



# Notice of Public Meeting

## The Board of Retirement of the San Mateo County Employees' Retirement Association will meet on **Tuesday, December 8, 2020 at 10:00 A.M.**

In accordance with the Governor's Executive Order N-29-20 (3) the Members of the Board will be participating via Zoom video conference and teleconference. Pursuant to Government Code §54954.3, members of the public, to the extent required by law, will have the opportunity to directly address the Board concerning matters within the jurisdiction of the Board. The public can participate and provide comment using the instructions below:

### To Join the Meeting

- To join the meeting via video conference, click here: <https://zoom.us/j/94455634204>
- To join the meeting via telephone, dial: (669) 900-9128, and enter Meeting ID: 944 5563 4204

### Public Comment During the Meeting

Persons wishing to address the Board should follow the steps below:

- If joining via video conference, please use the "raise your hand" feature in Zoom during the Oral Communications from the Public period.
- If joining via teleconference dial in, please dial \*9 to "raise your hand" during the Oral Communications from the Public period.

You will be called on at the appropriate time. At the beginning of your comment, please state your name.

### Public Comment Prior to the Meeting

Persons who wish to address the Board may submit written comments via email to [samcera@samcera.org](mailto:samcera@samcera.org) at least 30 minutes before the start of the Board meeting. Please include your name, agenda item, and your comment. The Board will have the email read into the record and attached to the minutes.

For help joining a Zoom meeting, see: <https://support.zoom.us/hc/enus/articles/201362193>

**PUBLIC SESSION** – The Board will meet in Public Session at 10:00 a.m.

- 1. Call to Order, Roll Call and Miscellaneous Business**
- 2. Oral Communications**
  - 2.1 Oral Communications from the Board
  - 2.2 Oral Communications from the Public
- 3. Approval of the Minutes**
  - 3.1 Approval of Board Meeting Minutes from October 27, 2020
  - 3.2 Approval of Audit Committee Minutes from October 27, 2020

#### **4. Approval of the Consent Agenda\***

- 4.1 Disability Retirements (none)
- 4.2 Survivor Death Benefits
- 4.3 Service Retirements
- 4.4 Continuances
- 4.5 Deferred Retirements
- 4.6 Member Account Refunds
- 4.7 Member Account Rollovers
- 4.8 Member Account Redeposits
- 4.9 Acceptance of Trustees' Reports of Educational Activities
- 4.10 Reaffirm Education Policy
- 4.11 Reaffirm Procedures for Auditing Employer Data
- 4.12 Reaffirm Procedure for Assessment of Elements of Compensation

#### **5. Benefit & Actuarial Services**

- 5.1 Consideration of Agenda Items, if any, Removed from the Consent Agenda

#### **6. Investment Services**

- 6.1 Report on Preliminary Monthly Portfolio Performance Report for the Period Ended October 31, 2020
- 6.2 Report on Quarterly Investment Performance for the Period Ended September 30, 2020
- 6.3 Approval of Change to SamCERA's Policy Benchmark
- 6.4 Approval of Resolution Amending the Investment Policy Statement
- 6.5 Presentation of Private Asset Semi-Annual Performance Reports as of June 30, 2020
- 6.6 Report on Investment Consultant Annual Review
- 6.7 Approval of Proposed Alternative Investments (to be heard in Closed Session, Confidential Under Gov. Code §54956.81 and §6254.26, see item C2)

#### **7. Board & Management Support**

- 7.1 Annual Review of Brown Armstrong
- 7.2 Discussion of Board-Staff Retreat Topics
- 7.3 Report on 2020 Legislative Update and Direction to Staff

#### **8. Management Reports**

- 8.1 Chief Executive Officer's Report
- 8.2 Assistant Executive Officer's Report
- 8.3 Chief Investment Officer's Report
- 8.4 Chief Legal Counsel's Report

#### **CLOSED SESSION** – The Board may meet in closed session prior to adjournment

- C1 Consideration of Disability Items, if any, removed from the Consent Agenda
- C2 Approval of Proposed Alternative Investment (to be heard in Closed Session, Confidential Under Gov. Code § 54956.81 and 6254.26, see item 6.x)
- C3 Public Employee Performance Evaluation, in accordance with Gov. Code § 54957, Title: Chief Executive Officer (to be heard in Closed Session Confidential Under Gov. Code §54957)

#### **9. Report on Actions Taken in Closed Session**

# Notice of Public Meeting

## Page 3 of 3

---

### 10. Adjournment in Memory of the Following Deceased Members:

Allen, Geraldine	September 9, 2020	Mental Health
Ruiz, Christina	October 5, 2020	DPW
King, Violet	October 8, 2020	Probation
Logue, Amelia	October 10, 2020	Chope Hospital
Moore, Dorothy	October 15, 2020	Hospital
Ferrando, Orlene	October 19, 2020	Controller's
Noerager, Gloria	October 19, 2020	Engineering - Roads
Abramson, Catherine	October 22, 2020	Library
Dodson, Martha	October 27, 2020	Library
Nodson, Julie	November 11, 2020	Human Services
Grossetti, Judy	November 11, 2020	DPW
Bixby, Patricia	November 22, 2020	Mental Health



Scott Hood, Chief Executive Officer

Posted: December 2, 2020

(\* ALL ITEMS ON THE CONSENT AGENDA ARE APPROVED BY ONE ROLL CALL MOTION UNLESS A REQUEST IS MADE BY A BOARD MEMBER THAT AN ITEM BE WITHDRAWN OR TRANSFERRED TO THE REGULAR AGENDA. ANY ITEM ON THE REGULAR AGENDA MAY BE TRANSFERRED TO THE CONSENT AGENDA. ANY 4.1 ITEMS REMOVED FROM THE CONSENT AGENDA WILL BE TAKEN UP UNDER CLOSED SESSION; ALL OTHER ITEMS REMOVED FROM THE CONSENT AGENDA WILL BE TAKEN UP UNDER ITEM 5.1.)

**THE BOARD NORMALLY MEETS AT 100 MARINE PARKWAY, SUITE 160**, WHICH IS LOCATED ON THE SE CORNER OF TWIN DOLPHIN & MARINE PARKWAY IN REDWOOD CITY. Detailed directions are available on the "Contact Us" page of the website [www.samcera.org](http://www.samcera.org). Free Parking is available in all lots in the vicinity of the building. A copy of the Board of Retirement's open session agenda packet is available for review at the SamCERA offices and on our website unless the writings are privileged or otherwise exempt from disclosure under the provisions of the California Public Records Act. Office hours are Monday through Thursday 7 a.m. – 6 p.m.

IN COMPLIANCE WITH THE CALIFORNIA GOVERNMENT CODE AND THE AMERICANS WITH DISABILITIES ACT: SamCERA's facilities and board and committee meetings are accessible to individuals with disabilities. Contact SamCERA at (650) 599-1234 at least three business days prior to the meeting if (1) you need special assistance or a disability-related modification or accommodation, including auxiliary aids or services, in order to participate in this meeting; or (2) you have a disability and wish to receive the agenda, meeting notice, agenda packet or other writings that may be distributed at the meeting in an alternative format. Notification in advance of the meeting will enable SamCERA to make reasonable arrangements to ensure full accessibility to this meeting and the materials related to it.

**SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**

OCTOBER 27, 2020 – REGULAR BOARD MEETING MINUTES

**2010.1 Call to Order, Roll Call and Miscellaneous Business**

**Call to Order:** Mr. David, Chair, called the Regular Meeting of the Board of Retirement to order at 10:00 a.m. via Zoom.

**Roll Call:**

Present: Sandie Arnott, Mark Battey, Ben Bowler, Al David, Paul Hackleman, Kurt Hoefer, Katherine O'Malley, Robert Raw and Eric Tashman.

Absent: None.

Alternates present: Susan Lee and Alma Salas.

Staff: Tariq Ali, Brenda Carlson, Michael Coultrip, Lili Dames, Scott Hood, Elizabeth LeNguyen, Doris Ng, Gladys Smith, and Anne Trujillo.

Consultants and speakers: Joe Abdou, Margaret Jadallah and John Nicolini (Verus); Nick Collier (Milliman, Inc.); Ashley Casey (Brown Armstrong).

**2010.2.1 Oral Communications from the Board:** None.

**2010.2.2 Oral Communications from the Public:** Mr. David asked if there was any public comment from those individuals participating on the telephone or via Zoom. There were no public comments and no written comments received ahead of the meeting.

**2010.3.1 Approval of Regular Board Meeting Minutes from September 29, 2020:** Mr. David asked if there were any changes or corrections, or objections, to the meeting minutes from the Board meeting held on September 29, 2020.

**Action:** Mr. Raw moved to approve the minutes from the Board meeting on September 29, 2020. The motion was seconded by Ms. Arnott and carried with a vote of 9-0, with trustees Arnott, Battey, Bowler, David, Hackleman, Hoefer, O'Malley, Raw and Tashman all in favor; none opposed.

**2010.4.0 Approval of the Consent Agenda:** Mr. David asked if there were any items to be removed for discussion from the Consent Agenda. No items were removed.

**Action:** Mr. Hackleman moved to approve the items on the Consent Agenda. The motion was seconded by Mr. Raw and carried with a vote of 9-0, with trustees Arnott, Battey, Bowler, David, Hackleman, Hoefer, O'Malley, Raw and Tashman all in favor; none opposed.

**2010.4.1 Disability Retirements:** None.

**2010.4.2 Survivor Death Benefits:** None.

2010.4.3 **Service Retirements:**

<b>Name</b>	<b>Effective Retirement Date</b>	<b>Department</b>
Aguirre, Dennis	August 7, 2020	Planning & Building
Barberini, Edmund	August 30, 2020	Deferred - Sheriff's Office
Benavides, Benjamin	September 1, 2020	Deferred – Dept. of Public Works
Brown, A Joy	August 5, 2020	Probation
Charan, Kanchan	August 31, 2020	Retired - Plan 3 Portion
Cullen, Craig	August 7, 2020	Sheriff's Office
Ferguson, Curt	August 23, 2020	Sheriff's Office
Lao, Evelyn	August 15, 2020	San Mateo County Health
McHenry, Caroline	July 29, 2020	Human Resources
Montoya, Carlos	August 22, 2020	Human Services Agency
Newton, James	August 29, 2020	Deferred - Probation
Ramirez, Rosa Maria	August 14, 2020	San Mateo County Health
Rivera, Deborah	August 29, 2020	San Mateo County Health
Ruparel, Haresh	September 1, 2020	San Mateo County Health
Vance, Chris	August 29, 2020	Library
Warner, Lisa	August 19, 2020	Deferred - Social Services

2010.4.4 **Continuances:**

<b>Survivor's Name</b>	<b>Beneficiary of:</b>
Boggs, Gretchen	Nygren, Marilyn
Goad, Dorene	Goad, Roger
Leed, Laurie Jo	Leed, Donald
McHenry, Timothy	McHenry, Caroline

2010.4.5 **Deferred Retirements:**

The Board ratified the actions as listed below for the following members regarding deferred retirements:

<b>Name</b>	<b>Retirement Plan Type</b>
Bakovic, Dragan	G5, Vested - Reciprocity
Dela Cruz, Glenn	G4, Vested
Esquivel, Svetlana	G4, Vested
Fish, Michael	G7, Non-vested - Reciprocity
Franson, David	S4, Vested - Reciprocity
Galea, Aaron	G4, Vested - Auto Defer - Code 31700
Glocke, Stacy	G7, Vested
Hoang, John	G4, Vested - Auto Defer - Code 31700
Luna, Jessica	G7, Vested
Mendez, Michelle	G4, Vested - Auto Defer - Code 31700
Molina, Ivana	G4, Vested - Auto Defer - Code 31700
Nevin, Timothy	G7, Non-vested - Reciprocity
Nichols, Kameisha	G5, Vested - Auto Defer - Code 31700

2010.4.6 **Member Account Refunds:**

The Board ratified the actions as listed below for the following members regarding refunds:

<b>Name</b>	<b>Retirement Plan Type</b>
Glensor, Devan	G7, Non-vested
Hawes, Julian	G7, Non-vested
Hernandez, Jessica	G7, Non-vested
Miranda, Dereck	G4, Vested
Mohler, Kristiane	G4, Non-vested
Reid, Brandon	G7, Non-vested

2010.4.7 **Member Account Rollovers:**

The Board ratified the actions as listed below for the following members regarding rollovers:

<b>Name</b>	<b>Retirement Plan Type</b>
Cherry, Linda	G7, Non-vested
Kim, Jessica	G7, Non-vested
Kwak, Edward	G7, Non-vested
Sooahoo, Dalyn	G7, Non-vested

2010.4.8 **Member Account Redeposits:** None.

2010.4.9 **Acceptance of Trustees' Reports of Educational Activities:** None.

2010.4.10 **SACRS Business Meeting November 2020:** The Board authorized SamCERA's Voting Delegate, CEO Scott Hood, to approve the minutes of the SACRS Fall 2020 Business Meeting and to vote in the best interest of SamCERA on any new action items that may be added to the November 2020 Business Meeting Agenda.

2010.5.1 **Consideration of Agenda Items, if any, Removed from the Consent Agenda:** None.

2010.5.2 **Approval of Resolution that Further Defines Compensation Earnable for On-Call Duty:** Mr. Hood discussed the proposed changes to the resolution for compensation earnable applicable to legacy members in Plans 1-6 stemming from the California Supreme Court decision in the Alameda case in regards to on-call payments. He noted that today's action does not apply to PEPR Plan 7 members. Staff's recommendation is that on-call pay code 027 remain included in compensation earnable but to add a clarification for the use of pay code 027 for "Regular and Required On-Call". For on-call pay that does not meet the criteria for pay code 027, a new pay code, 024 "Voluntary or Ad Hoc On-Call", should be used and those payments would not be includable in compensation earnable. After the adoption of the changes, Staff will monitor the data and review employer on-call policies as needed and analyze whether any adjustments need to be made regarding the inclusion of pay code 027 for certain members who received it after the 2013 amendment to §31461. If any such adjustments are required, staff will first update and seek direction from the Board.

Mr. Hood noted that the proposed resolution rescinds the previous resolution and adds the description under which pay code 027 may be used and adds pay code 024, and deletes the erroneous listing of on-call pay codes 127 and 827 as these codes are not used by legacy members.

**Action:** Ms. Arnott motioned to approve the resolution defining compensation earnable, pursuant to Government Code §31461 for members who are not subject to Government Code §7522.34 to further

define compensation earnable for on-call duty. The motion was seconded by Mr. Hoefer and carried by a vote of 8-0, with trustees Arnott, Battey, David, Hackleman, Hoefer, O'Malley, Raw and Tashman all in favor; none opposed. Mr. Bowler left the meeting at 10:10 a.m. prior to the vote.

- 2010.5.3 **Annual Review of SamCERA's Actuarial Services Firm, Milliman, Inc.:** Ms. Smith presented the results of Milliman, Inc.'s annual performance report. She reported that Milliman received high marks from the Board and staff. She and Mr. Hood thanked Mr. Collier for all the work he and the rest of Milliman, Inc. has done for SamCERA this year. This item was informational and for discussion only, no action was taken.
- 2010.6.1 **Report on Preliminary Monthly Portfolio Performance Report for the Period Ended September 30, 2020:** Mr. Coultrip reported that SamCERA's net preliminary return for September was -1.2% bringing the preliminary trailing twelve month return ending September 2020 to 4.3% net. This item was informational and for discussion only, no action was taken.
- 2010.6.2 **Report on Inflation Hedge Manager Annual Review:** Ms. Ng reviewed the meeting notes of the annual review of SamCERA's public real assets managers, State Street Global Advisors (SSgA), that took place on October 1, 2020. The discussion included a firm/organizational update, investment process review, review of performance and attribution as well as positioning and market outlook. There were no significant concerns identified during the portfolio reviews. This item was informational and for discussion only, no action was taken.
- 2010.6.3 **Report on Opportunistic Credit Manager Annual Review:** Ms. Ng reported that staff and Verus held an annual review meeting for opportunistic manager, Angelo Gordon. The discussion included a firm/organizational update, investment process review, performance review and attribution as well as positioning and market outlook. There were no significant concerns identified during the portfolio reviews. This item was informational and for discussion only, no action was taken.
- 2010.6.4 **Report on Absolute Return Manager Annual Review:** Ms. Ng reviewed the meeting notes of the annual review of SamCERA's absolute return manager, Aberdeen Standard, held on October 8<sup>th</sup>. The meeting lasted approximately 1.5 hours, and consisted of a firm/organizational update, investment process review, performance review and attribution, and current positioning/market outlook. This item was informational and for discussion only, no action was taken.
- 2010.6.5 **Report on Trading Cost Analysis for Public Equity and Fixed Income Managers:** Chris Phillips and Brian Greene of Zeno AN Solutions presented an analysis of SamCERA's trading costs for the calendar year of 2019 and answered questions from the Board. This item was informational and for discussion only, no action was taken.

Mr. Bowler rejoined the meeting at 11:02 a.m.

- 2010.6.6 **Approved of Proposed Alternative Investment (to be heard in Closed Session):** The Board adjourned into Closed Session at 11:02 a.m. to hear item 6.6 then reconvened in Open Session at 11:20 a.m. See Closed Session report under C2.

The Board was adjourned for a break at 11:21 a.m. and reconvened at 11:26 a.m.

- 2010.7.1 **Presentation by Brown Armstrong of 2020 Financial Audit Management Reports:** Ashley Casey, from Brown Armstrong, reviewed the independent financial audit performed by Brown Armstrong for the fiscal year ended June 30, 2020. She discussed the process and outcome of the audit and reported that SamCERA received an unmodified, clean opinion. Ms. Salas reported that the Audit Committee met that morning and reviewed the financial audit report and Management Letter. The

Audit Committee recommends that the Board accept the report. With no objection, the financial audit report and Management Letter were accepted by the Board.

2010.7.2 **Approval of SamCERA's 2020 Comprehensive Annual Financial Report (CAFR):** Ms. Chow presented the highlights of the 2020 CAFR, noting that SamCERA's net position increased by 1%, or \$57 million, compared to last fiscal year. Ms. Chow thanked Ashley and the rest of the Brown Armstrong team, Milliman, Cheiron and the Investment Team for all the hard work they have put into the audit and financial reports. Mr. Hood also thanked staff for their efforts in putting together the CAFR. Ms. Salas reported the Audit Committee met that morning and reviewed the 2020 CAFR. The Audit Committee recommends that the Board approve the 2020 CAFR.

**Action:** Ms. Arnott motioned to approve SamCERA's 2020 CAFR. The motion was seconded by Mr. Hackleman and carried by a vote of 9-0, with trustees Arnott, Battey, Bowler, David, Hackleman, Hoefer, O'Malley, Raw and Tashman all in favor; none opposed.

2010.7.3 **Approval of Resolution Authorizing CEO to Enter into an Agreement with Digital Deployment, Inc.:** Mr. Hood discussed staff's success in working with Digital Deployment, Inc. on the redesign of the "MySamCERA" mobile application. He further discussed the proposed 6-year contract covering reworking, support and maintenance of the public website, online web member services portal and mobile app. Mr. Hood also added that staff recommends that the RFP process be waived to ensure a continuity in regard to these member related deliverables. Mr. Ali also reiterated his satisfaction in working with Digital Deployment, Inc. and looks forward to the launch of the updated "MySamCERA" mobile application.

**Action:** Mr. Hackleman motioned to approve a resolution: (a) waiving the Request for Proposal Process; (b) authorizing the CEO to execute an agreement with Digital Deployment, Inc. for the reworking of the SamCERA public website, MySamCERA online web member services and various support and maintenance services through 2026; and (c) authorizing the CEO to execute contract amendments up to an aggregate of \$25,000 above the contract cap through the term of the agreement. The motion was seconded by Mr. Hoefer and carried by a vote of 9-0, with trustees Arnott, Battey, Bowler, David, Hackleman, Hoefer, O'Malley, Raw and Tashman all in favor; none opposed.

2010.7.4 **Approval of Resolution Setting the Board of Retirement Meeting Schedule for 2021:** Ms. Smith went over the highlights of the proposed Board meeting schedule for 2021.

**Action:** Mr. Raw motioned to approve a resolution setting the Board of Retirement's regular meeting schedule for calendar year 2021. The motion was seconded by Mr. Battey and carried by a vote of 9-0, with trustees Arnott, Battey, Bowler, David, Hackleman, Hoefer, O'Malley, Raw and Tashman all in favor; none opposed.

2010.8.1 **Chief Executive Officer's Report:** Mr. Hood thanked staff that assisted with the CAFR. He mentioned that the SACRS Fall Conference will be held virtually from November 10<sup>th</sup> - 13<sup>th</sup> and will be offering a 2-hour Ethics training course. Mr. Hood highlighted a few items for the December meeting including the Education Policy, annual review of Brown Armstrong, CEO Annual Review, and topics for the 2021 Board/Staff Retreat.

2010.8.2 **Assistant Executive Officer's Report:** Ms. Smith informed the Board that there was a technical issue and that the Board will receive an email on November 2<sup>nd</sup> with a link to the Sexual Harassment training. She also added that the deadline to complete the training is December 4<sup>th</sup>. Ms. Smith informed the Board that she will be sending out the annual survey for Brown Armstrong this week. Ms. Trujillo informed Board members about upcoming educational events.



2010.8.3 **Chief Investment Officer's Report:** Mr. Coultrip reported that staff will be conducting annual manager reviews on private equity and private real asset portfolios on November 17<sup>th</sup> at 9:30 a.m. and a link will be sent out for those interested in participating. He also informed the Board that staff will be sending out a link to Verus' annual review shortly after the meeting.

2010.8.4 **Chief Legal Counsel's Report:** Ms. Carlson informed the Board, usually she gives her fall legislative update at the October meeting, but that there is no applicable legislative update at this time.

C1 **Consideration of Disability Items, if any, removed from the Consent Agenda:** None.

C2 **Approval of Proposed Alternative Investment (to be heard in Closed Session, Confidential Under Gov. Code §54956.81 and §6254.26, see item 6.6):** Ms. Carlson reported that the Board approved a commitment of \$25 million to EQT Infrastructure V L.P. The motion passed a vote of 9-0, with trustees Arnott, Battey, Bowler, David, Hackleman, Hoefer, O'Malley, Raw and Tashman all in favor; none opposed.

2010.10 **Adjournment:** Mr. David adjourned the meeting at 11:51 a.m. in memory of the deceased members listed below.

Nava, Robert	September 11, 2020	Assessor's Office
Molina, Celestino	September 14, 2020	DPW
Samuelson, Helen	September 13, 2020	General Services
Rinonos, Maria	September 24, 2020	H.S.A.
Wong, Donald	September 24, 2020	Aging & Adult Services
Domeniconi, John	September 29, 2020	Probation
Hassell, Mark	October 8, 2020	Human Services

---

Al David  
Board Chair

San Mateo County Employees' Retirement Association  
**Minutes of the Audit Committee Meeting of the Board of Retirement**

**October 27, 2020 – Audit Committee Meeting Minutes**

- 1. Call to Order:** Chair Alma Salas called the meeting of the Audit Committee to order at 9:30 a.m.

**Roll Call:** *Present:* Kurt Hofer, Robert Raw and Alma Salas.

*Not Present:* None.

*Staff:* Brenda Carlson, Tat-Ling Chow, Scott Hood, Gladys Smith and Anne Trujillo.

*Consultants:* Ashley Casey, from Brown Armstrong.

- 2.1 Oral Communications from the Committee:** None.

- 2.2 Oral Communications from the Public:** Ms. Salas asked if there was any public comment from those individuals participating on the telephone or via Zoom. There were no public comments and no written comments received ahead of the meeting.

- 3.1 Recommendation to the Board of Retirement to Accept Financial Audit Management Reports and Findings:** Ms. Casey provided a review of the audit process including the timeline and presented the financial audit management reports and findings with the Committee. She reported that SamCERA received an unmodified (clean) opinion and that there were no recommendations given by the auditors.

**Action:** Mr. Hofer moved to recommend that Board of Retirement accept the Financial audit management reports and findings, as prepared by Brown Armstrong. The motion was seconded by Mr. Raw and carried with a vote of 3-0, with trustees Hofer, Raw and Salas, all in favor; and none opposed.

- 3.2 Recommendation to the Board of Retirement to Approve SamCERA's 2020 Comprehensive Annual Financial Report:** Ms. Salas asked the Audit Committee if there were any questions or comments on SamCERA's 2020 Comprehensive Annual Financial Report. There were no questions or comments from the Audit Committee.

**Action:** Mr. Raw moved to recommend that Board of Retirement approve SamCERA's 2020 Comprehensive Annual Financial Report. The motion was seconded by Mr. Hofer and carried with a vote of 3-0, with trustees Hofer, Raw and Salas, all in favor; and none opposed.

- 6. Adjournment:** With no further business, Ms. Salas adjourned the meeting at 9:54 a.m.

---

Scott Hood  
Chief Executive Officer

---

Anne Trujillo  
Retirement Executive Secretary

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
**Board of Retirement**

December 8, 2020

Agenda Items 4.1- 4.9

**TO:** Board of Retirement

**FROM:** Elizabeth LeNguyen, Retirement Benefits Manager



**SUBJECT:** Approval of Consent Agenda Items 4.1 – 4.9

**4.1 Disability Retirements**

None.

**4.2 Survivor Death Benefits**

None.

**4.3 Service Retirements**

The Board ratifies the service retirement for the individuals listed below as follows:

<b>Name</b>	<b>Effective Retirement Date</b>	<b>Department</b>
Armsby, Aimee	September 12, 2020	County Counsel
Ayala, Janine	September 28, 2020	Human Resources
Corkery, John	September 6, 2020	Sheriff's Office
Dayter, Zoya	October 1, 2020	San Mateo County Health
Guier, Brent	October 1, 2020	Environmental Health
Hernandez, Rosemarie	September 21, 2020	QDRO
Horne, Gary	September 5, 2020	San Mateo County Health
Kennedy, Catherine	September 22, 2020	Def'd - Human Services Agency
Lee Lung, Fung	September 26, 2020	San Mateo County Health
Luna, Anna	September 22, 2020	Human Services Agency
Macaraeg, Girley	October 1, 2020	Public Health
Martin, Lenda	September 28, 2020	Def'd - San Mateo County Health
Masis, Agnes	September 23, 2020	San Mateo County Health
Parnainfar, Saman	September 27, 2020	Probation
Spiller, Denise	September 18, 2020	Sheriff's Office
Thompson, Barry	October 1, 2020	Probation
Willers, Patricia	September 19, 2020	San Mateo County Health
Wong-Sing, Douglas	September 11, 2020	Deferred - Health Services

**4.4 Continuances**

The Board ratifies the granting of a continuance to the following individuals:

<b>Survivor's Name</b>	<b>Beneficiary of:</b>
Lesui, Ato	Lesui, Clark
Liikane, Meeri	Liikane, Juhan

#### 4.5 Deferred Retirements

The Board ratifies the deferred retirements as listed below for the following individuals:

<b>Name</b>	<b>Retirement Plan Type</b>
Chung, Diana	G4, Vested - Auto Defer - Code 31700
Duffy, Danae	G7, Non-vested - Reciprocity
Elliot, Robin	G4, Vested
Giovannoni, Kevin	S4, Vested - Auto Defer - Code 31700
Harte, Virginia	S7, Vested - Reciprocity
Hirst, Deborah	G4, Vested - Auto Defer - Code 31700
Huynh, Michael	G7, Vested - Reciprocity
Kmak, Rocelia	G1, Vested - Reciprocity
Leos, Monica	G7, Vested - Auto Defer - Code 31700
McCulley, Dylan	G5, Vested - Auto Defer - Code 31700
Mon, Kristen	G7, Vested
Pasini, Nicole	G4, Vested - Auto Defer - Code 31700
Sandoval, Patricia	G4, Vested - Auto Defer - Code 31700
Sharma, Shaneil	G7, Vested - Auto Defer - Code 31700
Silva, Teresa	G5, Vested - Reciprocity
Velasquez, Jose	S4, Vested

#### 4.6 Member Account Refunds

The Board ratifies the refunds as listed below for the following individuals:

<b>Name</b>	<b>Retirement Plan Type</b>
Allee, Andrew (FBO: Allee, Robert)	G4, Vested
Dabbagh, Elizabeth	G7, Non-vested
O'Leary, Brandon	S7, Non-vested
Solis, Gabriela	G7, Non-vested

Tyrell, Jolly	G4, Vested
Villanueva, Christine	G7, Vested

#### 4.7 Member Account Rollovers

The Board ratifies the rollovers as listed below for the following individuals:

<b>Name</b>	<b>Retirement Plan Type</b>
Bunoan, Tomas (FBO: Eufrecina Bunoan)	G4, Non-vested
Coke, Simone	G4, Non-vested
Dahlberg, Christina	G7, Non-vested
Martinez, Virginia (FBO: Isidro Martinez) <i>Marriage license submitted to prove surviving spouse entitled to lump sum.</i>	G7, Non-vested
Pagarigan, Rey (FBO: Maria Gina Pagarigan) <i>Marriage license submitted to prove surviving spouse entitled to lump sum.</i>	G4, Vested
Villanueva, Christine	G7, Vested

#### 4.8 Member Account Redeposits

None.

