)
  - Bond yield spread momentum: Momentum of bond yield spreads (excess of the measured bond yield over the identical duration US Treasury bond yield) for corporate bonds (trailing 12-months) for both investment grade bonds (75% weight) and high yield bonds (25% weight).
  - Both measures are converted to Z-scores and then combined to get an "apples to apples" comparison without the need of re-scaling.
- The black line reading on the graph is calculated as the average of the stock return momentum measure and the bonds spread momentum measure.[1] The color reading on the graph is determined as follows:
  - If both stock return momentum and bond spread momentum are positive = GREEN (positive)
  - If one of the momentum indicators is positive, and the other negative = GRAY (inconclusive)
  - If both stock return momentum and bond spread momentum are negative = RED (negative)

[1] Momentum as we are defining it is the use of the past behavior of a series as a predictor of its future behavior.
"Time Series Momentum" Moskowitz, Ooi, Pedersen, August 2010. *http://pages.stern.nyu.edu/~lpederse/papers/TimeSeriesMomentum.pdf*

What does the Meketa Market Sentiment Indicator (MIG-MSI) mean? Why might it be useful?

- There is strong evidence that time series momentum is significant and persistent. In particular, across an extensive array of asset classes, the sign of the trailing 12-month return (positive or negative) is indicative of future returns (positive or negative) over the next 12-month period. The MIG-MSI is constructed to measure this momentum in stocks and corporate bond spreads. A reading of green or red is agreement of both the equity and bond measures, indicating that it is likely that this trend (positive or negative) will continue over the next 12 months. When the measures disagree, the indicator turns gray. A gray reading does not necessarily mean a new trend is occurring, as the indicator may move back to green, or into the red from there. The level of the reading (black line) and the number of months at the red or green reading, gives the user additional information on which to form an opinion, and potentially take action.

Disclaimer Information

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MEKETA
INVESTMENT GROUP

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MEMORANDUM

TO: SJCERA Board of Retirement
FROM: Meketa Investment Group ("Meketa")
DATE: February 12, 2021
RE: SJCERA Benchmark Review

Following previous discussions with the SJCERA Board, Meketa reviewed SJCERA's current benchmarks for the managers, strategic classes and the overall policy. This memo recommends some changes to better align relative performance comparisons. Each of the various portfolio components are reviewed below with recommended changes where appropriate.

Summary: Recommended Benchmark Changes

Aggressive Growth			
	Strategy	Current Benchmark Target	New Benchmark Target
Aggressive Growth	Asset Class Comp.	MSCI ACWI ND + 2%	50% ACWI ND + 2% PE/ 50% NCREIF ODCE + 1%

Private Credit			
	Strategy	Current Benchmark Target	New Benchmark Target
BlackRock	Global Infra.	50% BB HY/ 50% Lev. Loan	CPI + 6% Annual
Oaktree	Leveraged Direct	MSCI ACWI ND + 2%	CPI + 6% Annual

SJCERA Total Fund Policy

Asset Class	Current Policy Target (%)	Current Benchmark	New Benchmark
Traditional Growth			
Public Global Equity	32	MSCI ACWI IMI	No Change
Aggressive Growth			
Private Equity	5	MSCI ACWI ND + 2%	50% ACWI ND + 2%
Opp/Value Add Real Estate	5		50% NCEIF ODCE + 1%
Stabilized Growth			
Risk Parity	10	T-bills + 4%	No Change
Private/Liquid Credit	17	50% BB High Yield/ 50% Leveraged Loan	No change
Core Real Estate	6	NCREIF ODCE	No Change
Diversifying Strategies			
Principal Protection	10	BB Aggregate Index	No change
Crisis Risk Offset	15	1/3rd BB long Duration, 1/3rd BTOPS 50, 1/3rd 5% Annual	No change
Cash[1]	0	N/A	N/A
Total	100	Total Fund Custom Benchmark	

Discussion

When evaluating the performance of a portfolio or a specific manager, it's important to compare it against an appropriate benchmark. There are numerous index providers that create benchmarks used to gauge the performance of most investments, including Standard & Poor's, Russell, MSCI, and Bloomberg, among others. In general, an appropriate benchmark represents the investable universe (or opportunity set) while also adhering to broadly-accepted industry standards.[2] Such standards are easily implemented through the broad market benchmark framework.

[1] Cash does not have an asset class benchmark.

[2] See, for example, A Primer for Investment Trustees, ©2011, The Research Foundation of the CFA Institute. This publication highlights that broad class benchmarks provide reasonable proxies for the types of capital market risks that must be borne by investors in order to capture investment returns over time. In addition, the most common metrics utilized to measure investment performance rely upon broadly published benchmarks. Finally, the basic standard for a benchmark is that it be (i) unambiguous, (ii) measurable, (iii) investable, (iv) appropriate, (v) measurable in advance, and (vi) owned (i.e., the publisher adheres to high-quality accountability standards). Widely-followed broad class benchmarks easily meet these standards.

While liquid, long-only classes are fairly easy to benchmark, illiquid and/or more complex strategies/classes, such as Private Equity, are more difficult. Since these types of investments are often multi-asset in nature, they commonly do not possess an easily identifiable investable universe, and are highly illiquid, finding benchmarks that fulfill all of the desired criteria can prove challenging. To this end, Aggressive Growth is currently benchmarked against a hybrid target: a market index + a premium (MSCI ACWI ND +2%)[3] as opposed to solely broad market indexes.

In short to medium term periods of markets inflections, such as 2020, having a benchmark tied to highly volatile market like equites can lead to relatively high performance dispersions. This can be seen in the SJCERA Aggressive growth portfolio, where relative performance was down (6.4%) for the YTD ending September 2020. However, Meketa expects Private Equity managers to outperform this benchmark hurdle over longer periods.

Annualized Performance – Gross of Fees

(as of 9/30/2020) (lagged)

	1 Month	Quarter	YTD	1 Year	3 Years	5 Years
Aggressive Growth Total	-3.4	-3.4	-2.3	-1.4	8.3	7.2
MSCI ACWI + 2%	3.4	20.0	4.1	4.7	6.4	7.4

To help eliminate these short-term performance differences, Institutional managers have begun to look for at indices that compare Private Equity managers to other Private Equity managers. As a result, Cambridge Associates has developed the All PE index.[4] While we do not recommend that this benchmark be used for performance reporting purposes, we will be including it as part of our annual review of the class with the board.

[3] **MSCI ACWI ND** comprises both developed and emerging markets less the United States. This series approximates the minimum possible dividend reinvestment. The dividend is reinvested after deduction of withholding tax, applying the rate to non-resident individuals who do not benefit from double taxation treaties. MSCI Barra uses withholding tax rates applicable to Luxembourg holding companies, as Luxembourg applies the highest rates.

[4] The Cambridge Associates US Private Equity Index is calculated by looking at the performance of multiple private equity funds, including buyout, growth and energy.

DPS/RL/ndb

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MEMORANDUM

TO: SJCERA Board of Retirement
FROM: Meketa Investment Group ("Meketa")
CC: David Sancewich; Ryan Lobdell, CFA, CAIA - Meketa
Johanna Shick, CEO; Paris Ba – SJCERA
DATE: February 12, 2021
RE: 2021 Capital Market Assumptions Expected Return Memo

The general theme of the 2021 Meketa Capital Market Assumptions are lower future expected returns. This is a theme which is consistent across the board in the industry and largely driven by the significant changes in interest rates during 2020. Lower interest rates results in lower expected returns for most yield oriented asset classes as starting yield is often a fairly reasonable predictor of future returns for many fixed income related classes. A knock on effect to lower equity return assumptions would also occur for anyone taking a risk premium approach to building capital market assumptions (e.g., Cash + a premium). Other approaches which focuses on building forecasted from a more bottom-up or fundamental view point for equities and other economic growth risk linked classes can are often (or at least in some part) influence by valuation levels. With a strong year across the board for equity markets, valuations increased across many measures. As such, expected returns are lower for anyone relying solely on a valuation approach as well. It's important to remember that our capital market assumptions and those of other practitioners and peers have a significant range of error in terms of potential future outcomes. For example, the higher the expected standard deviation, the higher the range of possible outcomes is expected to be for any asset class or portfolio. It is also important to note that the long-term expected portfolio compound return assumes net-of-fee returns, with no attempt to seek added value via active management. In addition, our capital market assumptions are over a 20-year time horizon which is different from the time horizon used SJCERA's actuary, Chieron which projects out over 30-years. Another point of difference is the inflation assumption, whereas Cheiron assumes a higher inflation rate at 2.75% versus our assumption of 2.1%. Further summary comments of our 2021 capital market assumptions are below with the detailed projections by strategic class numbers shown on the following page.

- In 2021 our cash return expectations declined materially from last year from 2.4% to 1.1% pushing the real return expectation even further into negative territory.
  - Short-term rates declined significantly, with 3 month treasury yields starting at 1.55% and dropping to 0% on the March 25th and 26th, before remained low the rest of the year and ending at 0.09%.
- Fixed income yields across the maturity and quality spectrum fell significantly during the year reducing return expectations for Principal Protection, Stabilized Growth, and Long Duration (a part of Crisis Risk Offset).
- With the exception of Aggressive Growth, no class is forecasted to achieve a compound return above 7.00% over the next 10 years.
  - Aggressive Growth contains Private Equity and Non-Core Real Estate. The next highest returning sub-asset class is Private Credit at ~6.6%.
- Over the next 20-years the SJCERA policy portfolio is projected to produce a return of 6.25%.

		2021 20-Year Assumptions		
Investment Class	**Target * %**	Exp. Arith. Return	Exp. Comp. Return**	Expected Std. Dev.
Aggressive Growth	10%	12.10	9.70	21.80
Traditional Growth	32%	8.70	7.10	18.00
Stabilized Growth	33%	6.00	5.50	9.85
Principal Protection	10%	1.90	1.80	4.00
Crisis Risk Offset	15%	4.45	4.05	8.90
Cash	0%	1.10	1.10	1.00
Inflation	---	2.10	2.10	3.00
Total	100%	6.85	6.25	10.65

*Long-term Target Allocation

Note: all numbers are rounded to the nearest 0.05%

DPS/RL/ndb

Investment Return Review and Cost Projections

February 12, 2021

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

Topics for Discussion

- Background
- Review of Return Assumption
- Projections

Background

- Triennial experience study performed in 2019, reviewing all assumptions (demographic and economic)
  - Board updated demographic assumptions, but retained prior economic assumptions
  - 7.25% discount rate, 2.90% inflation, 4.35% real return
- Board adopted alternative economic assumptions for 2020 actuarial valuation
  - 7.00% return, 2.75% inflation, 4.25% real return
  - Phased-in impact of changes in the UAL over three years; Normal Cost change not phased-in
- Full triennial review of all assumptions scheduled in conjunction with the 1/1/2022 Actuarial Valuation

Review of Return Assumption

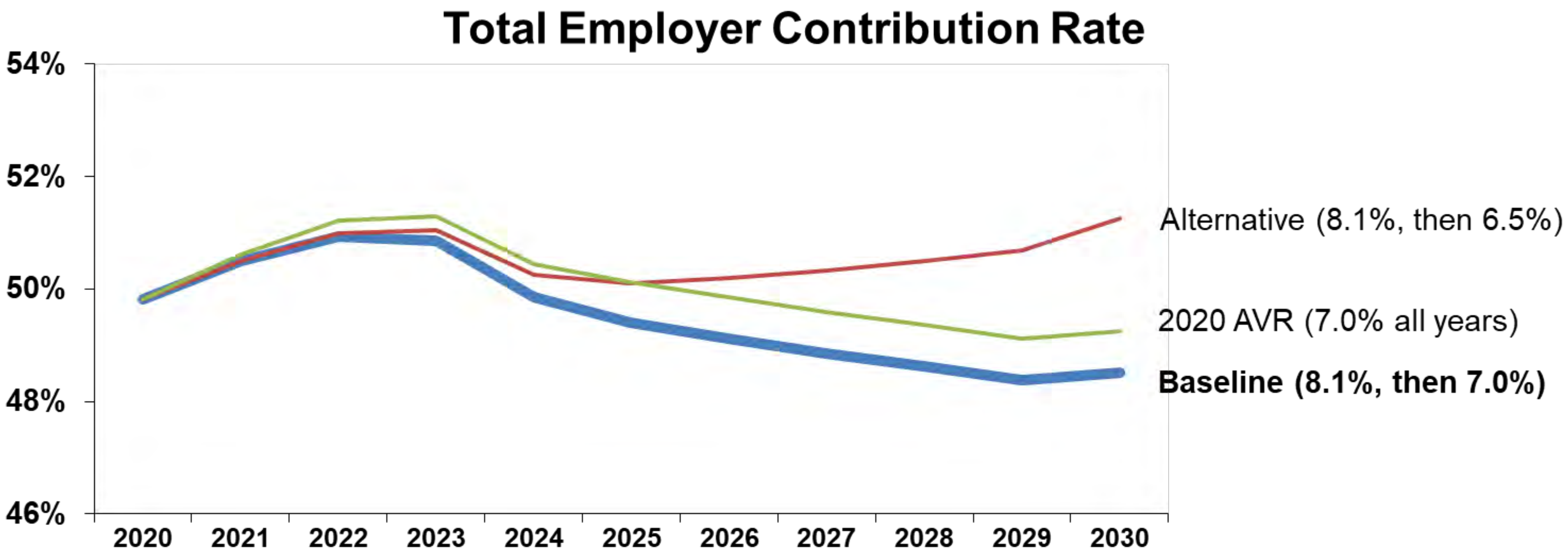
SJCERA Portfolio Return Expectations			
Source	**Nominal**	**Inflation**	**Real**
Capital Market Assumptions as of Feb 2020			
Meketa 2020 (10-year)	6.20%	2.20%	4.00%
Capital Market Assumptions Updates			
Meketa 2021 (20-year)	6.25%	2.10%	4.15%
Horizon 2020 (Survey, 10-year)	6.25%	2.00%	4.25%
Horizon 2020 (Survey, 20-year)	7.10%	2.20%	4.90%
Average	6.5%	2.1%	4.4%
Current SJCERA Assumptions	7.00%	2.75%	4.25%

- Current SJCERA real return assumption (4.25%) continues to be consistent with consultants' expectations (average 4.4%)
- Current SJCERA inflation assumption (2.75%) continues to be higher than consultants' expectations (average 2.1%)
- If future events match consultants' expectations, Plan would experience investment losses, offset by liability gains from retiree COLAs and pay increases

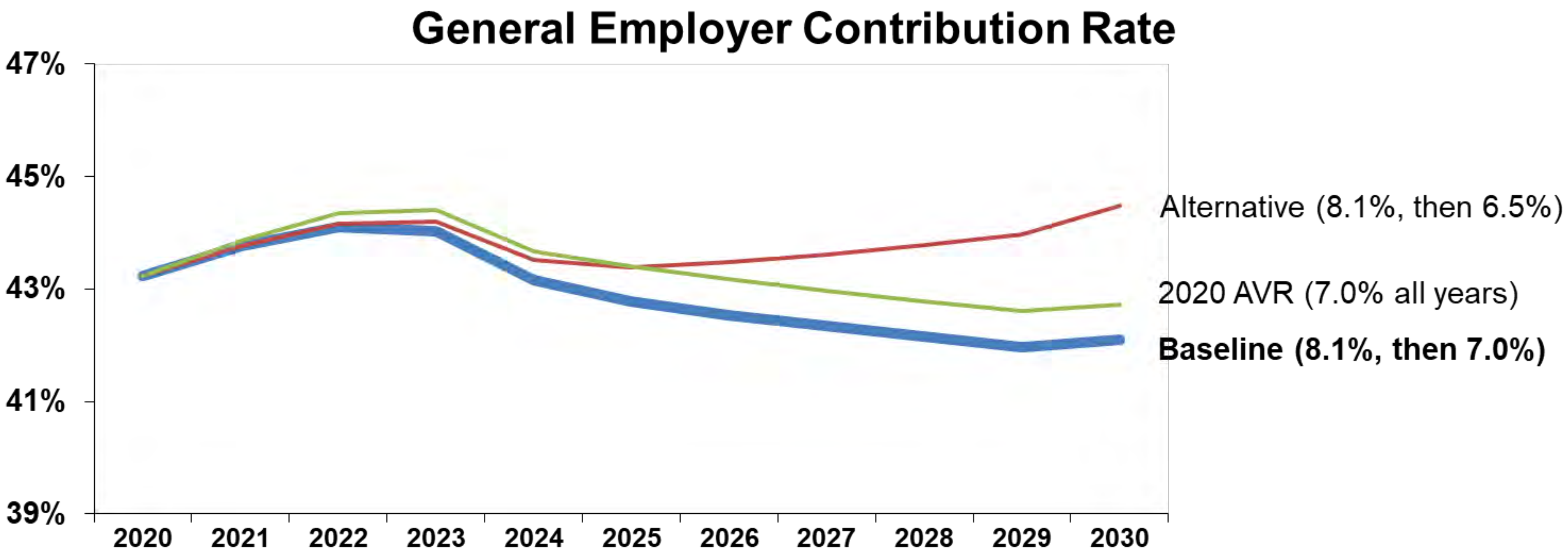
Employer Contribution Rate Projections

- Baseline projections assume 8.1% net return for 2020
  - All assumptions met after 1/1/2021, including 7.00% return each year and 3.00% payroll growth, with no additional employer contributions
- Alternative scenarios shown:
  - 8.1% return for 2020, 6.5% each year thereafter (average nominal return forecast), with no offsetting liabilities gains
  - 2020 AVR Projection (2020+ return of 7.00%)

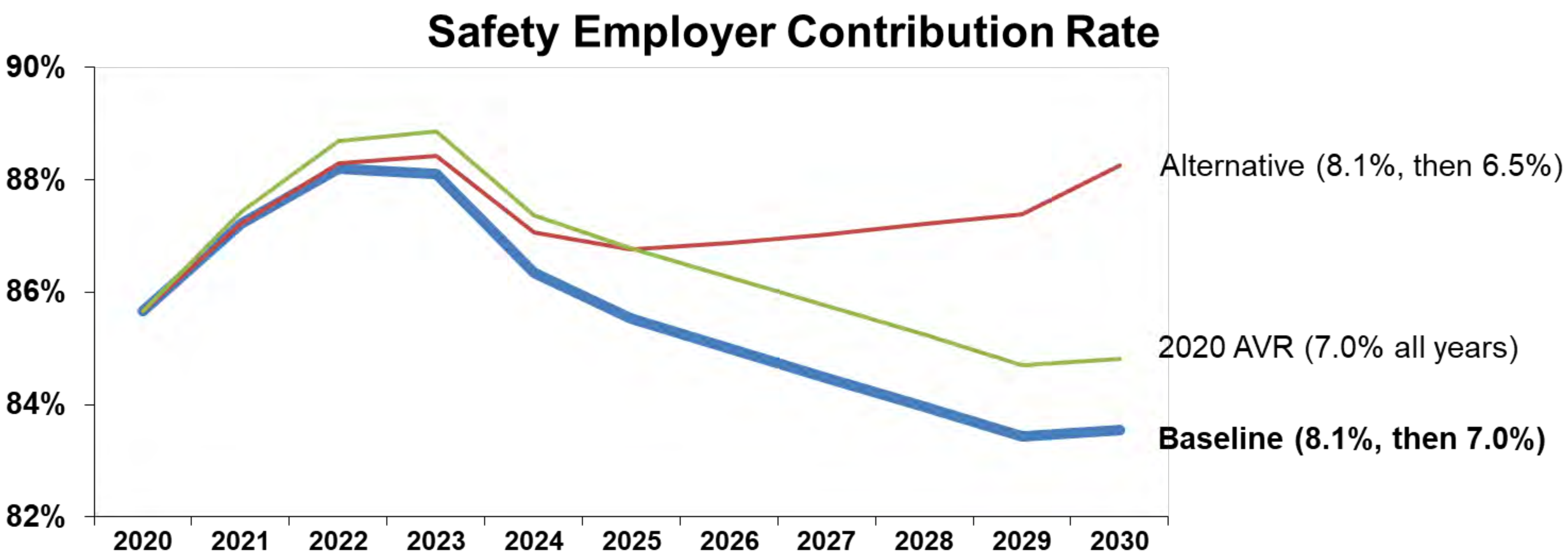
Projections – All SJCERA



Projections – General



Projections - Safety



Projection Details – Total SJCERA

	Total SJCERA					
	Baseline (8.1%, then 7.0%)		Alternative (8.1%, then 6.5%)		2020 AVR (7.0% all years)	
FY	ER Rate	Funded Ratio	ER Rate	Funded Ratio	ER Rate	Funded Ratio
2020	49.8%	64.7%	49.8%	64.7%	49.8%	64.7%
2021	50.5%	67.4%	50.5%	67.4%	50.6%	66.7%
2022	50.9%	69.7%	51.0%	69.4%	51.2%	69.0%
2023	50.9%	72.2%	51.0%	71.5%	51.3%	71.5%
2024	49.9%	74.7%	50.3%	73.7%	50.4%	74.0%
2025	49.4%	77.3%	50.1%	75.9%	50.1%	76.6%
2026	49.1%	79.8%	50.2%	78.0%	49.9%	79.1%
2027	48.9%	82.4%	50.3%	80.2%	49.6%	81.8%
2028	48.6%	85.0%	50.5%	82.5%	49.4%	84.4%
2029	48.4%	87.7%	50.7%	84.8%	49.1%	87.1%
2030	48.5%	90.4%	51.2%	87.2%	49.2%	89.9%
2031	45.3%	93.2%	48.5%	89.7%	46.1%	92.8%
2032	42.7%	96.2%	46.3%	92.3%	43.4%	95.8%
2033	24.5%	98.9%	28.7%	94.8%	25.3%	98.6%
2034	20.1%	101.6%	24.8%	97.2%	20.9%	101.3%

Required Disclosures

The purpose of this presentation is to present projections for the San Joaquin County Employees' Retirement Association. This presentation is for the use of the San Joaquin County Employees' Retirement Board in accordance with applicable law.