#### 4.9 Acceptance of Trustees' Reports of Educational Activities Through Outside Provider

None.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

December 8, 2020

Agenda Item 4.10

**TO:** Board of Retirement

**FROM:** Scott Hood, Chief Executive Officer



**SUBJECT:** Education Policy

**Recommendation**

Reaffirm the Board's Education Policy or remove from Consent calendar to discuss.

**Background**

In 2016, the Board approved its Education Policy. The policy reflects the following core principles as stated by the Ad Hoc Education Policy Committee:

- **Fiduciary:** education must be consistent with the Board's fiduciary responsibilities.
- **Prudent:** exercising good judgment /decision making; understanding that the Board is entrusted with the Retirement Fund.
- **Relevant:** education must be relevant to Trustee's responsibilities and to individual experience and background.
- **Focus:** training/conference should focus on education not marketing
- **Cost Effective:** Board should apply the same discipline to Board travel/education as it does to all SamCERA expenses. Each Board member shall make every effort to obtain his or her education within California.
- **Optics/Perception:** location and perception of luxury are important. Board member education should be obtained in a cost-efficient manner minimizing costs wherever possible, multiple education providers provide similar educational opportunities.

**Discussion**

The Policy authorizes each Trustee to attend all of the following each fiscal year:

- Unlimited number of conferences and education programs within the Bay Area; and
- Any program sponsored by the State Association of County Retirement Systems (SACRS) and the California Association of Public Retirement Systems (CALAPRS) wherever located; and
- Up to two (2) approved out-of-Bay Area educational events requiring overnight stays.

The two approved out of Bay Area educational events requiring overnight stays can be from the following list of providers:

- International Foundation of Employee Benefit Plans (IFEBP)
- Wharton investment management programs
- Chartered Financial Analyst (CFA) Institute
- National Conference on Public Employee Retirement Systems (NCPERS)
- Institutional Limited Partner Association (ILPA) Institute (Educational Programs)

This list is subject to annual review and revision by the Board. Requests to attend an event not on the above list can be made by a Trustee by completing a form that is placed on the regular agenda for approval. Since its adoption only two event requests were made and both were granted by the Board.

**Attachment**

Education Policy

**BOARD EDUCATION POLICY**

**SECTION 1. BOARD MEMBER EDUCATION IS REQUIRED**

- A. **Fiduciary Duty.** Consistent with the Board's fiduciary responsibility to discharge its duties with respect to the system with care, skill, prudence, and diligence, the Board acknowledges the vital importance of making informed judgments on all matters which come before it and has determined that educational activities help provide the Board with knowledge and skills to make such informed decisions. Board members come to the Board with differing backgrounds, knowledge and expertise. Each member has a duty to receive the education that best fits his or her needs. Board member education should develop the individual knowledge of the Board members and in turn, improve the knowledge of the Board as whole so that it may discharge its fiduciary duties.
- B. **Minimum Required Hours of Training.** Each Board member shall receive a minimum of 24 hours of Board member education in the topics listed in Section 3 (A) within the first two years of assuming office and for every subsequent two-year period the Board member continues to hold membership, in accordance with Government Code §31522.8.
- C. **Posting of Policy and Board Member Compliance.** Staff shall maintain a record of Board member compliance with this policy and this policy and an annual report on Board member compliance will be posted on the Board's website which shall reflect the education completed for the prior fiscal year or calendar, depending upon when the Board member's term commences, in accordance with Government Code §31522.8.
- D. **Timely Report by Board Member of Educational Participation.** Prior to the next regularly scheduled meeting of the Board following the Board member's participation in an educational activity, the Board member shall submit for inclusion on the Consent Agenda, a summary written report on the content of educational activities. The report shall substantially reflect the information contained in the attached sample report.

**SECTION 2 COST EFFECTIVE EDUCATION**

- A. **Limit for Attendance at Overnight Out-Of-Bay Area Educational Events.** Board member education should be obtained in a cost efficient manner minimizing costs wherever possible. Every Board member is authorized to attend conferences and education programs within the Bay Area, and programs sponsored by the State Association of County Retirement Systems (SACRS) and the California Association of Public Retirement Systems (CALAPRS). In addition, every Board member is authorized to attend up to two (2) approved out-of-Bay Area educational events requiring overnight stays per fiscal year. Multiple education providers provide similar educational opportunities and each Board member shall make every effort to obtain his or her education within California. Board members should not attend educational activities that conflict with regularly scheduled Board meetings.



- B. **Travel Expenses.** Travel expenses incurred by a Board member for education are subject to reimbursement by SamCERA in accordance with this policy and the Board’s “Policy For Reimbursement Of Travel And Other Official Expenses For Trustees.” Any international travel by a Board member must be placed on the Board’s regular agenda for the Board’s pre-approval. Costs for attendance at educational events that are not consistent with both policies will not be subject to reimbursement without Board approval.
- C. **Education through Electronic Means.** The Board further encourages members to participate to the fullest extent possible in approved taped and electronic delivery of educational opportunities.
- D. **Education Given by SamCERA Staff and Consultants.** Training provided by or arranged by the Chief Executive Officer, Chief Investment Officer, Chief Legal Counsel, and other SamCERA staff, the Board’s Medical Advisor, Actuary, Investment Consultant, Investment Managers shall satisfy the required education for the subject matters presented at such training and the required educational hours for the length of the training.
- E. **Education from Publications.** A Board member may count up to three hours towards his or her biannual education requirement by reading Pensions & Investments, the Public Retirement Journal, and/or the Wall Street Journal.
- F. **Education from On Site Visits.** A Board member may count up to three hours towards his or her biannual education requirement by accompanying staff on an onsite visit to a potential or existing investment consultant, manager or other SamCERA provider. Visits outside of the Bay Area requiring an overnight stay will count as an approved trip in accordance with Section 2 (A).

**SECTION 3. APPROVED EDUCATIONAL TOPIC AREAS AND PROGRAMS**

- A. **Educational Topic Areas.** Appropriate topics for Board member education, shall include two hours of Ethics Training consistent with Government Code §53234 and two hours of Sexual Harassment Prevention Training consistent with Government Code §53237.1 in a manner approved by the Chief Legal Counsel and, in accordance with Government Code §31522.8, may include but is not limited to, the following topics:
  - (1) Fiduciary responsibilities
  - (2) Ethics
  - (3) Pension fund investments and investment program management
  - (4) Actuarial matters
  - (5) Pension funding
  - (6) Benefits administration
  - (7) Disability evaluation
  - (8) Fair hearings
  - (9) Pension fund governance
  - (10) New board member orientation
- B. **Approved Educational Programs and Activities.** In addition to the SACRS and CALAPRS conferences and educational programs listed in Section 2 A, a Board member’s

attendance at and/or viewing or listening of recordings of one or more programs listed below shall satisfy the required education for the subject matters presented at such programs and the required educational hours for the length of the program. This list of programs is subject to annual review by the Board and shall be revised as determined by the Board.

- (1) International Foundation of Employee Benefit Plans (IFEBP)
- (2) Wharton investment management programs
- (3) Chartered Financial Analyst (CFA) Institute
- (4) National Conference on Public Employee Retirement Systems (NCPERS)
- (5) Institutional Limited Partner Association (ILPA) Institute (Educational Programs)

C. **Recommended Education for New Board members.** As part of a new Board member's orientation, staff will provide a recommended educational plan that best suits the Board member's educational needs for his or her first term.

D. **Special Request to attend Education Event.** In considering each request to attend a specified educational activity that is not authorized in Section 2B, the Board will consider if the overnight travel is appropriate and consistent with the intent of this policy and shall consider items such as:

- 1) Are the conference topics of current interest and importance and related to issues facing SamCERA?
- 2) Have reports from previous attendees been favorable regarding the content of the conference and the continuing value of future attendance?
- 3) Will the conference meet the educational needs of the attendee?
- 4) Can similar education be received from an already approved provider or that provider's on-line resources?
- 5) Does the cost of the event and overnight travel justify the benefits particularly if the conference is out of California?
- 6) How many overnight trips has the Board member attended and/or is planning on attending this fiscal year?

#### **SECTION 4. EDUCATIONAL EXPENSES FOR STAFF**

The Chief Executive Officer is authorized to approve the participation and associated travel of the Chief Executive Officer and staff in educational activities to the extent that the Chief Executive Officer finds that such participation will contribute to the staff member's ability to perform her or his duties and the budget provides funds for such activities.


Last amended 12/5/17

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
**Board of Retirement**

December 8, 2020

Agenda Item 4.11

**TO:** Board of Retirement

**FROM:** Scott Hood, Chief Executive Officer 

**SUBJECT:** Procedures for Auditing of Employer Data and Information Regarding Member Data

**Recommendation**

Reaffirm the “Board of Retirement Procedures for Auditing of Employer Data and Information to Determine Correctness of Member’s Retirement Benefits, Reportable Compensation, Enrollment in and Reinstatement to, the Retirement System.”

**Background**

In order to ensure that SamCERA’s participating employers provide accurate data to SamCERA, the Board is authorized by statute to audit the “books, papers, data or records, including, but not limited to, personnel and payroll records” of SamCERA employers for the purpose of determining “the correctness of retirement benefits, reportable compensation, and enrollment in, and reinstatement to, the system.” In addition, the Board may assess the employer costs of the audit, as well as the costs of any adjustment or correction, if the Board determines that the employer “knowingly failed” to comply with its legal responsibilities by (a) reporting compensation to SamCERA that the employer knew or should have known was not pensionable under statute, or (b) failed to identify the pay period in which compensation earnable was earned.

**Discussion:**

The Board’s procedure to audit of employer data and information provides several alternative methods to accomplish the audit. These approaches include:

- **Informal Requests.** Staff may make informal requests of the employer so as to resolve any issues related to individual or multiple member records, retirement benefits, reportable compensation, and enrollment in, and reinstatement to, the retirement system and/or compliance with applicable state or federal law.
- **Request for Special Audit Report.** If Staff believes that a reason exists, in addition to or as a follow up to the audit activities, to have a Special Audit of information, it may request the Board to authorize a Special Audit.
- **Annual Audit Approach.** Staff may, from time to time, request SamCERA’s independent auditor as part of, or in addition to its annual financial audit activities, to review employer data and reporting that may impact member’s

eligibility, contributions, membership, records, benefits, and/or compliance with applicable state or federal law.

Staff has always taken a proactive and ongoing cooperative approach with each of our employers to validate all member data. Staff participates in HR/Payroll Solution Committee meetings regarding any new pay items and contribution amounts and meets with the employers regarding any factors that may affect membership eligibility. And, if an issue arises, staff works with the employers to correct it.

In addition, our V3 pension administration software system automatically verifies member data as against the County and Court's payroll systems. Staff interfaces separately with the District's staff on any issues that may arise.

Staff is of the opinion that no amendments to the policy are necessary.

**Attachment**

Board of Retirement Procedure for Auditing of Employer Data and Information to Determine Correctness of Members' Retirement Benefits, Reportable Compensation, Enrollment in, and Reinstatement to, the Retirement System

**SAN MATEO COUNTY EMPLOYEES RETIREMENT ASSOCIATION  
BOARD OF RETIREMENT PROCEDURES FOR AUDITING OF EMPLOYER DATA AND INFORMATION TO  
DETERMINE CORRECTNESS OF MEMBERS' RETIREMENT BENEFITS, REPORTABLE COMPENSATION,  
ENROLLMENT IN, AND REINSTATEMENT TO, THE RETIREMENT SYSTEM**

**I. Purpose.**

By statute, the Board of Retirement is authorized to audit SamCERA employers to determine the correctness of member's retirement benefits, reportable compensation, enrollment in, and reinstatement to, the retirement system. (Government Code Sections 31542.5, 31543, 7522.72 and 7522.74.)

**II. Procedures.**

- A. Alternative Audit Approaches.** Staff may utilize one or more of the following approaches, as it deems appropriate, in order to determine the correctness of members' records, retirement benefits, reportable compensation, and enrollment in, and reinstatement to, the retirement system and/or compliance with applicable state or federal law. Verification of employer information and data may be periodically checked or performed on an as need basis. Similarly, issues concerning a specific member's compensation or specific compensation issues that may arise from time to time, Staff may conduct or cause to be conducted by an independent auditor, a specific audit of that issue. Issues regarding whether an element of compensation was paid to enhance a member's benefit will be handled in accordance with the "Board of Retirement Procedure for Assessment and Determination of Whether an Element of Compensation Was Paid to Enhance a Member's Benefit."
- B. Confidentiality.** To the extent that any confidential member or employer personnel information is presented, appropriate steps, in accordance with applicable law, will be taken by staff and the Board and the employer throughout the process to protect the confidentiality of information produced in any audit, staff reports, and discussion by or with the Board.
- C. Annual Audit Approach.** SamCERA may, from time to time, request SamCERA's independent auditor as part of, or in addition to its annual financial audit activities, to review employer data and reporting that may impact a member's eligibility, contributions, membership, records, benefits, and and/or compliance with applicable state or federal law.
- D. Informal Requests.** Staff may make informal requests of the employer so as to resolve any issues related to individual or multiple member records, retirement benefits, reportable compensation, and enrollment in, and reinstatement to, the retirement system and/or compliance with applicable state or federal law.
- E. Request For Special Audit Report.** If staff believes that reason exists, in addition to or as a follow up to the annual audit activities described in paragraph B, to have a Special

Audit of information, it may request that the Board authorize a Special Audit in accordance with Section III.

**III. Special Audit Procedure.**

- A. Request to the Board.** If Staff believes that a Special Audit is needed regarding information submitted by the employer with respect to member records, retirement benefits, reportable compensation, or enrollment in, and reinstatement to, the retirement system and/or compliance with applicable state or federal law, staff shall submit a written report to the Board setting forth the:
- (1) Reasons for the Special Audit, including a report as to prior informal requests of the employer so as to resolve any issues without a Special Audit.
  - (2) Books, papers, data, or records that should be provided by the employer in connection with the Special Audit, including but not limited to personnel and payroll records.
  - (3) Protocol that staff wishes to follow in conducting the Special Audit, including but not limited to who will conduct the audit and a proposed time and place.
  - (4) Estimated cost of the Special Audit, adjustment, and correction.
  - (5) Requested action by the Board in authorizing a Special Audit
  - (6) Any planned or potential follow on requests relating to adjustments or corrections by the employer that may be required as a result of such audit.
- B. Copy of Special Audit Request and Employer Response.** Staff shall send a copy of its Special Audit request to the employer at least 15 days prior to the Board meeting. Any response to the report should be submitted by the employer at least 5 days prior to the meeting.
- C. Opportunity to address the Board.** Staff and the employer will both be given an opportunity at the meeting to address the Board with respect to Staff's request.
- D. Approval of Special Audit Request.** If the Board approves staff's request for an audit, the employer will be informed of the Board's decision. The audit will then be conducted in accordance with the parameters established by the Board.
- E. Written Report of Special Audit Result.** Upon completion of the audit, staff will provide to the Board a written report of the audit results and the conclusions of the auditor and staff. A copy of the report will be provided to the employer at least 15 days prior to any Board discussion or action. Any response to the report should be submitted by the employer at least 5 days prior to the meeting.
- F. Cost of Special Audit and Corrective Action.** The Board may assess the employer costs of the audit, as well as the costs of any adjustment or correction, if the Board determines that the employer knowingly failed to comply with its legal responsibilities under the new law by (a) reporting compensation to SamCERA that the employer knew or should have known was not compensation earnable as defined in the 1937 Act, or (b) failed to identify to SamCERA the pay period in which compensation earnable was earned. The Board may further determine if other Board action should be taken as a result of the audit.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

RESOLUTION 12-13-06

**RESOLUTION APPROVING AMENDMENT OF REGULATION 4.14  
OF ARTICLE IV OF THE BOARD OF RETIREMENT REGULATIONS  
REQUIRED BREAK IN SERVICE PRIOR TO POST RETIREMENT EMPLOYMENT**

WHEREAS, Government Code §31525 provides that this Board, with the approval of the Board of Supervisors, may establish regulations that govern the operation of *SamCERA* that are not inconsistent with the California Employees' Retirement Law of 1937; and

WHEREAS, Board of Retirement regulation 4.14 sets forth certain requirements for *SamCERA* members who wish to return to employment with a *SamCERA* employer after retirement; and

WHEREAS, the provisions contained in regulation 4.14 requiring a break in service reflect certain requirements as set forth by the Internal Revenue Service; and

WHEREAS, in 2012, the California Public Employees' Pension Reform Act was enacted and it mandates additional requirements that must be met prior to a retired member becoming reemployed by a *SamCERA* employer, and regulation 4.14 has been amended to reflect such requirements; and

WHEREAS, the Board has reviewed the amendment to regulation 4.1 which incorporates these changes in state statute and desires to adopt such amendment;

THEREFORE BE IT RESOLVED, that the Board hereby amends regulation 4.14 of Article 4 of the Regulations of the Board of Retirement to read as follows:

**4.14 Required Break In Service Prior to Post Retirement Employment.** Regardless of a member's age, every member who is reemployed by a *SamCERA* employer consistent with the terms of Government Code section 7522.56, or any amendments thereto, shall have a 180-day break in service from the date of retirement to the commencement of the reemployment. If a member is reemployed within the 180 days, pursuant to Government Code section 7522.56, and the member retired at an age younger than normal retirement age, as defined in section 4.12, there must be at least a continuous 90-day break in service from the date of the member's retirement prior to such reemployment unless such reemployment is to respond to an emergency declared by a government agency or an emergency that may prevent the stoppage of public business.

\* \* \* \* \*

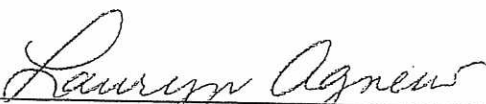
*Regularly passed and adopted, by the San Mateo County Employees' Retirement Association, Board of Retirement, on October 23, 2012.*

*Ayes, Trustees: Arnott, Agnew, Bowler, David, Hackleman, Kwan Lloyd, Settles, Spinello, Tashman*

*Noes, Trustees:*

*Absent, Trustees:*

*Abstain, Trustees:*


  
\_\_\_\_\_  
Lauryn Agnew, Board Secretary  
*SamCERA*

**SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**  
**Board of Retirement**

December 8, 2020

Agenda Item 4.12

**TO:** Board of Retirement

**FROM:** Scott Hood, Chief Executive Officer 

**SUBJECT:** Board Procedure for Assessment of Compensation

**Recommendation**

Reaffirm the "Board Procedures for Assessment and Determination of Whether an Element of Compensation Was Paid to Enhance a Member's Pension Benefit."

**Background**

Pursuant to state law, the Board adopted a procedure to analyze whether an element of compensation was paid to enhance a member's pension, if so to exclude it from the pension. If the Board determines to exclude it, the member and/or employer may seek judicial review.

**Discussion**

The Board's procedure provides that staff make an initial assessment as to whether any item of compensation was paid to enhance a member's pension. Factors to be considered include, for example, whether it was a one-time ad hoc payment paid only to the member, or whether similarly situated members received the same element of compensation during the same period. Staff considers explanations provided by the member and the employer as to the circumstances of the payment.

If staff determines to exclude the compensation item, the employer and member can request the Chief Executive Officer to decide. If the Chief Executive Officer confirms that it should be excluded, the member and the employer may bring the matter to the Board. If the Board excludes the pay item, either the member or the employer, or both, may seek judicial review.

Staff educates our employers regarding what pay items are includable and what is not. On an ongoing basis, staff participates in HR/Payroll Solution Committee meetings and our new pension administration software system automatically rejects unauthorized payroll items. Accordingly, these matters are, for the most part prevented. For those issues that arise just prior to retirement, staff addresses and resolves them during the member's record review.

Staff is of the opinion that no amendments to the policy are necessary.

**Attachment**

Board Procedures for Assessment and Determination of Whether an Element of Compensation Was Paid to Enhance a Member's Pension Benefit



**SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**

**BOARD OF RETIREMENT PROCEDURE FOR ASSESSMENT AND  
DETERMINATION OF WHETHER AN ELEMENT OF COMPENSATION WAS PAID  
TO ENHANCE A MEMBER'S PENSION BENEFIT**

**I. BACKGROUND**

Pursuant to Government Code Section 31542, the Board of Retirement is required to adopt a procedure for assessing and determining whether an element of compensation was paid to enhance a member's retirement benefit, and if the Board determines that it was paid to enhance a benefit, to provide a process for the member or the employer to seek review of the Board's determination.

**II. FACTORS TO BE CONSIDERED IN STAFF REVIEW**

With respect to all retirement applications with an effective date of retirement on or after January 1, 2013, Staff shall review all compensation included within the calculation of the member's final compensation within the meaning of the following Government Code sections: 7522.32 (final compensation PEPRA Plan); 7522.34 (pensionable compensation PEPRA Plan); 31461 (compensation earnable); 31462 (final compensation), 31462.1 (final compensation -1 year period), 31462.11 (final compensation -1 year period); and 31462.2 (final compensation 3 year period), as applicable. This review will be for the purpose of making an initial assessment as to whether any item of compensation included in final compensation was paid to enhance a member's retirement benefit.

- A. **Non-PEPRA Plan Members.** For all members commencing employment before January 1, 2013, and those members who commence employment after that date who are not members of the PEPRA Plan, the determination can be guided by Government Code §31461(b) which provides that compensation earnable, shall not include in any case the following:
1. Any compensation determined by the Board to have been paid to enhance a member's retirement benefit under that system. That compensation may include:
    - (a) Compensation that had previously been provided in kind to the member by the employer or paid directly by the employer to a third party other than the retirement system for the benefit of the member, and which was converted to and received by the member in the form of a cash payment in the final average salary period.
    - (b) Any one-time or ad hoc payment made to a member, but not to all similarly situated members in the member's grade or class.

(c) Any payment that is made solely due to the termination of the member's employment, but is received by the member while employed, except those payments that do not exceed what is earned and payable in each 12-month period during the final average salary period regardless of when reported or paid.

2. Payments for unused vacation, annual leave, personal leave, sick leave, or compensatory time off, however denominated, whether paid in a lump sum or otherwise, in an amount that exceeds that which may be earned and payable in each 12-month period during the final average salary period, regardless of when reported or paid.
3. Payments for additional services rendered outside of normal working hours, whether paid in a lump sum or otherwise.
4. Payments made at the termination of employment, except those payments that do not exceed what is earned and payable in each 12-month period during the final average salary period, regardless of when reported or paid.

B. **PEPRA Plan Members.** For all members commencing employment on or after January 1, 2013, who are members of the PEPRA Plan, the determination can be governed by Government Code §7522.34, which provides that pensionable compensation does not include the following:

1. Any compensation determined by the Board to have been paid to increase a member's retirement benefit.
2. Compensation that had previously been provided in kind to the member by the employer or paid directly by the employer to a third party other than the retirement system for the benefit of the member and which was converted to and received by the member in the form of a cash payment.
3. Any one-time or ad hoc payments made to a member.
4. Severance or any other payment that is granted or awarded to a member in connection with or in anticipation of a separation from employment, but is received by the member while employed.
5. Payments for unused vacation, annual leave, personal leave, sick leave, or compensatory time off, however denominated, whether paid in a lump sum or otherwise, regardless of when reported or paid.
6. Payments for additional services rendered outside of normal working hours, whether paid in a lump sum or otherwise.
7. Any employer-provided allowance, reimbursement, or payment, including, but not limited to, one made for housing, vehicle, or uniforms.

8. Compensation for overtime work, other than as defined in Section 207(k) of Title 29 of the United States Code.
9. Employer contributions to deferred compensation or defined contribution plans.
10. Any bonus paid in addition to the compensation described in subdivision (a) of Government Code §7522.34.
11. Any other form of compensation the Board determines is inconsistent with the requirements of 7522.34 (a).
12. Any other form of compensation that this Board determines should not be pensionable compensation.

C. **All Members.** In addition to the factors listed above, Staff shall consider one or more of the following factors:

1. Whether the earnings codes reported are in accordance with the Board resolutions defining "Compensation Earnable" and "Pensionable Compensation" and the statutes cited in this policy, and any amendments thereto, and other applicable statutory or case law.
2. Whether the item of compensation was earned or received within the period during which final compensation is to be calculated.
3. Whether the item of compensation was earned or received at any other time during the member's employment outside of the final compensation period and, if so how frequently;
4. Whether similarly situated members received the same element of compensation for the same period(s) of time.
5. Whether the member was entitled to receive the item of compensation pursuant to a collective bargaining agreement that was subsequently deferred or otherwise modified as a result of a negotiated amendment of that agreement. *(If so, the pay item shall not be deemed to have been paid to enhance a member's retirement benefit. Pursuant to Government code section 31542(c).)*
6. The percentage increase to the member's pension due to the inclusion of the pay item.
7. Information and explanation provided by the member and the employer in response to SamCERA's request as to the facts and circumstances concerning an item of compensation that staff believes may have been paid to enhance the member's retirement benefit.

8. Any other factors that cause staff to believe that an item of compensation included in final compensation was paid to enhance a member's retirement benefit.

### III. PROCESS:

#### A. Initial Staff Review:

After the member has elected the year or years, if applicable, to be used to determine a member's final compensation, Staff shall make an initial assessment of whether any item of compensation included in final compensation period was paid to enhance a member's retirement benefit.

#### B. Staff Decision.

1. **Initial determination and processing of benefit.** If Staff initially determines that the item of compensation was paid to enhance a member's benefit and payment of the member's benefit would be delayed by seeking resolution through the administrative processes set forth below, Staff may process the benefit excluding the compensation in question. If it is later determined the compensation should be included, Staff will adjust the benefit retroactive to the effective retirement date.
2. **Notice of Initial Staff Determination.** Staff shall notify the member and the employer (if it is the County, the member's department head will be notified) of its initial determination to exclude an item of compensation on the basis that it was paid to enhance a member's retirement benefit. The notification shall include the reasons for the determination.
3. **Written response to Staff Determination.** The member and the employer shall have 15 days to respond to staff regarding its initial determination. If the member and or employer disagree with the determination, either or both shall submit a written response to the Chief Executive Officer setting forth the reasons why the item of compensation was not paid to enhance the member's retirement benefit.

#### C. Response To Staff Decision By Member and or Employer.

4. **No Response Submitted.** If no response by the member or the employer to Staff's initial determination is received, Staff shall present a report with a recommendation to the Board for its approval to exclude the item on the basis that it was to enhance the member's benefit. The report shall contain a description of the reasons for staff's recommendation, including the specific facts and circumstances supporting staff's recommendation. It shall also set forth information, if any, received from the member and or employer.
5. **Response Submitted.** If a response is received, and after a review by the Chief Executive Officer, or designee, it is Staff's final determination that the pay item

should be excluded on the basis that it was to enhance the member's benefit, Staff shall prepare a report to be presented to the Board for its approval. The report shall contain a description of the reasons for staff's recommendation, including the specific facts and circumstances supporting staff's recommendation. It shall also set forth the response received by the member and or employer.

6. **Notice of Recommendation to the Board.** For any matter that is to be presented to the Board, Staff shall provide written notice of the Board meeting and a copy of staff's report to the member and the employer, no later than 10 days before the recommendation is presented to the Board for action.

C. **Decision by the Board of Retirement.**


1. **Opportunity to be heard.** Before the Board acts, Staff, the member, and the employer shall be given an opportunity to be heard by the Board.
2. **Finding that Compensation Item Should be Included.** If the Board finds the item of compensation should be included, staff will adjust the member's benefit to include said item, retroactive to the effective date of retirement.
3. **Finding that Compensation Item Should Not be Included.** If the Board finds that the item of compensation was paid to enhance a member's retirement benefit, Staff shall provide written notice of that determination to the member and employer. The member or the employer may obtain judicial review of the Board's action by filing a petition for writ of mandate within 30 days of the mailing of the notice. If a writ of mandate is not sought and or obtained, the Board's decision shall become final and binding.

**SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**  
**Board of Retirement**

December 8, 2020

Agenda Item 6.1

**TO:** Board of Retirement

**FROM:** Michael Coultrip, Chief Investment Officer 

**SUBJECT:** Preliminary Monthly Portfolio Performance Report for the Period Ended October 31, 2020

**Recommendation**

Accept the preliminary performance report dated October 31, 2020.

**Background**

This preliminary report is intended to provide a high-level view of the portfolio and its trends. It is not intended to provide short-term performance upon which the Board would act. The quarterly performance metrics are not yet available for our private equity, private credit, private real asset, and real estate portfolios. The performance for these portfolios will be reflected in the quarterly performance report generated by Verus.