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

This presentation and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices that are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as a credentialed actuary, I meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this presentation. This presentation does not address any contractual or legal issues. I am not an attorney, and our firm does not provide any legal services or advice.

This presentation was prepared exclusively for the San Joaquin County Employees' Retirement Board for the purpose described herein. This presentation is not intended to benefit any third party, and Cheiron assumes no duty or liability to any such party.

The actuarial assumptions, data and methods, other than where noted, were used in the actuarial valuation report as of January 1, 2020. Future projections may differ significantly from the current projections presented in this presentation due to such factors as the following: plan experience differing from that anticipated by the assumptions; changes in assumptions; and changes in plan provisions or applicable law.

Cheiron utilizes ProVal, an actuarial valuation application leased from Winklevoss Technologies (WinTech), to calculate liabilities and project benefit payments. We have relied on WinTech as the developer of ProVal. We have reviewed ProVal, have a basic understanding of it, and have used it in accordance with its original intended purpose. We have not identified any material inconsistencies in assumptions or output of ProVal that would affect this report. The projections shown in this presentation were developed using R-scan, our proprietary projection tool We have relied on Cheiron colleagues who developed the tool, and we have used the tool in accordance with its purpose.

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

2021 CONFERENCES AND EVENTS SCHEDULE 2021

EVENT DATES 2021 BEGIN	END	EVENT TITLE	EVENT SPONSOR	LOCATION	REG. FEE	WEBLINK FOR MORE INFO	EST. BOARD EDUCATION HOURS
Feb 23	Feb 25	2021 Pension Bridge ESG Summit Virtual Conference	Pension Bridge	Virtual Conference	N/A	pensionbridge.com	10 hrs*
Mar 2	Mar 5	NCPERS Accredired Fiduciary Program - Modules 1 & 2	NCPERS	Virtual Conference	$400	ncpers.org	10 hrs
Mar 8	Mar 9	CALAPRS General Assembly	CALAPRS	Virtual Conference	$100	calaprs.org	7.3 hrs*
Mar 9	Mar 12	NCPERS Accredired Fiduciary Program - Modules 3 & 4	NCPERS	Virtual Conference	$400	ncpers.org	10 hrs
May 4	May 7	2021 Annual Pension Bridge Virtual Conference	Pension Bridge	Virtual Conference	N/A	pensionbridge.com	10 hrs*
May 24	May 26	2021 Visions, Insights & Perspectives	Institutional Real Estate Inc.	Palos Verdes, CA	N/A	irei.com	10.75 hrs*

** Estimates based on prior agendas*

The California Association of Public Retirement Systems, CALAPRS, invites you to attend our Virtual General Assembly, March 8-9, 2021. The General Assembly is an educational conference for retirement system trustees, senior staff, and our annual sponsors. This year, we're putting together an exciting virtual experience that will allow you to still foster one-on-one connections, get to know our sponsoring partners, and learn from international experts and peers.

REGISTRATION

Register online at www.calaprs.org/events.

Retirement System Fee: $250/person
Sponsor Fee: Complimentary for up to 2 representatives*

*Annual sponsorship required. Details here →

GA Planning Committee

Steve Delaney, Orange County Employees Retirement System (Chair)
Roberto Peña, San Jose Retirement Services
Johanna Shick, San Joaquin County Employees' Retirement Association
Anthony Suine, California Public Employees' Retirement System
Julie Wyne, Sonoma County Employees' Retirement Association

SPONSORSHIP

Sign-up to Sponsor at www.calaprs.org/sponsors.

Fee: $2,500
General Assembly Benefits:

- (2) Two complimentary registrations
- Virtual exhibit booth featuring company description, video, contact information, and chat messaging (optional, must opt-in and set up)
- Access to all educational sessions during the conference
- Participation in table topic networking session
- Direct messaging and one-on-one video chat with fellow participants during the conference
- Archived access after the conference for 30 days

PROGRAM

Monday, March 8, 2021

8:30 – 8:45 AM	**Opening Remarks** General Assembly Conference Chair: Steve Delaney, CEO, OCERS
8:45 – 9:45 AM	**Cyber Security** Moderators: Matt Eakin, Director of Cyber Security, OCERS and Jon Gossard, Information Security Manager, OCERS Panelists: Peter Dewar, President, Linea Secure and Peter Liebert, VP & Chief Information Security Officer, Cerner Government Services and Commander of Cyber Operations, California State Guard
9:45 –10:00 AM	Networking Break / Expo Hall
10:00 – 11:00 AM	**COVID: One-Year Later - What's Changed?** Panelists: Roberto Peña, Chief Executive Officer, San Jose Retirement Services and Representatives from CalPERS and Other County Systems
11:00 – 11:15 AM	Networking Break / Expo Hall
11:15 AM – 12:15 PM	**Table Topic Breakout Sessions**
12:15 – 1:00 PM	Lunch Break
1:00 – 3:00 PM	**AB1234 Ethics for Public Pension Trustees** Presenter: Ashley Dunning, Partner, Nossaman LLP

Tuesday, March 9, 2021

8:30 – 8:45 AM	**Opening Remarks** General Assembly Conference Chair: Steve Delaney, CEO, OCERS
8:45 – 9:45 AM	**Unconscious Bias: A Quiet Performance Killer** Presenter: Dr. Tyrone A. Holmes, Ed.D., T.A.H. Performance Consultants, LLC
9:45 –10:00 AM	Networking Break / Expo Hall
10:00 – 11:00 AM	**Stealth War: How China Took Over While America's Elite Slept** Presenter: Dr. Robert Spalding, Author and Former U.S. Air Force Brigadier General (Ret.)
11:00 – 11:30 AM	Networking Break / Expo Hall
11:30 AM – 12:30 PM	**The Australian Model – Understanding the Approach Taken by Super Annuation Funds** Presenter: Con Michalakis, Chief Investment Officer, Statewide Super
12:30 – 12:35 PM	**Closing Remarks** General Assembly Conference Chair: Steve Delaney, CEO, OCERS

SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

SUMMARY OF PENDING TRUSTEE AND EXECUTIVE STAFF TRAVEL

2021 Event Dates	Sponsor / Event Description	Location	Traveler(s)	Estimated Cost	BOR Approval Date
Feb 11	CALAPRS Administrators' Roundtable	Webinar	Shick	$50	N/A
Mar 8 - 9	CALAPRS General Assembly	Webinar	Shick	$100	N/A

SAN JOAQUIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

SUMMARY OF COMPLETED TRUSTEE AND EXECUTIVE STAFF TRAVEL

Event Dates 2020	Sponsor / Event Description	Location	Traveler(s)	Estimated Cost	Actual Cost	Event Report Filed
Jan 27	Meketa Fourth Quarter 2020 Market Review	Webinar	Nicholas, Praus	N/A	N/A	N/A
Feb 2 - 3	NCPERS FALL Conference	Webinar	Shick, Herman, Ba	$900	$900	N/A

San Joaquin County Employees' Retirement Association

February 5, 2021

TO: Board of Retirement

FROM: Johanna Shick
Chief Executive Officer

SUBJECT: Chief Executive Officer Report

Strengthen Fund Stability
Deliver Target Investment Return. In 2020, the SJCERA portfolio gained 8.3 percent, exceeding its assumed rate of return of 7 percent. The three-year annualized return was 6.3 percent and the five-year annualized return of 7.4 percent. The returns will be considered in calculating our funded ratio, as part of our actuarial valuation, which is published in August. While this is great news, it should be noted Capital Market Assumptions continue their downward trend (as Meketa will present on February 12), which indicates experts anticipate it will become increasingly difficult to attain these levels of returns.

Active versus Passive Considerations. At the March Board meeting, Meketa will provide an active versus passive investing education across the various equity and fixed income market segments. To assist the Board and me in considering the options, Investment Officer, Paris Ba, provided the following summary, which may be helpful.

Based on a 2018 research on this topic, AQR provided the following conclusions.

- Active managers have provided positive value-added returns (net of fees) over the past 20 years, especially for institutional investors and investors outside of the United States.
- The past 10 years, have not been as favorable for active equity managers in the United States.
- Given the growing trend of passive investment, the bar for active managers is increasingly higher: active investors have to keep raising their game and/or lowering their fees, which is a healthy development for investors.

Meketa's more recent white paper (October 2020) suggests that in general there are no clear indicators between whether active or passive is better. They did however, point out on average, active managers tend to outperform during bear market.

Leverage Technology to Improve Accuracy and Efficiency
Implement Year 1 of Five-Year Technology Plan.

- *Implement Pension System Enhancements Remaining on Statement of Work for legacy PAS*
  Work continues on functionality identified in the statement of work for the enhancement project including, the Actuary/Auditor data extract, service purchases, and death refunds.

- *Maintain and Update Core Functionality of Legacy PAS*
  Negotiations between IG. Inc and SJCERA have begun regarding IG's role over the next three to five years. Both parties have indicated they are committed to a smooth transition to a new system.

Manage Risk
Conduct Cyber-Security Audit. Management Analyst III, Greg Frank is working with Information Systems

Manager, Adnan Khan and ACEO, Kathy Herman to draft the Cyber-Security Audit RFP. Staff anticipates posting the RFP before the next Board meeting. We would welcome those trustees with Cyber-Security Audit experience to review the RFP and/or to participate on the panel selecting the vendor.

<u>Conduct Actuarial Audit</u>. It's RFP season for Greg Frank! In addition to the Cyber-Security Audit RFP mentioned above, he has also drafted the Actuarial Audit RFP, which is the first step in selecting a firm to conduct an audit of SJCERA's annual actuarial valuation to validate the methods, assumptions, and results of SJCERA's consulting actuary. The actuarial valuation is a foundational document which informs many of SJCERA's and the Board's decisions; conducting an audit every five years is a best practice in the industry.

ACEO Kathy Herman, Deputy County Counsel Jason Morrish, and I reviewed the draft, and Greg expects to distribute and post the RFP on or about February 19, 2021. SJCERA will then be in a quiet period related to the search until a selection is made. If you are contacted by a service provider or potential bidders, please refer them to Greg Frank, RFP Coordinator, at ActuaryAuditRFP@sjcera.org. Staff expects to select and engage the vendor in May and plans to have the Actuarial Audit firm present the results of the audit to the Board in September (following Cheiron's presentation of the valuation in August.)

<u>Implement *Alameda* Decision</u>. Work on the affected retiree population occurs in two phases. First, adjust the existing benefit, then calculate the difference in overpaid benefits and overpaid member contributions to determine if the retiree is owed a return of contributions. Of the affected population of 127 retirees, staff has calculated and adjusted benefits for 24 and aims to complete 20 per week. A number of factors affect the pacing on this project: (1) The research and recalculation of the benefit adjustments are manual; (2) There are new staff in critical positions, one long-term vacancy, and some reduced hours due to COVID-related education/child care needs; (3) This is SJCERA's busiest season for normal production, which impacts the same staff.

Retirement Services Officer, Melinda DeOliveira, and Retirement Services Associates Ron Banez and Andrea Bonilla, are diligently researching, calculating and verifying adjustments, and ensuring SJCERA uses the new highest final average compensation (FAC) period when recalculating benefits, which minimizes the amount of the adjustment where possible. Kathy Herman performs one final review before sending each retiree a letter explaining the adjustment. I have authorized payment of overtime to address the increased workload.

Deliver Excellent Service and Support to Stakeholders

<u>Provide Stakeholder Communication and Education</u>. Members are raving about our webinars! More than 340 members registered for the new Understanding Your Retirement Benefits webinar, held on February 4. Ron Banez and Melinda DeOliveria did a great job explaining the benefit and fielding nearly 200 questions. Clearly these online events are in demand.

<u>Revise and Update Prioritized Member Communications and Web Content</u>. Staff added a new Cost of Living Adjustment (COLA) page in the Retired Members section of SJCERA's website, which explains both the COLA and the COLA Bank. Additionally, staff added an announcement to the What's New section of the website notifying members that the 1.5% COLA would be presented to the Board for approval on February 12. Thanks goes out to Administrative Secretary, Kendra Fenner, Retirement Services Officer, Melinda DeOliveira, Information Systems Specialist II, Jordan Regevig and ACEO Kathy Herman for their assistance on content and posting.

<u>Provide Excellent Customer Service</u>. SJCERA continues to provide exemplary customer service to our members. Here's just one customer survey quote regarding Retirement Payroll Technician, Marissa Smith that illustrates the point: "Marissa makes me feel like I would like her to take over all of my life - it

would be so well thought-out and all organized. She is delightful to work with." Clearly a delighted customer!

Deliver Operations Timely and Accurately. Finance and IT staff met all critical January deadlines: semiannual interest was posted to member accounts on January 14, and IRS Forms1099-R were mailed on January 26, ahead of the January 31 deadline. Typically, the County's mail room staff provide folding, stuffing and mailing services for 1099-R forms. This year their small staff was hit with COVID-related shortages and could not guarantee service. SJCERA's new Accounting Manager, Carmen Murillo, jumped into action, scheduling an outside vendor (Presort) to ensure SJCERA met the IRS deadline. Many thanks to Investment Accountant, Fe Maliwat, Carmen Murillo, and Adnan Khan as they worked through the revised interest posting process as part of the system enhancement and again as they reconciled the 1099s. With Information Systems Analyst II, Lolo Garza's assistance everything was printed and mailed on time.

Maintain a High-Performing Workforce

Modify SJCERA Job Descriptions for Career Paths to Meet Organizational Needs. Much has changed in the last four years significantly changing how we do business. Where there were two Senior Office Assistants at the front counter, the workload for those two positions has evolved and is now more technical and virtual. Gone are the days of creating hundreds of paper packets and presentations or thick binders. No longer are we scanning, only to print again hundreds of pages of records or answering a phone, only to transfer the call.

Now when the mail is received it is scanned immediately and electronically routed to the appropriate staff. Now, the person who answers the phone or opens the SJCERA organizational email is being trained to answer 80 percent or more of all questions and soon we will have a virtual receptionist.

Without adding staff, the two job specific technician classifications have been blended to increase training, backup and career opportunities. In addition, effective February 1, 2021, retiree payroll is now part of the Accounting/Finance team. This move is intended to increase accounting oversite, build additional layers of backup to this most critical function, enhance cross training and continue to enhance career opportunity for staff. Some staff will be switching cubicles to further support these ongoing changes.

Offer Enterprise Training on Topics Intended to Strengthen SJCERA's Succession Planning. Input from various points of view is critical to any organization's success. To promote collaboration, and provide tools for bringing up potentially difficult topics, I asked staff to view the TED talk video, "4 Tips to Kickstart Honest Conversations at Work." Additionally, I provided the management team a leadership tip article entitled, "Why Great Leaders Speak Last." As a nation, we have become "information snackers"—we tend to want information better in small, digestible bits. These quick training tips are easy to work into even the busiest day and are intended to help us develop or sharpen our skills.

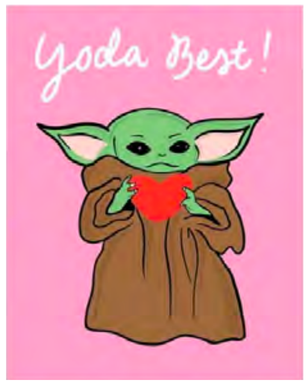
Administrative Secretary Recruitment. Welcome Kendra Fenner! Kendra's first day in the office was January 19, and already she's doing a great job. Andrea Bonilla is busily training her on the various functions and helping Kendra organize, compile and distribute the materials for the February Board meeting.

Managing Emerging Organizational Needs

Compliance. In compliance with SJCERA's *Declining Employer Payroll* policy, Management Analyst III, Greg Frank, has prepared the annually required Declining Employer Payroll Report (attached). No triggering events were identified this year.

Trustee Elections. There are three trustee elections to be held by the Registrar of Voters in June, the third seat General member, the eighth seat Retired member, and the Alternate Retired seat. In recent elections at other county retirement systems there have been issues with candidates' making campaign promises in their candidate statements that are outside the purview of the Board of Retirement's authority (for example, promising to increase the COLA or the benefit formula). Voters reviewing the candidate statements have no reason to know the statements are outside the Board's purview and cast their vote based on the candidate's statement. To prevent such issues in our County, staff plans to meet with Registrar of Voters' staff to explore options and learn how they address such issues in other elections.

Conclusion
2021 is off to a busy, but good start. I want to thank staff for their significant efforts as we manage our usual peak season workload, various Action Plan projects, and the *Alameda* decision. In addition, I'd like to acknowledge the Board for their significant efforts and guidance on implementing the *Alameda* decision. You're simply the best!



San Joaquin County Employees' Retirement Association

February 5, 2021

TO: Board of Retirement

THROUGH: Johanna Shick, CEO

FROM: Greg Frank, MA III

SUBJECT: Declining Employer Payroll Report

Background

The purpose of the Board's Declining Employer Payroll policy is to establish guidelines by which SJCERA intends to assure that a participating employer experiencing a declining active member payroll would continue to satisfy its obligation to timely pay all unfunded actuarial accrued liabilities (UAAL).

Currently, SJCERA's employers pay contributions based on a percentage-of-payroll. If an employer's covered payroll is declining or is expected to decline over time, a different methodology to fund the UAAL would need to be determined. The policy directs the CEO to work with staff, the actuary, and participating employers to obtain the information needed to annually report if there are any declining payroll triggering events. This memo is intended to fulfill the annual reporting requirement.

Recommendation

No action required at this time. My analysis identified no triggering events and all SJCERA participating employers have made their required contribution payments.

It is further recommended for staff and counsel to monitor the incorporation process of Mountain House Community Service District for any potential future impacts.

Three employers (the County, the Court, and the Mosquito and Vector Control District) have made additional contributions. Below is a summary of the analysis.

Summary of Analysis

The policy defines two types of triggering events: (1) Ceasing to enroll new hires and (2) A material and expected to be long-lasting reduction in SJCERA-covered payroll. Analysis of each follows.

1) *Triggering event resulting from ceasing to enroll new hires.*

   To analyze if employers are ceasing to enroll new hires, I compared the active member data (from SJCERA's CAFR) to employer FTE data (from employer documents). Allocated FTE data includes filled and funded vacant positions, along with part-time positions converted to FTEs. Vacant positions and part-time employees are not included in SJCERA's member data. I would expect to see the percentage of members to FTEs to either increase or remain fairly stable. If the percentage of members to FTEs begins decreasing, additional investigation may be required to determine if the employer is avoiding hiring employees into retirement-eligible positions.

   It is not a perfect comparison because employer FTE data is reported on a fiscal year end of June 30 and SJCERA's member data is on a calendar year end December 31. The majority of

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employers have an increase in both Members and FTEs from 2016 to 2019. The primary driver of employers who have a decline in FTEs is a result of turnover and not due to the elimination of positions, the cessation of hiring employees into SJCERA-eligible positions, or the exclusion of eligible employees from SJCERA enrollment. As the chart below indicates, the number of Total Members compared to Total FTEs ranges between 83 percent to 85 percent for 2016 to 2019.

The only known issue of employers ceasing to enroll new hires was identified in 2018 and that situation has been resolved. When staff became aware that a special district was not enrolling new full-time employees hired after January 1, 2007, the two employees were enrolled and the employer paid the past due contributions.

We have been notified that Mountain House Community Services District is in the process of incorporating. Government Code 31468 defines district to include, "…any city…and any other political subdivision…formed or created under the constitution or laws of this state and located or having jurisdiction wholly or partially within the county." Government Code 31557 states, "In the case of districts for which the board of supervisors is not the governing body, the governing body adopts by a two-thirds vote, a resolution providing for the inclusion of the district in the retirement association and the board, by majority vote, consents thereto." It is unknown at this time if Mountain House intends to continue their participation in SJCERA. Staff is working with County Counsel to determine next steps.

Employer	Member to FTE Comparison							
	2016	Annual % Change	2017	Annual % Change	2018	Annual % Change	2019	Avg. Annual % Change
County								
Members[1]	5,682	2.3%	5,812	3.6%	6,021	-0.8%	5,970	1.7%
FTEs (Allocated)[2]	6,761	4.1%	7,036	1.1%	7,114	1.9%	7,252	2.4%
Member/FTEs	84.0%		82.6%		84.6%		82.3%	
Superior Court								
Members	303	-1.3%	299	-0.3%	298	4.7%	312	1.0%
FTEs	304	3.3%	314	-2.5%	306	5.7%	324	2.1%
Member/FTEs	99.7%		95.2%		97.4%		96.4%	
LMFD								
Members	36	-2.8%	35	25.7%	44	9.1%	48	11.1%
FTEs	36	0.0%	36	4.2%	38	20.0%	45	8.3%
Member/FTEs	100.0%		97.2%		117.3%		106.7%	
Mosquito & Vector CD								
Members	35	-2.9%	34	5.9%	36	0.0%	36	1.0%
FTEs	35	2.9%	36	-2.8%	35	2.9%	36	1.0%
Member/FTEs	100.0%		94.4%		102.9%		100.0%	
MHCSD								
Members	19	21.1%	23	17.4%	27	3.7%	28	15.8%
FTEs	19	5.3%	20	17.5%	24	12.8%	27	13.2%
Member/FTEs	100.0%		115.0%		114.9%		105.7%	
WMFD								
Members	18	-5.6%	17	-5.9%	16	6.3%	17	-1.9%
FTEs	20	-20.0%	16	12.5%	18	-5.6%	17	-5.0%
Member/FTEs	90.0%		106.3%		88.9%		100.0%	
Tracy Cemetery								
Members	6	0.0%	6	0.0%	6	16.7%	7	5.6%
FTEs	7	-14.3%	6	0.0%	6	16.7%	7	0.0%
Member/FTEs	85.7%		100.0%		100.0%		100.0%	
Historical Society								
Members	2	-50.0%	1	300.0%	4	0.0%	4	33.3%
FTEs	2	0.0%	2	100.0%	4	0.0%	4	33.3%
Member/FTEs	100.0%		50.0%		100.0%		100.0%	
Law Library								
Members	1	100.0%	2	-50.0%	1	100.0%	2	33.3%
FTEs	2	0.0%	2	-50.0%	1	100.0%	2	0.0%
Member/FTEs	50.0%		100.0%		100.0%		100.0%	
Total Members	**6,102**	**2.1%**	**6,229**	**3.6%**	**6,453**	**-0.4%**	**6,424**	**1.8%**
Total FTEs	**7,186**	**3.9%**	**7,468**	**1.0%**	**7,545**	**2.2%**	**7,713**	**2.4%**
Member/FTEs	**84.9%**		**83.4%**		**85.5%**		**83.3%**	

[1] *– Members data from CAFR Schedule of Participating Employers*
[2] *–FTE data is from annual employer reports (if available) or provided directly by the employer*

2) *Triggering event resulting from a material and expected long-lasting reduction in SJCERA-covered payroll.*

   Per the chart below, there is no long-lasting reduction in covered payroll and all employers have had an increase in pensionable payroll from 2016 to 2019, with a Total Average Annual Percent Change of 5.2 percent. Should the County ever decide to sell the hospital, I would suggest hiring Cheiron to do a study regarding the impact of a reduction in pensionable payroll.

	Pensionable Payroll[1]							
Employer	**2016**	Annual % Change	**2017**	Annual % Change	**2018**	Annual % Change	**2019**	Avg. Annual % Change
County	366,782,873	8.8%	399,071,707	2.3%	408,148,298	3.7%	423,208,843	5.1%
Superior Court	17,547,972	4.5%	18,342,308	5.4%	19,328,951	5.1%	20,315,771	5.3%
LMFD	2,599,290	7.1%	2,782,703	18.6%	3,298,967	6.5%	3,513,665	11.7%
Mosquito Vector	2,366,398	2.8%	2,432,592	-0.1%	2,429,420	7.2%	2,603,914	3.3%
MHCSD	1,527,861	15.1%	1,757,811	13.2%	1,990,698	12.6%	2,241,456	15.6%
WMFD	995,409	10.0%	1,094,499	-0.4%	1,090,298	8.9%	1,187,062	6.4%
Tracy Cemetery	234,720	11.0%	260,460	4.0%	270,936	11.1%	301,079	9.4%
Historical Society	129,147	-2.7%	125,613	8.3%	136,012	70.3%	231,608	26.4%
Law Library	43,645	-55.9%	19,259	262.8%	69,867	53.4%	107,186	48.5%
Total	**392,227,315**	8.6%	**425,886,952**	2.6%	**436,763,447**	3.9%	**453,710,584**	5.2%

[1] – The pensionable payroll information is taken from the annual GASB 67/68 reports

The member and pensionable payroll information for 2020 are not yet available and consequently will be included in next year's report.

THE NCPERS

MONITOR

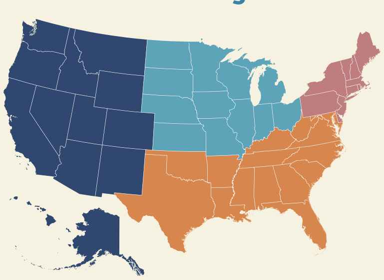
The Latest in Legislative News

January 2021

In This Issue

In its final days the 116th Congress approved additional financial relief to struggling individuals, businesses, first responders, and health care providers dealing with the Covid-19 pandemic, and finalized funding for federal agencies and programs through the end of fiscal year 2021.

A cornerstone of the membership proposition at NCPERS is our commitment to keeping you informed about the most pressing issues confronting public pensions.



This month, we will highlight Connecticut, Illinois, Kentucky and New Mexico.

NIRS Study Delves Into Pension Funding Strategies as States Work to Keep Funds Flowing

The Covid-19 pandemic has raised concerns that public pension shortfalls may develop or increase as state and local governments cope with unusual economic instability. A new report from the National Institute on Retirement Security examines strategies that 13 jurisdictions have explored to keep funds flowing to their public pensions.

The NIRS report, *Beyond the ARC: Innovative Funding Strategies from the Public Sector*, highlights case studies from California, Colorado, Indiana, Kentucky, Louisiana, Maine, Montana, New York, North Carolina, Oklahoma, Oregon, Pennsylvania and West Virginia. While investment markets and public pension funds have generally been resilient amid the Covid-19 fallout, the debate over funding levels could be renewed, the report said. The case studies should serve as a tool for policy markets and stakeholders as they search for strategies to address funding challenges, NIRS said.

The plans highlighted in the report use a variety of funding strategies. They include separate funding strategies for existing liabilities and on-going plan costs; employer side accounts; pension obligation bonds; withdrawal liabilities; and dedicated revenue streams from sources like sports betting.

NIRS Executive Director Dan Doonan said pension systems could face a push by cash-strapped state and local governments to reduce their annual required contribution (ARC) to plans. Less funding could be particularly problematic for the handful of funds that were already inadequately funded because of past funding missteps, Doonan said.

For example, the report looked at efforts in four states—California, New York, Oregon and Pennsylvania—to give local employers greater control over state-run plans through the use

CONTINUED ON PAGE 6

End-of-Year Flourish

By Tony Roda

Photo illustration © 2021, adobestock.com

In its final days the 116th Congress approved additional financial relief to struggling individuals, businesses, first responders, and health care providers dealing with the Covid-19 pandemic, and finalized funding for federal agencies and programs through the end of fiscal year 2021.

One major item that will be left undone and will await action by the 117th Congress and the Biden Administration is additional federal assistance to state and local governments. Republicans in Congress have tied this further aid to simultaneous enactment of a liability shield for employers against returning workers who might contract Covid-19. In January following the inauguration of President-Elect Joe Biden we will see whether the new political dynamic in Washington will yield results on these two fronts.

Recent drafts as well as earlier versions of legislation to provide a new round of federal assistance to states and localities included language prohibiting the funds from being used by the state or local governments for their pension systems. Specifically, the recent draft in the bipartisan proposal floated this month provided two separate restrictions.

The first is similar to language we have seen throughout 2020. It is straightforward and says that no federal funds provided in the Act may be deposited into any state or local government pension fund. The second restriction, however, takes a step further. It would create a general condition to receiving funds under the Act, saying that a state or unit of local government shall not make a change to its pension program that would result in total pension obligation payments in state fiscal years 2021 or 2022 exceeding total pension obligation payments for state fiscal year 2019, with some exceptions, including one for COLAs already provided for in the state or local law.

To condition receipt of this federal assistance to not making any changes to a state of local pension plan is certainly a new and unwelcome intrusion by Congress into the affairs of state and local government. While this would be a temporary and emergency funding stream and restriction, the precedent of making receipt of such aid conditioned on not making changes to a pension plan should, in my view, be resisted. It is analogous to saying that states and localities that take this federal aid should be barred from increasing spending on income support programs, infrastructure, or the enforcement of some law that Congress finds objectionable.

In addition, basic and important terms in this new restriction are not defined, such as "change" and "total pension obligation payments." Would only a change to a state statute rise to the level of a "change" under the proposed new federal law? What about changes to actuarial assumptions that should automatically be made under existing law. Some of those changes may increase the employer contribution to a pension plan, thereby increasing

CONTINUED ON PAGE 6

As Covid-19 Alters How We Communicate, NCPERS Adapts and Responds

Photo illustration © 2021, Shutterstock.com

A cornerstone of the membership proposition at NCPERS is our commitment to keeping you informed about the most pressing issues confronting public pensions. Members are familiar with our core offerings: News clips go out every week. *Washington Update*, published as often as weekly, provides expert analysis from our law & lobbying firm, Williams & Jensen. Our flagship monthly newsletter, *The Monitor*, delivers timely news and analysis on legislative and regulatory issues. And *PERSist*, our quarterly educational journal, delivers perspectives from NCPERS service members.

This established rhythm was just right until Covid-19 came along and upended everyone's expectations. The pandemic has disrupted so much of daily life, including school, work, travel, and the social, cultural and sporting activities that bind us together in our communities. It's pushed us deeper and deeper into an online existence, and it's radically changed the way we communicate.

This established rhythm was just right until Covid-19 came along and upended everyone's expectations. The pandemic has disrupted so much of daily life, including school, work, travel, and the social, cultural and sporting activities that bind us together in our communities.

Distance has made effective communication more important than ever as we all adapt to interacting remotely. Video interactions via Zoom and other remote meeting platforms are a necessary but inadequate substitute for the intimacy of in-person engagement. Nonverbal cues—the gestures, expressions and eye contact that make up a huge part of communication—can get lost behind our screens and our face masks.

Challenges notwithstanding, communication is more urgent than ever. Throughout 2020, we at NCPERS dramatically increased our member outreach via more channels than ever. We've ramped up different channels for a simpler reason: Members have preferences, and they differ widely. Some like Twitter, some like Facebook; some avoid social media like the plague. Some will read email blasts; others will read text messages on their phone or go online to check out blog posts. Many if not most will attend webinars, but whether they participate or not is another question.

Our communications philosophy is simple: Keep NCPERS members informed and engaged via whatever channels work best for them. Can't attend meetings? We've filled in that gap with 31 webinars and webcasts during 2020, as well as 14 video blogs between August and December.

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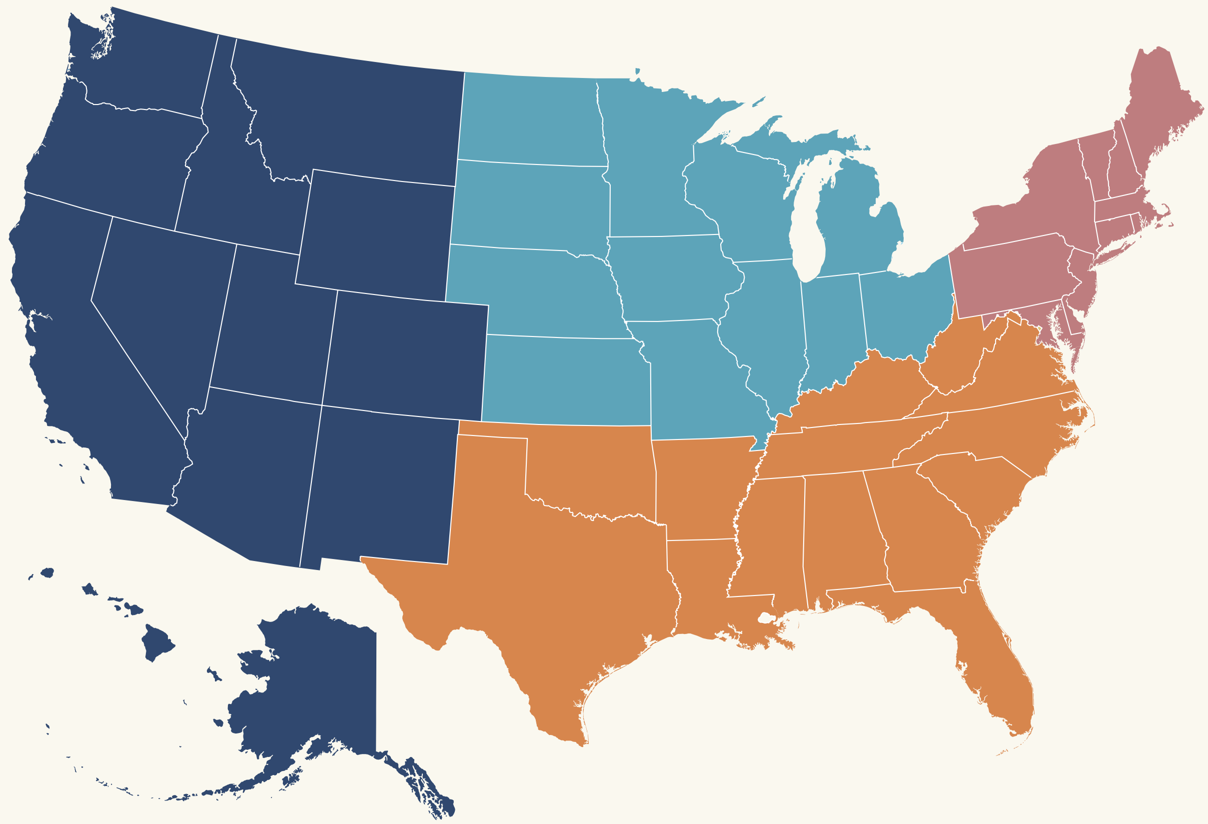
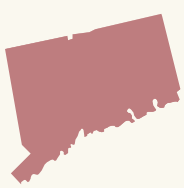
NCPERS Around the Regions

This month, we will highlight Connecticut, Illinois, Kentucky and New Mexico.



EAST: Connecticut



Private-sector workers in Connecticut could have access to a state-sponsored retirement savings program by the middle of 2021, culminating nearly four years of planning that was punctuated by several setbacks.

The Connecticut Retirement Security Authority (CRSA) board is preparing to launch a Secure Choice-inspired program that would collect a 3 percent payroll deduction from workers whose employers do not offer retirement benefits. The board in April chose Sumday, a subsidiary of BNY Mellon, to serve as the program's administrator. In recent months, it has been working on its operating budget and firming up program governance, among other tasks.

The CRSA is charged with developing retirement savings options for the nearly 600,000 Connecticut workers who are not offered a plan through their employer. State Comptroller Kevin Lembo serves as chair of the 15-member board.

According to news reports, the CRSA is currently in negotiations with an account manager, which it expects to complete early in 2021. A pilot program will begin with a small group of eligible employees to test the program before it is fully launched.

The legislation authorizing the program narrowly passed in 2016. Supporters include former Governor Dannel Malloy, Lembo and labor unions; opposition came from Connecticut Business and Industry Association, which saw it as an attempt by the state to undercut the financial and investment services industry.

The program fell behind initial plans to launch in 2018 and experienced other setbacks, including funding shortfalls, the dismissal of its first executive director, and the ripple effects of the closely watched legal battle over a pioneering program in California, known as CalSavers.

CONTINUED ON PAGE 8

A Virtual Program with Real Value!

SAME CONTENT

NEW FORMAT!

NCPERS UNIVERSITY

NCPERS ACCREDITED FIDUCIARY (NAF) PROGRAM

MODULES 1 & 2
March 2 – 5, 2021

MODULES 3 & 4
March 9 -12, 2021

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Visit www.NCPERS.org or call 202-601-2445 for more information

2020 NCPERS
Public Retirement Systems Study

January 19, 2021

Study conducted by the
National Conference on Public Employee Retirement Systems and
Cobalt Community Research

Contents

This study reviews funds' current fiscal condition and steps they are taking to ensure fiscal and operational integrity.

Overview

Over the last 10 years, funds have continued to take a serious look at the concerns and challenges that face public pensions. They continue to take significant actions to address them.

Executive Summary

From September to December 2020, the National Conference on Public Employee Retirement Systems (NCPERS) undertook a comprehensive study exploring the retirement practices of the public sector. In partnership with Cobalt Community Research, NCPERS has collected and analyzed the most current data available on funds' fiscal condition and steps they are taking to ensure fiscal and operational integrity.

The *2020 NCPERS Public Retirement Systems Study* includes responses from 138 state and local government pension funds with more than 12.8 million active and retired members and assets exceeding $1.5 trillion. Statewide and local pension funds were represented in roughly equal measure (51 percent and 49 percent, respectively).

NCPERS is the largest trade association for public-sector pension funds, representing approximately 500 funds throughout the United States and Canada. The membership is a unique network of public trustees, administrators, public officials, and investment professionals who collectively oversee nearly $3 trillion in retirement funds managed on behalf of seven million retirees and nearly 15 million active public servants - including firefighters, law enforcement officers, teachers, and other public servants.

Founded in 1941, NCPERS is the principal trade association working to promote and protect pensions by focusing on advocacy, research, and education for the benefit of public-sector pension stakeholders.

To access the interactive *2020 NCPERS Public Retirement Systems Study* dashboard, please contact Amanda Rok, communication and social media manager, at Amanda@NCPERS.org.

To view previous editions of this report, please visit: www.NCPERS.org/surveys.

About Cobalt Community Research

Cobalt Community Research is a national 501c(3) nonprofit, non-partisan coalition that helps local governments, schools, and membership organizations affordably engage their communities through high-quality data, benchmarking, geofencing, and community engagement. Cobalt is headquartered in Charlotte, Michigan.

2020 Executive Summary

1. COVID-19 has accelerated trends in the adoption of communication capabilities. The ability of board members to participate and vote by phone or videoconference rose from 19 percent to 58 percent. About 54 percent of funds now offer live web conferences to members, with another 19 percent considering it. 2020 also showed a 5 percentage point increase in the implementation of enhanced online portals to allow members to access account information. This rose from 47 percent to 52 percent.

2. Reporting funds saw, on average, 1-year returns of around 8.1 percent. The 5-year average was slightly below the assumed rate of return, while the 10-year average returns outperformed the assumption. The 20-year returns fell below the assumed rate of return as the strong performance of the late 1990s began to roll off the average. Those funds that responded in both 2019 and 2020 reported 1-year and 10-year returns above the assumed rate of return, with the 5-year and 20-year returns slightly below. As a result, funded levels rose to 75.1 percent, up from 72.4 percent in 2019.

3. The average investment assumed rate of return for responding funds is 7.26 percent, compared with 7.24 percent last year. The inflation assumption is 2.7 percent, which is 0.1 percentage point lower than last year.

4. The overall average expense for all respondents to administer the funds and to pay investment management fees is 60 basis points (100 basis points equals 1 percentage point). This is up slightly from 55 basis points in the prior year. According to the *2020 Investment Company Fact Book*, the average expense of most hybrid funds is 62 basis points.

5. The average cost-of-living adjustment (COLA) offered to members was 1.7 percent, which is slightly higher than the COLA of 1.6 in 2019. Many responding funds did not offer a COLA in the most recent fiscal year.

6. About 71 percent of respondents noted that they are not having a problem attracting and retaining skilled staff as people retire, an improvement from the 63 percent reported last year. About 19 percent are starting to experience or anticipate a problem in this area, down from 27 percent last year.

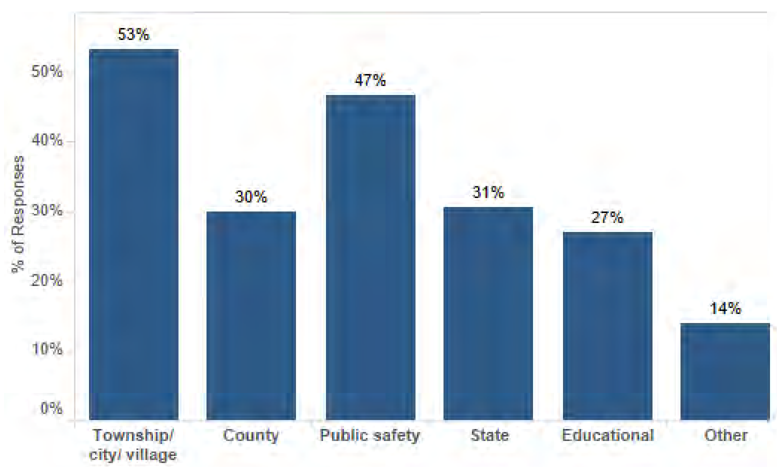
Who Responded

Overall, 138 public retirement funds responded to the *2020 NCPERS Public Retirement Systems Study*. There were 155 respondents in 2019. Of the 138 respondents, 90 also completed the study in 2019.