The attached performance report shows both net and gross of fee returns for the total plan on page one, with net composite returns (pages 2-3) and net manager returns (pages 4-11) also shown.

**Discussion**

The fund's net preliminary return for October was 1.0%, bringing the preliminary trailing twelve-month net return ending October 2020 to 4.3%. The preliminary twelve-month net return is above SamCERA's Plan Benchmark return of 4.1% but below SamCERA's Actuarial Assumed Earnings Rate of 6.5%.

Global markets continued their pull back in a volatile October, which saw the general U.S. equity market increase early in the month only to reverse course and end down for the month. Uncertainty around the U.S. elections, coupled with higher global COVID-19 cases, contributed to the volatility. The U.S. equity market (measured by the S&P 500 Index) was down 2.7% (+2.8% YTD). Small-cap stocks were up 2.1% (-6.8% YTD). International markets were also mixed on the month. Developed international equity (as measured by MSCI EAFE) was down 4.0% (-10.8% YTD), while emerging markets were up 2.1% (+0.9% YTD).

Economic data was generally positive, with real U.S. GDP growing by an annualized 33.1% in the third quarter, almost offsetting the massive 31.4% decline that occurred in the second quarter. The ISM Manufacturing Index increased while improvement in the U.S. labor market continued to slow. However, consumer confidence declined in October.

The general U.S. fixed income market was lower by 0.4% as interest rates rose and the yield curve steepened. The 10-year U.S. Treasury yield was higher by 15 basis points during the month and ended at 0.84% by month-end. High Yield returns were up 0.5% as credit spreads narrowed.

**Attachments**

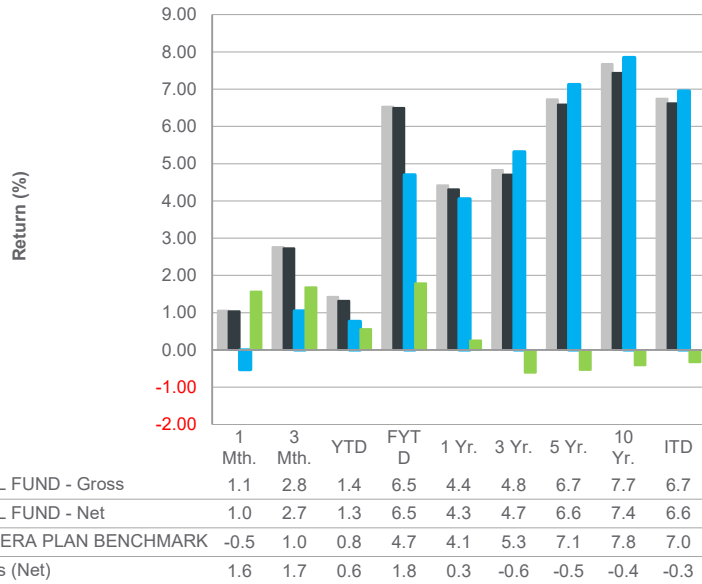
Northern Trust Monthly Preliminary Performance Report  
Verus Capital Market Update

# San Mateo County Composite Return Summary

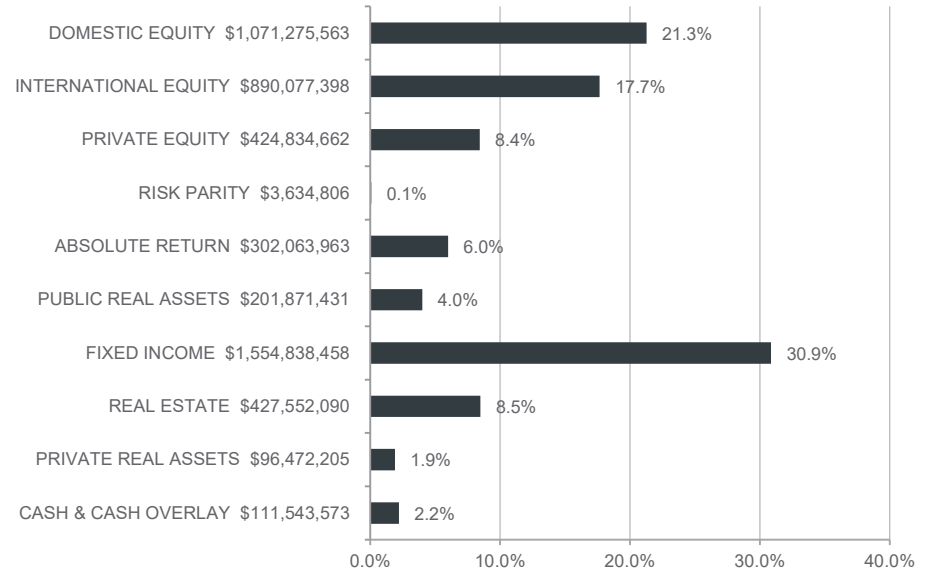
October 31, 2020



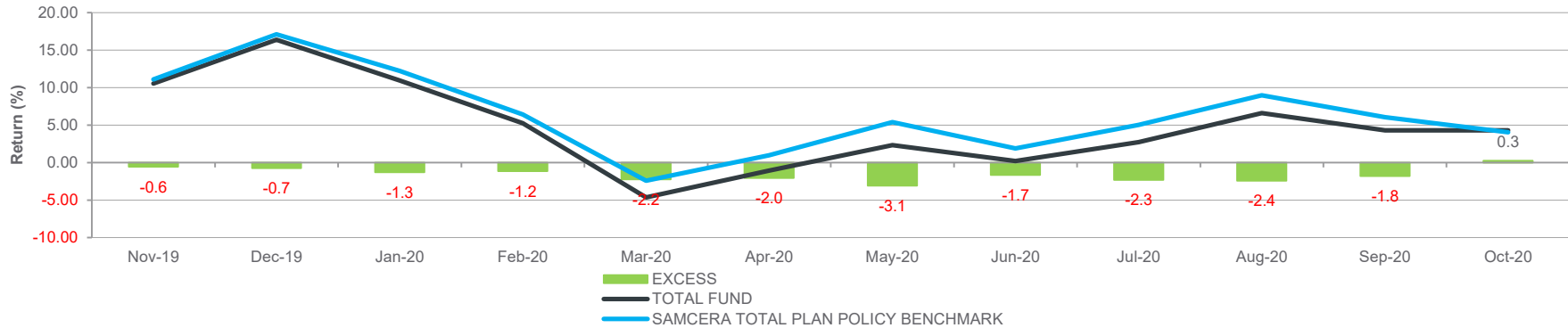
**Total Fund Performance**



**Asset Allocation**



**Rolling Month End Annual Returns**



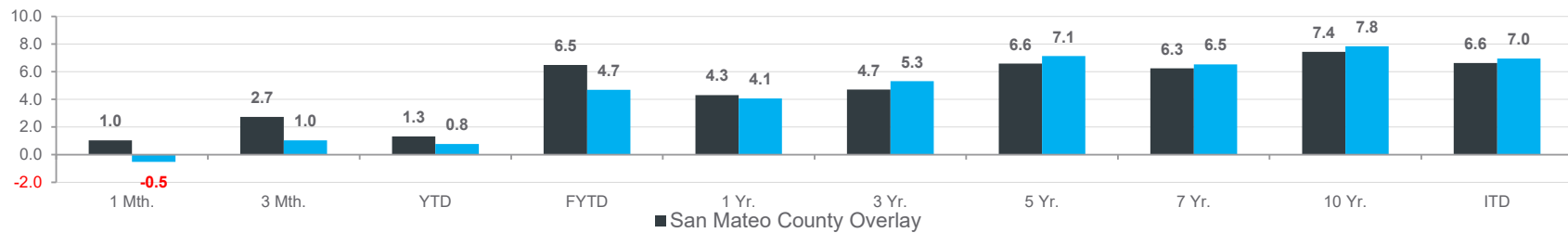


# San Mateo County Composite Return Summary

October 31, 2020



Return Comparison



Composite Returns (Net of Manager Fees)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
San Mateo County Overlay	5,037,874,533	1.0	2.7	1.3	6.5	4.3	4.7	6.6	6.3	7.4	6.6
Samcera Total Plan Benchmark		-0.5	1.0	0.8	4.7	4.1	5.3	7.1	6.5	7.8	7.0
Excess		1.6	1.7	0.6	1.8	0.3	-0.6	-0.5	-0.3	-0.4	-0.3
San Mateo Ex-Clifton Overlay	5,026,671,544	1.0	2.7	1.3	6.5	4.3	4.6	6.5	6.1	7.4	6.5
Samcera Total Plan Benchmark		-0.5	1.0	0.8	4.7	4.1	5.3	7.1	6.5	7.8	7.0
Excess		1.6	1.7	0.6	1.8	0.2	-0.7	-0.6	-0.4	-0.5	-0.4
Total Equity	1,961,352,960	-1.5	1.0	-2.1	5.4	3.5	5.0	8.1	7.3	8.9	7.6
Samcera Total Equity Benchmark		-2.2	0.7	-1.5	5.1	4.4	5.4	9.0	8.3	9.8	8.2
Excess		0.7	0.3	-0.6	0.3	-0.9	-0.4	-0.9	-1.0	-0.9	-0.6
Fixed Income	1,554,838,458	-0.1	0.6	4.4	2.2	5.0	4.4	5.0	4.3	4.7	5.5
Samcera Fixed Income Benchmark		-0.2	-1.0	4.7	1.4	5.3	4.9	4.6	4.0	3.8	5.1
Excess		0.1	1.5	-0.4	0.7	-0.3	-0.5	0.3	0.3	0.9	0.4
Risk Parity	3,634,806	0.0	-0.0	-8.5	-0.0	-7.1	2.1	5.2	4.8	--	5.3
Samcera Risk Parity Benchmark		-1.8	-0.2	1.9	4.0	5.4	5.6	7.5	7.4	--	8.1
Excess		1.8	0.2	-10.4	-4.0	-12.5	-3.5	-2.2	-2.7	--	-2.8

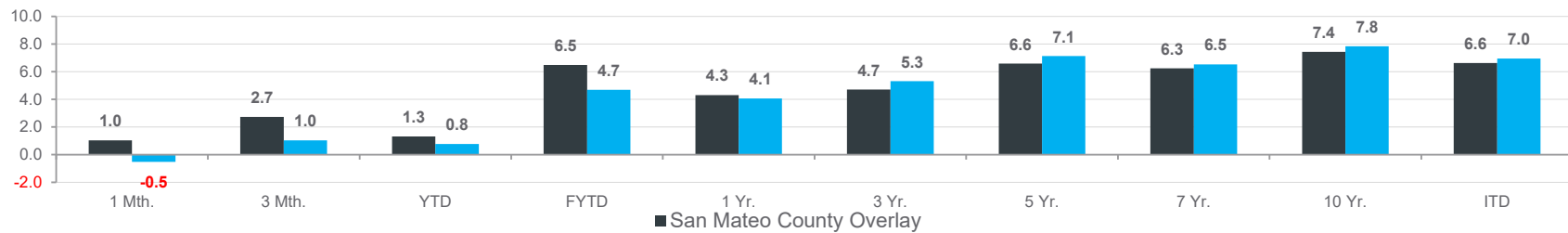


# San Mateo County Composite Return Summary

October 31, 2020



Return Comparison



Composite Returns (Net of Manager Fees)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
Alternatives	726,898,625	14.7	18.6	28.3	32.2	28.7	12.4	10.2	9.0	-1.5	0.1
Samcera Alternatives Benchmark		3.1	7.6	9.5	14.9	10.1	9.6	9.9	8.3	9.2	8.0
Excess		11.6	11.0	18.8	17.3	18.6	2.8	0.3	0.6	-10.7	-8.0
Inflation Hedge	725,895,726	-0.2	0.2	-10.5	1.5	-8.8	-1.2	--	--	--	2.9
SamCERA Inflation Hedge Index		0.1	0.9	-5.0	2.8	-2.7	2.1	--	--	--	4.4
Excess		-0.3	-0.7	-5.5	-1.3	-6.1	-3.3	--	--	--	-1.5
Cash	111,543,573	0.1	0.1	0.7	0.3	0.9	1.0	0.9	0.8	0.7	1.8
Samcera Cash Benchmark		0.0	0.0	0.6	0.0	0.9	1.7	1.2	0.9	0.6	1.8
Excess		0.1	0.1	0.0	0.2	-0.1	-0.7	-0.3	-0.1	0.1	0.0



**San Mateo County**  
**Composite Return Summary**  
 October 31, 2020



<b>Composite Returns (NET)</b>	<b>Market Value (\$)</b>	<b>1 Mth.</b>	<b>3 Mth.</b>	<b>YTD</b>	<b>FYTD</b>	<b>1 Yr.</b>	<b>3 Yr.</b>	<b>5 Yr.</b>	<b>7 Yr.</b>	<b>10 Yr.</b>	<b>ITD</b>
Total Equity	1,961,352,960	-1.5	1.0	-2.1	5.4	3.5	5.0	8.1	7.3	8.9	7.6
Samcera Total Equity Benchmark		-2.2	0.7	-1.5	5.1	4.4	5.4	9.0	8.3	9.8	8.2
Excess		0.7	0.3	-0.6	0.3	-0.9	-0.4	-0.9	-1.0	-0.9	-0.6
Domestic Equity	1,071,275,563	-1.5	0.4	-0.7	5.6	5.3	7.9	10.2	9.8	11.7	8.6
Samcera Dom. Equity Benchmark		-2.2	1.1	3.1	6.9	10.1	10.0	11.5	10.9	12.7	9.2
Excess		0.6	-0.7	-3.8	-1.2	-4.8	-2.1	-1.3	-1.1	-1.0	-0.5
Large Cap Equity	988,428,868	-1.8	0.3	0.7	5.6	6.8	9.0	11.0	10.9	12.3	9.4
Russell 1000		-2.4	0.9	3.8	6.8	10.9	10.6	11.8	11.5	13.0	9.9
Excess		0.6	-0.7	-3.2	-1.2	-4.1	-1.6	-0.8	-0.6	-0.8	-0.5
Blackrock Russell 1000	476,905,082	-2.0	1.3	4.4	7.2	11.4	10.8	--	--	--	12.6
Russell 1000		-2.4	0.9	3.8	6.8	10.9	10.6	--	--	--	12.4
Excess		0.4	0.4	0.5	0.4	0.6	0.2	--	--	--	0.2
DE Shaw Commingled Fund	161,243,831	-1.7	0.9	0.5	6.3	6.8	8.2	11.1	--	--	10.4
Russell 1000		-2.4	0.9	3.8	6.8	10.9	10.6	11.8	--	--	10.5
Excess		0.7	-0.0	-3.3	-0.5	-4.1	-2.4	-0.7	--	--	-0.0
Acadian US MGD V-SL	170,949,452	-2.3	-1.9	-8.0	2.0	-3.1	--	--	--	--	9.0
Russell 1000		-2.4	0.9	3.8	6.8	10.9	--	--	--	--	18.8
Excess		0.1	-2.8	-11.9	-4.8	-13.9	--	--	--	--	-9.9
Panagora Defuseq -SL	179,330,502	-0.9	-1.4	-5.3	3.7	-1.5	--	--	--	--	12.7
Russell 1000		-2.4	0.9	3.8	6.8	10.9	--	--	--	--	18.8
Excess		1.5	-2.3	-9.1	-3.2	-12.3	--	--	--	--	-6.2
Domestic Equity Overlay	6,971,330	4.8	1.5	--	7.6	--	--	--	--	--	25.5
ICE BofAML US 3-Month Treasury Bill		0.0	0.0	--	0.0	--	--	--	--	--	0.1
Excess		4.8	1.4	--	7.5	--	--	--	--	--	25.4
Small Cap Equity	75,875,365	2.5	0.9	-17.5	4.7	-12.5	-3.8	2.1	2.0	6.9	5.1
Russell 2000		2.1	4.2	-6.8	7.1	-0.1	2.2	7.3	6.4	9.6	7.3
Excess		0.4	-3.3	-10.7	-2.4	-12.4	-6.0	-5.1	-4.4	-2.8	-2.1



# San Mateo County Composite Return Summary

October 31, 2020



Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
QMA US Small Cap	75,875,365	2.5	0.9	-17.5	4.7	-12.5	-3.8	--	--	--	2.7
Russell 2000		2.1	4.2	-6.8	7.1	-0.1	2.2	--	--	--	6.8
Excess		0.4	-3.3	-10.7	-2.4	-12.4	-6.0	--	--	--	-4.1
International Equity	890,077,398	-1.5	1.7	-3.8	5.2	1.4	1.6	5.3	3.6	4.1	5.3
SamCERA Custom Hedge Intl		-2.3	0.1	-7.0	3.1	-2.3	-0.1	4.5	2.6	3.6	4.7
Excess		0.8	1.6	3.3	2.1	3.7	1.7	0.8	1.0	0.5	0.6
Baillie Gifford	308,057,711	-0.6	5.8	13.6	12.5	22.0	8.9	10.4	7.8	--	9.4
MSCI ACWI ex USA Growth		-1.7	1.4	5.7	8.3	11.8	6.2	8.6	6.1	--	--
Excess		1.1	4.3	7.9	4.2	10.2	2.7	1.8	1.6	--	--
Blackrock MSCI ACWI ex US IMI	304,725,095	-2.2	-0.1	--	4.3	--	--	--	--	--	0.9
MS AC WldxUS IMI Nt		-2.2	-0.1	--	4.4	--	--	--	--	--	1.2
Excess		-0.0	0.0	--	-0.1	--	--	--	--	--	-0.3
Mondrian Investment Partners	271,317,137	-1.7	-1.5	-17.6	1.8	-12.9	-4.0	1.2	0.5	2.4	4.0
MSCI ACWI xUSA Value		-2.6	-2.3	-19.3	-0.2	-15.5	-5.8	0.8	-0.6	1.5	3.6
Excess		0.8	0.9	1.7	2.0	2.6	1.8	0.4	1.2	1.0	0.4
Currency Hedge Futures	311,172,129	-0.1	-0.5	--	3.2	--	--	--	--	--	4.6
ICE BofAML US 3-Month Treasury Bill		0.0	0.0	--	0.0	--	--	--	--	--	0.1
Excess		-0.1	-0.6	--	3.1	--	--	--	--	--	4.5
Currency Hedge Futures Offsets	311,172,129	0.0	0.0	--	0.0	--	--	--	--	--	0.0
ICE BofAML US 3-Month Treasury Bill		0.0	0.0	--	0.0	--	--	--	--	--	0.1
Excess		-0.0	-0.0	--	-0.0	--	--	--	--	--	-0.1
International Equity Overlay	5,977,455	-4.3	-3.5	--	6.5	--	--	--	--	--	19.5
ICE BofAML US 3-Month Treasury Bill		0.0	0.0	--	0.0	--	--	--	--	--	0.1
Excess		-4.3	-3.5	--	6.4	--	--	--	--	--	19.4
Fixed Income	1,554,838,458	-0.1	0.6	4.4	2.2	5.0	4.4	5.0	4.3	4.7	5.5
Samcera Fixed Income Benchmark		-0.2	-1.0	4.7	1.4	5.3	4.9	4.6	4.0	3.8	5.1
Excess		0.1	1.5	-0.4	0.7	-0.3	-0.5	0.3	0.3	0.9	0.4



# San Mateo County Composite Return Summary

October 31, 2020



Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
Core Fixed Income	1,054,099,856	-0.5	-0.8	5.7	0.8	6.2	4.6	4.5	4.2	4.3	5.4
BBG Barclays US Aggregate		-0.4	-1.3	6.3	0.2	6.2	5.1	4.1	3.8	3.6	5.0
Excess		-0.1	0.5	-0.6	0.7	-0.0	-0.4	0.4	0.4	0.7	0.3
FIAM B Core Bond	267,082,859	-0.4	-0.9	8.0	1.1	8.2	5.9	--	--	--	5.2
BBG Barclays US Aggregate		-0.4	-1.3	6.3	0.2	6.2	5.1	--	--	--	4.1
Excess		0.0	0.4	1.7	0.9	2.0	0.8	--	--	--	1.1
Western Total Return	181,849,907	0.1	0.2	2.3	2.5	4.4	3.5	4.7	--	--	4.5
BBG Barclays US Aggregate		-0.4	-1.3	6.3	0.2	6.2	5.1	4.1	--	--	4.0
Excess		0.5	1.5	-4.0	2.3	-1.8	-1.6	0.6	--	--	0.5
Blackrock Inter Gov	140,041,237	-0.4	-0.4	5.8	-0.1	5.5	4.1	--	--	--	3.6
BBG Barclays US Aggregate		-0.4	-1.3	6.3	0.2	6.2	5.1	--	--	--	4.9
Excess		0.1	0.9	-0.5	-0.3	-0.7	-0.9	--	--	--	-1.2
DoubleLine	228,373,482	-1.1	-1.2	--	0.6	--	--	--	--	--	4.2
BBG Barclays US Aggregate		-0.4	-1.3	--	0.2	--	--	--	--	--	2.5
Excess		-0.7	0.2	--	0.5	--	--	--	--	--	1.8
NISA Core Bond	203,411,541	-0.4	-1.2	--	0.3	--	--	--	--	--	1.9
BBG Barclays US Aggregate		-0.4	-1.3	--	0.2	--	--	--	--	--	1.3
Excess		0.0	0.1	--	0.1	--	--	--	--	--	0.6
Core Fixed Income Overlay	33,340,831	-1.2	-2.1	--	-1.5	--	--	--	--	--	-0.9
ICE BofAML US 3-Month Treasury Bill		0.0	0.0	--	0.0	--	--	--	--	--	0.1
Excess		-1.2	-2.1	--	-1.5	--	--	--	--	--	-0.9
Opportunistic Credit	500,738,602	0.7	3.5	1.6	5.0	2.8	4.0	6.1	5.6	7.2	8.2
BB Barc BA Intermediate HY Ind		0.4	-0.3	3.1	4.1	4.9	5.0	5.9	5.3	6.1	7.1
Excess		0.3	3.7	-1.5	0.9	-2.1	-1.0	0.2	0.3	1.1	1.1
Pimco Private Income	41,573,262	5.2	12.8	7.9	12.8	10.6	--	--	--	--	6.9
BB Barc BA Intermediate HY Ind		0.4	-0.3	3.1	4.1	4.9	--	--	--	--	6.5
Excess		4.8	13.1	4.8	8.7	5.7	--	--	--	--	0.4



**San Mateo County**  
**Composite Return Summary**  
 October 31,2020



Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
AG CREDIT SOL FU LP	9,700,337	0.0	6.6	13.3	6.6	--	--	--	--	--	13.3
BB Barc BA Intermediate HY Ind		0.4	-0.3	3.1	4.1	--	--	--	--	--	3.1
Excess		-0.4	6.9	10.1	2.5	--	--	--	--	--	10.1
AG CSF ANX DISLOC FD	17,978,102	0.0	5.9	--	5.9	--	--	--	--	--	6.0
BB Barc BA Intermediate HY Ind		0.4	-0.3	--	4.1	--	--	--	--	--	14.6
Excess		-0.4	6.2	--	1.9	--	--	--	--	--	-8.7
AG Opportunistic Whole Loan	2,684,391	0.0	9.2	-15.1	9.2	-12.1	9.8	9.9	--	--	7.4
BB Barc BA Intermediate HY Ind		0.4	-0.3	3.1	4.1	4.9	5.0	5.9	--	--	5.1
Excess		-0.4	9.5	-18.3	5.2	-17.0	4.8	4.0	--	--	2.3
Angelo Gordon	190,791	0.0	59.4	36.7	59.4	39.8	31.3	22.2	19.0	--	18.0
BB Barc BA Intermediate HY Ind		0.4	-0.3	3.1	4.1	4.9	5.0	5.9	5.3	--	5.4
Excess		-0.4	59.7	33.6	55.4	34.9	26.2	16.3	13.7	--	12.6
Blackrock Direct Lending Feede	4,753,490	0.0	5.6	-2.3	5.6	-2.3	--	--	--	--	-1.6
BB Barc BA Intermediate HY Ind		0.4	-0.3	3.1	4.1	4.9	--	--	--	--	7.1
Excess		-0.4	5.9	-5.4	1.6	-7.2	--	--	--	--	-8.7
Beach Point Select Fund	78,781,590	1.1	8.0	5.0	8.0	6.8	5.9	7.3	--	--	7.5
BB Barc BA Intermediate HY Ind		0.4	-0.3	3.1	4.1	4.9	5.0	5.9	--	--	5.4
Excess		0.7	8.2	1.9	3.9	1.9	0.9	1.4	--	--	2.1
Brigade Cap Mngmt	90,057,540	0.6	3.2	-0.6	6.8	-0.6	1.5	5.1	3.4	5.2	5.5
BB Barc BA Intermediate HY Ind		0.4	-0.3	3.1	4.1	4.9	5.0	5.9	5.3	6.1	6.5
Excess		0.2	3.5	-3.7	2.8	-5.5	-3.5	-0.8	-1.9	-1.0	-1.1
White Oak Yield Spec	34,184,024	0.0	2.7	4.1	2.7	5.5	7.5	--	--	--	--
BB Barc BA Intermediate HY Ind		0.4	-0.3	3.1	4.1	4.9	5.0	--	--	--	5.5
Excess		-0.4	2.9	1.0	-1.4	0.6	2.4	--	--	--	--
PIMCO Div. Income Fund	128,489,493	-0.0	-0.3	1.8	2.7	2.9	4.5	--	--	--	4.6
BB Barc BA Intermediate HY Ind		0.4	-0.3	3.1	4.1	4.9	5.0	--	--	--	5.0
Excess		-0.5	-0.1	-1.3	-1.4	-2.0	-0.5	--	--	--	-0.4



# San Mateo County Composite Return Summary

October 31, 2020



Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
TCP Direct Lending VIII	33,878,678	-0.0	3.0	3.4	3.0	4.0	5.6	--	--	--	--
BB Barc BA Intermediate HY Ind		0.4	-0.3	3.1	4.1	4.9	5.0	--	--	--	6.1
Excess		-0.4	3.3	0.3	-1.1	-0.9	0.6	--	--	--	--
Franklin Templeton	58,466,904	0.3	-0.5	-7.8	-0.1	-6.4	-2.5	0.6	0.3	--	2.3
BB Barclays Multiverse Index		0.1	-0.4	5.4	2.8	5.3	4.2	4.0	2.4	--	2.7
Excess		0.2	-0.0	-13.2	-2.9	-11.8	-6.7	-3.4	-2.1	--	-0.4
Risk Parity	3,634,806	0.0	-0.0	-8.5	-0.0	-7.1	2.1	5.2	4.8	--	5.3
Samcera Risk Parity Benchmark		-1.8	-0.2	1.9	4.0	5.4	5.6	7.5	7.4	--	8.1
Excess		1.8	0.2	-10.4	-4.0	-12.5	-3.5	-2.2	-2.7	--	-2.8
Panagora	3,634,806	0.0	0.0	-5.2	0.0	-5.5	2.7	5.8	--	--	5.2
Samcera Risk Parity Benchmark		-1.8	-0.2	1.9	4.0	5.4	5.6	7.5	--	--	6.8
Excess		1.8	0.2	-7.1	-4.0	-10.9	-2.9	-1.6	--	--	-1.7
Alternatives	726,898,625	14.7	18.6	28.3	32.2	28.7	12.4	10.2	9.0	-1.5	0.1
Samcera Alternatives Benchmark		3.1	7.6	9.5	14.9	10.1	9.6	9.9	8.3	9.2	8.0
Excess		11.6	11.0	18.8	17.3	18.6	2.8	0.3	0.6	-10.7	-8.0
Private Equity	424,834,662	25.5	32.1	66.8	58.5	70.1	32.1	23.6	22.4	-8.7	-8.7
Samcera PE Benchmark		5.8	14.4	13.8	29.6	14.0	12.5	14.3	14.0	15.9	15.9
Excess		19.7	17.8	53.0	28.9	56.1	19.6	9.4	8.4	-24.6	-24.6
Absolute Return	302,063,963	-0.5	0.3	-10.7	1.7	-12.3	-8.4	-4.0	0.1	--	0.7
Samcera LIBOR + 4%		0.3	1.0	4.0	1.4	4.9	5.7	5.3	5.0	--	4.8
Excess		-0.8	-0.7	-14.7	0.3	-17.2	-14.2	-9.3	-4.9	--	-4.1
AQR Delta XN	5,045,643	0.0	0.2	-26.8	0.2	-29.8	-17.9	-9.8	-4.3	--	-2.6
Samcera LIBOR + 4%		0.3	1.0	4.0	1.4	4.9	5.7	5.3	5.0	--	4.8
Excess		-0.3	-0.8	-30.8	-1.2	-34.7	-23.6	-15.1	-9.3	--	-7.4
Aberdeen Std GARS	78,185,581	-0.4	0.7	4.0	3.6	5.5	2.7	1.6	--	--	1.6
Samcera LIBOR + 4%		0.3	1.0	4.0	1.4	4.9	5.7	5.3	--	--	5.3
Excess		-0.7	-0.3	0.0	2.2	0.6	-3.0	-3.7	--	--	-3.7