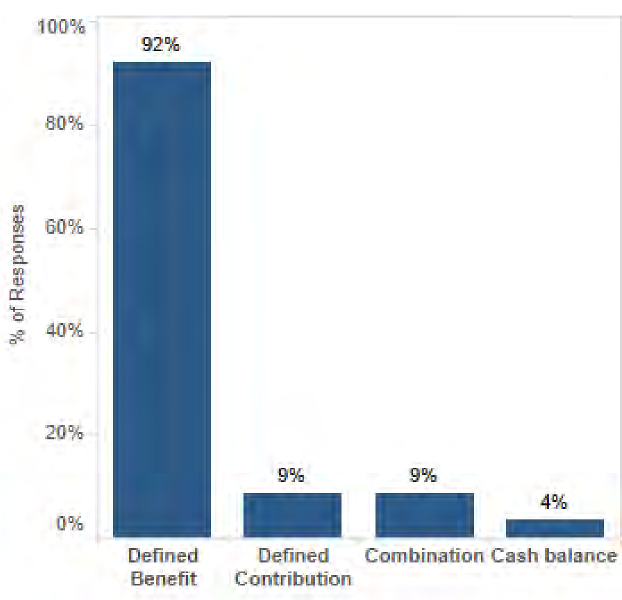
About 53 percent of all 2020 responding funds serve township, city, and village employees and beneficiaries. About 47 percent of the responding funds serve police and fire employees. The top graph below shows the distribution of employee types served by the funds. The bottom graph shows response by type of plan provided. Totals may exceed 100 percent because of multiple responses.

The overall distribution of the groups served by responding funds is similar to prior years; however, statewide funds were a larger proportion of the response compared with last year.

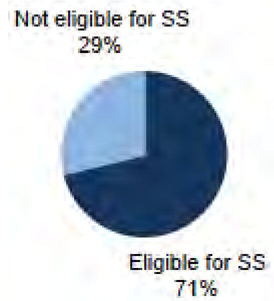
Employee / Retiree Type



Type of Plan



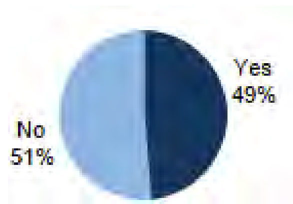
Members' Social Security Eligibility



About 71 percent of responding funds have members who are eligible for Social Security, and 29 percent are not eligible. In this report, breakdowns are presented for funds whose members are or are not eligible for Social Security.

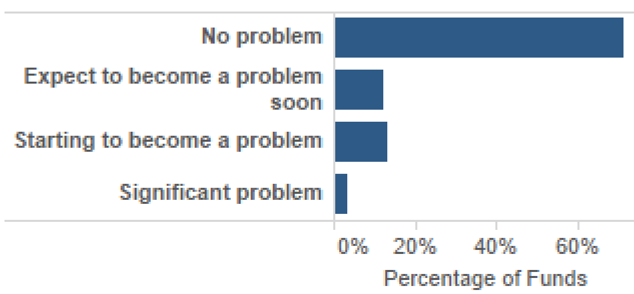
Funds whose members are not eligible for Social Security tend to offer higher levels of benefits to make up for the loss of income typically supplemented by Social Security.

Includes Overtime in Benefit Calculation



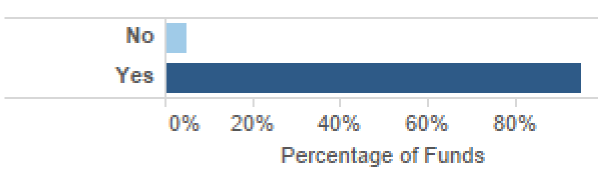
Inclusion of overtime in the calculation of a retirement benefit has been an area of interest to public funds. According to the 2020 respondent funds, 51 percent of respondent funds do not include overtime in the benefit calculation, which is 4 percentage points fewer than last year; however, the cohort of respondents who participated in the study in both 2019 and 2020 showed an increase in exclusion, from 52 percent to 60 percent.

Attracting / Retaining Skilled Staff



For 2020, fewer respondents note that they are having a problem attracting and retaining skilled staff as people retire. About 19 percent are starting to experience or anticipate a problem in this area, compared with 27 percent last year.

Call and Vote via Conference Call



The ability of board members to participate and vote by phone or video-conference has soared from 58 percent in 2019 to 95 percent.

Fund Confidence

The study asked respondents, “How satisfied are you with your readiness to address retirement trends and issues over the next two years?” Respondents provided an overall “confidence” rating of 8.0 on a 10-point scale (very satisfied = 10). This is slightly above the 7.9 reported last year and well above the 7.4 in 2011. The responses of funds that also participated in last year’s study were unchanged from 2019.

Over the last 10 years, responding funds have generally become increasingly confident in their ability to adapt and address issues in the volatile environment surrounding public pensions.

Responding funds have been proactive in making changes to their plan assumptions and benefits to ensure sustainability.

Funds with Social Security-eligible and not eligible members responded with a rating of 7.7 and 8.1, respectively. Large funds (more than 100,000 participants) rated their confidence the highest, with an average score of 8.4.

Fund Confidence

Expenses

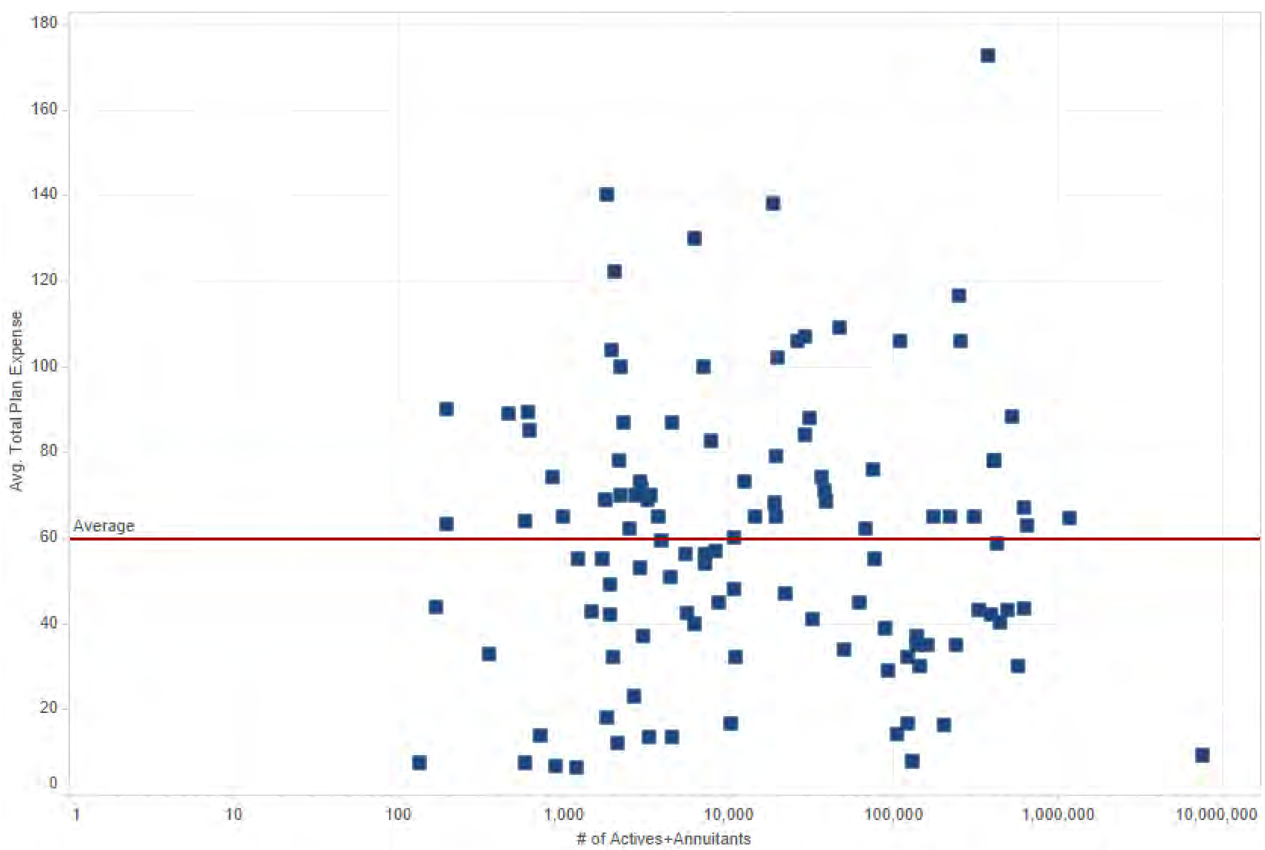
The overall average expense for all respondents to administer the funds and to pay investment management fees is 60 basis points (100 basis points equals 1 percentage point). This is up from 55 basis points in the prior year.

According to the *2020 Investment Company Fact Book*, the average expense of most hybrid funds is 62 basis points.

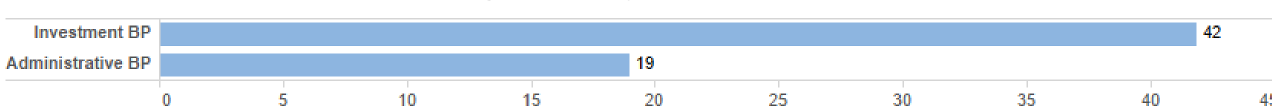
The top graph below shows the distribution of total expenses (in basis points) on the vertical axis and the size of the fund (by total participants) on the horizontal. The red line represents the average expense.

The bottom graph shows the average administrative and investment expenses. Note: The averages below do not total the average expenses because not all funds reported both investment and administrative numbers.

2020 Total Fund Expense by Fund Size

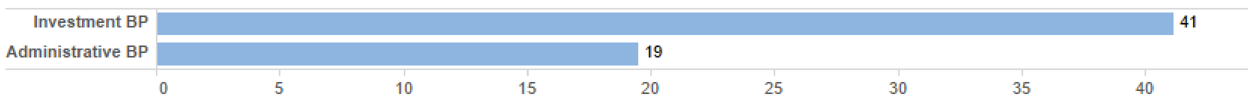


2020 Average Fund Expenses (Basis Points)

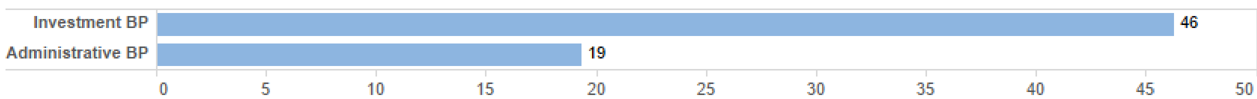


Below are average expenses separated by funds whose members are and are not eligible for Social Security. Total expenses are 59 and 65, respectively. Note: The averages below do not total the average expenses because not all funds reported both investment and administrative numbers.

Average Fund Expenses: Social Security Eligible (Basis Points)

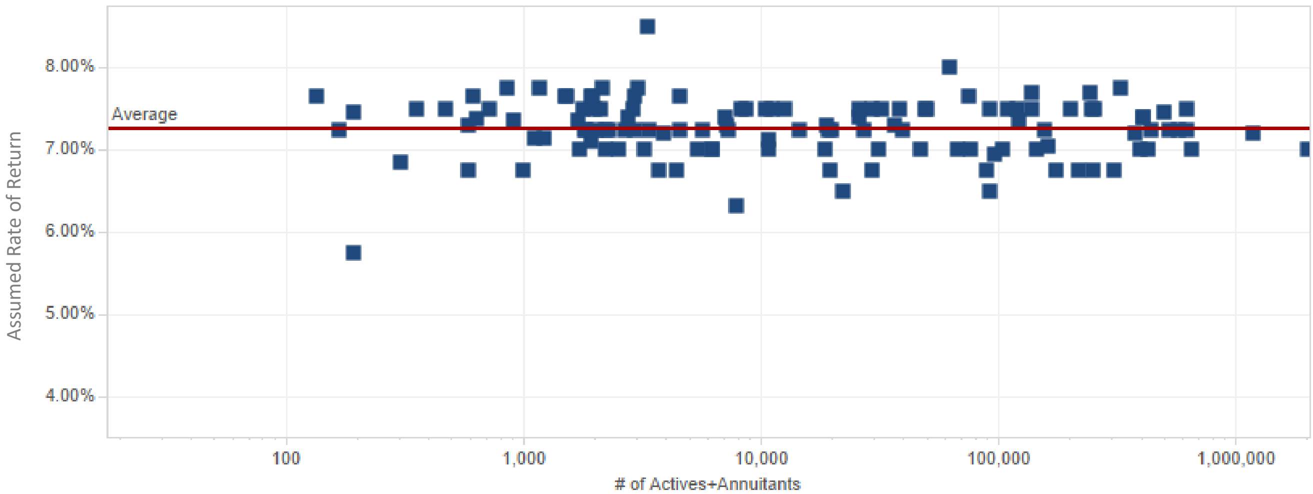


Average Fund Expenses: Not Social Security Eligible (Basis Points)



Actuarial Assumptions

Investment Assumptions



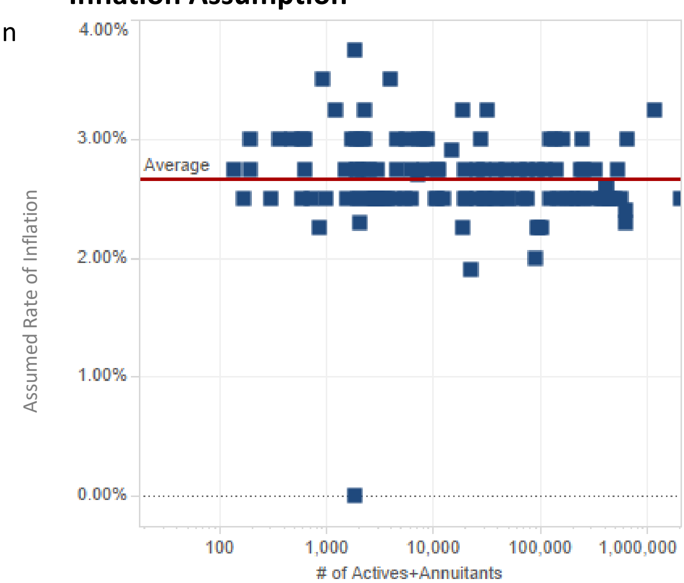
Retirement funds utilize a long-term planning horizon to ensure that liabilities are fully funded at the time they are due to be paid. To set contribution rates and measure progress toward meeting their financial obligations, funds make actuarial assumptions to estimate the likely investment and demographic experience over that time horizon.

Such assumptions have powerful effects on the funded level of a plan and on required contributions to pay for future benefits. Overly optimistic assumptions (high market returns, lower-than-expected retirement rates) tend to increase a plan's funded level and reduce the contribution rates an employer is obligated to pay today. Conversely, overly pessimistic assumptions reduce the funded level and increase short-term contribution rates.

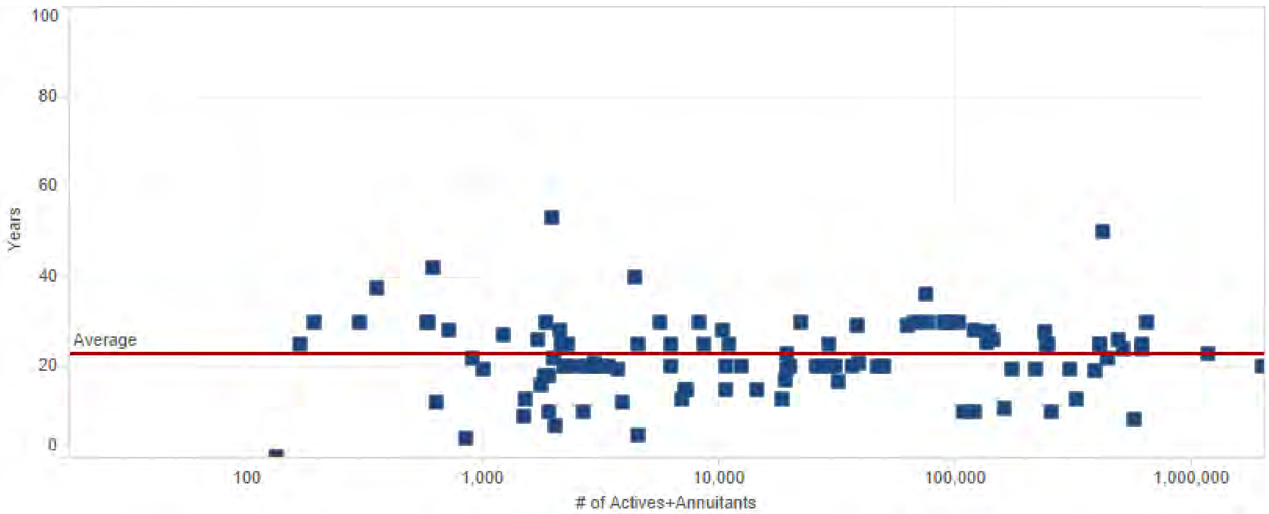
The average investment assumed rate of return for responding funds is 7.26 percent, compared with 7.24 percent last year. Plans that responded both years saw the assumed rate rise 0.05 percentage points, to 7.24 percent.

The aggregated assumed rate of inflation is 2.7 percent, which is 0.1 percentage points lower than last year.

Inflation Assumption



Amortization Period



Pension funds are designed to fund liabilities over a period of time, which ensures long-term stability and makes annual budgeting easier through more predictable contribution levels.

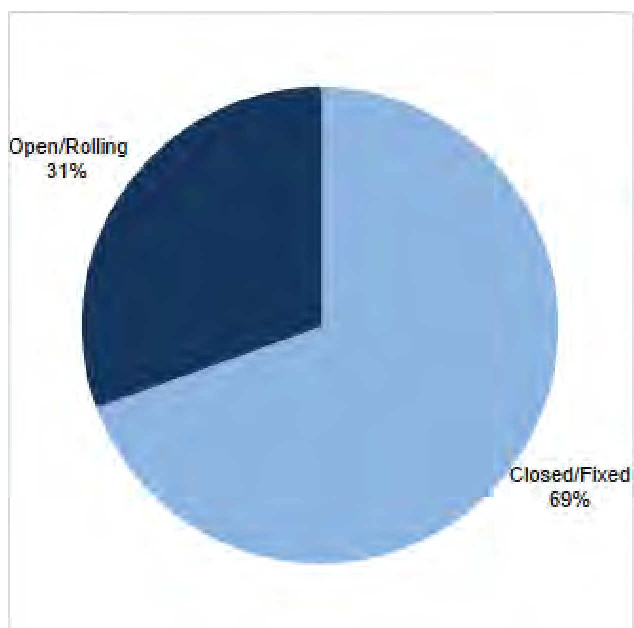
For responding funds, that period of time averages 22.9 years, up from 22.4 years in 2019. Funds that responded both years saw a reduction in the period of time by about 0.5 years.

Groups can tighten their amortization period by adjusting the period in years or using a fixed (or closed) method that pays all liabilities in a fixed time frame.

Open (or rolling) amortization periods are used to determine the actuarially required payment, but they are recalculated each year. The same number of years is used in determining the payment each year. Overall, the percentage of closed / fixed funds rose from 67 percent to 69 percent.

Larger funds are much more likely to have closed / fixed amortization periods – about 88 percent are closed.

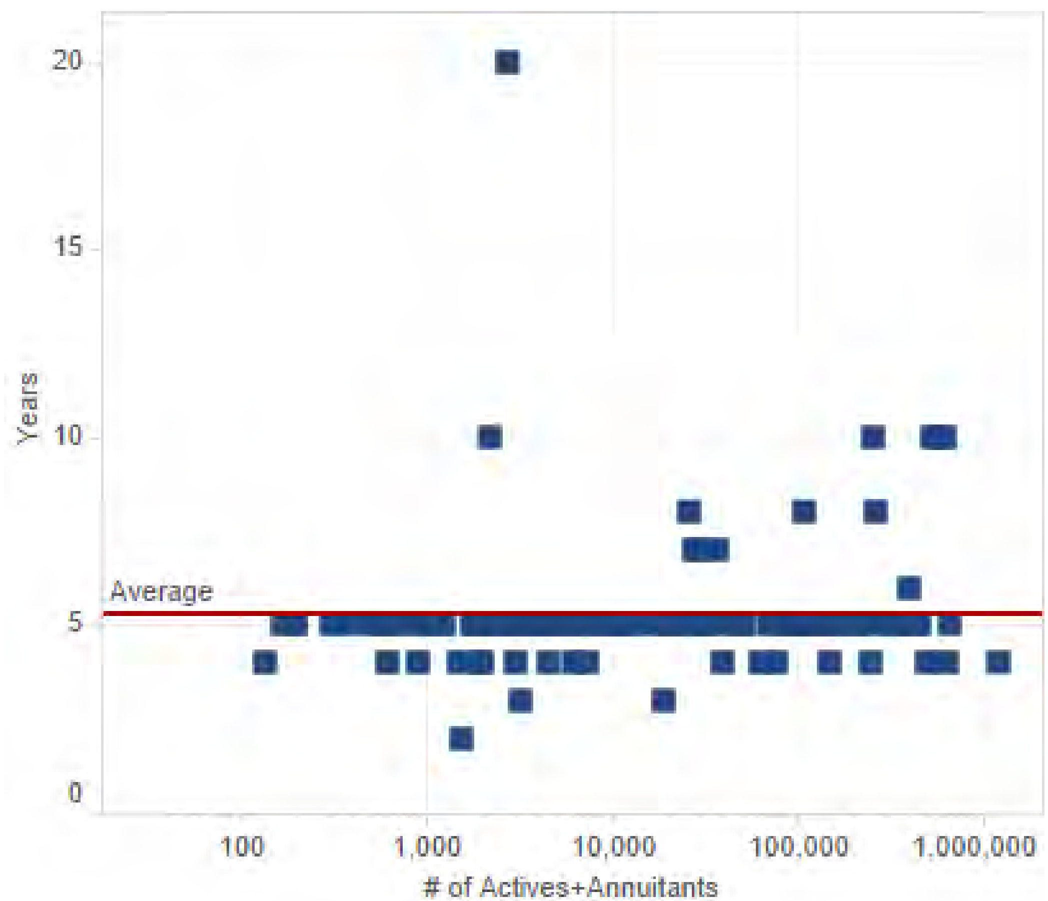
Type of Amortization Period



The investment-smoothing period is a key factor in calculating the assets currently held by the fund and the contribution levels required to continue moving toward full funding over the amortization period. By smoothing investments, funds dampen sharp changes in short-term investment returns. This helps stabilize contribution levels over time without undermining the long-term integrity of the funding mechanism.

The average investment-smoothing period for respondents remained at 5.3 years, but it rose to 5.4 among participants in both the 2019 and 2020 studies. The distribution of responding funds on the graph below shows that the majority have smoothing periods of 5 years or shorter. For funds with Social Security- eligible members, the smoothing period fell 0.1 years, to 5.4 years. Funds with members who are not Social Security eligible have an average smoothing period of 4.9 years, up 0.2 from last year. Large plans average 5.8 years.

Investment Smoothing

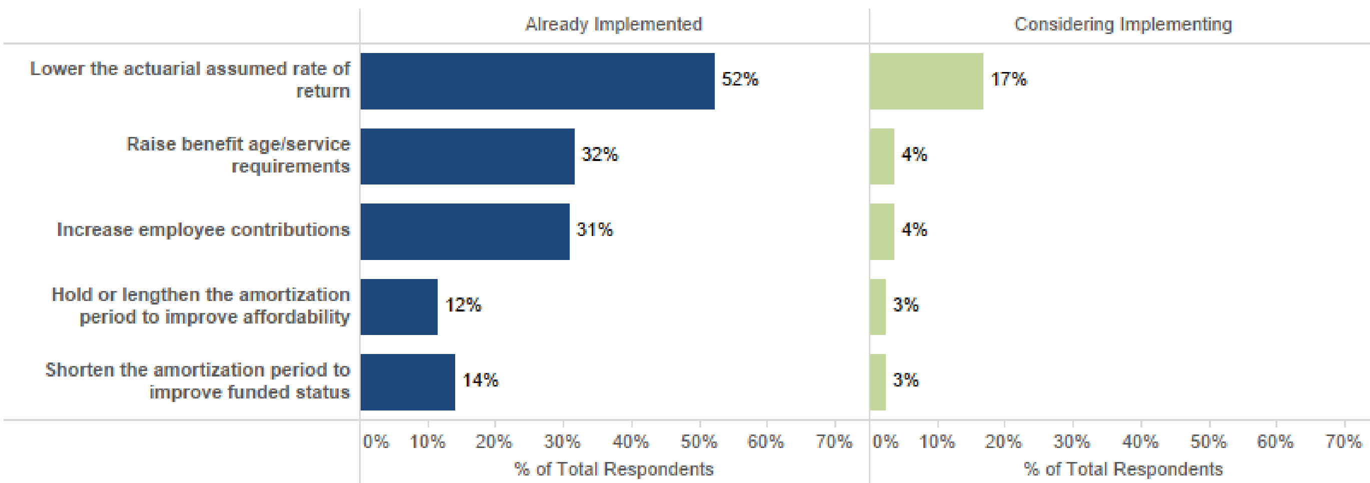


Trends in Plan Changes

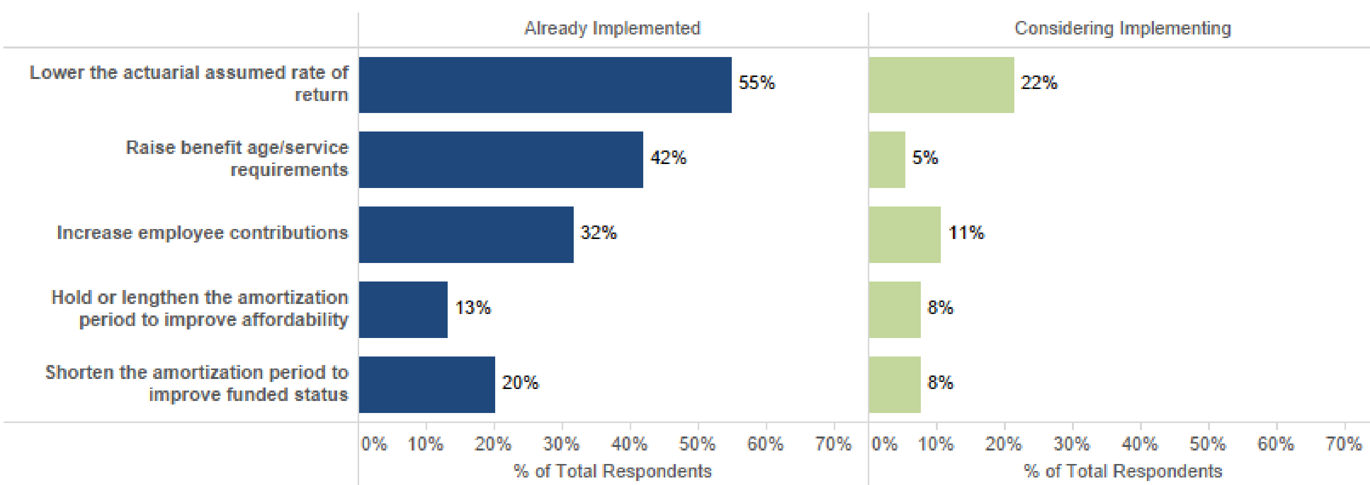
As changes emerge in the political, economic, and demographic landscape, funds are adapting their design and assumptions to respond and to maintain their sustainability. Funds in 2020 in general reduced the number of strategies they have implemented or are considering. Still, reducing the actuarial assumed rate of return, raising benefit age / service requirements, and increasing employee contributions remain widely used strategies.

Already Implemented   Considering Implementing

2020



2019

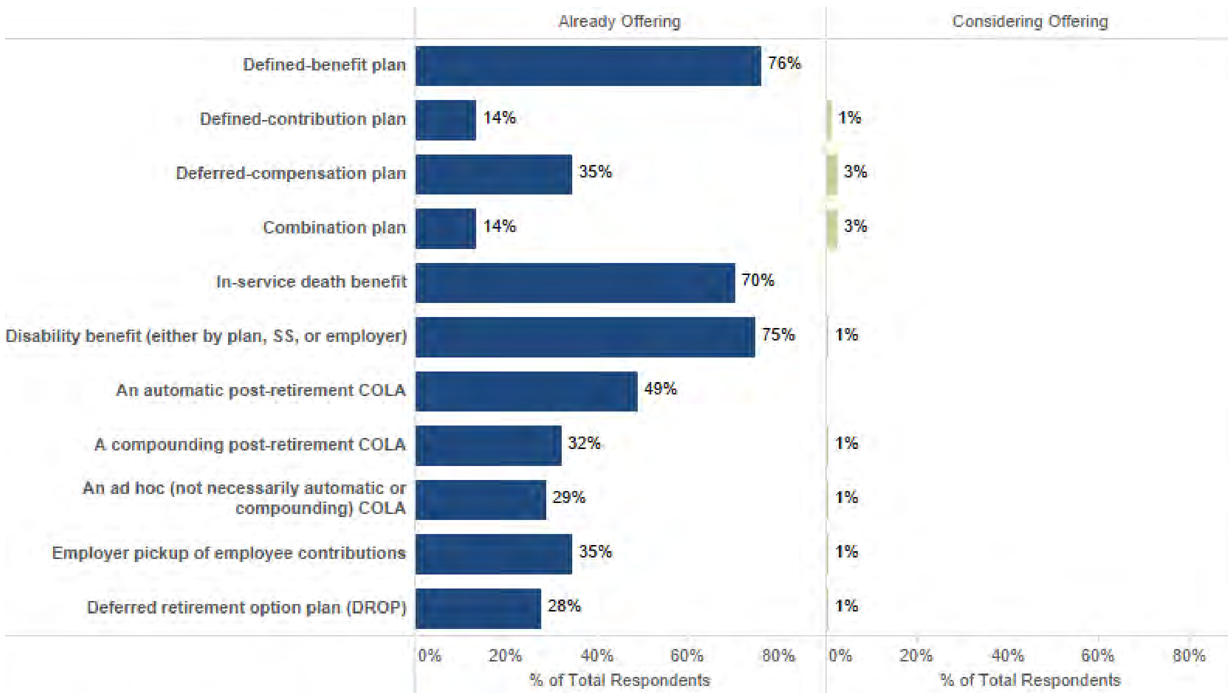


Trends in Retirement Benefits

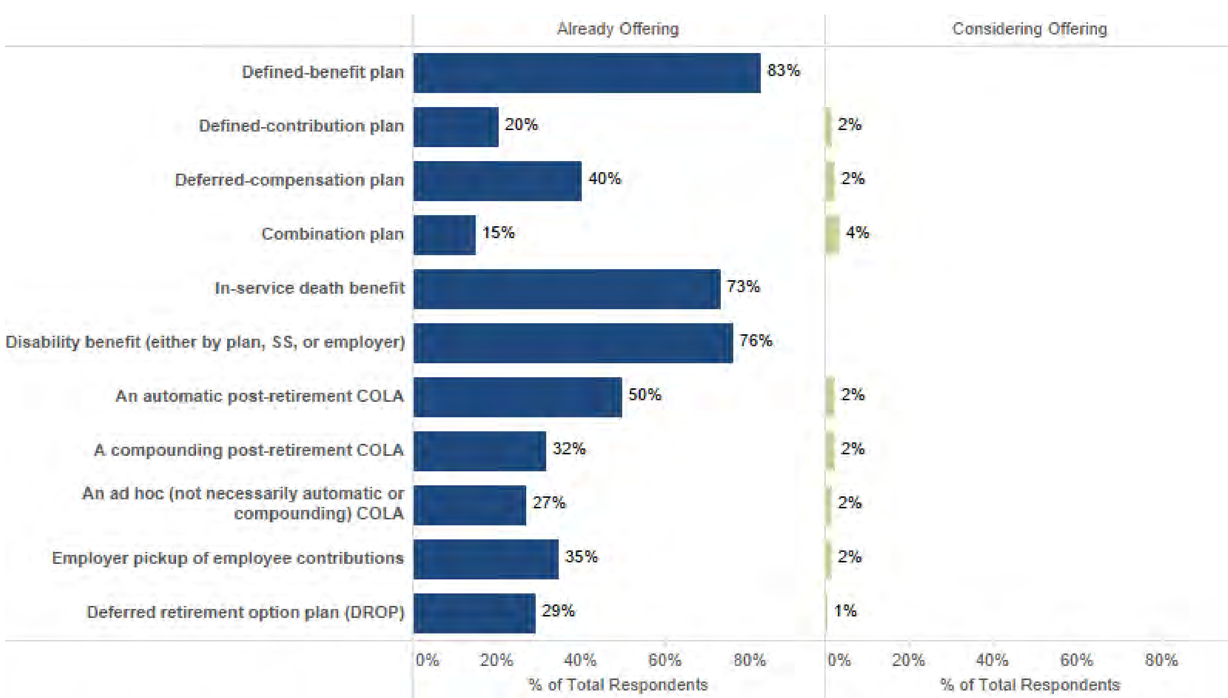
There remains minimal activity in terms of responding funds considering offering additional benefits to their members. Most funds provide a disability benefit, an in-service death benefit, and some variation of a cost-of-living adjustment (COLA). Overall, 7 percentage points fewer respondents are offering a defined-benefit plan; however, funds responding in 2019 and 2020 show a slight increase year over year.

Already Offering Considering Offering

2020



2019

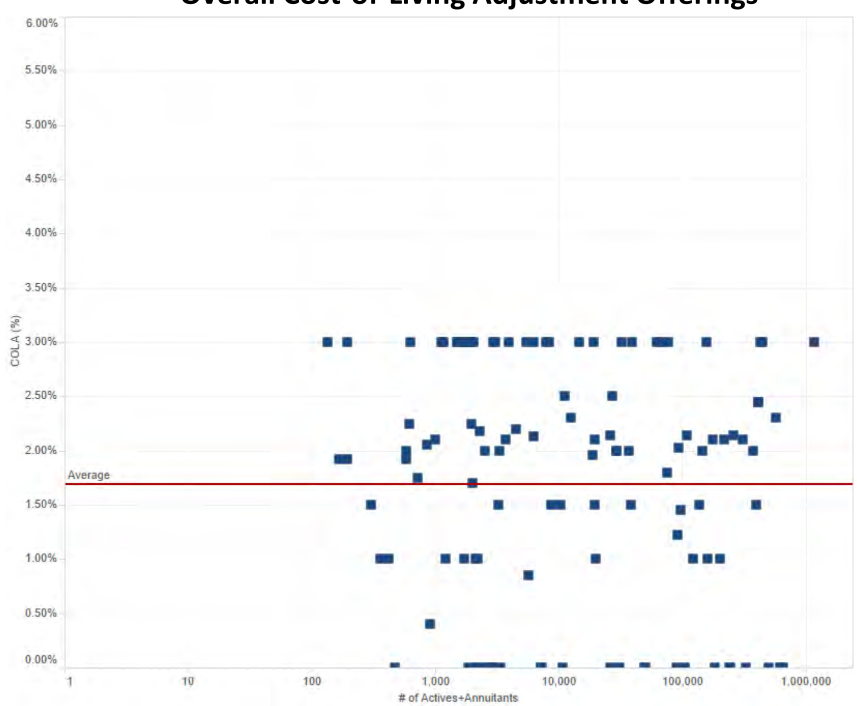


Cost-of-Living Adjustments

The top chart below shows the distribution of funds offering various percentages of cost-of-living adjustments (COLAs). The aggregated average COLA offered to members was 1.7 percent, which is 0.1 percentage points higher than in 2019. Many responding funds did not offer a COLA in the most recent fiscal year.

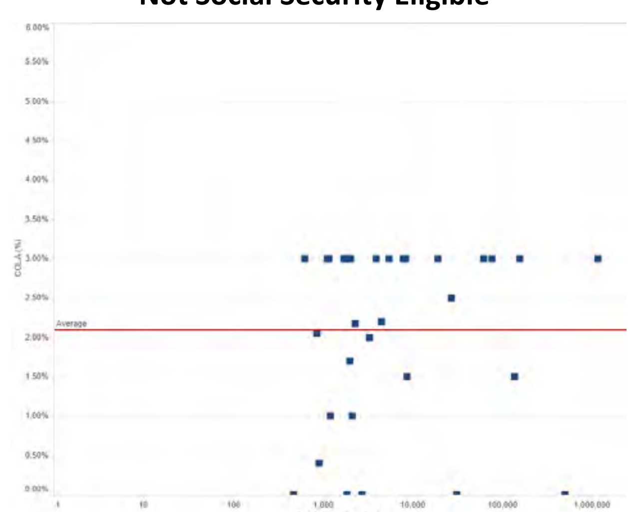
Funds with members who are not eligible for Social Security tend to offer higher COLAs (2.1 percent) than those with members who are eligible for Social Security (1.5 percent). Large funds have an average COLA 0.4 percentage points lower than small and medium-sized funds.

Overall Cost-of-Living Adjustment Offerings



Social Security Eligible

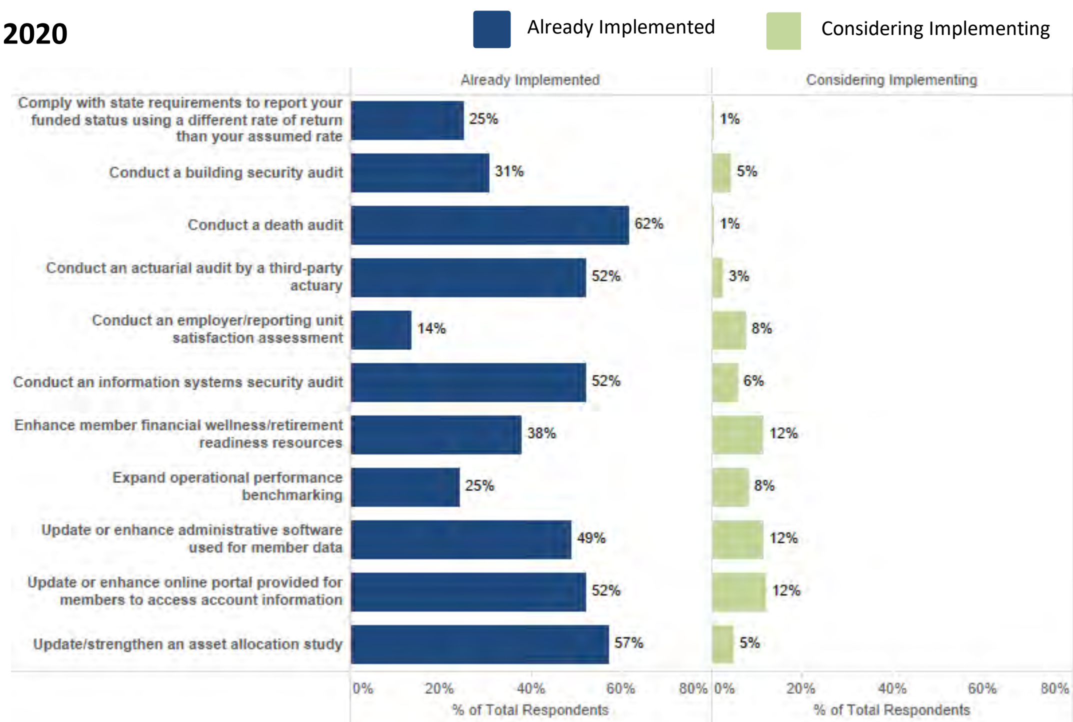
Not Social Security Eligible



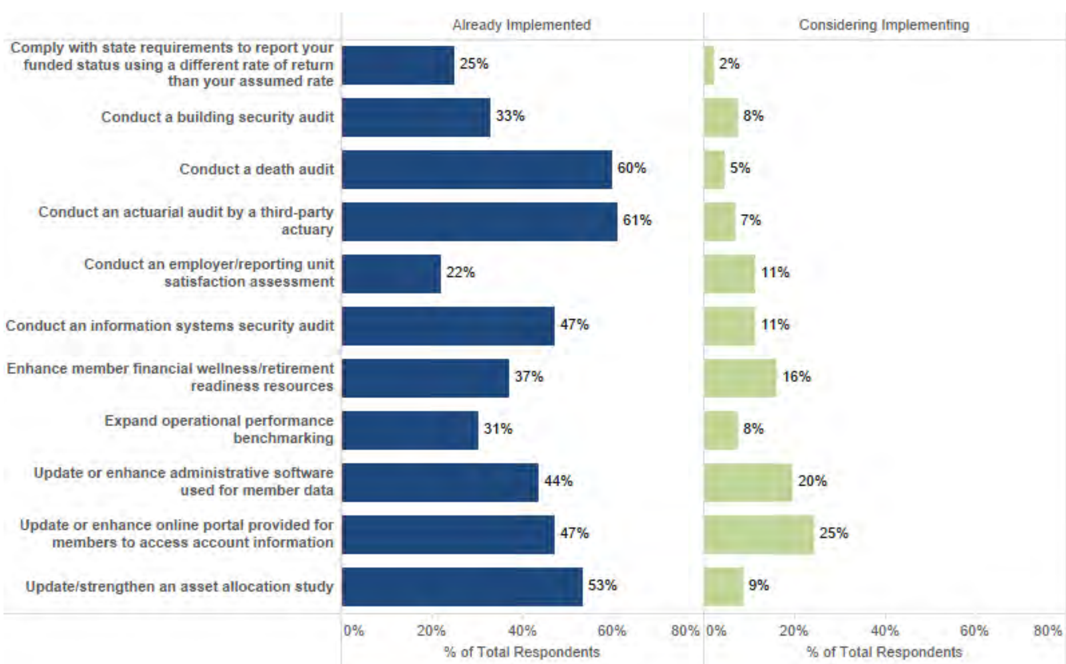
Trends in Business Practices

Conducting a death audit and updating / strengthening an asset allocation study were the most commonly implemented business practices. The practices under consideration include enhancing member financial wellness / retirement readiness resources, updating administrative software used for member data, and updating the online portal provided for member access to account information.