# San Mateo County Composite Return Summary

October 31, 2020



Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
Graham Global Investment	75,064,503	0.9	3.6	--	3.6	--	--	--	--	--	0.1
Samcera LIBOR +4%		0.3	1.0	--	1.4	--	--	--	--	--	3.5
Excess		0.6	2.6	--	2.2	--	--	--	--	--	-3.4
PIMCO MAARS Fund L.P.	69,284,138	-1.3	-2.8	--	-1.4	--	--	--	--	--	0.5
Samcera LIBOR +4%		0.3	1.0	--	1.4	--	--	--	--	--	2.5
Excess		-1.7	-3.9	--	-2.8	--	--	--	--	--	-2.1
Acadian MAAR Fund LLC	44,484,098	-1.1	--	--	--	--	--	--	--	--	-1.1
Samcera LIBOR +4%		0.3	--	--	--	--	--	--	--	--	0.3
Excess		-1.5	--	--	--	--	--	--	--	--	-1.5
CFM SYS Global Macro Fund	30,000,000	0.0	--	--	--	--	--	--	--	--	0.0
Samcera LIBOR +4%		0.3	--	--	--	--	--	--	--	--	0.3
Excess		-0.3	--	--	--	--	--	--	--	--	-0.3
Inflation Hedge	725,895,726	-0.2	0.2	-10.5	1.5	-8.8	-1.2	--	--	--	2.9
SamCERA Inflation Hedge Index		0.1	0.9	-5.0	2.8	-2.7	2.1	--	--	--	4.4
Excess		-0.3	-0.7	-5.5	-1.3	-6.1	-3.3	--	--	--	-1.5
Real Estate	427,552,090	0.2	0.2	0.5	0.3	0.5	5.2	--	--	--	6.5
Samcera NCREIF ODCE EW (gross)		0.0	0.6	0.2	0.6	1.7	5.5	--	--	--	6.3
Excess		0.2	-0.4	0.3	-0.2	-1.2	-0.3	--	--	--	0.3
Invesco Core Real Estate	260,402,254	-0.4	-0.4	-1.3	0.5	-1.3	4.6	6.1	8.3	9.8	7.2
Samcera NCREIF ODCE EW (gross)		0.0	0.6	0.2	0.6	1.7	5.5	7.0	8.8	10.4	7.3
Excess		-0.4	-0.9	-1.5	-0.1	-3.0	-1.0	-0.8	-0.5	-0.6	-0.1
Invesco US Val IV	14,716,665	0.9	0.9	1.5	-3.7	1.5	10.2	--	--	--	10.5
Samcera NCREIF ODCE EW (gross)		0.0	0.6	0.2	0.6	1.7	5.5	--	--	--	7.1
Excess		0.9	0.4	1.3	-4.2	-0.2	4.7	--	--	--	3.3
PGIM Real Estate US Debt Fund	84,822,307	1.3	1.3	4.7	1.3	4.7	5.4	--	--	--	4.8
Samcera NCREIF ODCE EW (gross)		0.0	0.6	0.2	0.6	1.7	5.5	--	--	--	5.6
Excess		1.3	0.7	4.5	0.7	3.0	-0.2	--	--	--	-0.7





**San Mateo County**  
**Composite Return Summary**  
 October 31, 2020



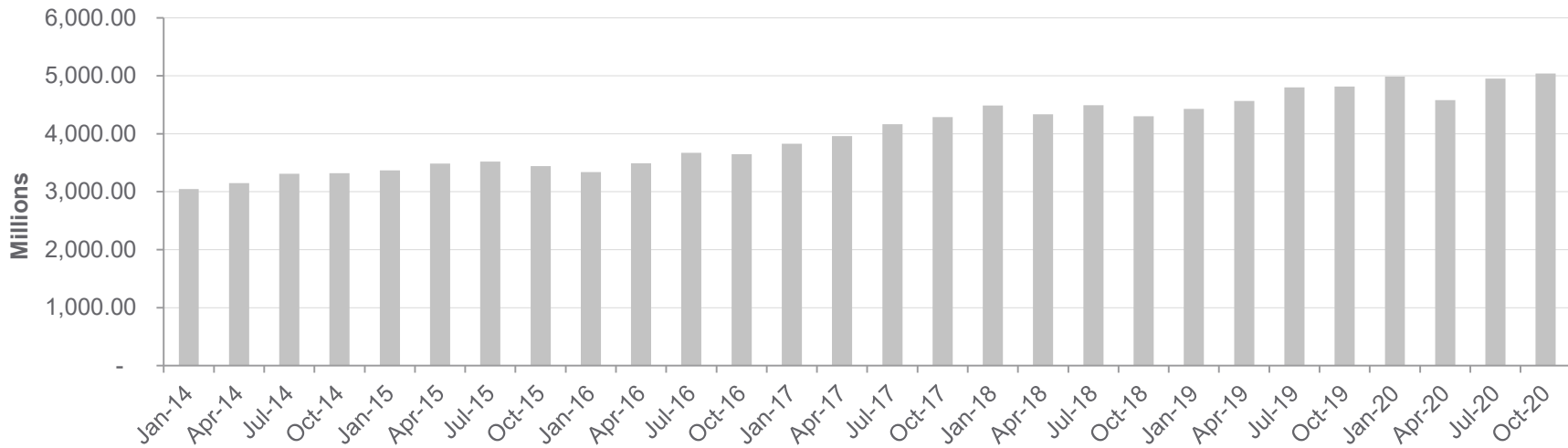
<b>Composite Returns (NET)</b>	<b>Market Value (\$)</b>	<b>1 Mth.</b>	<b>3 Mth.</b>	<b>YTD</b>	<b>FYTD</b>	<b>1 Yr.</b>	<b>3 Yr.</b>	<b>5 Yr.</b>	<b>7 Yr.</b>	<b>10 Yr.</b>	<b>ITD</b>
Invesco US VAL V	16,671,772	-0.6	-0.6	1.0	-4.4	1.0	--	--	--	--	1.4
Samcera NCREIF ODCE EW (gross)		0.0	0.6	0.2	0.6	1.7	--	--	--	--	--
Excess		-0.6	-1.2	0.8	-5.0	-0.7	--	--	--	--	--
Harrison Street Core Property	50,939,092	1.1	1.1	1.9	0.8	--	--	--	--	--	1.9
Samcera NCREIF ODCE EW (gross)		0.0	0.6	0.2	0.6	--	--	--	--	--	0.2
Excess		1.1	0.5	1.7	0.2	--	--	--	--	--	1.7
Public Real Assets	201,871,431	-1.0	-1.2	-25.3	2.9	-22.0	-8.3	--	--	--	--
SamCera Liquid Real Asset Inde		-1.0	-1.1	-15.1	3.0	-11.2	-2.9	--	--	--	2.9
Excess		0.0	-0.1	-10.2	-0.1	-10.8	-5.4	--	--	--	--
SSGA CST REAL ASSET NL	201,871,431	-1.0	-1.2	-15.7	2.9	-11.9	-3.4	--	--	--	--
SamCera Liquid Real Asset Inde		-1.0	-1.1	-15.1	3.0	-11.2	-2.9	--	--	--	1.2
Excess		0.0	-0.1	-0.6	-0.1	-0.8	-0.5	--	--	--	--
Private Real Assets	96,472,205	0.1	3.8	-1.0	4.3	1.2	-3.3	--	--	--	6.1
SamCERA Private Real Asset Idx		2.1	4.7	-3.8	10.0	-3.9	1.2	--	--	--	4.7
Excess		-2.0	-0.9	2.8	-5.7	5.1	-4.5	--	--	--	1.4
Cash Overlay	11,202,989	0.0	0.0	--	0.1	--	--	--	--	--	0.2
ICE BofAML US 3-Month Treasury Bill		0.0	0.0	--	0.0	--	--	--	--	--	0.1
Excess		0.0	0.0	--	0.1	--	--	--	--	--	0.1
General Account	32,643,895	0.0	-0.1	0.5	-0.0	0.8	1.7	1.3	1.0	0.8	1.9
County Treasury Pool	35,184,598	0.6	0.6	1.5	0.8	1.5	1.8	1.4	1.2	1.1	2.6
Currency Hedge Cash Overlay	32,507,061	0.0	0.0	--	0.1	--	--	--	--	--	0.1
San Mateo County Overlay	5,037,874,533	1.0	2.7	1.3	6.5	4.3	4.7	6.6	6.3	7.4	6.6
Samcera Total Plan Benchmark		-0.5	1.0	0.8	4.7	4.1	5.3	7.1	6.5	7.8	7.0
Excess		1.6	1.7	0.6	1.8	0.3	-0.6	-0.5	-0.3	-0.4	-0.3



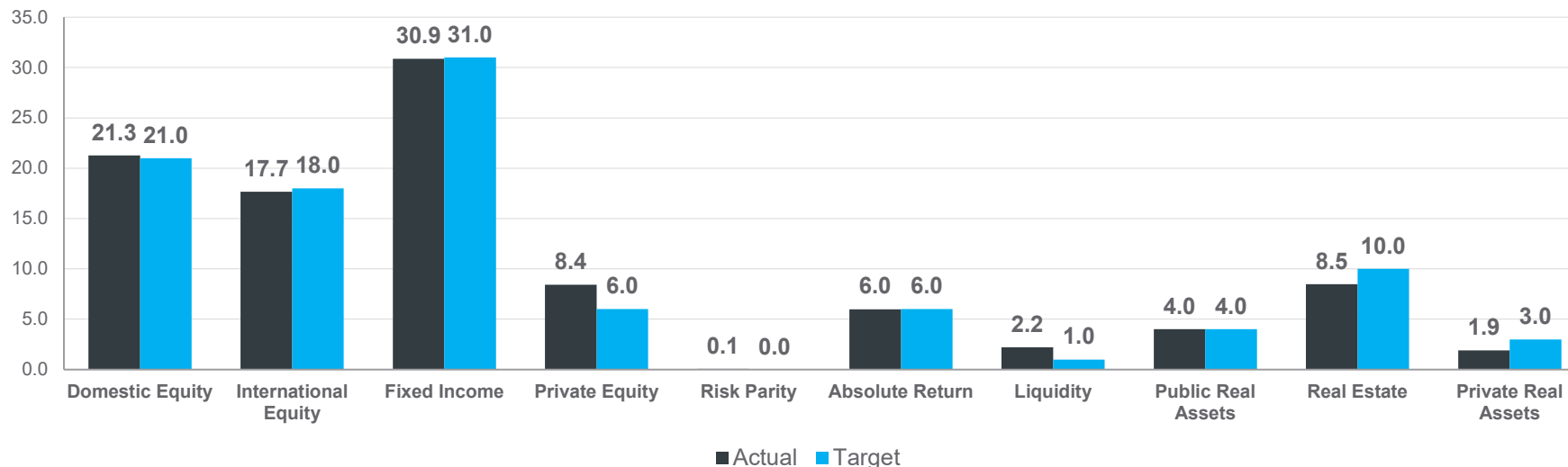
**Record of Asset Growth**

	<b>Three Months</b>	<b>One Year</b>
<b>TOTAL FUND</b>		
Beginning Market Value	4,950,044,380	4,815,718,219
Contributions	188,892,287	704,669,677
Withdrawals	-320,282,574	-772,493,624
Income Received	17,692,927	63,386,723
Gain/Loss	118,852,879	145,429,185
Ending Market Value	5,037,874,533	5,037,874,533

**Net Asset Values Over Time (\$000)**

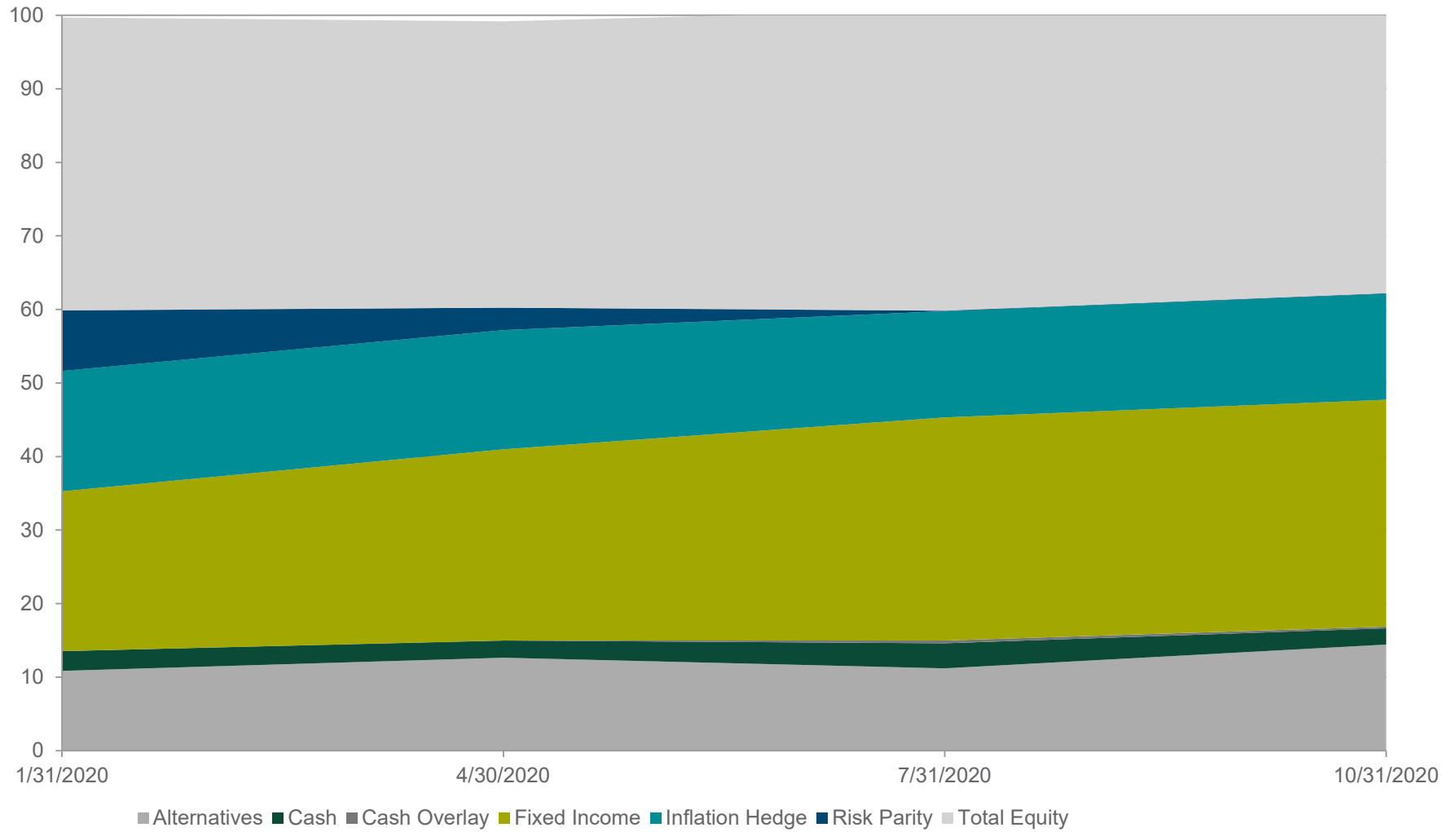


Actual vs Target Weights

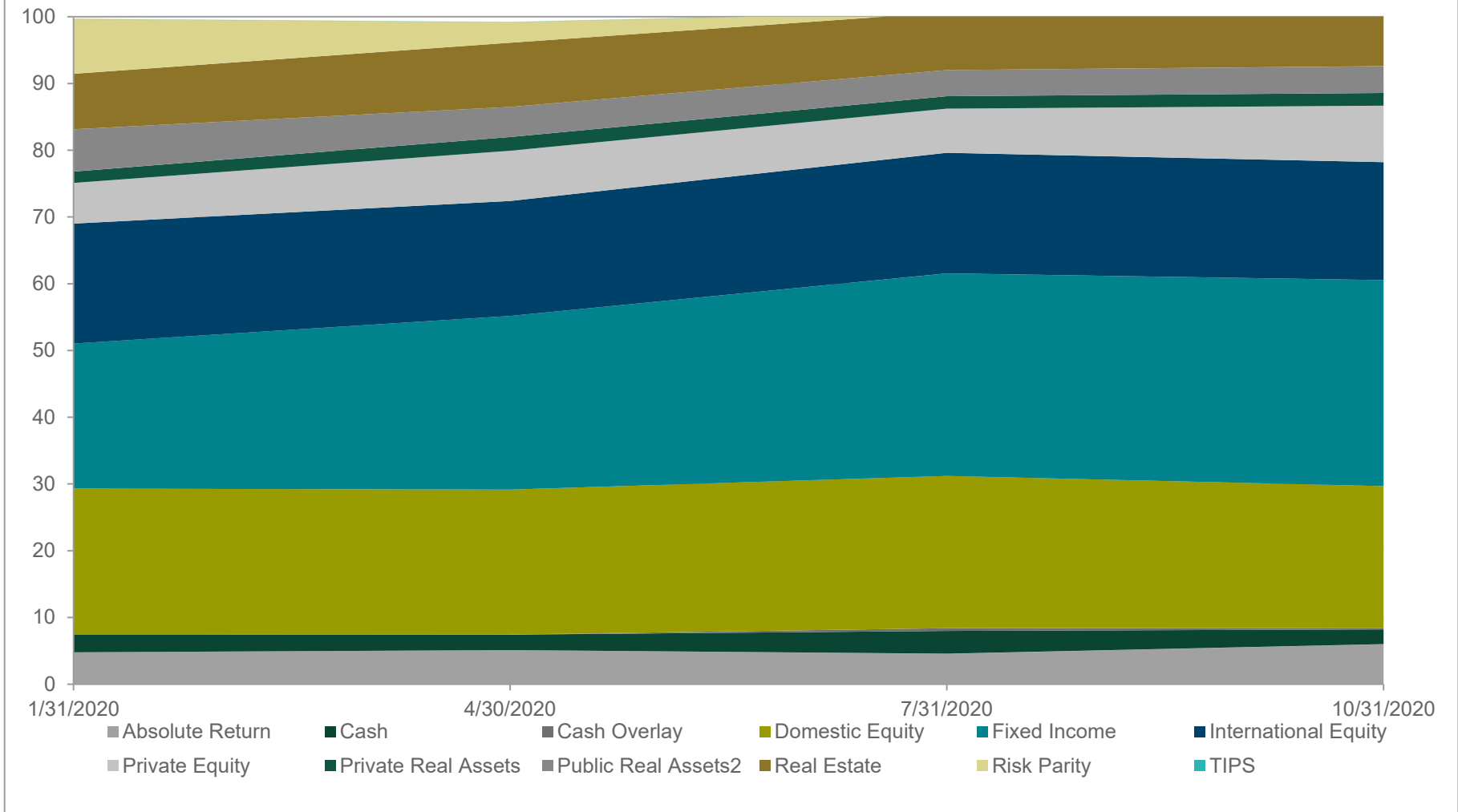


	Min	Actual	Target	Deviation	Max
<b>Domestic Equity</b>	19.0	21.3	21.0	0.3	23.0
<b>International Equity</b>	16.0	17.7	18.0	-0.3	20.0
<b>Fixed Income</b>	29.0	30.9	31.0	-0.1	33.0
<b>Private Equity</b>	4.0	8.4	6.0	2.4	8.0
<b>Risk Parity</b>	0.0	0.1	0.0	0.1	0.0
<b>Absolute Return</b>	4.0	6.0	6.0	0.0	8.0
<b>Liquidity</b>	0.0	2.2	1.0	1.2	2.0
<b>Public Real Assets</b>	2.0	4.0	4.0	0.0	6.0
<b>Real Estate</b>	8.0	8.5	10.0	-1.5	12.0
<b>Private Real Assets</b>	1.0	1.9	3.0	-1.1	5.0

Asset Allocation over Time



### Sub-Asset Class Allocation Over Time



## Disclaimer(s)

The Global Industry Classification Standard ("GICS") was developed by and is the exclusive property and a service mark of Morgan Stanley Capital International Inc. ("MSCI") and Standard & Poor's, a division of The McGraw-Hill Companies, Inc. ("S&P") and is licensed for use by The Northern Trust Corporation and its wholly owned subsidiaries. Neither MSCI, S&P, nor any other party involved in making or compiling the GICS or any GICS classifications makes any express or implied warranties or representations with respect to such standard or classification (or the results to be obtained by the use thereof), and all such parties hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability and fitness for a particular purpose with respect to any of such standard or classification. Without limiting any of the foregoing, in no event shall MSCI, S&P, any of their affiliates or any third party involved in making or compiling the GICS or any GICS classifications have any liability for any direct, indirect, special, punitive, consequential or any other damages (including lost profits) even if notified of the possibility of such damages.

The Dow Jones Wilshire Indexes are calculated, distributed and marketed by Dow Jones & Company, Inc. pursuant to an agreement between Dow Jones and Wilshire and have been licensed for use. All content of the Dow Jones Wilshire Indexes © 2005 Dow Jones & Company, Inc. & Wilshire Associates Incorporated.

Standard and Poor's including its subsidiary corporations ("S&P") is a division of the McGraw-Hill Companies, Inc. Reproduction of S&P Index Alerts in any form is prohibited except with the prior written permission of S&P. Because of the possibility of human or mechanical error by S&P sources, S&P or others, S&P does not guarantee the accuracy, adequacy, completeness or availability of any information and is not responsible for any errors or omissions or for the results obtained from the use of such information. S&P gives not express or implied warranties, including, but not limited to, any warranties or merchantability or fitness for a particular purpose or use. In no event shall S&P be liable for any indirect, special or consequential damages in connection with subscriber's or others' use of S&P Index Alerts.

All MSCI equity characteristic results except for Dividend Yield, Price to Book Value, Price to Cash Earnings and Price Earnings Ratio were calculated by The Northern Trust Company. FTSE ® is a trade mark of London Stock Exchange Plc and The Financial Times Limited and is used by FTSE under license. All rights in the FTSE Indices vest in FTSE and/or its licensors. Neither FTSE nor its licensors accept any liability for any errors or omissions in the FTSE Indices or underlying data.

The Merrill Lynch Indices are used with permission. Copyright 2007, Merrill Lynch, Pierce, Fenner & Smith Incorporated. All rights reserved. The Merrill Lynch Indices may not be copied, used, or distributed without Merrill Lynch's prior written approval.

The Citi Index data is provided to you on an "AS IS" basis and you agree that use of the index data is at your sole risk. Citi Index makes no representations or warranties, express or implied, to you or any other person or entity, including without limitation any warranty of merchantability, originality, suitability or fitness for a particular purpose of the index data or any other matter and no warranty is given that the index data will conform to any description thereof or be free of omissions, errors, interruptions or defects. 4. In no event shall Citi Index be liable to you or any other person or entity for any direct, incidental, indirect, special or consequential damages (including, without limitation,

lost profits or revenues, loss of data, loss of use or claims of third parties), arising out of or in any manner in connection with your use of (or inability to use) the index data, whether or not you have been advised of, or otherwise might have anticipated the possibility of, such damages. Without limitation on the foregoing, you acknowledge that the index data may be incomplete or condensed, is for information purposes only and is not intended as, and shall not be construed to be, an offer or solicitation with respect to the purchase or sale of any security. All opinions and estimates provided constitute judgments as of their respective dates and are subject to change without notice. Such data, information, opinions and estimates are furnished as part of a general service, without regard to your particular circumstances, and Citi Index shall not be liable for any damages in connection therewith. Citi Index is not undertaking to manage money or act as a fiduciary with respect to your accounts or any of your managed or fiduciary accounts and you acknowledge and agree that the index data does not and shall not serve as the primary basis for any investment decisions made with respect to such accounts.

iShares® and BlackRock® are registered trademarks of BlackRock, Inc. and its affiliates ("BlackRock") and are used under license. BlackRock has licensed certain trademarks and trade names of BlackRock to The Northern Trust Company. The Northern Trust Company's products and services are not sponsored, endorsed, sold, or promoted by BlackRock, and BlackRock makes no representations or warranties related to such products or services either to The Northern Trust Company or any other person or entity, including but not limited to the advisability of investing in the products of The Northern Trust Company. BlackRock has no obligation or liability in connection with the operation, marketing, trading or sale of the products or services from The Northern Trust Company.

Please note that this report has been prepared using best available data. This report may also contain information provided by third parties, derived by third parties or derived from third party data and/or data that may have been categorized or otherwise reported based upon client direction - Northern Trust assumes no responsibility for the accuracy, timeliness or completeness of any such information. If you have questions regarding third party data or direction as it relates to this report, please contact your Northern Trust relationship team.

INVESTMENT ADVICE NOTICE: The data and analysis contained in this report is for informational purposes only. In providing the information contained herein, The Northern Trust Company is not undertaking to provide "investment advice" or to give advice in a fiduciary capacity for purposes of the Employee Retirement Income Security Act of 1974, as amended. Nothing in this report is intended as, or should be understood as, a recommendation to hire, retain, or terminate an investment manager or engage in any purchase or sale transaction with such a manager or any fund that it manages. The Northern Trust Company and/or its affiliates may have business relationships with one or more investment managers or funds for included in this report, and may receive compensation for providing custody, administration, banking, brokerage, foreign exchange or other services to such investment managers or funds. The Northern Trust Company and its affiliates shall have no responsibility for the consequences of investment decisions made in reliance on information contained in this report.



**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**

OCTOBER 2020  
Capital Markets Update

# Market commentary

## U.S. ECONOMICS

- Real U.S. GDP expanded at an annualized quarterly rate of 33.1% in the third quarter (-2.9% year-over-year), following a historic -31.4% plunge in Q2. Personal consumption expenditures contributed 68% to the quarterly annualized advance. Government spending contracted following the expiration of the CARES Act, and weighed on growth.
- The U.S. labor market extended its rebound in October and nonfarm payroll employment rose by 638,000. Notable gains were seen in the leisure and hospitality sector where 4.8 million jobs have been added since April. Still, the sector's payrolls remain 3.5 million below levels seen in February. Broad unemployment improved from 7.9% to 6.9%, though the labor force participation rate remained subdued.
- The ISM Non-Manufacturing PMI ticked down from 57.8 to 56.6 in October but remained in expansionary territory (above 50.0) for the fifth consecutive month.

## U.S. EQUITIES

- The S&P 500 Index continued to fall lower in October and declined -2.7%. The two largest sectors in the S&P 500, information technology (-5.1%) and health care (-4.4%), which make up 25.5% and 10.8% of the index respectively, weighed heavily on performance in October.
- At month-end, the forward 12-month P/E ratio for the S&P 500 was 20.6, well above the 5-year average P/E of 17.3.
- As of month end, 64% of companies in the S&P 500 had reported Q3 results and 86% of those companies have posted better-than-expected earnings. If 86% is the final percentage, it will be the largest percentage of companies to post positive EPS surprise since 2008.

## U.S. FIXED INCOME

- The Federal Reserve left the target range for the federal funds rate unchanged at 0-0.25% and reiterated its commitment to keep rates accommodative until labor markets reach maximum employment and inflation exceeds 2.0% for some time. The Fed will continue to increase its holdings of Treasury securities and agency mortgage-backed securities over the coming months to support the flow of credit to households and businesses.
- Ten-year U.S. Treasury yields pushed up toward the top-end of their trading range through the pandemic and finished the month at 0.87%.
- The yield on the 30-year Treasury bond traded 19 basis points higher in October and ended the period at 1.66%. Long-duration Treasuries (BBgBarc US Treasury Long) returned -3.0%.