2020



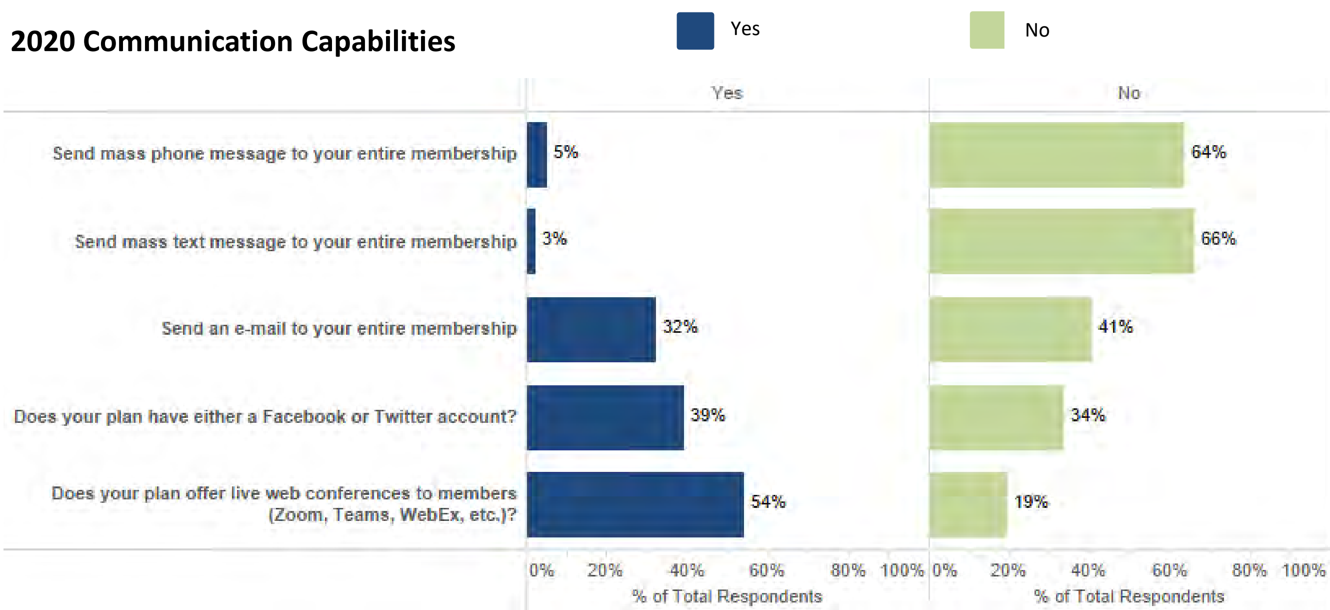
2019



Trends in Communication

Overall, many responding funds have begun providing live web conferences to members. Other communication channels have remained comparable to those used in 2019.

2020 Communication Capabilities

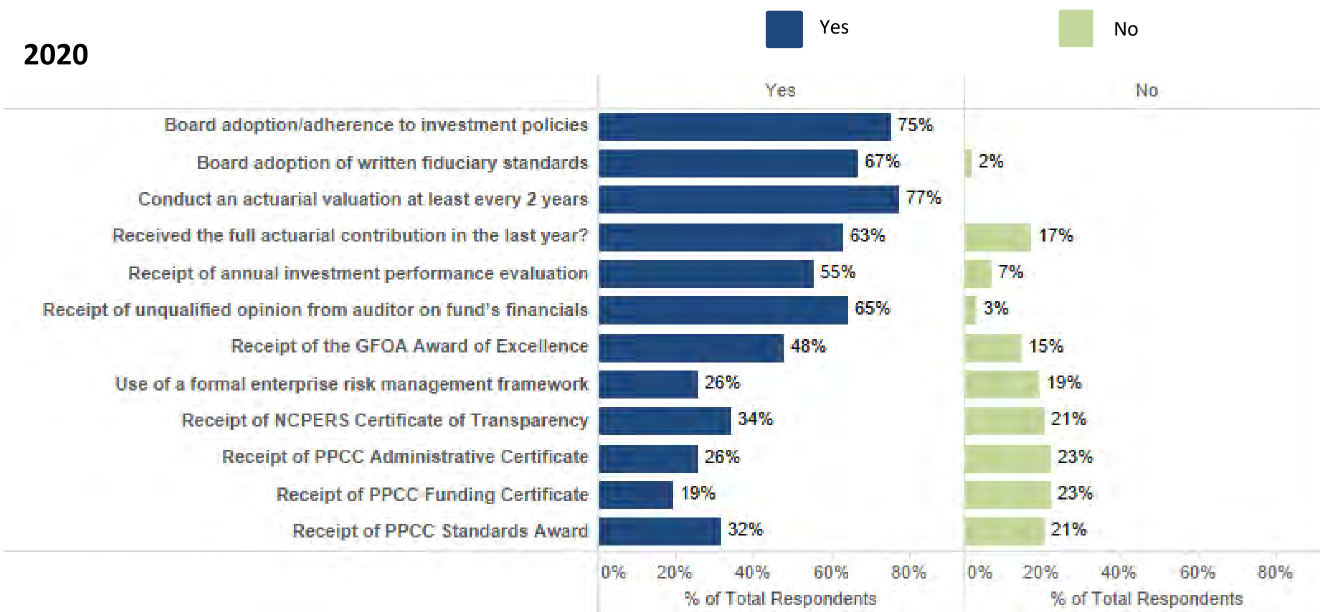


2019 Communication Capabilities

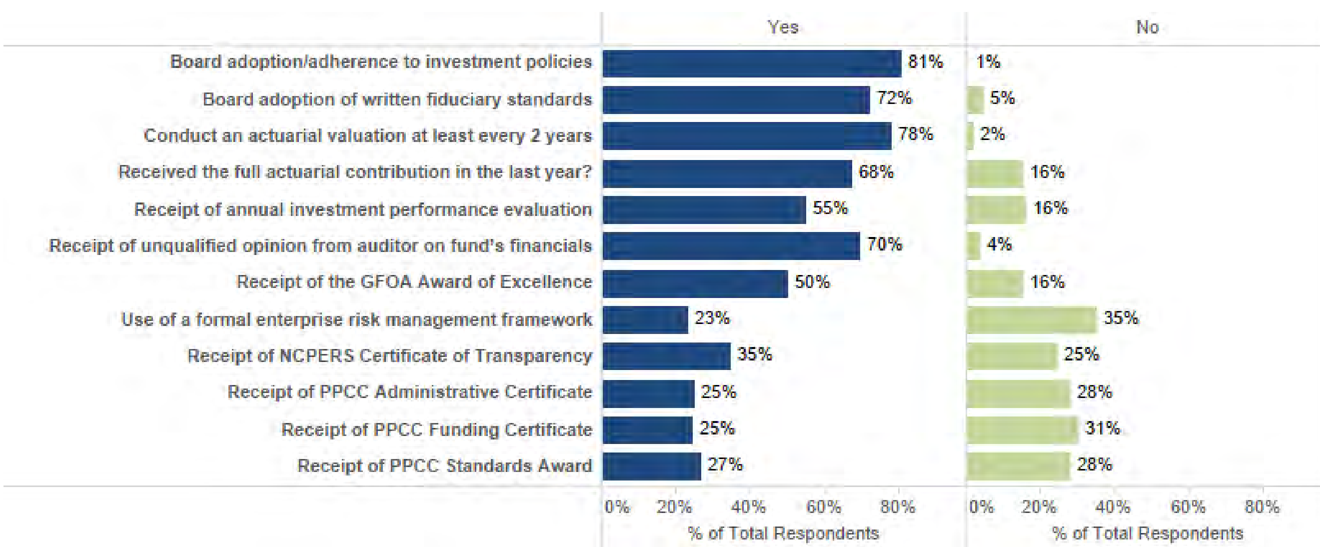
Trends in Oversight Practices

Overall, responding funds showed very similar practices to last year. There was a slight reduction in board adoption of / adherence to investment policies, adoption of fiduciary standards, receipt of full actuarial contributions, PPCC Funding Certificate receipt, and PPCC Standards Award receipt. These differences did not emerge for those funds that also participated in the survey last year. This cohort shows an 8 percentage point increase in receipt of the NCPERS Certificate of Transparency.

2020



2019

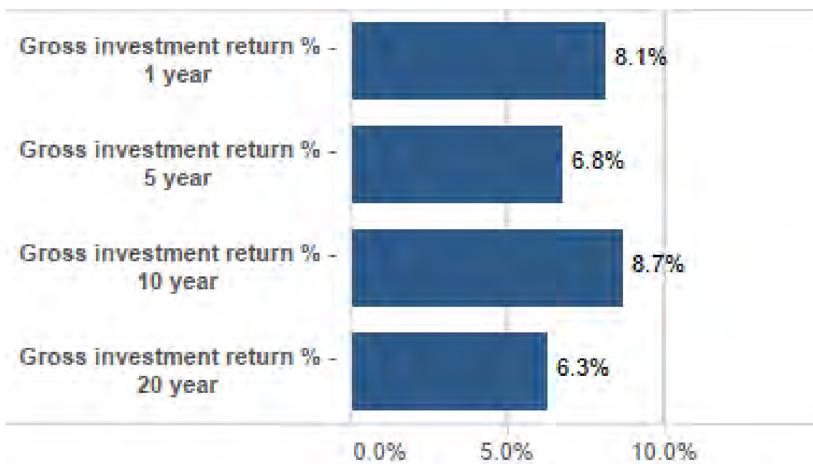


Investment Returns

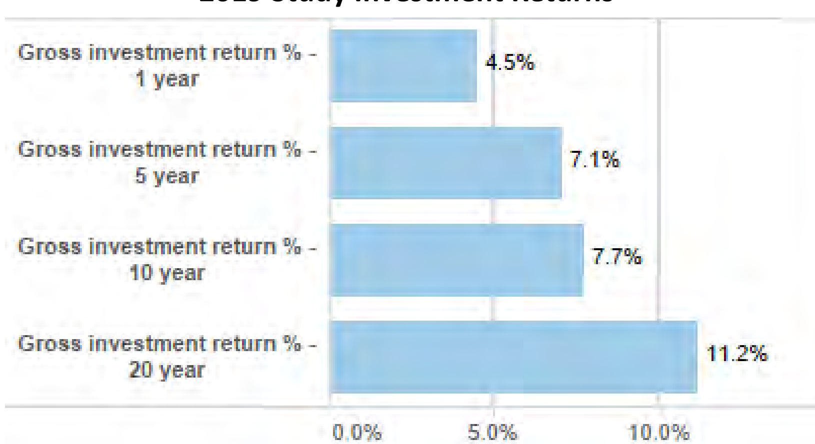
Reporting funds saw, on average, 1 year returns of around 8.1 percent. The 5 year average was slightly below the assumed rate of return, while the 10-year average returns outperformed assumptions. The 20-year returns fell below the average assumed rate of return as the strong performance of the late 1990s began to roll off the average. Those funds that responded in both 2019 and 2020 report 1-year and 10-year returns above the assumed rate of return, with the 5-year and 20-year returns slightly below.

It is important to note that not all responding funds have the same fiscal year-end date. The timing of a fiscal year-end accounts for a significant share of the difference in investment experience between funds. Funds that have a December fiscal year-end date saw 1-year returns of 16.8 percent, which is much higher than the returns of those closing at other times.

2020 Study Investment Returns

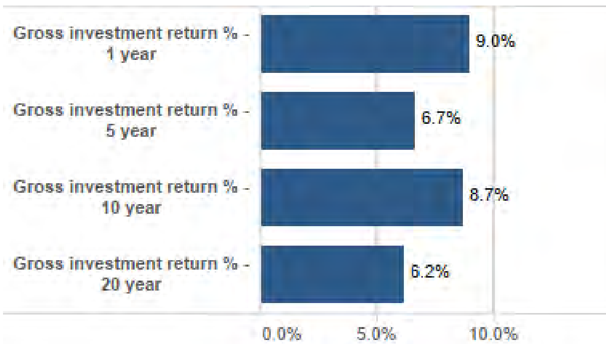


2019 Study Investment Returns

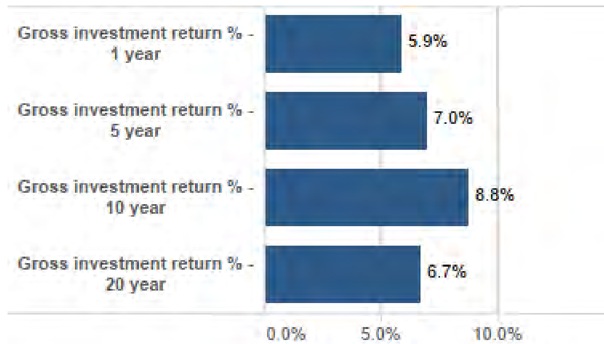


Funds with members who are Social Security eligible reported higher one-year returns than funds with members who are not Social Security eligible.

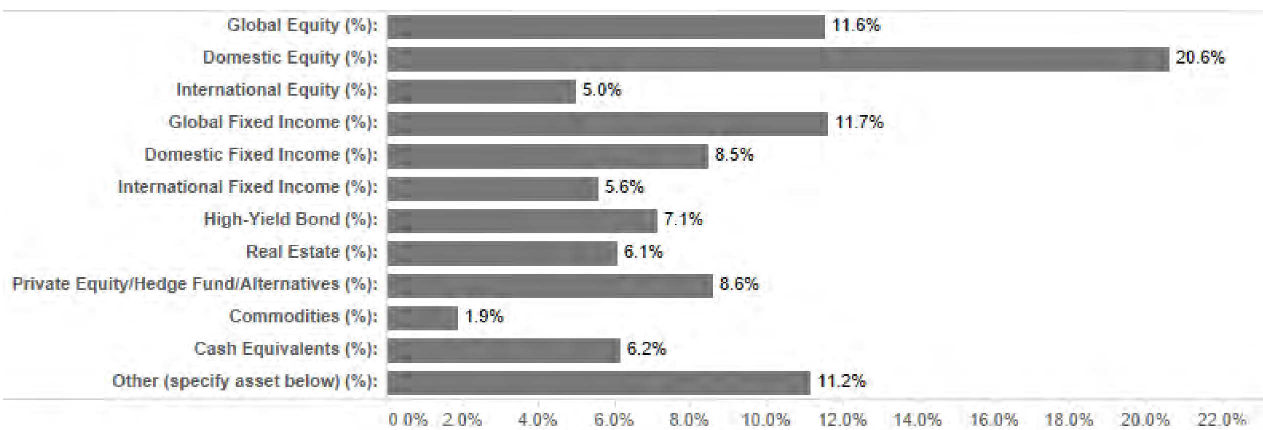
2020 Returns: Social Security Eligible



2020 Returns: Not Social Security Eligible



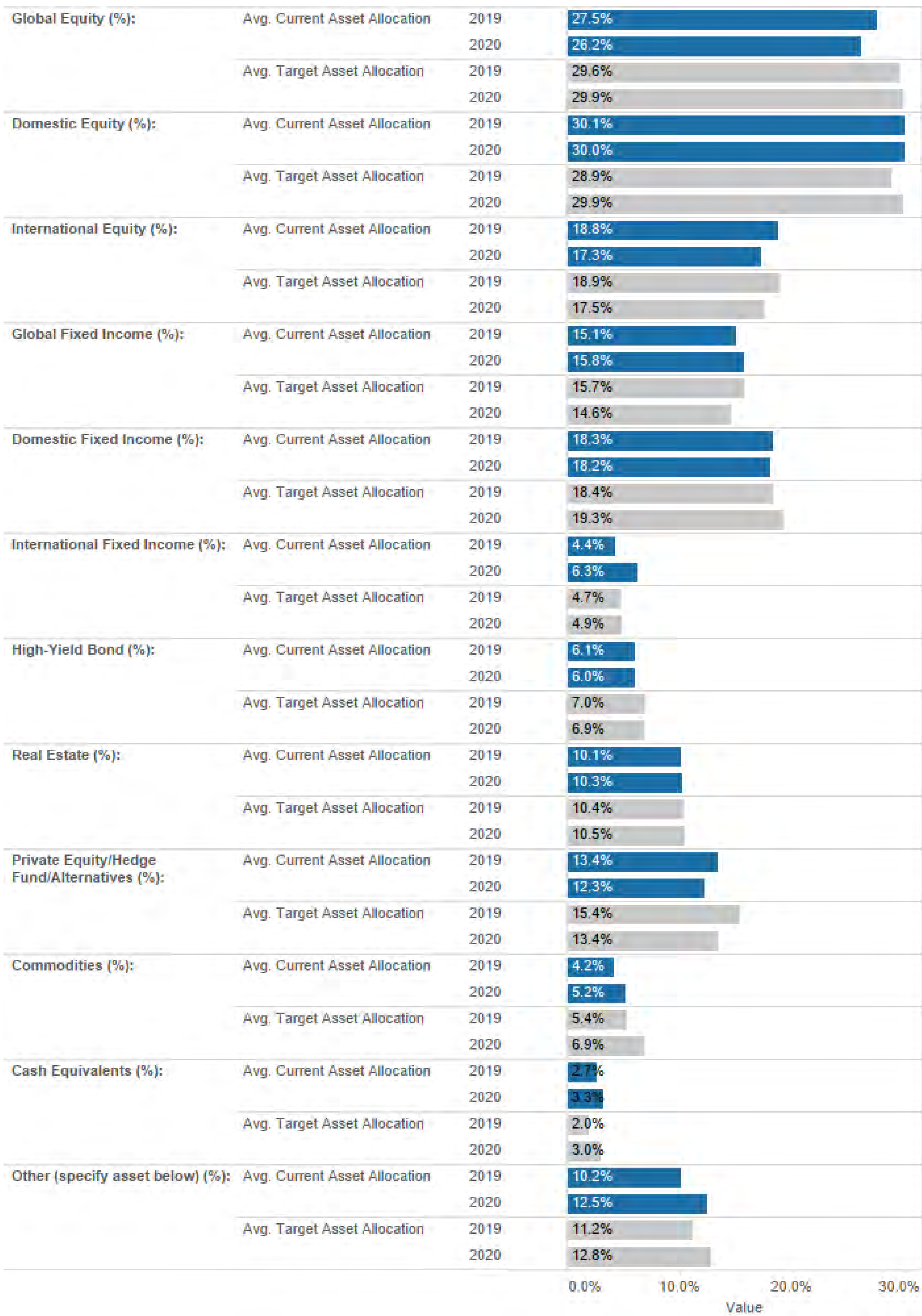
The graph below shows the one-year gross investment returns based on the various asset classes in which responding funds are invested. Domestic equity, global fixed income, global equity, and "other" saw the largest returns.



Investment Asset Allocation

Responding funds had similar allocations to asset classes as they did in 2019. There was a modest decrease in allocations to global equities, international equity, and private equity. There was a modest increase in international fixed income, commodities, and "other."

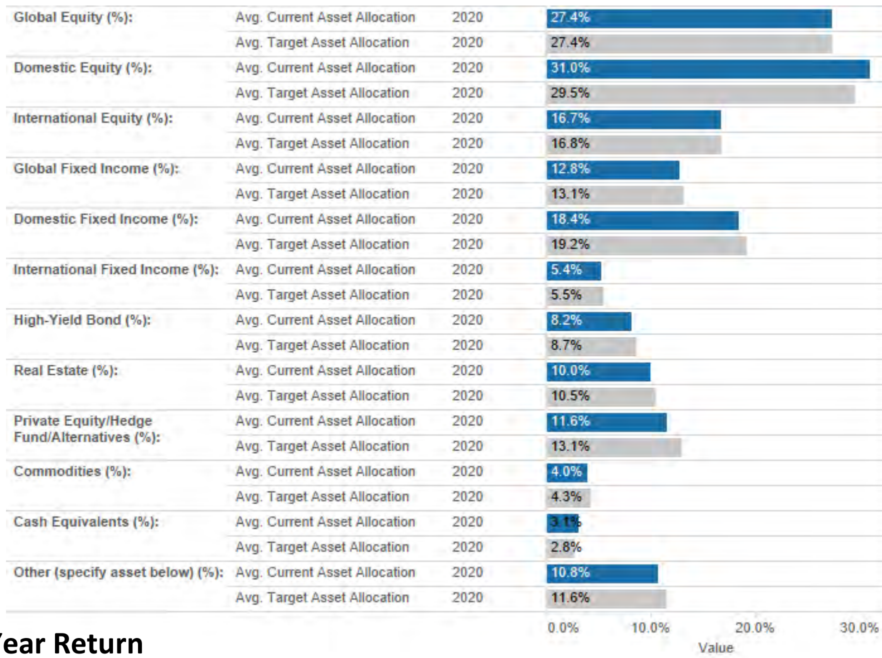
Note: Average allocations in each asset class do not total to 100 percent because of how individual allocations were reported.



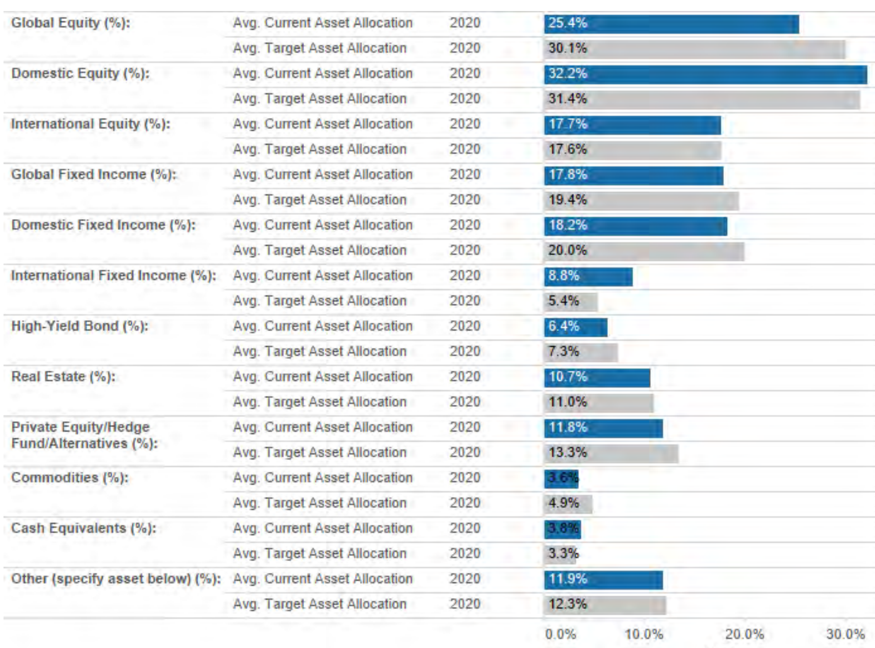
Below are two graphs that show the asset allocations for those funds that reported higher-than-average 1-year and 10-year investment returns, respectively.

A factor with a major impact on return appears to be the timing of the fiscal year-end, as funds with a December close had a much higher return than those closing in other periods.

Highest 1-Year Return



Highest 10-Year Return

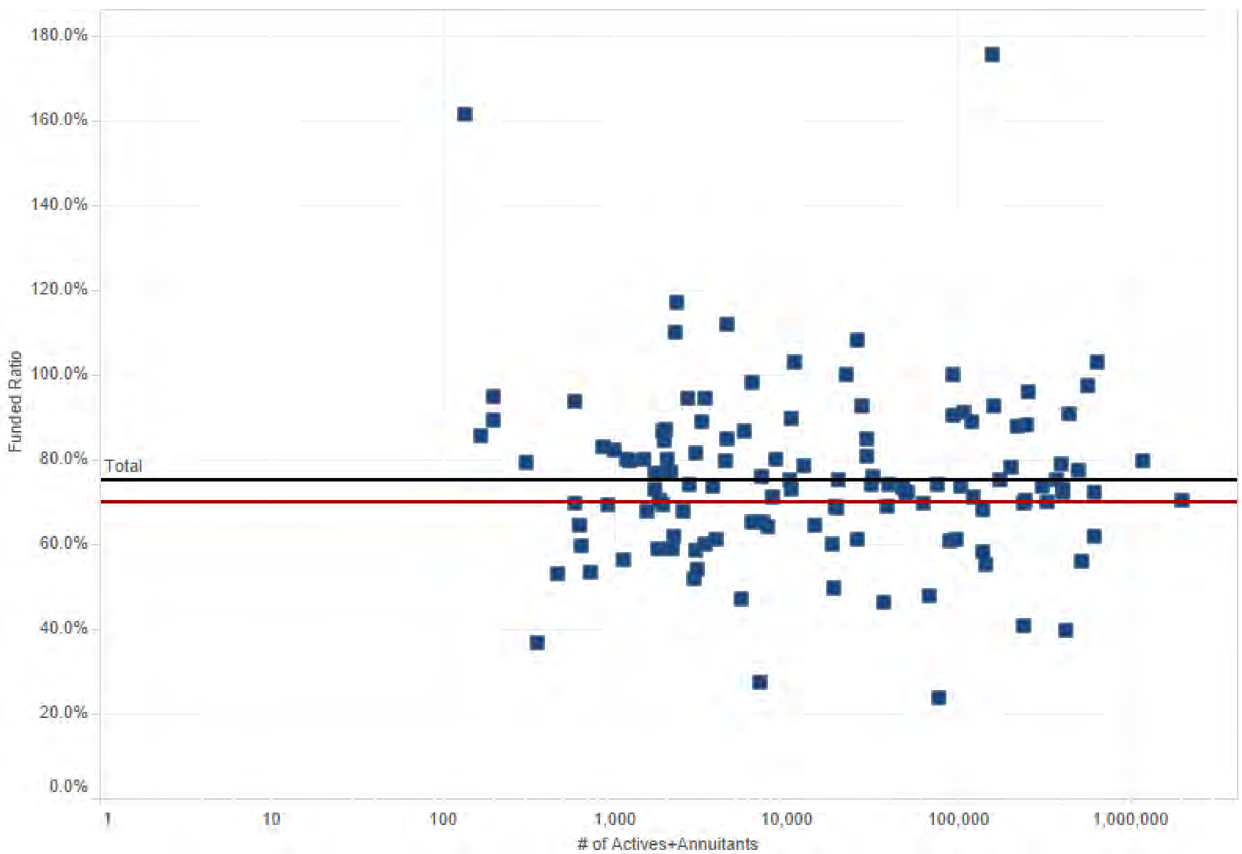


Funding Levels

The average funded level is 75.1 percent, up from 72.4 percent in 2019. Funds whose members are eligible for Social Security tended to have higher funded levels.

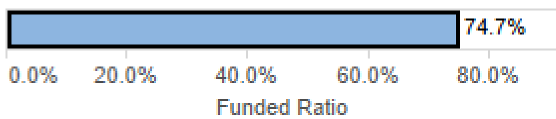
The graph below shows the distribution of funded levels and fund size. The vertical axis shows the level of funding, and the horizontal axis shows the size of the fund by total active and retired participants. The black center line denotes the average of 75.1 percent, and the red center line denotes the 70 percent funding target that Fitch Ratings considers to be adequate.

2020 Funded Level Distribution

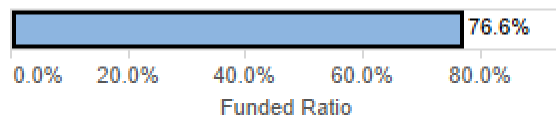


Many funds include members who are not eligible to receive Social Security at the time of retirement. These funds often have higher benefit levels to offset the loss of this source of retirement income. Those funds that include such members report an average funded level of 74.7 percent, which is above the 68.7 percent reported in the 2019 study. Similarly, funds with members who are eligible for Social Security saw funding levels rise from 74.8 percent reported in 2019 to 76.6 percent in 2020.

Not Social Security Eligible

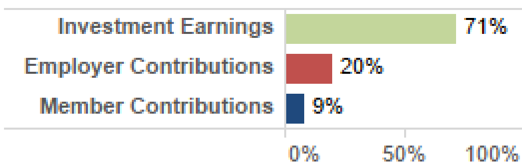


Social Security Eligible

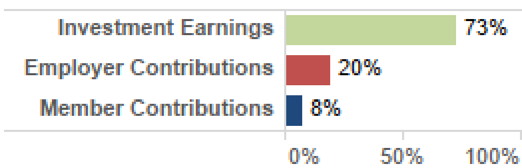


Sources of Funding

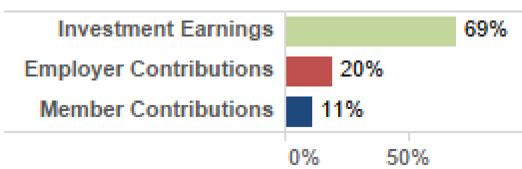
Overall Sources of Revenue



Social Security Eligible



Not Social Security Eligible



Contribution Rates as a Percentage of Payroll– All Respondents

	2019	2020
Member Contributions	9%	9%
Employer Contributions	22%	20%
All Contributions	31%	29%

Contribution Rates as a Percentage of Payroll– Respondents in Both Years

	2019	2020
Member Contributions	9%	9%
Employer Contributions	21%	20%
All Contributions	30%	29%

Income used to fund pension programs generally comes from three sources: member contributions, employer contributions, and investment returns. The chart to the left shows the proportion of funding provided by each of these sources based on reported data.

Investment returns are by far the most significant source of revenue (71 percent). Employer contributions fell by 2 percentage points compared with last year, and member contributions remained flat.

The graphs to the left also show revenue sources for whose funds members are and are not eligible for Social Security.

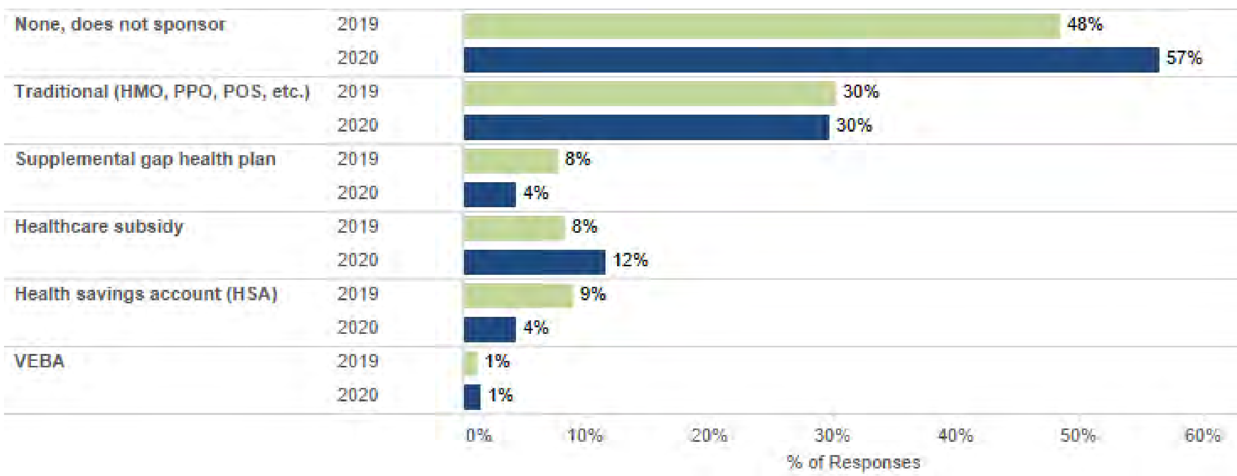
Funds whose members are eligible Social Security show income sourced from employer contributions dropped by 3 percent and member contributions dropping by 1 percentage point. Funds whose members are not eligible for Social Security also showed a slight decrease in income sourced by employer contributions (by 1 percentage point), and member contributions increased by 1 percentage point.

The tables to the left show contribution rates as a percentage of payroll. The top table shows contribution rates for all survey responses, while the bottom table shows responses for those who participated in both 2019 and 2020. Contribution rates were stable, with just a slight decline for employers.

Health Plans

Responding funds were asked whether the plan sponsor offers a health plan. In 2020, coverage declined. About 43 percent offered a plan or subsidy, while about 57 percent of funds did not sponsor a plan. In 2019, about 52 percent offered such coverage, and 48 percent did not. For funds responding in both study years, we saw a 4 percentage points drop in coverage between 2019 and 2020. For this cohort, traditional coverage fell 6 percentage points and healthcare subsidy rose by 2 percentage points.

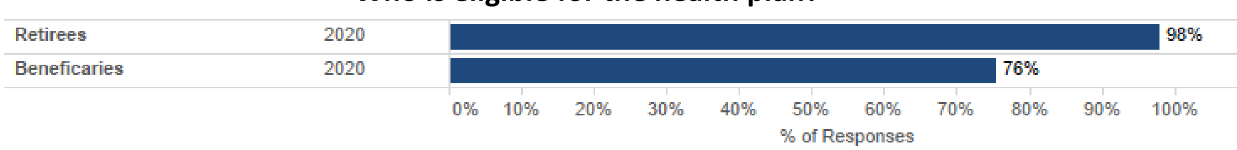
What type of health plan does your pension plan sponsor?



The funds that do offer a health plan or subsidy were also asked to report which types of members are eligible to participate.

About 98 percent of the sponsors offering a health plan or subsidy include retirees, and 76 percent include beneficiaries. For 2020, this question changed to focus on plans for retirees and beneficiaries only instead of also including active participants. For this reason, the percentages reported for 2020 are higher than those reported in 2019 (which are not shown here).

Who is eligible for the health plan?



Reducing Liability

Respondents were asked to share strategies they have put in place to reduce accrued actuarial liabilities beyond traditional amortization. Below is a text cloud showing the words that appear most often in respondents' comments. Larger words appear more often. The themes relating to these words are listed to the left, and the verbatim comments are provided below.

Tier – Employers have added new tiers of benefits to reduce benefit levels for new hires

Contribute – Funds have increased contribution levels directly for employers and members (legislation or policy)

Reduce – Funds have reduced cost-of-living adjustments for plan members, negotiated investment fees, changed assumptions to reduce unfunded liabilities

Verbatim Comments

- State implemented 2-tier plan in 2010.
- Tier 2 plan which decreased member benefits.
- ALM, risk mitigation, discount rate reduction, shorten amortization.
- Working with stakeholders to bring funding legislation for our upcoming legislative year.
- The board adopted a funding policy with a closed funding period and a pension funding scorecard. The scorecard is a risk tool that combines input from a variety of metrics to measure the financial health of the plan.
- Currently reviewing COLA; currently directing all contributions to fund pension and none to fund health care; evaluating the need for benefit plan design changes for future new hires.
- The Kentucky General Assembly has stated their intent to fully fund going forward. The enacted state budget has been adopted that fully funds the system through 2021.
- Tier 2 which reduced benefits for new hired.
- Increased communication with employers to educate them on UAAL and encourage pay off.
- Closed amortization; lowered expected rate of return.
- Introduced legislation to increase funding.
- Introduced legislation to increase contributions.
- Reduce admin and investment costs; employers paying additional contributions towards unfunded liability.

Verbatim Comments, continued

- IAP redirect starting July 1, 2020, SB 1049 requires that members earning more than $2,500 per month have a portion of their 6% IAP (DC Component of the Hybrid Plan) contributions redirected to a new Employee Pension Stability Account (EPSA) for each member. Funds from your EPSA will be used to pay for part of your defined pension benefits at retirement. The IAP Redirect is in effect when the PERS system is less than 90% funded. The portion of the 6% redirected to a member's EPSA depends on their membership type: Tier One and Tier Two – 2.5% will go to your EPSA. OPSRP – 0.75% is redirected to your EPSA. The remainder of your 6% will be contributed to the IAP as usual. 2020-2024 – SB 1049 Changes: Work After Retirement Limitations removed for most retirees from January 1, 2020, through December 31, 2024, most retirees may work for a PERS-participating employer for an unlimited number of hours while continuing to receive their pension benefit. However, employers must pay employer contributions to these salaries, with these contributions going towards the UAL.
- Following the fiscal year 2019, the PSPRS Board of Trustees implemented a phased-in approach, effective with the June 30, 2020 valuation, to begin reducing its 3.5 percent assumed payroll growth assumption by 0.5 percent each year. The board will re-evaluate the effects of this gradual reduction when the assumed payroll growth rate reaches 2 percent. At that time, the board will decide whether to continue reducing the payroll growth assumption until it reaches zero with the intent of eliminating negative amortization among the systems multi-plan employers. System employers, which are currently in 20 or 30-year closed amortization periods, will also use a 15-year closed-layered amortization schedule once they reach 15 years under their current (20 or 30 years) amortization schedules.
- Negotiated lower management fees/restructured investments.
- The City makes additional fixed contributions to eliminate the unfunded liability in 4 years.
- Individual employer units have been invited to make additional payments toward their unfunded liability.
- Allowing our employers many different options to address their AAL, including closing or freezing their DB Plan and going to a DC Plan, or Hybrid Plan. In addition, allowing employers to make changes to their benefit structure for the DB Plan for future service.
- Increase contribution rates for both employer and employee, monitoring of investment strategy and market liquidity, and make appropriate changes.
- None, the most recent actuarial projections show the Plan fully funded by 2038.
- UAAL can be reduced in three ways: IMRF earns more on its investments than its assumed rate of return of 7.5%. An employer pays the employer contribution rate set annually by IMRF. An employer makes voluntary payments specifically to pay down their UAAL.
- Pension Liability Surtax.
- Plan sponsors make additional payments towards the UAAL each year. Employees pay a portion of the UAAL contribution per bargained for MOU provisions.
- TMRS lowered its amortization period from 25 to 20 years for new losses effective 1/1/2020; allowed cities to contribute above the ADEC to accelerate time to full funding, and TMRS completed an experience study and adjusted actuarial assumptions.
- Seeking legislation to increase the normal retirement age, increase member contribution rate, increase reduction factor for early retirement, and change the final average earning period from the last three years to the last five years.
- Continue to review benefit structure and implement legislative changes to tighten costs.
- The Plan Sponsor has proposed several funding options, but these will have minimal impact on solvency.
- Employee and member contributions are projected to be sufficient. The State of NE also contributes 2% of member salary.
- Increase to contributions, benefit changes, the introduction of Tier II in 2012.
- Adjusted asset allocation, increased employer contributions, increased member contributions.
- Employee and member contributions are projected to be sufficient. The Plan has always been adequately funded.
- Pension reform legislation passed in 2018: increases employer contributions by 1.25% over a six-year period, and employee contribution by 0.25% in the sixth year. Reduced COLA from 2% to 1% for 5 years, then a gradual increase to 1.5% over the following five years. Eligibility for the first COLA changed to normal retirement age. Interest on deferred benefits eliminated.
- Adjusted asset allocation, increased employer contributions, increased member contributions.
- If the plan goes over 30-year amortization, then consider increasing member contribution rate, stop COLAs, look at DROP interest.
- A new tier was enacted in 2010 to reduce plan liability and increase plan sustainability. The Board has adopted a modified asset allocation and has systematically reduced the investment return assumption. While the assumption decrease does increase liability numbers in the short term, over the long term, we believe it is a prudent approach to plan funding.
- We have been focusing on education and awareness with our employers to explain how and why contributions will be increasing in the future. We encourage employers to utilize our Employers Reserve Fund to smooth the contribution volatility that will occur in future years.
- We recently implemented legislative changes in our benefit structure, including increased employee and employer contributions and reduced annual post-retirement benefit increases (COLA). These changes have led to a contribution sufficiency and a path to 100% funding within the amortization period.
- Increase of employer contributions effective 07/01/2020: Police Fire = 41% of payroll and General Employees = 24% of payroll.
- Same as General Plan.

Verbatim Comments, continued

- Increased employers' contribution.
- Create a tier of unfunded liability/asset after each annual actuarial valuation and amortize each tier over a maximum of 20 years until tier amortized.
- Certain employees are making additional payments.
- We have implemented a contribution rate stabilization reserve fund to maintain a higher contribution rate than necessary under funding policy.
- The Governor and General Assembly have focused on reducing plan costs and liabilities with a multipronged approach that included: Accelerating repayment of deferred contributions, estimated to save $60.5 million over six years; funding 100% of actuarially determined contribution rates earlier than anticipated, saving $232 million over 20 years.
- State contributions are too low to begin reducing the unfunded liability. The board certifies both the amount required under state law and the amount required under the actuarial process (different cost method, shorter amortization) that does begin reducing the unfunded liability. This approach is needed because our funded status is too low.
- All URLs to be paid within 25 years by board policy.
- The legislature has made ad hoc appropriations to the Trust Fund in recent years to reduce the unfunded actuarial liability.
- Currently working with the plan sponsor to pay down the UAAL and implement an ADC strategy.
- Implemented a cash benefit plan for new hires after 3/1/2015. The vesting period for new hires after 3/1/2015 was also extended to 10 years.
- Reduced benefits and increased employee and employer contribution rates.

Innovations / Best Practices

In the study, respondents were asked to share a success story regarding best practices or innovations that other plans might like to learn about. Below is a text cloud showing the words that appear most often in respondents' comments. Larger words appear more often. The themes relating to these words are listed to the left, and the verbatim comments are provided below.

Retiree/member – Increased efforts and resources for retiree/member portal and retirement planning

System – Improved software systems to enable staff and participants to address service requests remotely; additional portal tools; improved business systems and administration systems to enhance staff effectiveness

Educate – Expanded training opportunities on financial wellness and retirement planning; more seminars for participants and employers

Verbatim Comments

- Implementation of pension administration system utilizing Deloitte software.
- In response to the COVID-19 pandemic, STRS Ohio quickly and efficiently implemented work-from-home measures for the vast majority of staff. All business functions including benefit payments, member services such as the call center and virtual counseling, and investments operations continued without interruption. An electronic invoice workflow system was implemented earlier this year that allows departments to easily review and approve invoices. The formerly paper-based process is now automated using workflow and electronic approvals. This results in a number of advantages to the retirement system, including improved visibility into the status of invoices, strengthens internal controls and enhances STRS Ohio's business continuity readiness.
- In an effort to extend the solvency of the health care fund, the OPERS Board approved significant changes in the delivery of health care for pre-Medicare retirees to begin January 1, 2022. The new model will replace the long-standing group plan with a Health Reimbursement Arrangement (HRA) model funded by OPERS through monthly allowances to retirees. The HRA model allows retirees the opportunity to select and fund an individual health plan most suitable to their needs. This model, in many forms, replicates the current model provided to over 100,000 Medicare retirees education and communication efforts with our members and retirees throughout the year were focused on the retiree health care program to make sure they understood the funding model, the issues we face, and the solutions that were being discussed. Our entire Member Services staff completed a comprehensive training on the Affordable Care Act (ACA) in preparation of the transition of our pre-Medicare retirees to the private market in 2022. The training included education on qualifying for a premium tax credit and plans available on healthcare.gov. Included in the training were several hands-on activities requiring the employees to search for plans on healthcare.gov for different personas and answer detailed questions on the outcomes.
- TRS On the Road-40 counselors travelled throughout the state and provided retirement estimates to members. Shared Responsibility plan that fully funds the health insurance benefit for retirees. Electronic voting of Trustees that was implemented by in-house information technology staff.
- We have updated our pension administration system utilizing production from Deloitte.
- Enhanced Board Governance practices.