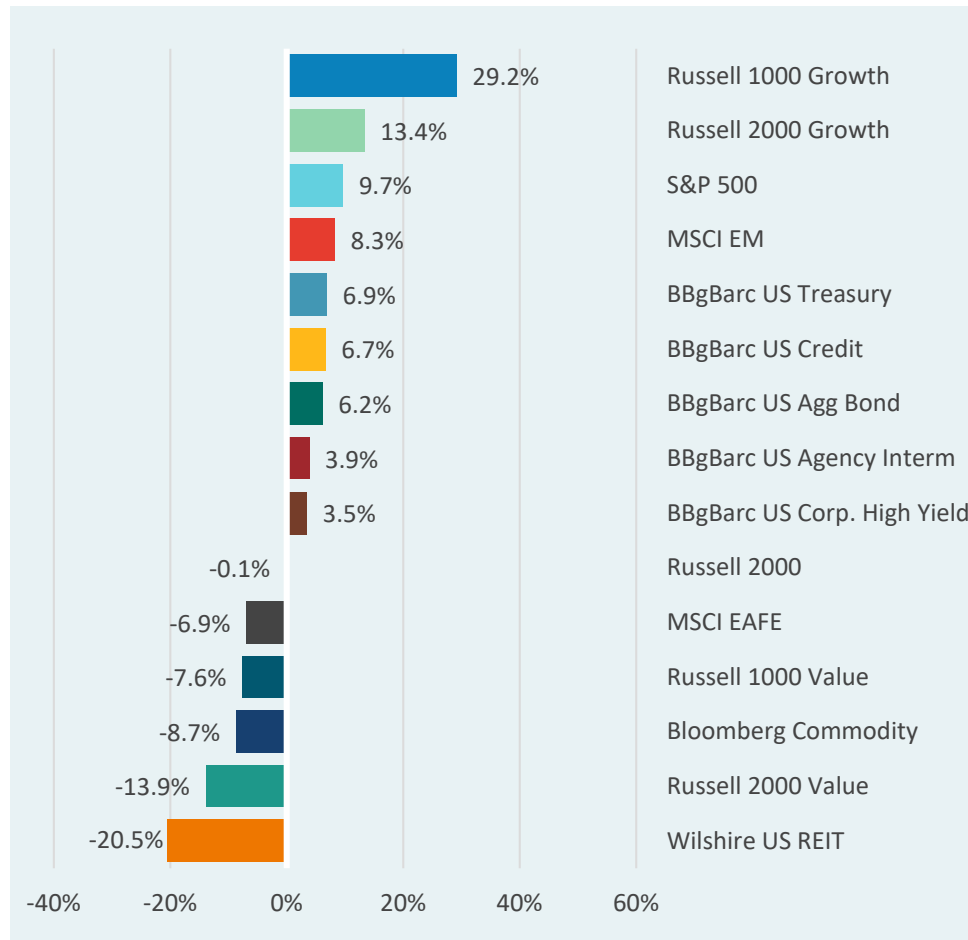
## INTERNATIONAL MARKETS

- Chinese GDP grew at an annualized quarterly pace of 2.7% in the third quarter following an 11.5% increase in the second quarter. Year-over-year GDP growth picked up from 3.2% to 4.9%.
- The IHS Markit Eurozone Services PMI fell from 48.0 to 46.9 in October, dropping further away from the expansionary level of 50.0 over the month. Input costs increased for the fifth consecutive month, and the print indicated that weak demand led to price discounting amongst service providers.
- Eurozone GDP recovered by more than initial estimates in the third quarter, and grew at an annualized quarterly rate of 12.7% in Q3, up from -11.8% in Q2. Still, Eurozone gross domestic product remained -4.3% below its Q3 2019 level.

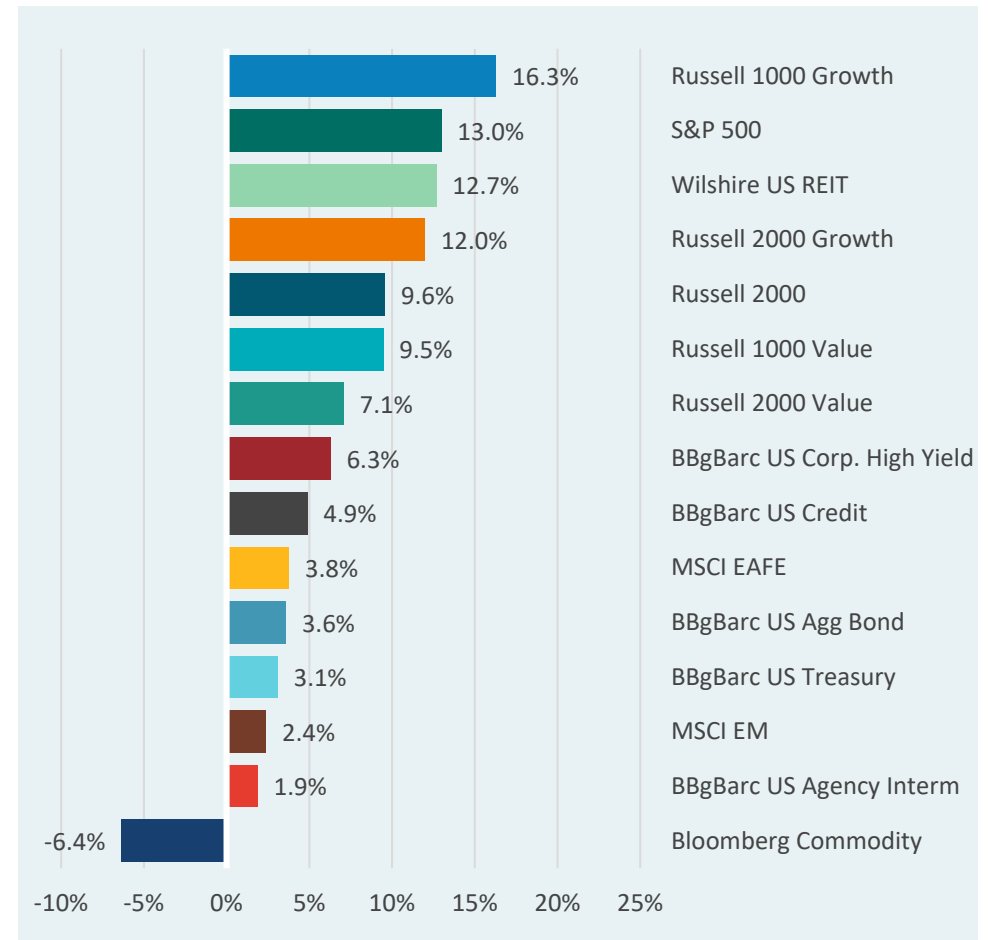


# Major asset class returns

ONE YEAR ENDING OCTOBER



TEN YEARS ENDING OCTOBER



\*Only publicly traded asset performance is shown here. Performance of private assets is typically released with a 3- to 6-month delay.

Source: Morningstar, as of 10/31/20

Source: Morningstar, as of 10/31/20

# U.S. large cap equities

- The S&P 500 Index ended a volatile month down -2.7%. By October 12th, the index had climbed 5.1% over the month-to-date, although gains were erased in the second half of the month. The price index reached intra-month highs of 3534 but finished October at 3270.
- At month-end, 46 companies had issued EPS guidance for the fourth quarter of 2020. Of the few companies issuing guidance, 67% of companies issued positive earnings guidance compared to the five-year average of 32%. While equities remain at lofty valuations, fundamentals appear to be on an encouraging track.
- Of the 11 major sectors in the S&P 500 Index only two, utilities (+1.3%) and telecom (+0.8%), delivered positive returns over the month. The energy (-4.4%) and information technology (-5.1%) sectors underperformed the overall index.
- The Cboe VIX Index of implied volatility jumped 11.6 points in October and closed the month at 38.0, its highest level since June, and a level well above historical averages. Investors continue to expect elevated levels of volatility around the election, levels that may then fall closer to average toward the beginning of 2021.

**S&P 500 PRICE INDEX**



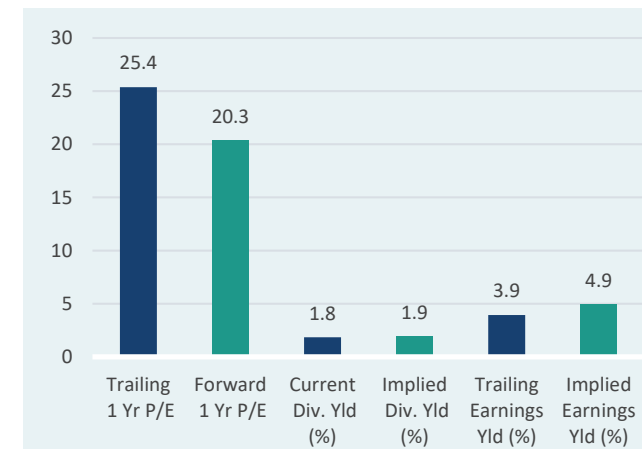
Source: Bloomberg, as of 10/31/20

**IMPLIED VOLATILITY (VIX INDEX)**



Source: CBOE, as of 10/31/20

**S&P 500 VALUATION SNAPSHOT**

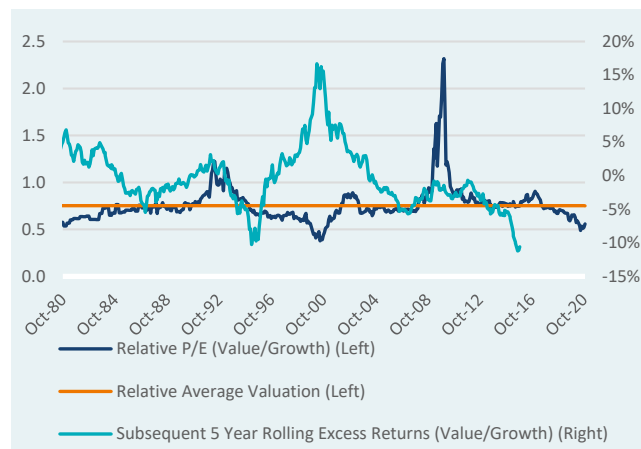


Source: Bloomberg, as of 10/31/20

# Domestic equity size and style

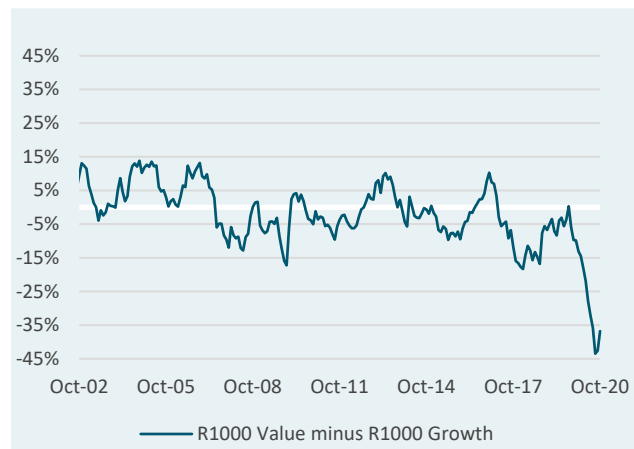
- Value stocks (Russell 3000 Value -1.0%) outperformed growth stocks (Russell 3000 Growth -3.2%) for the second consecutive month. Within the small cap universe, the value factor outperformed as well - Russell 2000 Value Index outpaced the Russell 2000 Growth Index by +2.8%.
- The iShares Edge MSCI USA Quality Factor ETF, an index fund which seeks to track the performance of high quality large- and mid-cap stocks based on return-on-equity ratios, earnings consistency, and leverage, fell -2.3%, but beat the overall S&P 500 Index (-2.7%).
- Small-cap equities (Russell 2000 Index +2.1%) outperformed large-cap equities (Russell 1000 Index -2.4%) in October. The heavy weight of the information technology sector within the large cap index presented material headwinds for performance.
- The S&P 500 Low Volatility High Dividend Index declined -1.3%, outperforming the S&P 500 Index (-2.7%). Investors were paid for positioning themselves more defensively within their equity portfolios in October.

**VALUE VS. GROWTH RELATIVE VALUATIONS**



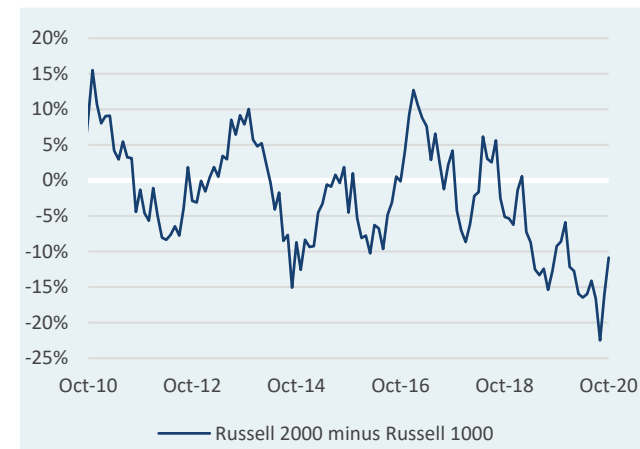
Source: Russell, Bloomberg, as of 10/31/20

**VALUE VS. GROWTH 1-YR ROLLING RELATIVE PERFORMANCE**



Source: FTSE, Bloomberg, as of 10/31/20

**SMALL VS. LARGE 1-YR ROLLING RELATIVE PERFORMANCE**

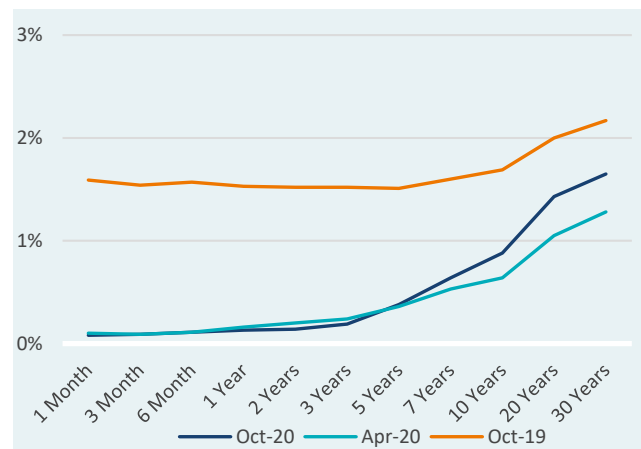


Source: FTSE, Bloomberg, as of 10/31/20

# Fixed income

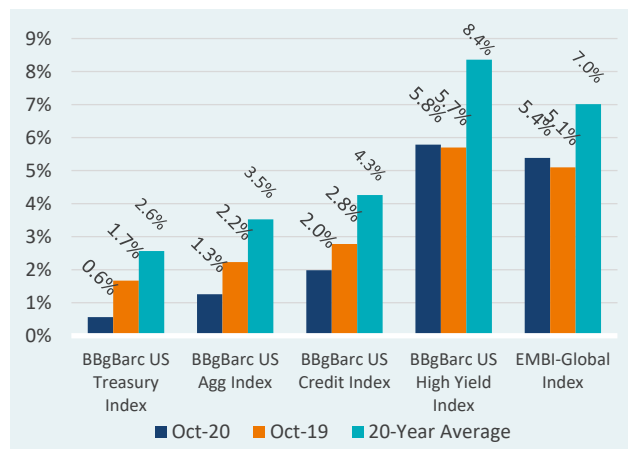
- The European Central Bank decided to leave its monetary policy and rates unchanged. The interest rates on the ECB’s main refinancing operation, marginal lending facility and deposit facility remain at 0.00%, 0.25% and -0.50%, respectively. The bank hinted that they would strongly consider announcing further monetary stimulus in December.
- Global rates advanced, resulting in negative performance for most bondholders. Credit spreads continued to compress however, leading riskier credit (BBgBarc HY +0.5%) to outperform safer credit (BBgBarc U.S. Agg -0.4%).
- Global risky credit performed relatively well in October. Local-currency denominated emerging market debt (J.P. Morgan GBI-EM) returned +0.4% and outperformed hard-currency denominated emerging market debt (JPM EMBI Global Diversified Index +0.0%).
- Treasury yields drifted higher, likely impacted by the increase in the chances for a Biden presidency which many investors viewed as more likely to deliver larger fiscal stimulus which might increase longer-term expectations for growth and inflation. The 10-year yield rose from 0.69% to 0.88% over the month.

**U.S. TREASURY YIELD CURVE**



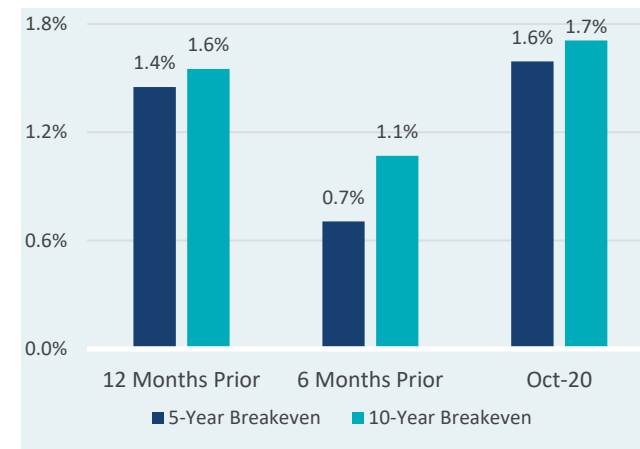
Source: Bloomberg, as of 10/31/20

**NOMINAL YIELDS**



Source: Morningstar, as of 10/31/20

**BREAKEVEN INFLATION RATES**

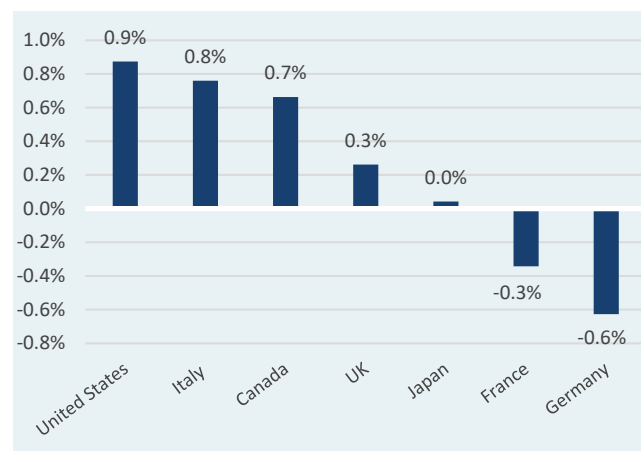


Source: Bloomberg, as of 10/31/20

# Global markets

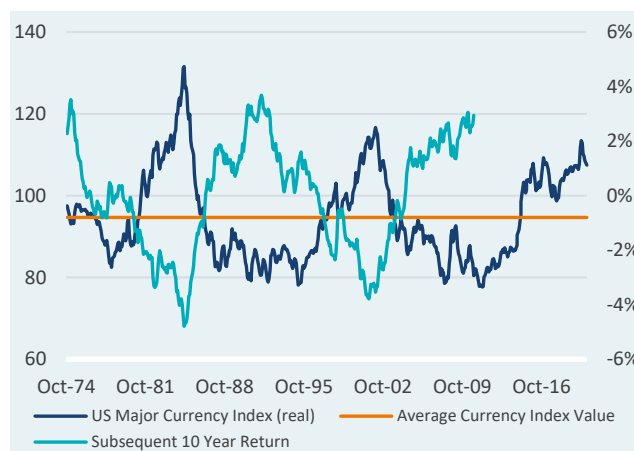
- Emerging market equities (MSCI EM +2.1%) outperformed U.S. (S&P 500 -2.7%) and international developed equities (MSCI EAFE -4.0%) in U.S. dollar terms. Asian EM equities (MSCI EM Asia +3.3%) posted strong performance in October and were a bright spot within the global equity opportunity set.
- COVID-19 case growth accelerated in October, especially in Europe. Social distancing controls were tightened or added across much of the continent, reigniting fears over the economic impacts of a second wave of sweeping lockdowns.
- European sovereign bond yields declined in October. The 10-year German bund yield fell deeper into negative territory from -0.52% to -0.63%, and Italian 10-year bond yields ticked down from 0.86% to 0.76% over the same period.
- Emerging market currencies broadly appreciated relative to the U.S. dollar, bolstering emerging market equities' (MSCI EM Index +2.1%) outperformance of world indices in U.S. dollar-terms. The Mexican peso (+4.4%) and South African rand (+3.1%) appreciated most significantly relative to the dollar in October.

**GLOBAL SOVEREIGN 10-YEAR YIELDS**



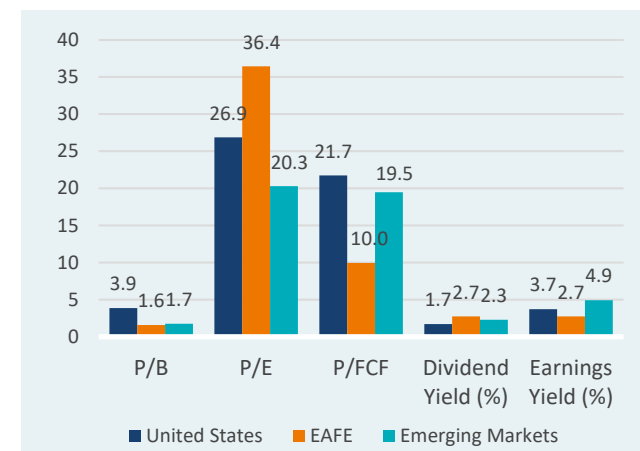
Source: Bloomberg, as of 10/31/20

**U.S. DOLLAR MAJOR CURRENCY INDEX**



Source: Federal Reserve, as of 10/31/20

**MSCI VALUATION METRICS (3-MONTH AVG)**



Source: Bloomberg, as of 10/31/20

# Commodities

- The Bloomberg Commodity Index was up +1.4% and was driven higher by the grains (+4.2%) and industrial metals (+3.0%) sectors. Petroleum price movement reflected the downturn in other risk markets and reports of growing U.S. stockpiles likely contributed to declines.
- The petroleum sector declined -10.7% over the month and WTI crude oil prices fell to five-month lows. Accelerating coronavirus infections in Europe brought back concerns over petroleum demand, and higher-than-expected production in Libya added further downward price pressure within the sector.

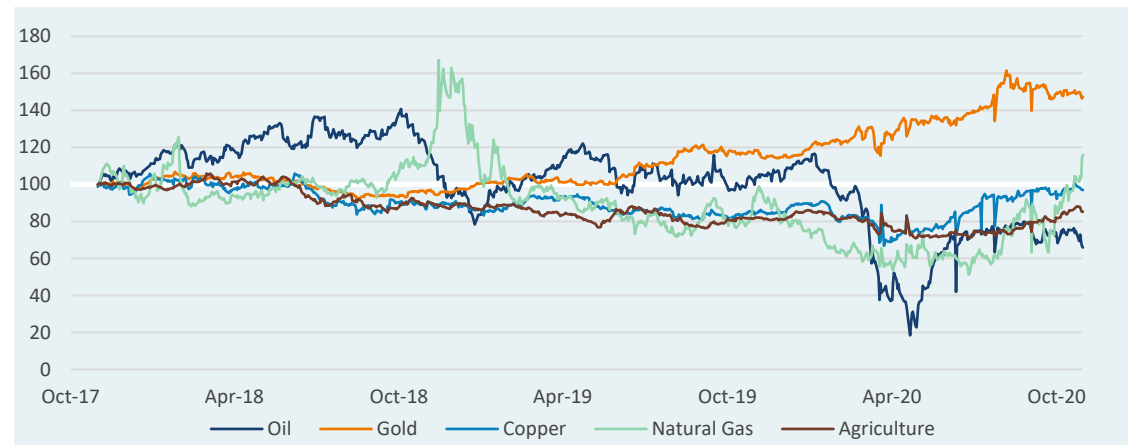
- The Bloomberg Industrial Metals Sub-Index advanced +3.0% over the month, as the aluminum (+5.3%), zinc (+4.7%), and nickel (+4.3%) all posted solid gains. Copper, which holds the highest weight amongst industrial metals in the overall Bloomberg Commodity Index (7.0%), gained just +0.5%.
- The Bloomberg Agriculture Index gained +3.9% over the month. Grains (+4.2%) advanced on the strong performance of soybeans (+4.2%) and corn (+4.9%). The performance of softs (+1.6%), another component of the agriculture index, was supported by sugar prices (+6.3%).

## INDEX AND SECTOR PERFORMANCE

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Bloomberg Commodity	1.4	1.4	(10.8)	(8.7)	(4.4)	(2.7)	(6.4)
Bloomberg Agriculture	3.9	3.9	(0.3)	5.0	(3.6)	(4.6)	(6.1)
Bloomberg Energy	(0.5)	(0.5)	(44.3)	(42.0)	(16.7)	(13.5)	(15.0)
Bloomberg Grains	4.2	4.2	1.8	4.0	(2.4)	(5.9)	(6.2)
Bloomberg Industrial Metals	3.0	3.0	4.9	2.8	(1.8)	5.8	(3.6)
Bloomberg Livestock	(1.2)	(1.2)	(26.2)	(26.6)	(13.9)	(8.1)	(4.9)
Bloomberg Petroleum	(10.7)	(10.7)	(55.6)	(50.3)	(19.3)	(14.0)	(12.8)
Bloomberg Precious Metals	(0.5)	(0.5)	22.1	22.0	11.9	8.7	1.5
Bloomberg Softs	1.6	1.6	(8.5)	3.4	(8.3)	(5.9)	(9.4)

Source: Morningstar, as of 10/31/20

## COMMODITY PERFORMANCE



Source: Bloomberg, as of 10/31/20

# Appendix

# Periodic table of returns

BEST

↑

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	YTD	5-Year	10-Year
Large Cap Growth	38.7	66.4	31.8	14.0	25.9	56.3	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	13.3	31.7	37.3	6.7	36.4	20.1	17.3	16.3
US Bonds	27.0	43.1	22.8	8.4	10.3	48.5	22.2	21.4	26.9	16.2	1.4	37.2	26.9	7.8	18.1	38.8	13.2	5.7	21.3	30.2	1.9	31.4	6.3	11.8	13.0
Small Cap Growth	20.3	33.2	12.2	7.3	6.7	47.3	20.7	20.1	23.5	15.8	-6.5	34.5	24.5	2.6	17.9	34.5	13.0	0.9	17.3	25.0	0.0	28.5	4.7	10.4	12.0
Large Cap Equity	19.3	27.3	11.6	3.3	1.6	46.0	18.3	14.0	22.2	11.8	-21.4	32.5	19.2	1.5	17.5	33.5	11.8	0.6	12.1	22.2	-1.5	26.5	3.8	7.9	9.6
Hedge Funds of Funds	16.2	26.5	7.0	2.8	1.0	39.2	16.5	7.5	18.4	11.6	-25.9	28.4	16.8	0.4	16.4	33.1	6.0	0.0	11.8	21.7	-3.5	25.5	2.5	7.3	9.5
60/40 Global Portfolio	8.7	21.3	4.1	-2.4	-6.0	29.9	14.3	6.3	15.5	10.3	-33.8	23.3	16.1	-2.1	15.3	23.3	4.9	-0.8	11.2	14.6	-6.0	22.4	2.1	6.7	9.4
Emerging Markets Equity	15.6	24.3	6.0	2.5	-5.9	30.0	14.5	7.1	16.6	10.9	-28.9	27.2	16.7	0.1	16.3	32.5	5.6	-0.4	11.3	17.1	-4.8	22.0	0.9	6.3	7.1
Real Estate	4.9	20.9	-3.0	-5.6	-11.4	29.7	12.9	5.3	15.1	7.0	-35.6	20.6	15.5	-2.9	14.6	12.1	4.2	-1.4	8.0	13.7	-8.3	18.6	0.5	5.8	5.8
Cash	1.2	13.2	-7.3	-9.1	-15.5	25.2	11.4	4.7	13.3	7.0	-36.8	19.7	13.1	-4.2	11.5	11.0	3.4	-2.5	7.1	7.8	-9.3	18.4	0.4	4.1	3.8
Small Cap Equity	-2.5	11.4	-7.8	-9.2	-15.7	23.9	9.1	4.6	10.4	5.8	-37.6	18.9	10.2	-5.5	10.5	9.0	2.8	-3.8	5.7	7.7	-11.0	8.7	-6.8	3.7	3.6
International Equity	-5.1	7.3	-14.0	-12.4	-20.5	11.6	6.9	4.6	9.1	4.4	-38.4	11.5	8.2	-5.7	4.8	0.1	0.0	-4.4	2.6	7.0	-11.2	7.8	-10.8	3.1	2.9
Commodities	-6.5	4.8	-22.4	-19.5	-21.7	9.0	6.3	4.2	4.8	-0.2	-38.5	5.9	6.5	-11.7	4.2	-2.0	-1.8	-7.5	1.0	3.5	-12.9	7.7	-10.8	2.8	2.4
Large Cap Value	-25.3	-0.8	-22.4	-20.4	-27.9	4.1	4.3	3.2	4.3	-1.6	-43.1	0.2	5.7	-13.3	0.1	-2.3	-4.5	-14.9	0.5	1.7	-13.8	6.4	-12.7	1.1	0.6
Small Cap Value	-27.0	-1.5	-30.6	-21.2	-30.3	1.0	1.4	2.4	2.1	-9.8	-53.2	-16.9	0.1	-18.2	-1.1	-9.5	-17.0	-24.7	0.3	0.9	-14.6	2.1	-18.7	-2.7	-6.4

↓

WORST

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

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

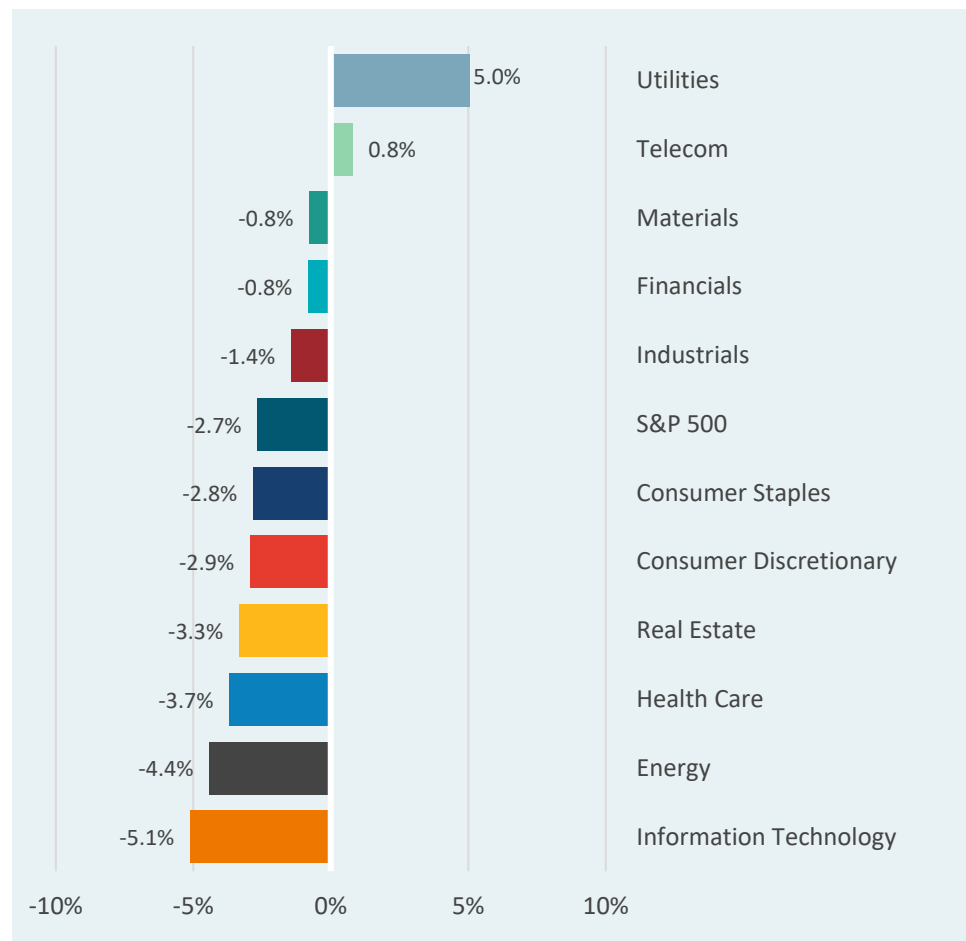
- Commodities
- Real Estate
- Hedge Funds of Funds
- 60% MSCI ACWI/40% BBgBarc Global Bond

Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BBgBarc US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, BBgBarc Global Bond. NCREIF Property Index performance data as of 9/30/20.



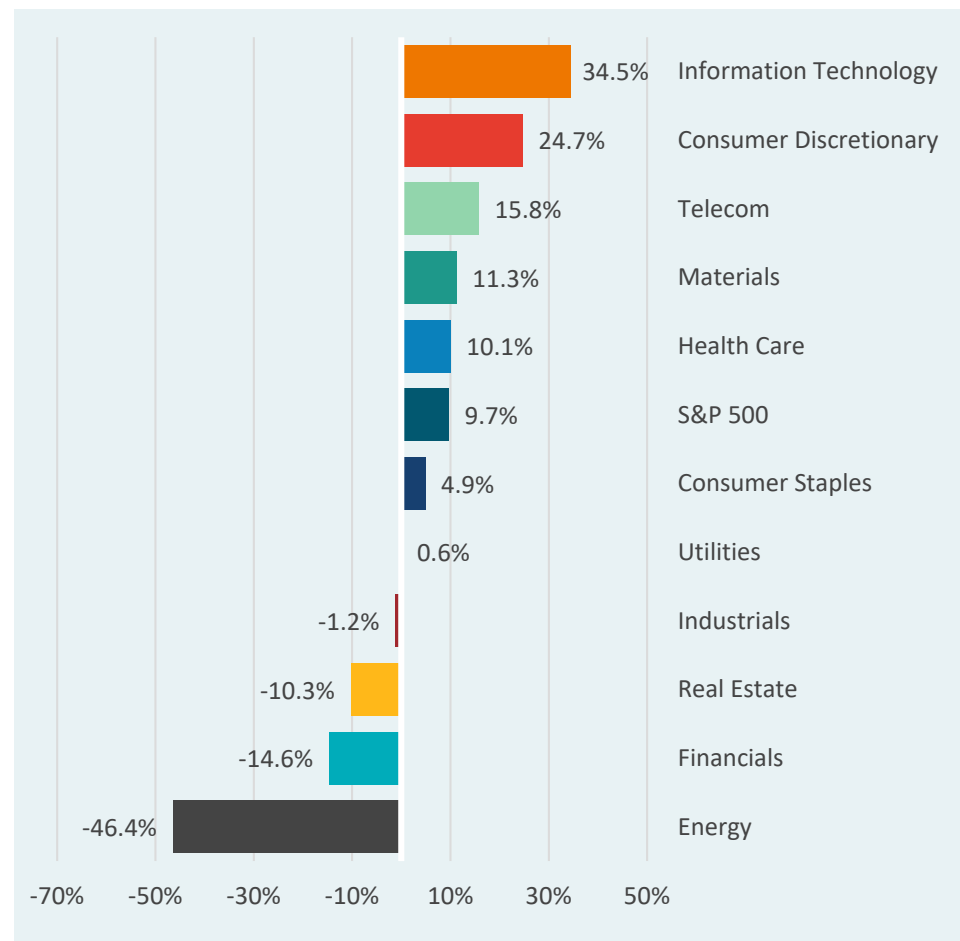
# S&P 500 sector returns

OCTOBER



Source: Morningstar, as of 10/31/20

ONE YEAR ENDING OCTOBER



Source: Morningstar, as of 10/31/20

# Detailed index returns

## DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Core Index</b>							
S&P 500	(2.7)	(2.7)	2.8	9.7	10.4	11.7	13.0
S&P 500 Equal Weighted	(0.6)	(0.6)	(5.3)	0.6	5.9	8.6	11.6
DJ Industrial Average	(4.5)	(4.5)	(5.4)	0.3	6.7	11.1	11.8
Russell Top 200	(3.4)	(3.4)	5.9	13.4	12.1	12.9	13.7
Russell 1000	(2.4)	(2.4)	3.8	10.9	10.6	11.8	13.0
Russell 2000	2.1	2.1	(6.8)	(0.1)	2.2	7.3	9.6
Russell 3000	(2.2)	(2.2)	3.1	10.1	10.0	11.5	12.8
Russell Mid Cap	0.6	0.6	(1.7)	4.1	6.8	9.0	11.4
<b>Style Index</b>							
Russell 1000 Growth	(3.4)	(3.4)	20.1	29.2	18.8	17.3	16.3
Russell 1000 Value	(1.3)	(1.3)	(12.7)	(7.6)	1.9	5.8	9.5
Russell 2000 Growth	0.8	0.8	4.7	13.4	7.9	10.4	12.0
Russell 2000 Value	3.6	3.6	(18.7)	(13.9)	(4.1)	3.7	7.1

## INTERNATIONAL EQUITY

<b>Broad Index</b>							
MSCI ACWI	(2.4)	(2.4)	(1.1)	4.9	5.5	8.1	7.9
MSCI ACWI ex US	(2.1)	(2.1)	(7.5)	(2.6)	(0.2)	4.3	3.4
MSCI EAFE	(4.0)	(4.0)	(10.8)	(6.9)	(1.2)	2.8	3.8
MSCI EM	2.1	2.1	0.9	8.3	1.9	7.9	2.4
MSCI EAFE Small Cap	(3.5)	(3.5)	(7.5)	(1.4)	(0.4)	5.4	6.5
<b>Style Index</b>							
MSCI EAFE Growth	(4.0)	(4.0)	0.5	5.2	4.8	6.6	6.2
MSCI EAFE Value	(4.0)	(4.0)	(21.6)	(18.4)	(7.4)	(1.1)	1.3
<b>Regional Index</b>							
MSCI UK	(5.0)	(5.0)	(27.3)	(22.3)	(7.4)	(2.8)	1.1
MSCI Japan	(1.6)	(1.6)	(2.3)	0.3	1.8	5.1	5.8
MSCI Euro	(6.6)	(6.6)	(15.0)	(11.4)	(4.5)	1.2	2.2
MSCI EM Asia	3.3	3.3	11.6	20.1	5.0	10.4	5.5
MSCI EM Latin American	(1.1)	(1.1)	(36.8)	(33.1)	(11.1)	0.6	(6.1)

## FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
BBgBarc US TIPS	(0.6)	(0.6)	8.5	9.1	5.5	4.4	3.2
BBgBarc US Treasury Bills	0.0	0.0	0.7	1.0	1.7	1.2	0.7
BBgBarc US Agg Bond	(0.4)	(0.4)	6.3	6.2	5.1	4.1	3.6
<b>Duration</b>							
BBgBarc US Treasury 1-3 Yr	(0.0)	(0.0)	3.1	3.2	2.7	1.8	1.3
BBgBarc US Treasury Long	(3.0)	(3.0)	17.7	13.8	10.8	7.7	7.2
BBgBarc US Treasury	(0.9)	(0.9)	7.9	6.9	5.2	3.6	3.1
<b>Issuer</b>							
BBgBarc US MBS	(0.0)	(0.0)	3.6	3.9	3.7	3.0	2.9
BBgBarc US Corp. High Yield	0.5	0.5	1.1	3.5	4.2	6.3	6.3
BBgBarc US Agency Interm	(0.1)	(0.1)	3.9	3.9	3.2	2.3	1.9
BBgBarc US Credit	(0.2)	(0.2)	6.2	6.7	6.0	5.6	4.9

## OTHER

<b>Index</b>							
Bloomberg Commodity	1.4	1.4	(10.8)	(8.7)	(4.4)	(2.7)	(6.4)
Wilshire US REIT	(2.5)	(2.5)	(18.8)	(20.5)	(0.1)	5.7	12.7
CS Leveraged Loans	0.2	0.2	(0.7)	1.5	3.0	4.6	5.0
Alerian MLP	4.4	4.4	(46.1)	(44.9)	(19.5)	(13.2)	(4.0)
<b>Regional Index</b>							
JPM EMBI Global Div	(0.0)	(0.0)	(0.5)	1.0	3.4	5.6	5.2
JPM GBI-EM Global Div	0.4	0.4	(5.9)	(3.8)	1.3	3.9	0.4
<b>Hedge Funds</b>							
HFRI Composite	0.4	0.4	1.2	4.2	2.6	3.8	3.5
HFRI FOF Composite	0.2	0.2	2.8	5.4	2.6	3.0	2.8
<b>Currency (Spot)</b>							
Euro	(0.7)	(0.7)	3.8	4.4	(0.0)	1.1	(1.8)
Pound	0.0	0.0	(2.4)	(0.1)	(0.9)	(3.5)	(2.1)
Yen	0.9	0.9	4.0	3.4	2.8	2.9	(2.6)

Source: Morningstar, HFRI, as of 10/31/20

# Detailed private market returns

## Comparison to public market index returns

Private Equity Pooled IRRs	1 Year	3 Year	5 Year	10 Year
Global Private Equity FoFs & Secondary Funds	4.0	10.5	8.8	12.0
Global Private Equity Direct Funds *	9.3	13.8	12.1	14.5
U.S. Private Equity Direct Funds *	9.7	14.8	12.3	15.5
Europe Private Equity Direct Funds *	5.1	12.6	14.0	13.5
Asia Private Equity Direct Funds *	13.1	13.0	11.0	13.4

Public Index Time-weighted Returns	1 Year	3 Year	5 Year	10 Year
MSCI World	2.8	6.7	6.9	10.0
S&P 500	7.5	10.7	10.7	14.0
MSCI Europe	(6.8)	0.0	1.5	5.7
MSCI AC Asia Pacific	1.0	3.2	4.0	6.0

Private Real Estate Pooled IRRs	1 Year	3 Year	5 Year	10 Year
U.S. All Private Real Estate	(1.4)	6.0	7.7	12.3

Public Index Time-weighted Returns	1 Year	3 Year	5 Year	10 Year
FTSE NAREIT Equity REIT	(13.0)	0.0	4.1	9.1

Private Credit Pooled IRRs	1 Year	3 Year	5 Year	10 Year
U.S. All Private Debt **	(1.5)	5.2	6.5	10.0

Public Index Time-weighted Returns	1 Year	3 Year	5 Year	10 Year
S&P / LSTA U.S. Leveraged Loan 100 Index	(0.5)	2.5	3.0	4.1

Private Real Assets Pooled IRRs	1 Year	3 Year	5 Year	10 Year
Global Nature Resources ***	(23.7)	(7.3)	(4.3)	0.5
Global Infrastructure	3.2	8.4	10.0	9.8

Public Index Time-weighted Returns	1 Year	3 Year	5 Year	10 Year
S&P Global Natural Resources	(16.8)	(0.1)	0.9	1.5
S&P Global Infrastructure	(14.8)	(0.9)	2.6	6.9

Source: Pooled IRRs are from Thompson Reuters C/A and Time-weighted Returns are from Investment Metrics, as of June 30<sup>th</sup>, 2020. All returns in U.S. dollars.

\* Includes Buyout, Growth Equity and Venture Capital.

\*\* Includes Control-Oriented Distressed, Credit Opportunities, Senior Debt and Subordinated Capital.

\*\*\* Includes Private Equity Energy, Timber and Upstream Energy & Royalties.

# Notices & disclosures

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


Verus – also known as Verus Advisory™.

**SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**  
**Board of Retirement**

December 8, 2020

Agenda Item 6.2

**TO:** Board of Retirement

**FROM:** Michael Coultrip, Chief Investment Officer 

**SUBJECT:** Report on Quarterly Investment Performance Report for the Period Ended September 30, 2020

**Recommendation**

Accept Verus Advisory's quarterly performance report for the period ended September 30, 2020.

**Discussion**

The 3rd quarter net total return for the SamCERA portfolio was +5.2%, which was 20 bps lower than the +5.4% policy benchmark return. As can be seen on Page 20 and 21, alternatives and fixed income were the main contributors of performance, while domestic equity and inflation hedge (private real assets) were the main detractors.

Margaret Jadallah will present the report to the Board and will be available for questions.

**Attachment**

Verus Quarterly Performance Report Ending 9/30/2020



**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**



**PERIOD ENDING: SEPTEMBER 30, 2020**

Investment Performance Review for

**San Mateo County Employees' Retirement Association**

# Table of Contents



---

[VERUSINVESTMENTS.COM](http://VERUSINVESTMENTS.COM)

SEATTLE 206-622-3700

LOS ANGELES 310-297-1777

SAN FRANCISCO 415-362-3484

PITTSBURGH 412-784-6678

---

Market Environment

TAB I

---

Alternatives

TAB VI

---

Total Fund

TAB II

---

Inflation Hedge

TAB VII

---

US Equity

TAB III

---

Appendix

TAB VIII

---

International Equity

TAB IV

---

Fixed Income

TAB V

# 3<sup>rd</sup> quarter summary

## THE ECONOMIC CLIMATE

- Real GDP contracted at a -9.0% rate year-over-year in Q2 (-31.4% quarterly annualized rate)—likely the most sudden economic recession in American history.
- Europe is experiencing a drastic second wave of COVID-19 which has been sweeping across the continent. The seven-day average daily case growth of the EU and the U.K. combined rose from 4,699 to 48,807 during Q3.
- Election polls and the betting markets are indicating that Joe Biden is leading President Trump materially as we move into the final weeks pre-election. In 2016, the story was largely the same, as Clinton was expected to win up until the day before the election.

## PORTFOLIO IMPACTS

- U.S. and emerging markets have recovered most losses year-to-date, while international remain negative. Global equities are now positive for 2020 despite an earnings recession and considerable economic uncertainty.
- U.S. core inflation increased to a more normal level, rising 1.7% year-over-year in August from 1.2% in June. Inflation expectations also normalized. The 10yr U.S. TIPS inflation breakeven rate recovered to 1.6%, from a low of 0.5% on March 19th. The breakeven rate of inflation is now on par with actual year-over-year inflation.

## THE INVESTMENT CLIMATE

- The Federal Reserve announced a notable change to its inflation targeting approach, now aiming to achieve “inflation moderately above 2% for some time so that inflation averages 2% over time and longer-term inflation expectations remain well anchored at 2%.” This was a reversal from the prior goal of achieving 2% inflation.
- The Federal Reserve maintained an accommodative tone, and most members of the FOMC held their view that short rates are likely to stay near-zero through 2023—eventually moving to 2.50% over the longer-term.
- According to FactSet, S&P 500 Q3 earnings are expected to be down -20.5%. However, earnings in Q2 beat expectations by 12.5% (-31.6% YoY vs. -44.1%). Another large positive surprise in Q3 would be welcome news to investors.

## ASSET ALLOCATION ISSUES

- U.S. equities delivered +8.9% over the quarter, reaching a new high in September before giving back some gains. The S&P 500 is up +5.6% year-to-date, despite an earnings recession and considerable economic uncertainty.
- The U.S. dollar fell -3.5% in Q3, continuing a downward trend since a sudden jump in March on safe-haven buying. The dollar has now completely unwound the gains experienced during the market sell-off.

A more neutral risk positioning may be warranted in the current environment

There seems to be a high degree of uncertainty regarding the future market path



# U.S. economics summary

- Real GDP contracted at a -9.0% rate year-over-year in the second quarter (-31.4% quarterly annualized rate)—likely the most sudden economic recession in American history.
- The Atlanta Fed’s forecast for third quarter growth is -10.7% year-over-year (+33.8% quarterly annualized rate). This projection was based on the expectations that consumption rebounds materially, household investment picks up, businesses begin re-stocking shelves that were allowed to run empty, and supporting fiscal policy.
- The U.S. labor market partially recovered from the recent shock. Unemployment fell from 14.7% in April to 7.9% in September. A report released in September indicated 60% of temporary business closures during the pandemic were now permanent.
- Correlation between election results and market performance

has been weak, and the outcome depends greatly on how the data is sliced and the timing of economic events. The S&P 500 has experienced stronger gains with a Democrat in power, though the results are skewed by extreme events such as the Great Depression.

- The NFIB Small Business Optimism Index recovered to 104.0 in Q3, which was in line with pre-pandemic levels. The survey concluded that half of the jobs lost in March and April have been recouped, but that the pace of recovery has slowed.
- The median home price increased 11.1% year-over-year in September, according to Realtor.com. U.S. housing supply has reached record tightness. In August, 3.3 months worth of homes were on the market, which was the lowest inventory ever recorded since the government began tracking this data in 1963.

	Most Recent	12 Months Prior
GDP (YoY)	(9.0%) 6/30/20	2.0% 6/30/19
Inflation (CPI YoY, Core)	1.7% 8/31/20	2.4% 8/31/19
Expected Inflation (5yr-5yr forward)	1.7% 9/30/20	1.7% 9/30/19
Fed Funds Target Range	0% – 0.25% 9/30/20	1.75% – 2.00% 9/30/19
10-Year Rate	0.7% 9/30/20	1.7% 9/30/19
U-3 Unemployment	7.9% 9/30/20	3.5% 9/30/19
U-6 Unemployment	12.8% 9/30/20	6.9% 9/30/19

# International economics summary

- Growth contracted sharply in international developed economies in Q2. Gross domestic product in the Eurozone contracted -14.7% from the prior year, and Japanese GDP sank -9.9% over the same period, despite the deployment of fiscal support to the tune of roughly 40% of Japan’s GDP.
- European officials implemented stricter social distancing controls with hopes of stymying the second wave of COVID-19 sweeping across the continent. The seven-day average daily case growth of the EU27 and the United Kingdom combined rose from 4,699 to 48,807 over the third quarter.
- The IMF revised its global growth projections for 2020 and 2021 from -4.9% and 5.4% to -4.4% and 5.2%, respectively. The IMF’s model assumes social distancing controls will continue to act as a drag on growth into 2021, and that local transmission of the virus will be falling everywhere by 2023.
- Inflation remained muted globally in the third quarter, supporting arguments that the pandemic’s impact has been more disinflationary than inflationary over the short term. The Eurozone’s consumer price index ended the quarter -0.3% below its level from September 2019, though most of the deflationary pressures were supplied by an -8.2% decline in energy prices.
- Eurozone retail sales volumes grew 3.7% from the prior year in August (exp. 2.2%), driven by a sharp surge in online purchases and clothing sales. The vigorous rebound in consumer spending has been attributed to pent-up demand and incomes, which have been largely stable due to furlough schemes. Many analysts expect a “normalization” of retail sales in the fourth quarter, under the assumption that current spending levels are unlikely to be sustainable.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	(9.0%) <i>6/30/20</i>	1.3% <i>8/31/20</i>	7.9% <i>9/30/20</i>
Eurozone	(14.7%) <i>6/30/20</i>	(0.3%) <i>9/30/20</i>	8.1% <i>8/31/20</i>
Japan	(9.9%) <i>6/30/20</i>	0.2% <i>9/30/20</i>	3.0% <i>8/31/20</i>
BRICS Nations	(3.1%) <i>6/30/20</i>	3.3% <i>6/30/20</i>	5.3% <i>6/30/20</i>
Brazil	(11.4%) <i>6/30/20</i>	2.4% <i>8/31/20</i>	13.8% <i>7/31/20</i>
Russia	(8.0%) <i>6/30/20</i>	3.3% <i>9/30/20</i>	6.4% <i>8/31/20</i>
India	(23.9%) <i>6/30/20</i>	6.7% <i>8/31/20</i>	8.5% <i>12/31/17</i>
China	4.9% <i>9/30/20</i>	2.4% <i>8/31/20</i>	3.8% <i>6/30/20</i>

# Equity environment

- U.S. equities reached a new high in September before pulling back later in the month. U.S. and emerging markets have recovered most losses year-to-date, while international developed equities remain more negative. Global equities are now positive for 2020 despite an earnings recession and considerable economic uncertainty.
  - Emerging market equities outperformed during the quarter (MSCI Emerging Markets +9.6%) followed by domestic equities (S&P 500 +8.9%) and international developed (MSCI EAFE +4.8%).
  - According to FactSet, S&P 500 Q3 earnings are expected to be down -20.5%. However, earnings in Q2 beat expectations by 12.5% (-31.6% YoY vs. -44.1%). Another large positive surprise in Q3 would be welcome news to investors. The Cboe VIX Index moderated in June
- from heightened levels and remained generally rangebound during the third quarter. The VIX ended the month of September at 26, higher than the long-term average of 19.
- The U.S. dollar fell -3.5% in the third quarter, continuing a downward trend since a sudden jump in March on safe-haven buying. The dollar has now completely unwound the gains experienced during the market sell-off.
  - U.S. growth stocks beat value stocks in the third quarter, continuing an incredible run of market leadership (Russell 1000 Growth +13.2%, Russell 1000 Value +5.6%), while large cap stocks outperformed small cap stocks (Russell 1000 +9.5%, Russell 2000 +4.9%).

	QTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (S&P 500)	8.9%		15.1%	
US Small Cap (Russell 2000)	4.9%		0.4%	
US Large Value (Russell 1000 Value)	5.6%		(5.0%)	
US Large Growth (Russell 1000 Growth)	13.2%		37.5%	
International Large (MSCI EAFE)	4.8%	1.3%	0.5%	(3.1%)
Eurozone (Euro Stoxx 50)	3.5%	(0.6%)	(1.7%)	(6.8%)
U.K. (FTSE 100)	0.1%	(4.1%)	(13.9%)	(17.0%)
Japan (NIKKEI 225)	6.8%	4.7%	10.9%	10.2%
Emerging Markets (MSCI Emerging Markets)	9.6%	8.5%	10.5%	12.8%

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 9/30/20

# Domestic equity

U.S. equities delivered +8.9% in Q3, reaching a new high in September before pulling back later in the month. The S&P 500 is up +5.6% year-to-date, despite an earnings recession and considerable economic uncertainty.

Consumer Discretionary (+15.1%) and Materials (+13.3%) sectors led in Q3, with Energy (-19.7%) delivering further underperformance. Information Technology stocks have shown impressive performance year-to-date (+27.5%) and have captured headlines as some company valuations have

reached lofty levels. Large technology names have seen greater volatility recently, and exhibited a quick pullback during the first week of September. Growth stocks continue to be in vogue in the current low-growth environment.

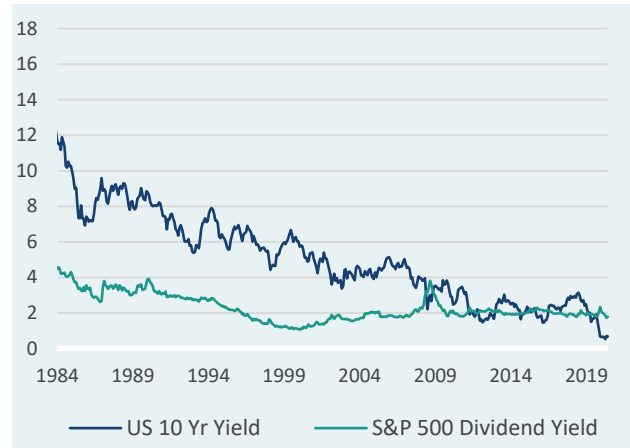
Many investors are justifiably questioning the rationale for such strong risk asset performance, at a time when so much uncertainty exists around public health and the economy, and at a time when some business models may no longer be viable due to COVID-19.

## S&P 500



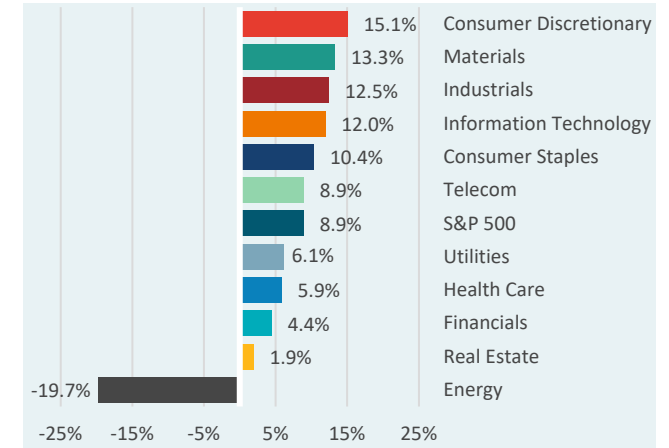
Source: Standard & Poor's, as of 9/30/20

## DIVIDEND YIELD VS BOND YIELD



Source: Standard & Poor's, as of 9/30/20

## Q3 SECTOR PERFORMANCE



Source: Standard & Poor's, as of 9/30/20

# Domestic equity size & style

U.S. growth stocks beat value stocks during Q3, continuing an incredible run of market leadership (Russell 1000 Growth +13.2%, Russell 1000 Value +5.6%), while large cap stocks outperformed small cap stocks (Russell 1000 +9.5%, Russell 2000 +4.9%).

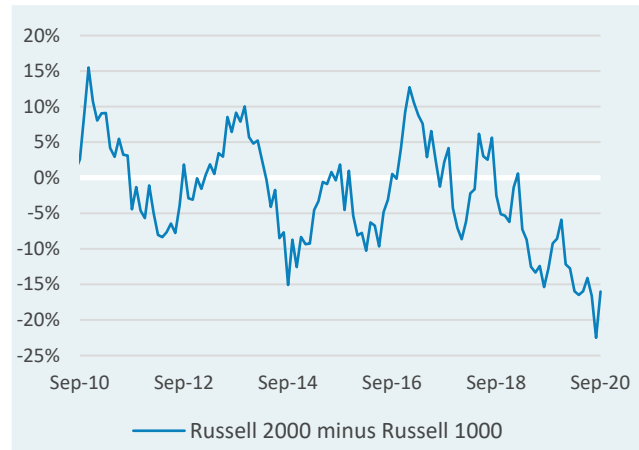
It seems that 2020 has been the perfect storm for value stocks. Commodities sectors were experiencing oversupply leading up to the onset of COVID-19, and the virus greatly accelerated these problems, resulting in a historic crash to prices (the Energy sector contains many value stocks). The Energy sector has delivered -45.2% over the past year. At the same time, the world has been rapidly changing in terms of technological progress, and COVID-19 appears to have accelerated these trends, contributing to extreme

outperformance of the growth-tilted Information Technology sector at +47.2% over the past year.

We recognize that recent value underperformance is anomalous, but we also recognize that much of this price action has been due to global trends that may not necessarily reverse over the short-term. It is very difficult to successfully make short-term bets on style factors, as factors can be incredibly noisy and vulnerable to sector randomness. Value is historically cheap, but a catalyst for a value turnaround is not yet evident. We continue to believe that a buy-and-hold approach to style investing is the best course of action, most of the time, but we are closely watching this space.