Verbatim Comments, continued

- We are planning to prepare and submit a CAFR for 2021.
- PSPRS is currently working to help employers find financing solutions to unfunded pension liabilities. Employers of PSPRS member beneficiaries each have their assets and liabilities, and PSPRS is helping employers understand the long-term costs associated with unfunded liabilities and to determine whether the historically low-interest rates present appropriate and cost-saving financing options. Unfunded liabilities accrue at the assumed earnings rate of the plan, currently set at 7.3 percent, while debt instruments like pension obligation bonds and certificates of participation can be issued at lower rates, resulting in substantial taxpayer savings. One employer, the City of Flagstaff, Arizona, recently paid its entire $112 million unfunded pension liability by issuing certificates of participation at rates below 3 percent. This financing measure is anticipated to provide more than $75 million of present value savings to city taxpayers.
- Pursuing Lean Six Sigma training/certification as an organization.
- Increased communications and educational webinars.
- The Plan verifies payments to all inactive members annually.
- This year we introduced a virtual employer training session to ensure our employer units receive efficiently and conveniently the information they need about the retirement plan, Board policies, and procedures to effectively do their job.
- Providing an online portal for retirees so that they can make addresses, tax withholding, and other optional benefits without going through the Plan Administration office.
- Our Plan offers an individual educational session or sessions with all participants looking to retire, including helping with where to go and what to consider with Social Security and health care and other retirement income.
- IMRF is the first public pension plan to receive the Malcolm Baldrige National Quality Award.
- We are developing a Board Resource that contains information about every aspect of plan administration written in a format that is easy to understand. Contains At Glance sections at the beginning of each topic with a summary of the topic, then in-depth descriptions with references to board policies or statutes or other underlying authority contain spotlight sections highlighting key issues like gift rules or fiduciary standards. Intended primarily for new trustees but will be a resource for all trustees.
- A Cost-Effective Measurement (CEM) study was completed; legislation passed that improved operational efficiencies, and asset and liability studies were completed in conjunction with each other.
- Making payments through our custodial bank versus the State Auditor’s Office to allow for direct deposit and other state tax withholdings, as well as cost savings to the plan.
- The advent of COVID-19 related shutdowns in March of 2020 required the CMERS IT team to procure, configure, and deploy multiple laptops and cell phones to accommodate the staff transitioning to work from home. We creatively procured devices as traditional channel sources had long lead times if able to provide devices at all. This included sourcing local big-box retailers for suitable devices. All staff requiring work from home devices were outfitted and trained within 2 weeks resulting in little to no disruption to the services provided to our end-user community.
- MPERS is going paperless to improve efficiency. With our new pension administration system, we are also hoping to connect to most of our members electronically.
- We perform actuarial stress tests annually. Also, we perform experience studies every three years as opposed to our past practice of every five years.
- Successful delegating of manager selection to the CIO and team.
- We have a few trustees that are elected to our Board. We have implemented an electronic platform for this purpose, that was considerably more efficient than paper ballots.
- Pension Reform: The Governor and General Assembly have focused on reducing plan costs and liabilities with a multipronged approach that included: Implementing plan design changes (VRS Plan 2 for all employees and the Hybrid Retirement Plan nonpublic safety employees that have lowered future benefit costs). The Hybrid Retirement Plan is the dominant plan for all new hires except public safety employees. The Hybrid combined defined benefit and defined contribution plan: - Reduces future benefit costs - Introduces risk-sharing between employer and employee - Lowers defined benefit-risk to employers by approximately one-third.
- myVRS Financial Wellness: In its quest to help members plan for tomorrow, today, VRS launched an innovative online program in 2017 to provide financial wellness education for its members, as well as free educational resources for citizens of the Commonwealth. The System continues to promote this education opportunity and enhance the available materials.- Recognizing that many VRS members would like to improve their knowledge but do not have access to personal finance education, VRS seized an opportunity to integrate financial wellness content on the public website and with the retirement planning tools within the agency’s secure myVRS online member portal. VRS partnered with a service provider, iGrad, creator of Enrich financial literacy content, to develop myVRS Financial Wellness. VRS appears to be the first state retirement system to offer financial wellness content through its public website and personalized content – based on the member’s profile – through a secure member portal. The program is aimed at helping members make informed and educated decisions on everyday financial matters while saving for the future and retirement security. Users find tools, tips, and time-savers that help them with debt and credit management, personal budgeting, spending habits, saving for goals, student loan repayment, and career-development strategies.

Verbatim Comments, continued

- Advancements in Technology and Security: VRS continued the Modernization journey. Successfully transitioned retirement processing and disbursements to a cloud-based environment and decommissioned the legacy mainframe, including the transfer of over 400 million records.- Successfully disbursed more than 200,000 payments to retirees and beneficiaries under the new system in May 2019.
- myVRS Online Self-service Member Portal Enhancements: Enhancements to myVRS will enable members to complete their retirement applications online. The online system provides the user with regular feedback and embedded education to enhance the user experience. Continue to enhance the online Self-service portal to allow members and retirees to update and manage beneficiaries, change bank account information for direct deposits, and update Health Insurance Credit information.
- The Retirement System has successfully implemented payment of operating vendors via ACH; this has decreased processing time and increased security when compared to check issuance. Staff effectively-researched planned and implemented the ACH payment program, while still maintaining effective internal controls. The Retirement system has also implemented a mid-career seminar; this allows the system to connect with its active members earlier and properly educate active members on their retirement benefits, and to provide information to those members considering retirement or entering the DROP Program in the next 5-10 years.
- KPERS recently completed a thorough business assessment as part of a larger pension administration system modernization. The assessment was very helpful in identifying gaps in existing business processes and targeting resources to the gap areas.
- After conducting due diligence on our customer service metrics, we validated member feedback that our responsiveness to telephone calls and emails was not at what we consider to be acceptable levels. We retained a call center consulting firm to provide us with an assessment and recommendation, which led us to the initiation of a project to develop and implement a Contact Center to respond to all forms of customer contact. The implementation is underway and scheduled to be up and running by calendar year-end.

Appendix A: Other Investments

Respondents were asked to specify what “other” asset classes they invested in. Below is a text cloud showing the words that appear most often in respondents’ comments. Larger words appear more often. The themes relating to these words are listed to the left, and the verbatim comments are provided below.

Real – Real assets, real return

Private – Private credit; private equity; private investment partnerships

Infrastructure – Infrastructure, natural resources, global infrastructure, energy infrastructure

Verbatim Comments

- (Current, Target, Return) Hedge Funds (9.3, 0.0, 5.2); Farmland (0.0, 5.0, 0.0).
- (Current, Target, Return) Timber (3.4, 3.0, 4.8); Hedge Funds (3.1, 3.0, 5.4); Farmland (0.0, 5.0, 0.0).
- Above same as General Fund.
- Above the same as General Fund.
- Absolute Return 8%/Natural Resources-Infrastructure 4%.
- Absolute Returns (8%) and Natural Resources/Infrastructure (4%).
- Broad Growth: Actual = 71.7%, Target = 68.0%; Principal Protection: Actual = 6.9%, Target = 8.0%; Crisis Risk Offset: Actual = 15.3%, Target = 16.0%; Real Return: Actual = 3.2%, Target = 8.0%; Opportunities: Actual = 0.2%, Target = 0.0%; Other: Actual = 2.8%, Target = 0.0%.
- Canadian Index Fund.
- Cash.
- Closed Plan No assets. Funded as a pay as you go plan by State’s General Fund.
- Combination of Private Equity, Real Assets, and Diversifying Strategies.
- Convertible Bonds.
- Convertibles.
- Credit strategies, multi-asset public strategies, Private investment partnerships.
- Crisis Risk Offset class 4.2% gross return with actual allocation of 16% and target of 20%; Credit class 4.7 gross return with actual allocation of 12.6% and target of 14%; Risk Parity class 19.9 gross return with actual allocation of 12.6% and target of 14%.
- Current Asset Allocation & Target are Private Credit. Investment returns are all net; other is private credit measured in IRR.
- Current asset Other: Emerging Equity 13.55%, Opportunistic Fixed Income 8.47, MACS 5.40%, Emerging Fixed Income 3.48. Target asset Other: Core Fixed Income 13%, Opportunistic Fixed Income 13%, Emerging Equity 13%. Gross investment return: see details on www.lsers.net>Investments>Investment Reports.
- Current: Non-core FI=18.66; Real Return=11.0. Target: Non-core FI=20.0; Real Return=10.0; Gross Investment Return Non-Core FI=7.89; Real Return=15.83; Private Equity/Hedge Fund/Alternatives 1 year return= Private Equity=12.39; Absolute Return = 5.14.

Verbatim Comments, continued

- Diversified Assets - MA PRIT Fund.
- Dynamic Asset.
- Global Asset Allocation.
- Global Listed Infrastructure.
- High Yield & alternative credit are included in other.
- Infrastructure.
- Infrastructure & Timber.
- Innovation allocation.
- Liquid alternatives.
- Master Limited Partnership.
- Master Limited Partnerships.
- Midstream energy (MLP).
- MLPs.
- Multi-asset portfolios.
- Multiasset: risk parity and global tactical asset allocation.
- Natural Resources.
- Opportunistic Fixed Income.
- Other = Global Asset Allocation International FI is defined as Emerging Market Debt.
- Other = Multiasset Class.
- Other- Public Global Equity 41.73% 47% 12.42% ; Other- Private Equity 11.05% 13% 7.04% ; Other- Fixed Income 15.86%. 11% 8.00% ; Other- Credit (%) 8.18% 7% 2.20% ; Other- Real Assets (%) 11.84% 12% -9.13% ; Other- Risk Mitigation (%). 9.76% 10% -0.76% ; Other- Unique Strategies (%) 0.01% 0% N/A.
- Other: Inflation sensitive assets: Target allocation 15.5 Multi-Assets 4 Inflation sensitive Investment return: 8.4% Multi-asset return: 20.6%.
- Portfolio Completion Strategies 8-14% / performance (-4.9%); Value-Added Fixed Income 5-11% / performance (-3.2%) ; Commodities equates to Timberland; performance figures as of 6/30/2020 gross of fees; Investments managed by PRIM
- Preferred/Convertible.
- Private Credit/Opportunistic Debt.
- Private Equity.
- PSPRS has attempted to conform its FY19 allocation (then current) and target asset allocations and performance as accurately as possible to the presented format. PSPRS will separately provide NCPERS with its own current and target allocations and performance. Please feel free to contact PSPRS with any questions.
- Public Real Assets.
- Real Return.
- Residual accounts in liquidation.
- Risk Parity 7.8 vs 8.0, Infrastructure 2.9 vs. 3.0, MLPs 2.1 vs. 3.0. PSERS reports net of fee returns only. Gross returns not available.
- Risk Parity, GTAA, Other Pension Assets, and Rebalancing.
- STIP, TIPS, Broad Fixed Income, Investment Grade Credit, Agency Mortgage-Backed Securities, Diversified Strategies.
- The above is all the same as the General Fund.
- Timber & Infrastructure.
- TIPS, Global Inflation-Linked Bonds, Infrastructure, Timber.
- Treasuries.
- US TIPS, Midstream energy infrastructure (MLPs), real assets, private credit.
- We are part of the State of MA-PRIT Fund.

Appendix B: 2020 Study Instrument

National Conference on Public Employee Retirement Systems
The Voice for Public Pensions

Cobalt Community Research

2020 NCPERS PUBLIC RETIREMENT SYSTEMS STUDY

Please share your feedback so we can continue to provide the most up-to-date data addressing retirement issues for public pension plans across the nation. Your most recent Comprehensive Annual Financial Report will help answer most questions.

If you administer more than one plan, please copy this survey for each and note the name of the fund. If you are a multiple employer plan, you may use aggregate numbers from your CAFR and respond to the questions in the generally applicable way for most of the plans you administer.

Please enter your ID number from the cover email: ______

Plan name: ______

What type of plan is this? **(Mark all that apply.)**

- ☐ *Defined Benefit Plan (Traditional Pension Plan)*
- ☐ *Defined Contribution Plan (Mandatory Retirement Account)*
- ☐ *Combination Plan (Blends Defined Benefit & Defined Contribution)*
- ☐ *Cash Balance Plan*

Plan Statistics

1. **Fund statistics from most recently completed fiscal year** (if applicable). Please do not use commas, dollar signs or percentage marks in the field - it is numeric only.

Total number of members (actives + deferred + retirees + beneficiaries): ______

Total number of staff who administer the fund (full-time equivalent): ______

Fiscal year of your CAFR referenced for this survey (MM/DD/YYYY): ______

Market value of plan assets ($ in thousands from actuarial valuation): ______

Total pension assets (a) ($ in thousands from actuarial valuation): ______

Total pension liability (b) ($ in thousands from actuarial valuation): ______

Current funded ratio (a divided by b) (%): ______

Cost of Living Adjustment (COLA) offered by plan in last fiscal year (%): ______

Did your plan receive the full (100%) actuarially determined contribution in the last fiscal year? ☐ *Yes* ☐ *No*

Member contributions as percent of payroll (%): ______

Employer contributions as percent of payroll (%): ______

Investment manager expenses (basis points): ______

Administrative expenses (basis points): ______

Investment assumption/discount rate (%): ______

Inflation assumption (%): ______

Investment smoothing period (years): ______

Amortization period (years): ______

Type of amortization period: ☐ *Open/Rolling* ☐ *Closed/Fixed*

Gross investment return % (1 year): ______

Gross investment return % (5 year): ______

Gross investment return % (10 year): ______

Gross investment return % (20 year): ______

Current and Target Asset Allocation / Investment Return

2. For each of the asset classes below, please specify your *CURRENT* and *TARGET* asset allocation and your *1 YEAR GROSS INVESTMENT RETURN* (%) for each asset class. Please note: percentages for asset allocation should equal 100%.

***CURRENT* asset allocation:**	
Global Equity (%):	
Domestic Equity (%):	
International Equity (%):	
Global Fixed Income (%):	
Domestic Fixed Income (%):	
International Fixed Income (%):	
High Yield Bond (%):	
Real Estate (%):	
Private Equity/Hedge Fund/ Alternatives (%):	
Commodities (%):	
Cash Equivalents (%):	
Other (specify asset below) (%):	

***TARGET* asset allocation (if a range, please use middle of range):**	
Global Equity (%):	
Domestic Equity (%):	
International Equity (%):	
Global Fixed Income (%):	
Domestic Fixed Income (%):	
International Fixed Income (%):	
High Yield Bond (%):	
Real Estate (%):	
Private Equity/Hedge Fund/ Alternatives (%):	
Commodities (%):	
Cash Equivalents (%):	
Other (specify asset below) (%):	

Gross investment return % (1 yr):	
Global Equity (%):	
Domestic Equity (%):	
International Equity (%):	
Global Fixed Income (%):	
Domestic Fixed Income (%):	
International Fixed Income (%):	
High Yield Bond (%):	
Real Estate (%):	
Private Equity/Hedge Fund/ Alternatives (%):	
Commodities (%):	
Cash Equivalents (%):	
Other (specify asset below) (%):	

If you entered an "Other" asset class above, please specify the other class(es) in which your fund is currently invested:

3. Which *retirement benefits* below does your plan offer or is considering offering? Please skip individual items below if not applicable.

	Already Offering	Considering Offering
Defined Benefit Plan (traditional pension plan in which the benefit is defined by a formula based on service and average wages)	☐	☐
Defined Contribution Plan (retirement account such as a 403(b) or 401(k) in which an employer's contribution is specified and employee participation is generally mandatory)	☐	☐
Deferred Compensation Plan (tax-deferred retirement savings account such as a 457 in which employee participation is voluntary)	☐	☐
Combination Plan (blends Defined Benefit and Defined Contribution elements)	☐	☐
In-service death benefit	☐	☐
Disability benefit provided either within the plan, by Social Security or by employer	☐	☐
An automatic post-retirement adjustment of payments (e.g. COLA)	☐	☐
A compounding post-retirement adjustment of payments (e.g. COLA)	☐	☐
An ad hoc (not necessarily automatic or compounding) post-retirement adjustment of payments (e.g. COLA)	☐	☐
Employer pick up of employee contributions	☐	☐
Deferred Retirement Option Plan (DROP - in all forms)	☐	☐

4. Which *retirement plan changes* below have been implemented or are being considered by the plan or plan sponsors? Please skip individual changes below if not applicable.

	Already Implemented	Considering Implementing
Lower the actuarial assumed rate of return	☐	☐
Raise benefit age/service requirements	☐	☐
Increase employee contributions	☐	☐
Hold or lengthen the amortization period to improve affordability	☐	☐
Shorten the amortization period to improve funded status	☐	☐

5. Which *business practices* below have been implemented or are being considered by the plan or plan sponsors? Please skip individual items below if not conducted.

	Already Implemented	Considering Implementing
Conduct a death audit	☐	☐
Conduct an actuarial audit by a third party actuary (includes replication of valuation and opinion on actuarial assumptions)	☐	☐
Conduct an information systems security audit	☐	☐
Conduct a building security audit	☐	☐
Update/strengthen an asset allocation study	☐	☐
Expand operational performance benchmarking	☐	☐
Update or enhance administrative software used for member data	☐	☐
Update or enhance online portal provided for members to access account information	☐	☐
Conduct an employer/reporting unit satisfaction assessment	☐	☐
Comply with new State statutory or regulatory requirements to report your funded status based on a rate of return different from your assumed rate of return	☐	☐
Enhance member financial wellness/retirement readiness resources	☐	☐

6. Which of the following *communication methods* does your plan or plan sponsor have the ability to conduct?

	Yes	No
Capacity to send a mass phone message to your entire membership	☐	☐
Capacity to send a mass text message to your entire membership	☐	☐
Capacity to send an e-mail to your entire membership	☐	☐
Does your plan have a Facebook or Twitter account?	☐	☐
Does your plan offer live web conferences to members (Zoom, Teams, WebEx, etc.)?	☐	☐

7. Which *oversight practices* below have been implemented? Please skip individual practices below if not conducted.

	Yes	No
Receipt of the GFOA Award of Excellence for the most recent award cycle	☐	☐
Receipt of NCPERS Certificate of Transparency	☐	☐
Receipt of PPCC Standards Award	☐	☐
Receipt of PPCC Administrative Certificate	☐	☐
Receipt of PPCC Funding Certificate	☐	☐
Receipt of an unqualified opinion from the auditor on the fund's financial statements, internal controls, and compliance with applicable laws and regulations	☐	☐
Conduct an actuarial valuation at least every 2 years	☐	☐
Board adoption and adherence to written investment policies	☐	☐
Board adoption of written fiduciary standards	☐	☐
Receipt of annual investment performance evaluation from an outside independent investment review entity	☐	☐
Use of a formal enterprise risk management framework	☐	☐

8. How satisfied are you with your plan's readiness to address retirement trends and issues over the next 2 years?

Very Dissatisfied– 1	2	3	4	5	6	7	8	9	Very Satisfied– 10
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

9. If you have an unfunded accrued actuarial liability, what strategies have you put in place to reduce it beyond traditional amortization?

10. Think about best practices. Please share a success story or plan innovation you are considering that other plans may like to learn about:

11. Which categories best describe your innovation or best practice story above? (**Please mark all that apply.**)

- ☐ *Retirement benefit*
- ☐ *Business practice*
- ☐ *Oversight practice*
- ☐ *Plan change*
- ☐ *Communication/ engagement practice*
- ☐ *Investment*

Questions about your fund (your responses will be confidential)

12. What type of employees/beneficiaries does your fund serve? (**Please mark all that apply.**)

- ☐ *Local (township/city/village)*
- ☐ *Public safety*
- ☐ *Educational*
- ☐ *County*
- ☐ *State*
- ☐ *Other*

13. What type of health plan does your pension plan sponsor? (**Please mark all that apply.**)

- ☐ *None, does not sponsor (skip to Q15)*
- ☐ *Healthcare subsidy*
- ☐ *Traditional (HMO, PPO, POS, etc.)*
- ☐ *Health Savings Account (HSA)*
- ☐ *Supplemental gap health plan*
- ☐ *Voluntary Employees' Beneficiary Association (VEBA)*

14. Who is eligible for the health plan? (**Please mark all that apply.**) ☐ *Retirees* ☐ *Beneficiaries*

15. Are your members eligible for Social Security coverage? ☐ *Yes* ☐ *No*

16. Are your members eligible for Medicare coverage? ☐ *Yes* ☐ *No*

17. Do you include overtime in the calculation of the retirement benefit? ☐ *Yes* ☐ *No* ☐ *N/A*

18. Does your plan allow Board Members the ability to participate via teleconference or webconfernce (Zoom, Teams, Webex) and vote? ☐ *Yes* ☐ *No*

19. How is your fund's current ability to attract and retain skilled employees as your staff retire?

- ☐ *Significant problem*
- ☐ *Expect to become a problem soon*
- ☐ *Starting to become a problem*
- ☐ *No problem*

20. Which role(s) best describe your relationship to the fund? (**Please mark all that apply.**)

- ☐ *Staff*
- ☐ *Plan consultant*
- ☐ *Board member/ trustee*
- ☐ *Other*

21. May we contact you if we have additional questions? ☐ *Yes* ☐ *No*

22. Please provide your name and email so we may provide access to the interactive comparison dashboard.

____

This concludes the study. Thank you for your time and cooperation.

For more information:

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