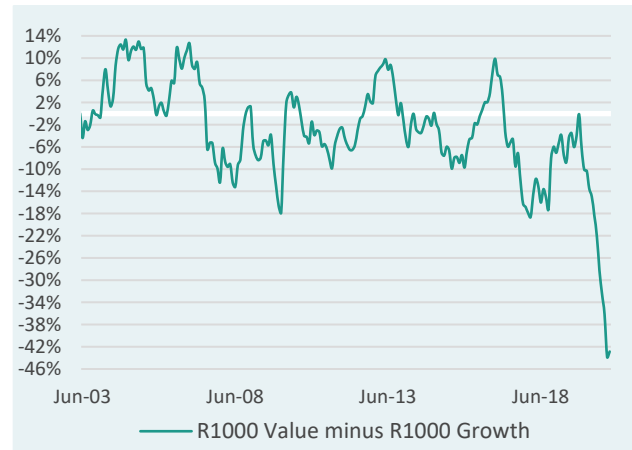
Sector performance has fueled dramatic negative performance of the value premium

**SMALL CAP VS LARGE CAP (YOY)**



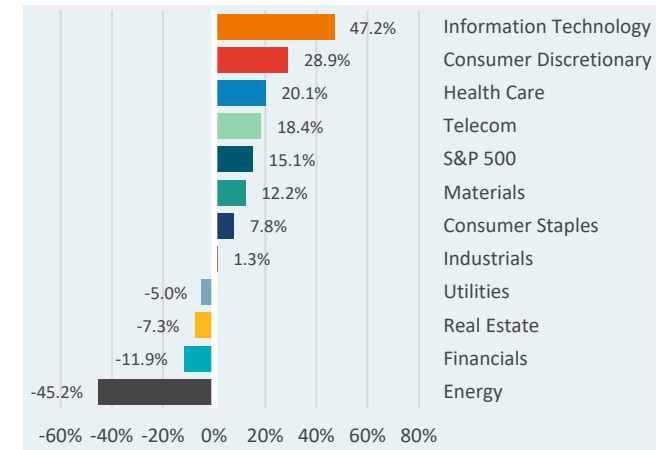
Source: FTSE, as of 9/30/20

**VALUE VS GROWTH (YOY)**



Source: FTSE, as of 9/30/20

**S&P 500 SECTOR PERFORMANCE (1-YEAR)**



Source: Standard & Poor's, as of 9/30/20

# International developed equity

International equities continued to recover through Q3, though the MSCI EAFE Index (+4.8%) materially lagged the MSCI Emerging Markets Index (+9.6%) and the S&P 500 Index (+8.9%). Dollar weakness coinciding with the risk recovery through the summer was a major theme and dampened the underperformance of international developed equities relative to U.S. equities in U.S. dollar terms. The three largest currency exposures embedded in the MSCI EAFE Index—the euro (32%), the yen (26%), and the pound sterling (13%)—appreciated +4.4%, +2.2%, and +4.6% relative to the greenback over the course of the quarter.

In the second quarter, MSCI EAFE Index revenues dropped nearly -20%, and earnings dropped nearly -60%, pushing certain valuation metrics including price/earnings ratios to historic highs. Moving into Q3 earnings season, analysts are anticipating a historic turnaround in corporate profits, which could help bring valuations back to more normal levels.

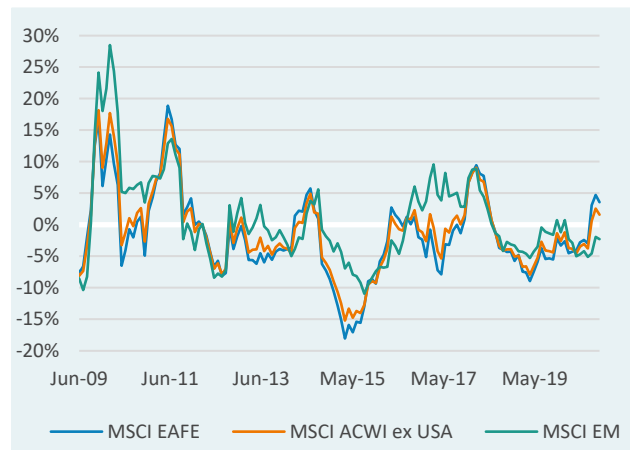
The MSCI EAFE Growth Index returned +8.4% over the third quarter, outpacing the MSCI EAFE Value Index (+1.2%) in U.S. dollar terms, extending its outperformance over the year-to-date to a staggering +23.6%.

## INTERNATIONAL DEVELOPED EQUITIES



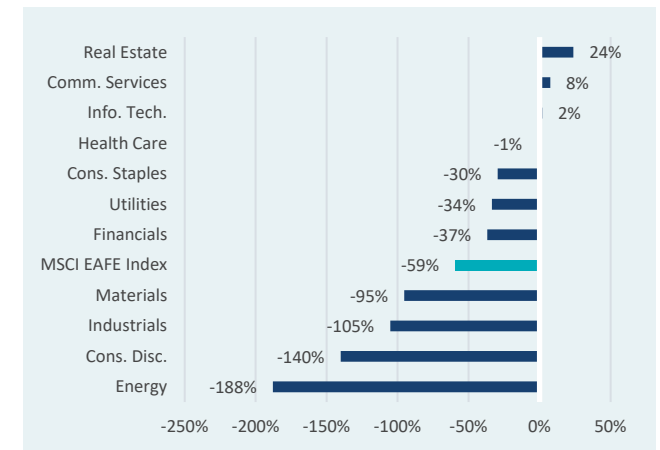
Source: MSCI, as of 9/30/20

## EFFECT OF CURRENCY (1-YEAR ROLLING)



Source: MSCI, as of 9/30/20

## Q2 2020 EARNINGS GROWTH – MSCI EAFE INDEX



Source: MSCI, Bloomberg, as of 9/30/20

# Emerging market equity

Emerging market equities (MSCI EM +9.6%) outperformed U.S. (S&P 500 +8.9%) and international developed equities (MSCI EAFE +4.8%) over the quarter. Looking across the emerging market complex, Latin American equities underperformed (MSCI EM Latin American -1.3%) which was a continuation of a longer-term trend. Latin American stocks have drastically underperformed over the previous 10-year period (MSCI EM Latin America -5.7%, MSCI EM +2.5%).

Inflation remained subdued relative to longer-term averages, due in large part to energy prices remaining under pressure. The Emerging Markets Citi Inflation Surprise Index rose from

-28.8 to -6.6 over the quarter, implying that the magnitude of inflation data misses lessened between June and September.

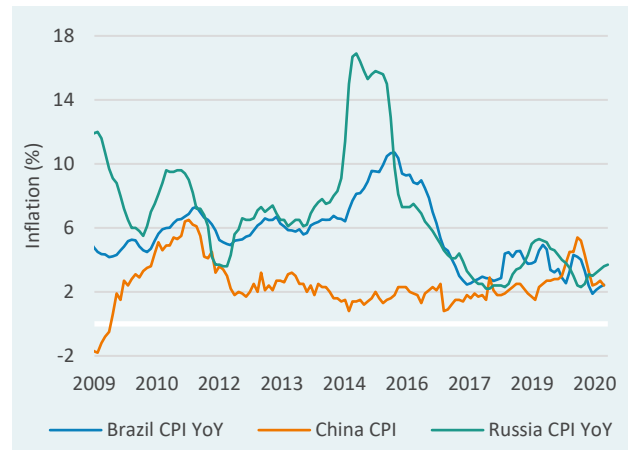
Emerging market currencies broadly appreciated relative to the U.S. dollar, and Asian currencies outperformed. The offshore Chinese renminbi rallied 4.2% versus the greenback to ¥6.78, its strongest level since mid-2019. Part of the rally in the yuan has been attributed to FTSE Russell's recent decision to add Chinese government bonds to its World Government Bond Index. This change would take effect in 2021, and would likely result in increased foreign capital inflows.

## EMERGING MARKET EQUITY



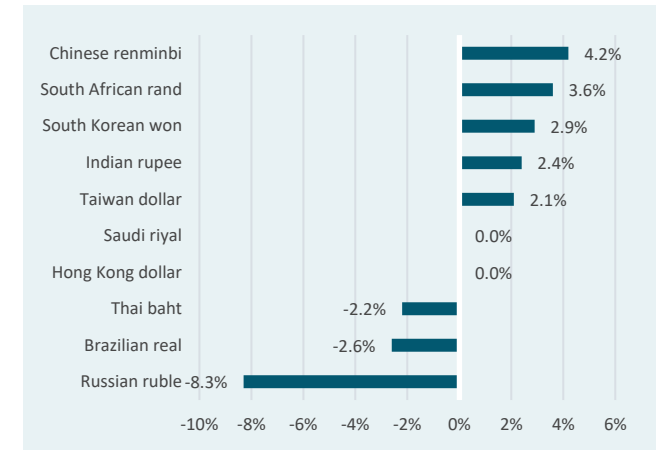
Source: MSCI, as of 9/30/20

## INFLATION (YOY)



Source: Bloomberg, as of 9/30/20

## Q3 CURRENCY PERFORMANCE – MSCI EM INDEX



Source: Bloomberg, as of 9/30/20

# Interest rate environment

- Global interest rate levels remained extremely depressed relative to long-term averages in Q3, and the 10-year U.S. Treasury yield traded in a relatively narrow range between 0.50%-0.75%.
- The Federal Reserve maintained an accommodative tone, and most members of the Federal Open Market Committee remained of the view that short rates are likely to stay near-zero through 2023, and eventually move toward 2.50% over the longer-term. The Fed repeated that while it has the power to lend, it does not hold the power to spend, and additional fiscal support will likely be required from Congress.
- The U.S. Fed made an adjustment to its policy approach related to its inflation target. Instead of targeting stable prices, defined as 2% annual growth in personal consumption expenditures (PCE), the Fed will now implement an average inflation targeting approach aimed at achieving “inflation moderately above 2% for some time so that inflation averages 2% over time and longer-term inflation expectations remain well anchored at 2%.”
- Officials at the Bank of England (BOE) reportedly warmed to the idea of pursuing a negative interest rate policy, and markets are now pricing in negative overnight rates by May 2021. Many analysts have stated that the BOE is likely to remain extremely supportive and may provide additional monetary accommodation in the form of quantitative easing before year-end.
- Investors were paid for betting on longer-term reflation of growth and inflation, likely due to their expectations for further fiscal and monetary accommodation moving forward. Ten-year breakeven inflation rates recovered from 1.3% to 1.6%, and key term spreads indicated a moderate steepening in the U.S. yield curve.

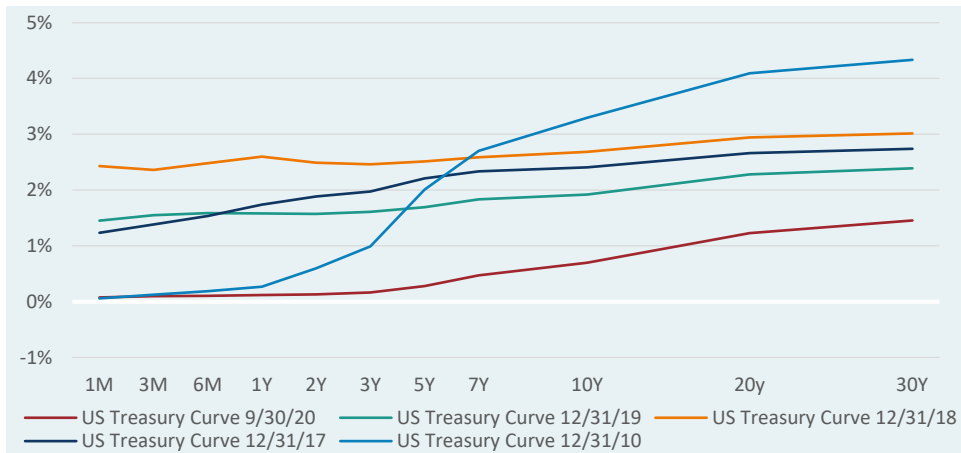
Area	Short Term (3M)	10-Year
United States	0.09%	0.68%
Germany	(0.63%)	(0.52%)
France	(0.64%)	(0.24%)
Spain	(0.54%)	0.25%
Italy	(0.48%)	0.87%
Greece	(0.08%)	1.02%
U.K.	0.01%	0.23%
Japan	(0.15%)	0.01%
Australia	0.12%	0.79%
China	2.29%	3.13%
Brazil	1.93%	7.45%
Russia	4.09%	6.29%

Source: Bloomberg, as of 9/30/20

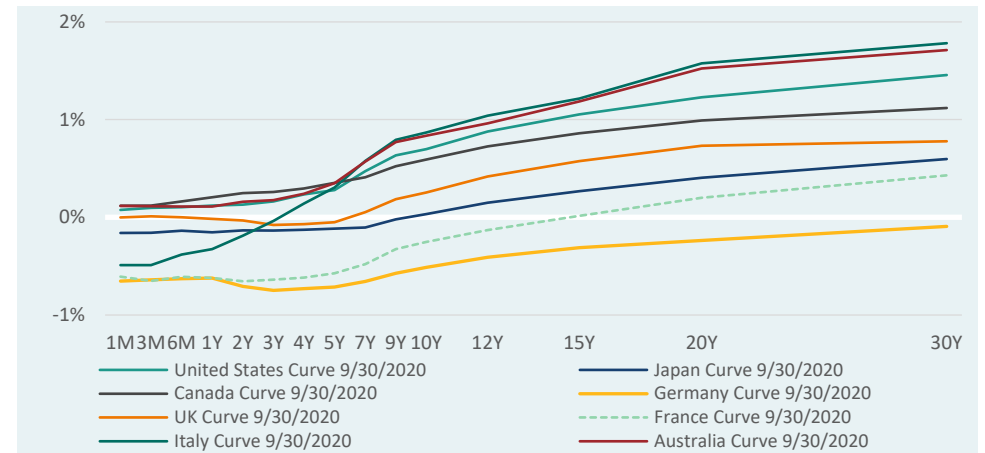


# Yield environment

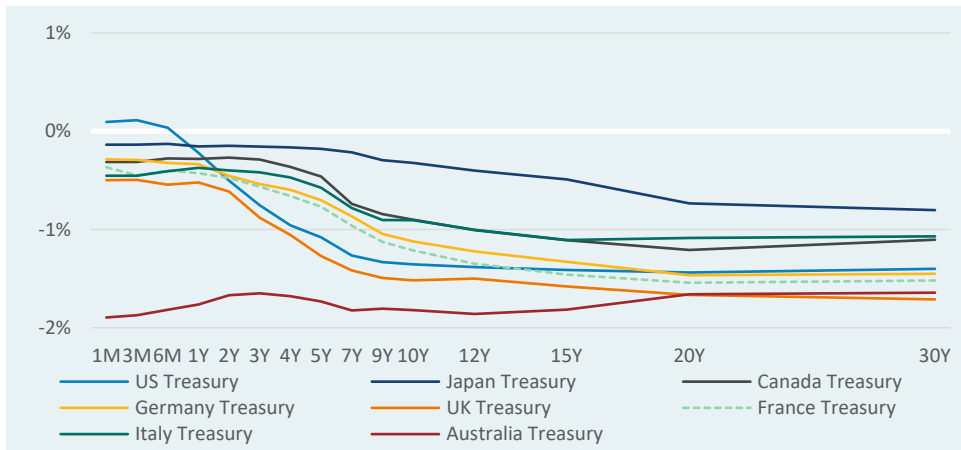
## U.S. YIELD CURVE



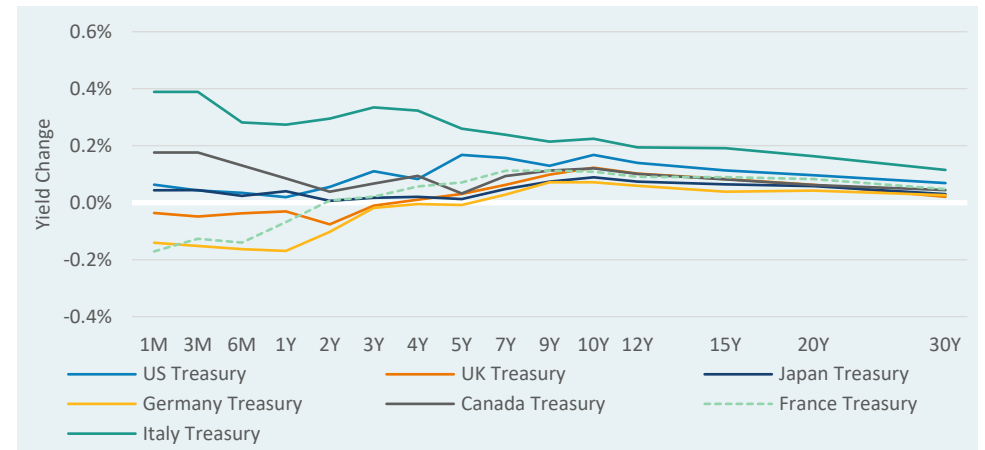
## GLOBAL GOVERNMENT YIELD CURVES



## YIELD CURVE CHANGES OVER LAST FIVE YEARS



## IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 9/30/20

# Currency

The U.S. dollar fell -3.5% in the third quarter, continuing a downward trend since a sudden jump in March on safe-haven buying. Though the dollar did show some signs of stabilization in September as equities took a step back, the Bloomberg Dollar Spot Index has now completely unwound the gains experienced during the market sell-off.

Interest rate differentials between U.S. Treasury bonds and international developed sovereign bonds have begun to separate once again. U.S. Treasury yields traded in a relatively narrow range while European yields

drifted lower, perhaps as a result of speculation on further quantitative easing from the European Central Bank. A continuation of this trend could be supportive of the dollar bull case, looking ahead.

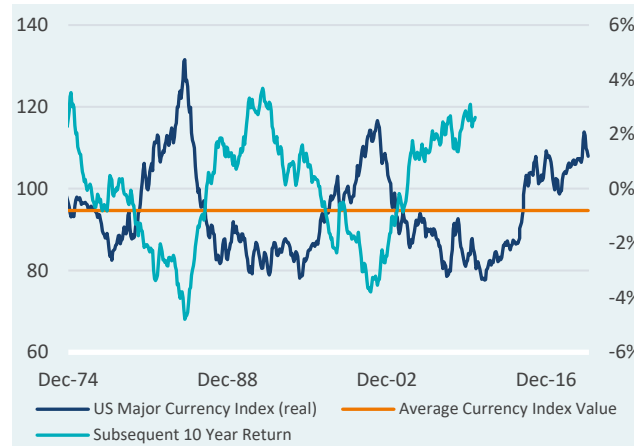
Despite the significant rally of the euro (+4.4%) relative to the greenback in Q3, the common currency remains cheap according to the OECD's purchasing power parity data. At quarter-end, the euro was -20.8% cheap relative to the U.S. dollar, which was significant but still at its least undervalued level since September 2018.

## BLOOMBERG DOLLAR SPOT INDEX



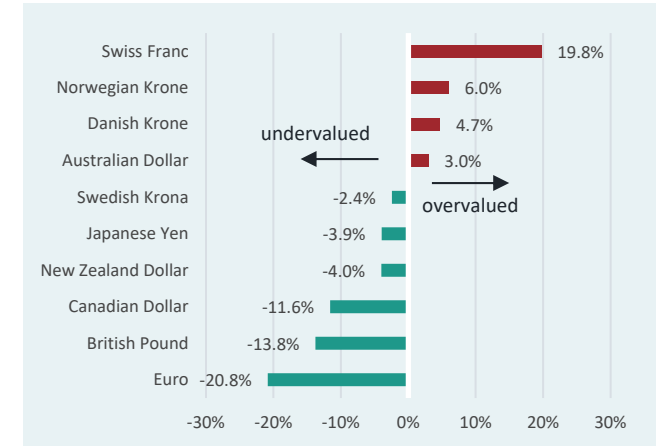
Source: Bloomberg, as of 9/30/20

## USD CURRENCY LEVEL & SUBSEQUENT RETURN



Source: Federal Reserve, as of 9/30/20

## G10 FX VALUATIONS – OECD PPP (VS USD)



Source: OECD, Bloomberg, as of 9/30/20

- The Total Fund, net of manager fees, returned 5.2% in the third quarter of 2020 and in the ranked 40<sup>th</sup> percentile among other public plans greater than \$1 billion (median of 5.0%). It lagged the policy index return of 5.4%. The Total Fund ex Overlay returned 5.3% for the quarter. The Total Fund one-year return of 3.4% lagged the policy index return of 6.0% and ranked in the 86<sup>th</sup> percentile of its peer universe. The three-year return of 4.6% (83<sup>rd</sup> percentile) lagged the median large public plan (5.5%) and the policy index (5.9%).
  
- Third quarter results were enhanced by the following factors:
  1. For the second quarter in a row Baillie Gifford beat the MSCI ACWI ex US (13.2 vs 6.4%). One of the particular standouts was an online cloud based commerce platform that continues to outperform because of Covid-19 concerns.
  2. Western TRU gained 2.4% beating the Barclays Aggregate which rose 0.6%. Both high yield and bank loans had a positive impact on relative performance as spreads tightened meaningfully during the quarter.
  
- Third quarter results were hindered by the following factors:
  1. Acadian Managed Vol gained 4.3% and PanAgora gained 4.5% trailing the Russell 1000 (9.5%). Underperformance was driven by an underweight to the information technology and consumer discretionary sectors.
  2. QMA trailed the Russell 2000 Index (2.2% vs 4.9%.) The continued underperformance of value and smaller capitalization stocks hurt QMA's relative performance for the quarter.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: September 30, 2020

	3 Mo (%)	Rank*	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Total Fund**</b>	<b>5.2</b>	<b>40</b>	<b>-0.5</b>	<b>77</b>	<b>3.4</b>	<b>86</b>	<b>4.2</b>	<b>67</b>	<b>4.6</b>	<b>83</b>	<b>7.2</b>	<b>75</b>	<b>7.6</b>	<b>44</b>
<i>Policy Index<sup>1</sup></i>	5.4	31	1.2	44	6.0	51	5.6	33	5.9	39	8.2	29	8.2	24
<i>InvMetrics Public DB &gt; \$1B Net Median</i>	5.0		0.8		6.0		4.7		5.5		7.5		7.4	
<b>Total Fund ex Overlay</b>	<b>5.3</b>	<b>38</b>	<b>-0.3</b>	<b>76</b>	<b>3.5</b>	<b>85</b>	<b>4.1</b>	<b>69</b>	<b>4.6</b>	<b>85</b>	<b>7.1</b>	<b>77</b>	<b>7.5</b>	<b>47</b>
<i>Policy Index<sup>1</sup></i>	5.4	31	1.2	44	6.0	51	5.6	33	5.9	39	8.2	29	8.2	24
<i>InvMetrics Public DB &gt; \$1B Net Median</i>	5.0		0.8		6.0		4.7		5.5		7.5		7.4	
<b>Public Equity</b>	<b>7.0</b>	<b>85</b>	<b>-1.1</b>	<b>74</b>	<b>7.1</b>	<b>75</b>	<b>4.2</b>	<b>74</b>	<b>6.0</b>	<b>78</b>	<b>9.7</b>	<b>72</b>	<b>9.4</b>	<b>63</b>
<i>Blended Public Equity Index<sup>1</sup></i>	7.5	65	0.7	47	9.4	50	5.3	52	6.9	58	10.5	46	9.9	50
<i>InvMetrics All DB Total Eq Net Median</i>	7.9		0.5		9.3		5.3		7.3		10.4		9.9	
<b>US Equity</b>	<b>7.2</b>	<b>83</b>	<b>0.2</b>	<b>72</b>	<b>7.8</b>	<b>78</b>	<b>5.0</b>	<b>72</b>	<b>8.9</b>	<b>67</b>	<b>11.8</b>	<b>64</b>	<b>12.2</b>	<b>55</b>
<i>Blended US Equity Index<sup>1</sup></i>	9.2	9	5.4	18	15.0	14	8.8	12	11.6	15	13.7	13	13.4	12
<i>Russell 3000</i>	9.2	9	5.4	18	15.0	14	8.8	12	11.6	15	13.7	11	13.5	11
<i>InvMetrics All DB US Eq Net Median</i>	8.2		2.0		10.6		6.4		9.8		12.3		12.3	
<b>Large Cap Equity</b>	<b>7.5</b>	<b>54</b>	<b>1.8</b>	<b>49</b>	<b>9.4</b>	<b>51</b>	<b>6.9</b>	<b>50</b>	<b>10.4</b>	<b>44</b>	<b>13.1</b>	<b>38</b>	<b>13.0</b>	<b>40</b>
<i>Russell 1000</i>	9.5	33	6.4	36	16.0	36	9.8	36	12.4	36	14.1	30	13.8	31
<i>eV US Large Cap Equity Net Median</i>	7.8		1.5		9.6		6.8		9.4		11.5		12.2	
<i>Acadian US MGD V</i>	4.3	96	-6.0	95	-1.1	98	--	--	--	--	--	--	--	--
<i>BlackRock Russell 1000</i>	9.5	23	6.4	25	16.0	23	9.8	24	12.4	21	--	--	--	--
<i>DE Shaw</i>	8.1	44	2.3	53	11.3	46	5.9	68	9.8	52	13.4	25	13.9	10
<i>PanAgora Defuseq</i>	4.5	94	-4.6	89	-1.4	98	--	--	--	--	--	--	--	--
<i>Russell 1000</i>	9.5	23	6.4	25	16.0	23	9.8	24	12.4	21	14.1	13	13.8	13
<i>eV US Large Cap Core Equity Net Median</i>	7.8		2.6		10.5		7.4		9.9		12.0		12.5	

\* Total Fund and asset class aggregates are ranked in InvMetrics universes. Managers are ranked in eVest (eA) manager universes.

\*\* Includes Parametric Minneapolis manager funded in August 2013.

1. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: September 30, 2020

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Small Cap Equity</b>	<b>2.2</b>	<b>75</b>	<b>-19.5</b>	<b>77</b>	<b>-12.0</b>	<b>72</b>	<b>-11.6</b>	<b>83</b>	<b>-4.3</b>	<b>77</b>	<b>3.3</b>	<b>79</b>	<b>7.4</b>	<b>78</b>
<i>Russell 2000</i>	4.9	50	-8.7	45	0.4	42	-4.4	48	1.8	44	8.0	45	9.9	47
<i>eV US Small Cap Equity Net Median</i>	4.9		-11.3		-4.0		-5.0		0.4		7.0		9.5	
<b>QMA US Small Cap</b>	<b>2.2</b>	<b>81</b>	<b>-19.5</b>	<b>97</b>	<b>-12.0</b>	<b>95</b>	<b>-11.6</b>	<b>97</b>	<b>-4.3</b>	<b>94</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Russell 2000</i>	4.9	47	-8.7	43	0.4	39	-4.4	48	1.8	42	8.0	43	9.9	52
<i>eV US Small Cap Core Equity Net Median</i>	4.7		-10.6		-3.0		-5.0		1.0		7.4		10.1	
Domestic Equity Overlay	8.5	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>International Equity</b>	<b>6.8</b>	<b>64</b>	<b>-2.7</b>	<b>39</b>	<b>6.0</b>	<b>44</b>	<b>3.1</b>	<b>32</b>	<b>2.6</b>	<b>28</b>	<b>7.2</b>	<b>31</b>	<b>4.6</b>	<b>56</b>
<i>Blended International Equity Index<sup>1</sup></i>	5.5	89	-4.8	62	2.8	75	1.1	60	1.3	51	6.6	43	4.5	61
<i>MSCI EAFE Gross</i>	4.9	93	-6.7	82	0.9	86	0.1	77	1.1	58	5.8	71	5.1	36
<i>InvMetrics All DB ex-US Eq Net Median</i>	7.3		-4.2		5.2		1.8		1.4		6.4		4.7	
<b>Baillie Gifford</b>	<b>13.2</b>	<b>26</b>	<b>14.2</b>	<b>33</b>	<b>28.5</b>	<b>27</b>	<b>13.7</b>	<b>20</b>	<b>10.0</b>	<b>26</b>	<b>12.6</b>	<b>34</b>	<b>--</b>	<b>--</b>
<i>MSCI ACWI ex US<sup>1</sup></i>	6.4	99	-5.1	97	3.4	97	1.3	97	1.6	95	6.7	96	--	--
<i>MSCI ACWI ex US Growth<sup>1</sup></i>	10.2	69	7.5	65	17.9	65	9.9	47	7.7	60	10.6	59	--	--
<i>eV ACWI ex-US Growth Equity Net Median</i>	11.8		10.1		20.7		9.8		8.6		11.3		7.8	
<b>Mondrian</b>	<b>3.6</b>	<b>51</b>	<b>-16.2</b>	<b>60</b>	<b>-7.2</b>	<b>64</b>	<b>-4.6</b>	<b>30</b>	<b>-3.0</b>	<b>32</b>	<b>2.9</b>	<b>58</b>	<b>3.0</b>	<b>51</b>
<i>MSCI ACWI ex USA Value Gross</i>	2.4	74	-17.2	67	-10.3	89	-7.2	58	-4.5	57	2.8	62	2.1	73
<i>MSCI ACWI ex USA Gross</i>	6.4	30	-5.1	8	3.4	11	1.3	6	1.6	8	6.7	10	4.5	20
<i>eV ACWI ex-US Value Equity Net Median</i>	3.7		-14.3		-6.5		-6.7		-4.2		3.1		3.0	
<b>BlackRock MSCI ACWI EX-US IMI<sup>1</sup></b>	<b>6.8</b>	<b>62</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>MSCI ACWI ex USA IMI</i>	6.8	63	-5.2	79	3.5	72	0.8	74	1.1	73	6.3	72	4.2	91
<i>eV ACWI ex-US All Cap Core Eq Net Median</i>	8.8		-1.4		8.8		2.4		3.5		8.0		5.6	
Int'l Equity Currency Overlay	--	--	--	--	--	--	--	--	--	--	--	--	--	--
International Equity Overlay	12.7	--	--	--	--	--	--	--	--	--	--	--	--	--

\* Funded June 2020.

1. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: September 30, 2020

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Fixed Income</b>	<b>2.0</b>	<b>30</b>	<b>4.2</b>	<b>70</b>	<b>5.6</b>	<b>62</b>	<b>6.5</b>	<b>67</b>	<b>4.4</b>	<b>56</b>	<b>5.2</b>	<b>31</b>	<b>4.8</b>	<b>26</b>
<i>Blended Fixed Income Index<sup>1</sup></i>	1.6	49	4.9	60	5.9	56	7.9	39	5.0	41	4.9	38	3.9	56
<i>InvMetrics All DB Total Fix Inc Net Median</i>	1.6		5.6		6.3		7.2		4.6		4.5		3.9	
<b>Core Fixed</b>	<b>1.3</b>	<b>--</b>	<b>6.5</b>	<b>--</b>	<b>7.4</b>	<b>--</b>	<b>8.0</b>	<b>--</b>	<b>4.8</b>	<b>--</b>	<b>4.6</b>	<b>--</b>	<b>4.3</b>	<b>--</b>
<i>BBgBarc US Aggregate TR</i>	0.6	--	6.8	--	7.0	--	8.6	--	5.2	--	4.2	--	3.6	--
<i>BlackRock Intermediate Govt</i>	0.3	95	6.2	58	6.2	60	6.9	59	4.2	53	--	--	--	--
<i>BBgBarc US Govt Int TR</i>	0.2	99	6.0	63	6.0	63	6.7	61	4.0	57	2.8	59	2.3	73
<i>BBgBarc US Aggregate TR</i>	0.6	8	6.8	43	7.0	35	8.6	22	5.2	24	4.2	1	3.6	3
<i>eV US Government Fixed Inc Net Median</i>	0.4		6.4		6.3		7.6		4.4		3.4		3.0	
<i>DoubleLine<sup>*</sup></i>	1.8	41	--	--	--	--	--	--	--	--	--	--	--	--
<i>BBgBarc US Aggregate TR</i>	0.6	67	6.8	2	7.0	2	8.6	2	5.2	5	4.2	16	3.6	53
<i>eV US Securitized Fixed Inc Net Median</i>	1.1		3.0		3.0		5.4		3.6		3.2		3.9	
<i>FIAM Bond</i>	1.4	24	8.4	10	9.0	5	9.6	13	6.0	10	5.1	9	4.4	15
<i>NISA Core Bond<sup>**</sup></i>	0.7	78	--	--	--	--	--	--	--	--	--	--	--	--
<i>BBgBarc US Aggregate TR</i>	0.6	88	6.8	63	7.0	62	8.6	54	5.2	61	4.2	71	3.6	72
<i>eV US Core Fixed Inc Net Median</i>	1.1		7.2		7.2		8.7		5.4		4.4		3.9	
<i>Western TRU</i>	2.4	2	1.9	99	5.0	96	5.9	99	3.1	99	4.5	41	--	--
<i>3-Month Libor Total Return USD</i>	0.1	99	0.6	99	1.0	99	1.8	99	1.9	99	1.5	99	0.9	99
<i>BBgBarc US Aggregate TR</i>	0.6	88	6.8	63	7.0	62	8.6	54	5.2	61	4.2	71	3.6	72
<i>eV US Core Fixed Inc Net Median</i>	1.1		7.2		7.2		8.7		5.4		4.4		3.9	
<i>Core Fixed Income Overlay</i>	-0.3	--	--	--	--	--	--	--	--	--	--	--	--	--

\* Funded March 2020.

\*\* Funded May 2020.

1. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: September 30, 2020

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Opportunistic Credit</b>	<b>3.3</b>	<b>--</b>	<b>-0.3</b>	<b>--</b>	<b>1.9</b>	<b>--</b>	<b>3.5</b>	<b>--</b>	<b>3.8</b>	<b>--</b>	<b>6.0</b>	<b>--</b>	<b>7.7</b>	<b>--</b>
<i>BBgBarc BA Intermediate HY<sup>1</sup></i>	3.6	--	2.7	--	5.0	--	7.1	--	5.0	--	6.5	--	5.3	--
AG CSF Annex Dislocation <sup>+</sup> *	0.0	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>BBgBarc BA Intermediate HY</i>	3.6	--	2.7	--	5.0	--	7.1	--	5.0	--	6.5	--	5.3	--
Angelo Gordon Opportunistic <sup>+</sup>	7.3	--	-12.7	--	-10.8	--	-0.9	--	8.9	--	8.3	--	--	--
Angelo Gordon STAR <sup>+</sup>	3.6	--	3.2	--	5.4	--	10.7	--	14.5	--	12.7	--	--	--
<i>BBgBarc US Aggregate TR</i>	0.6	--	6.8	--	7.0	--	8.6	--	5.2	--	4.2	--	3.6	--
Angelo Gordon Credit Solutions <sup>+</sup>	0.0	99	-11.2	99	--	--	--	--	--	--	--	--	--	--
<i>BBgBarc BA Intermediate HY</i>	3.6	84	2.7	7	5.0	6	7.1	3	5.0	7	6.5	19	5.3	82
<i>eV US High Yield Fixed Inc Net Median</i>	4.5		0.3		2.6		4.2		3.6		5.9		6.0	
Beach Point Select	6.8	3	1.2	25	4.6	12	4.8	34	5.5	2	7.4	6	--	--
<i>BBgBarc BA Intermediate HY</i>	3.6	84	2.7	7	5.0	6	7.1	3	5.0	7	6.5	19	5.3	82
<i>eV US High Yield Fixed Inc Net Median</i>	4.5		0.3		2.6		4.2		3.6		5.9		6.0	
Brigade Capital	6.2	5	-4.2	99	-1.2	96	-0.7	99	1.3	99	5.0	82	5.1	87
<i>BBgBarc BA Intermediate HY</i>	3.6	84	2.7	7	5.0	6	7.1	3	5.0	7	6.5	19	5.3	82
50% Barclays HY/ 50% Bank Loan	4.4	57	-0.1	60	2.1	61	3.4	68	3.7	47	5.4	69	5.5	78
<i>eV US High Yield Fixed Inc Net Median</i>	4.5		0.3		2.6		4.2		3.6		5.9		6.0	
PIMCO Diversified	2.7	95	1.9	15	3.6	20	6.5	5	4.7	15	--	--	--	--
<i>Blended PIMCO Diversified Index</i>	2.6	96	2.0	14	3.7	19	6.9	4	4.5	16	6.0	43	5.6	75
<i>BBgBarc BA Intermediate HY</i>	3.6	84	2.7	7	5.0	6	7.1	3	5.0	7	6.5	19	5.3	82
<i>eV US High Yield Fixed Inc Net Median</i>	4.5		0.3		2.6		4.2		3.6		5.9		6.0	
Franklin Templeton	-0.5	99	-6.2	99	-4.9	99	-1.6	99	-2.2	99	1.7	97	--	--
<i>BBgBarc Multiverse TR</i>	2.7	69	5.3	34	6.0	39	6.8	41	4.0	48	4.1	68	2.5	72
<i>eV All Global Fixed Inc Net Median</i>	3.4		3.1		4.9		6.0		3.8		4.7		3.6	

\* Preliminary return as of 09/30/2020.

\* Funded April 2020.

1. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: September 30, 2020

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Private Credit</b>	<b>2.4</b>	<b>--</b>	<b>3.4</b>	<b>--</b>	<b>5.3</b>	<b>--</b>	<b>6.2</b>	<b>--</b>	<b>6.9</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Cliffwater Direct Lending Index*</i>	3.2	--	1.4	--	3.3	--	5.6	--	6.8	--	7.6	--	9.4	--
Blackrock DL Feeder IX-U+*	0.0	99	--	--	--	--	--	--	--	--	--	--	--	--
<i>Cliffwater Direct Lending Index</i>	3.2	90	1.4	23	3.3	26	5.6	14	6.8	1	7.6	5	9.4	1
<i>eV US High Yield Fixed Inc Net Median</i>	4.5		0.3		2.6		4.2		3.6		5.9		6.0	
PIMCO Private Income	5.2	19	3.6	3	5.3	6	--	--	--	--	--	--	--	--
<i>BBgBarc BA Intermediate HY</i>	3.6	84	2.7	7	5.0	6	7.1	3	5.0	7	6.5	19	5.3	82
<i>Cliffwater Direct Lending Index</i>	3.2	90	1.4	23	3.3	26	5.6	14	6.8	1	7.6	5	9.4	1
<i>eV US High Yield Fixed Inc Net Median</i>	4.5		0.3		2.6		4.2		3.6		5.9		6.0	
TCP Direct Lending VIII*	1.6	99	2.6	7	4.0	18	5.7	13	6.0	2	--	--	--	--
White Oak Yield*	0.0	99	1.7	20	4.1	16	5.1	25	6.5	1	--	--	--	--
<i>Cliffwater Direct Lending Index</i>	3.2	90	1.4	23	3.3	26	5.6	14	6.8	1	7.6	5	9.4	1
<i>eV US High Yield Fixed Inc Net Median</i>	4.5		0.3		2.6		4.2		3.6		5.9		6.0	
<b>Alternatives</b>	<b>14.7</b>	<b>--</b>	<b>11.2</b>	<b>--</b>	<b>8.3</b>	<b>--</b>	<b>9.8</b>	<b>--</b>	<b>7.5</b>	<b>--</b>	<b>7.8</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Blended Alternatives Index<sup>1</sup></i>	11.0	--	5.8	--	7.8	--	8.7	--	8.8	--	9.8	--	--	--
<b>Private Equity** ++</b>	<b>25.5</b>	<b>1</b>	<b>31.5</b>	<b>1</b>	<b>26.7</b>	<b>4</b>	<b>26.8</b>	<b>2</b>	<b>22.4</b>	<b>5</b>	<b>18.8</b>	<b>6</b>	<b>--</b>	<b>--</b>
<i>Blended Private Equity Index<sup>1</sup></i>	21.5	2	7.1	23	9.5	28	10.7	30	11.1	40	14.5	17	15.4	6
<i>InvMetrics All DB Private Eq Net Median</i>	5.9		1.9		4.9		7.5		9.3		9.3		10.1	
<b>Hedge Fund/Absolute Return</b>	<b>2.1</b>	<b>75</b>	<b>-9.8</b>	<b>87</b>	<b>-10.9</b>	<b>90</b>	<b>-7.9</b>	<b>90</b>	<b>-7.7</b>	<b>96</b>	<b>-3.5</b>	<b>93</b>	<b>--</b>	<b>--</b>
<i>Libor 1 month +4%</i>	1.1	80	3.4	28	4.9	34	5.7	12	5.7	12	5.3	15	4.8	27
<i>InvMetrics All DB Hedge Funds Net Median</i>	4.4		-0.6		2.0		2.0		3.1		3.1		4.0	

\* Preliminary return as of 09/30/2020.

\* Funded March 2020.

\*\* Returns are one-quarter lag.

++ Excludes EnCap Energy Capital Fund and Sheridan Production Partners.

1. See Appendix for Benchmark History.



Total Fund  
Performance Summary (Net of Fees)

Period Ending: September 30, 2020

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Aberdeen Standard GARS	4.0	44	3.9	33	5.3	37	5.3	32	2.9	47	--	--	--	--
Graham Quant Macro*	2.7	53	--	--	--	--	--	--	--	--	--	--	--	--
PIMCO MAARS Fund LP***	-0.1	80	--	--	--	--	--	--	--	--	--	--	--	--
<i>Libor 1 month +4%</i>	1.1	68	3.4	35	4.9	39	5.7	29	5.7	26	5.3	39	4.8	47
<i>eV Alt All Multi-Strategy Median</i>	3.2		0.7		2.0		1.7		2.4		4.1		4.4	
<b>Inflation Hedge</b>	<b>2.0</b>	<b>--</b>	<b>-10.8</b>	<b>--</b>	<b>-8.4</b>	<b>--</b>	<b>-3.5</b>	<b>--</b>	<b>-0.8</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Blended Inflation Hedge Index<sup>1</sup></i>	4.1	--	-5.5	--	-3.1	--	0.4	--	1.9	--	--	--	--	--
<b>Real Estate</b>	<b>0.2</b>	<b>63</b>	<b>-1.5</b>	<b>73</b>	<b>0.6</b>	<b>59</b>	<b>3.6</b>	<b>39</b>	<b>5.3</b>	<b>29</b>	<b>6.7</b>	<b>20</b>	<b>10.0</b>	<b>11</b>
<i>NCREIF ODCE</i>	0.5	44	-0.1	48	1.4	45	3.5	40	5.2	33	6.6	22	10.3	7
<i>InvMetrics All DB Real Estate Pub Net Median</i>	0.4		-0.2		1.2		3.0		4.6		5.7		9.2	
Harrison Street Core Property**	1.1	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>NCREIF ODCE</i>	0.5	--	-0.1	--	1.4	--	3.5	--	5.2	--	6.6	--	10.3	--
Invesco	-0.3	--	-3.3	--	-1.2	--	2.4	--	4.6	--	6.2	--	9.7	--
<i>NCREIF ODCE</i>	0.5	--	-0.1	--	1.4	--	3.5	--	5.2	--	6.6	--	10.3	--
Invesco US Val IV	0.9	--	-3.0	--	0.3	--	7.2	--	7.8	--	--	--	--	--
<i>NCREIF ODCE</i>	0.5	--	-0.1	--	1.4	--	3.5	--	5.2	--	6.6	--	10.3	--
<i>NCREIF ODCE + 2%</i>	1.0	--	1.4	--	3.4	--	5.5	--	7.3	--	8.8	--	12.5	--
Invesco US Val V	-0.6	--	-3.9	--	0.7	--	--	--	--	--	--	--	--	--
<i>NCREIF ODCE</i>	0.5	--	-0.1	--	1.4	--	3.5	--	5.2	--	6.6	--	10.3	--
<i>NCREIF ODCE + 2%</i>	1.0	--	1.4	--	3.4	--	5.5	--	7.3	--	8.8	--	12.5	--
PGIM RE US Debt Fund	1.3	--	3.3	--	4.7	--	5.6	--	5.9	--	--	--	--	--
<i>NCREIF ODCE</i>	0.5	--	-0.1	--	1.4	--	3.5	--	5.2	--	6.6	--	10.3	--

\* Funded February 2020.

\*\* Funded January 2020.

\*\*\* Funded April 2020.

1. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: September 30, 2020

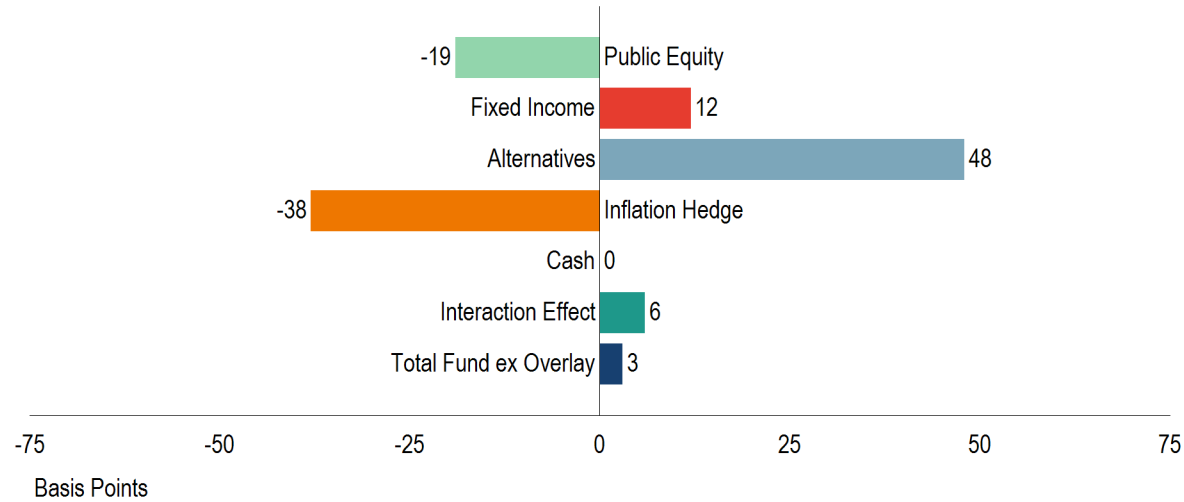
	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Private Real Asset**</b>	<b>6.3</b>	--	<b>-1.8</b>	--	<b>-1.6</b>	--	<b>-4.5</b>	--	<b>-3.7</b>	--	<b>4.0</b>	--	--	--
<i>Blended Private Real Asset Index<sup>1</sup></i>	16.9	--	-12.9	--	-15.3	--	-4.8	--	-2.9	--	1.3	--	--	--
<i>Blended Secondary CA Private RA Index<sup>1</sup></i>	3.6	--	-9.6	--	-10.7	--	-4.6	--	0.4	--	2.7	--	--	--
<b>Public Real Assets</b>	<b>4.0</b>	--	<b>-23.3</b>	--	<b>-20.0</b>	--	<b>-11.6</b>	--	<b>-7.1</b>	--	--	--	--	--
<i>Blended Public Real Asset Index<sup>1</sup></i>	3.9	--	-14.6	--	-9.6	--	-5.2	--	-2.5	--	2.0	--	--	--
SSgA Custom Real Asset	4.0	--	-14.6	--	-9.6	--	-5.2	--	-2.4	--	--	--	--	--
<i>SSgA Custom Real Asset Index<sup>1</sup></i>	3.9	--	-14.6	--	-9.6	--	-5.2	--	-2.5	--	--	--	--	--
<b>Cash</b>	<b>0.1</b>	--	<b>0.5</b>	--	<b>0.8</b>	--	<b>1.1</b>	--	<b>1.0</b>	--	<b>1.1</b>	--	<b>0.8</b>	--
<i>91 Day T-Bills</i>	0.0	--	0.4	--	0.8	--	1.5	--	1.6	--	1.1	--	0.6	--
General Account	0.2	--	1.0	--	1.5	--	3.3	--	3.2	--	2.6	--	1.5	--
Treasury & LAIF	0.2	--	1.0	--	1.7	--	2.4	--	3.0	--	2.1	--	1.5	--
<i>91 Day T-Bills</i>	0.0	--	0.4	--	0.8	--	1.5	--	1.6	--	1.1	--	0.6	--
Currency Hedge Cash Overlay	-0.1	--	--	--	--	--	--	--	--	--	--	--	--	--

\*\* Returns are one-quarter lag.

1. See Appendix for Benchmark History.

Total Fund ex Overlay  
Performance Attribution

Period Ending: September 30, 2020

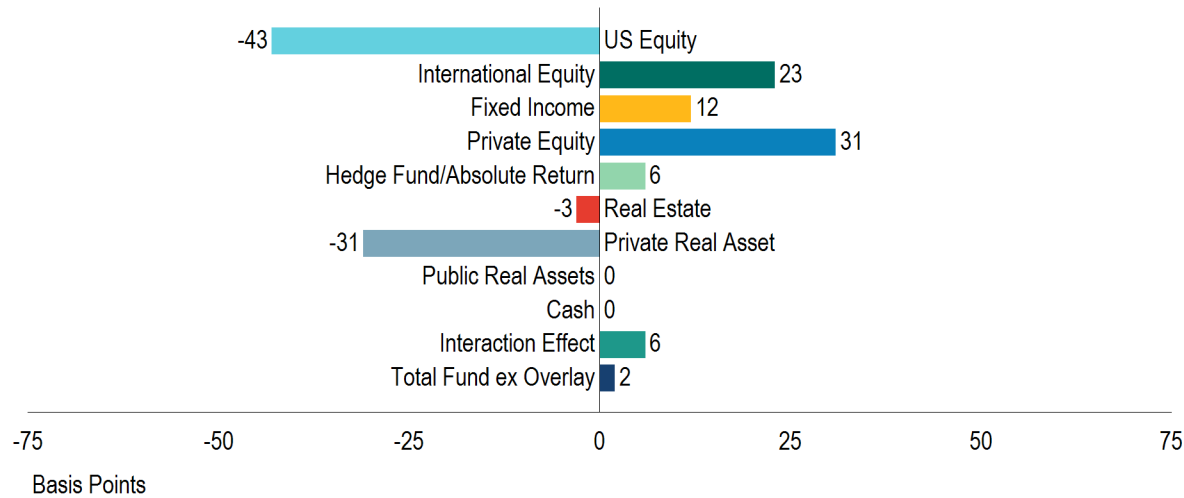


	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction*	Total Effects
Public Equity	7.03%	7.49%	-0.46%	-0.19%	0.01%	-0.01%	-0.18%
Fixed Income	1.98%	1.60%	0.38%	0.12%	0.02%	-0.01%	0.13%
Alternatives	14.69%	11.02%	3.68%	0.48%	-0.03%	0.02%	0.48%
Inflation Hedge	1.96%	4.14%	-2.18%	-0.38%	0.03%	0.05%	-0.29%
Cash	0.14%	0.02%	0.11%	0.00%	-0.10%	0.00%	-0.10%
<b>Total</b>	<b>5.48%</b>	<b>5.45%</b>	<b>0.03%</b>	<b>0.04%</b>	<b>-0.07%</b>	<b>0.06%</b>	<b>0.03%</b>

Attribution does not include the impact of the Parametric Minneapolis strategy.  
\* Interaction Effects include Residual Effects.

Total Fund ex Overlay  
Performance Attribution

Period Ending: September 30, 2020

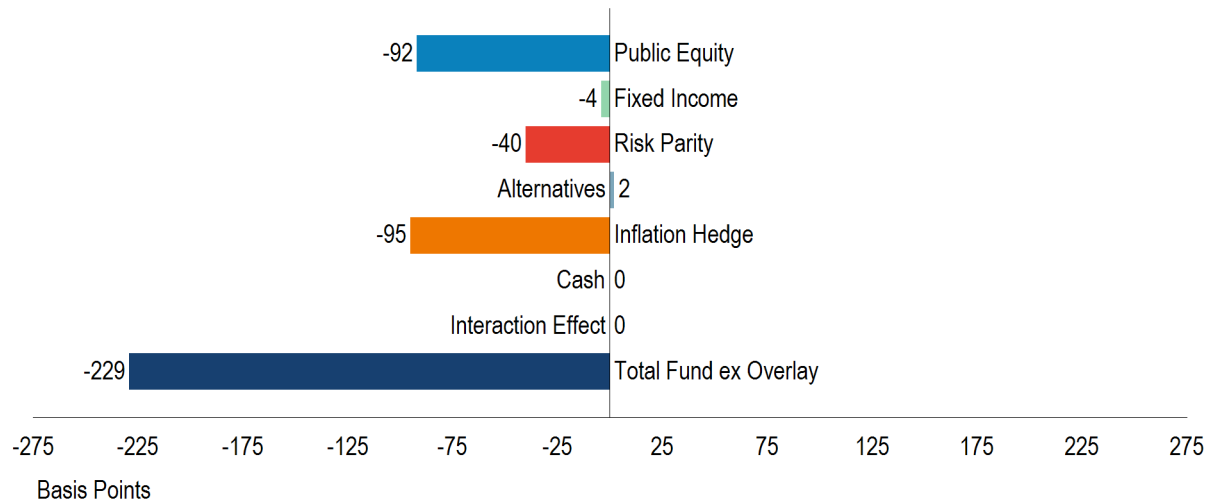


	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction * Effects	Total Effects
US Equity	7.21%	9.21%	-2.00%	-0.43%	0.04%	-0.03%	-0.42%
International Equity	6.76%	5.47%	1.28%	0.23%	0.00%	0.00%	0.23%
Fixed Income	1.98%	1.60%	0.38%	0.12%	0.02%	-0.01%	0.13%
Private Equity	25.54%	21.47%	4.07%	0.31%	0.08%	-0.02%	0.37%
Hedge Fund/Absolute Return	2.11%	1.05%	1.05%	0.06%	0.03%	0.01%	0.11%
Real Estate	0.18%	0.48%	-0.30%	-0.03%	0.05%	0.01%	0.03%
Private Real Asset	6.26%	16.91%	-10.65%	-0.31%	-0.12%	0.11%	-0.32%
Public Real Assets	4.04%	3.93%	0.11%	0.00%	0.00%	0.00%	0.00%
Cash	0.14%	0.02%	0.11%	0.00%	-0.10%	0.00%	-0.10%
<b>Total</b>	<b>5.47%</b>	<b>5.45%</b>	<b>0.02%</b>	<b>-0.04%</b>	<b>0.00%</b>	<b>0.06%</b>	<b>0.02%</b>

Attribution does not include the impact of the Parametric Minneapolis strategy.  
\* Interaction Effects include Residual Effects.

Total Fund ex Overlay  
Performance Attribution (1 Year)

Period Ending: September 30, 2020

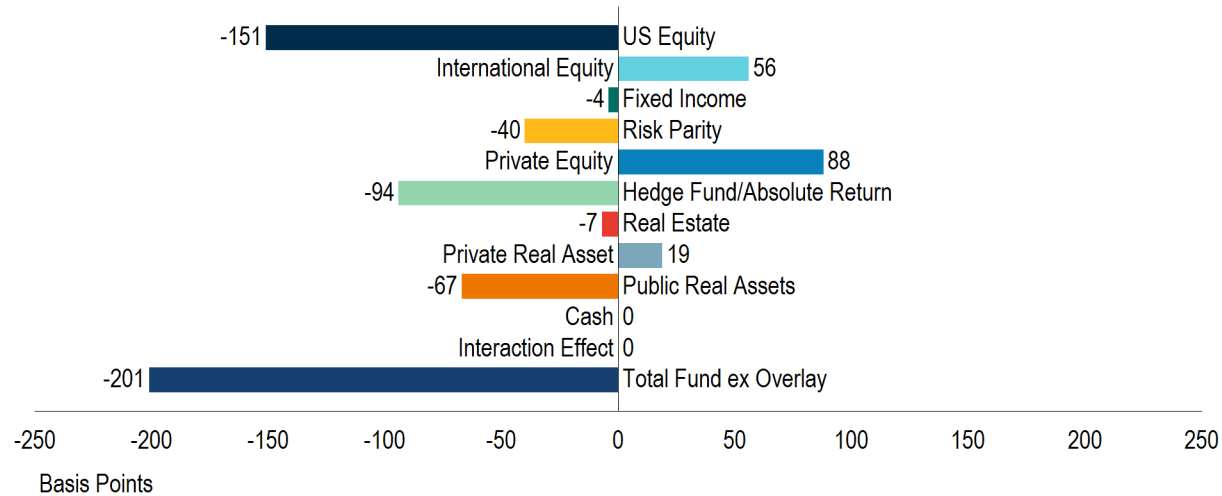


	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction *	Total Effects
Public Equity	7.06%	9.37%	-2.31%	-0.92%	0.00%	0.00%	-0.92%
Fixed Income	5.59%	5.89%	-0.30%	-0.04%	0.00%	0.00%	-0.04%
Risk Parity	--	--	--	-0.40%	0.00%	0.00%	-0.40%
Alternatives	8.33%	7.82%	0.51%	0.02%	0.00%	0.00%	0.02%
Inflation Hedge	-8.43%	-3.09%	-5.34%	-0.95%	0.00%	0.00%	-0.95%
Cash	0.79%	0.82%	-0.03%	0.00%	0.00%	0.00%	0.00%
<b>Total</b>	<b>3.77%</b>	<b>6.06%</b>	<b>-2.29%</b>	<b>-2.29%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>-2.29%</b>

Attribution does not include the impact of the Parametric Minneapolis strategy. Risk Parity closed June 2020.  
\* Interaction Effects include Residual Effects.

Total Fund ex Overlay  
Performance Attribution (1 Year)

Period Ending: September 30, 2020



	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction *	Total Effects
US Equity	7.84%	15.00%	-7.16%	-1.51%	0.00%	0.00%	-1.51%
International Equity	5.96%	2.78%	3.19%	0.56%	0.00%	0.00%	0.56%
Fixed Income	5.59%	5.89%	-0.30%	-0.04%	0.00%	0.00%	-0.04%
Risk Parity	--	--	--	-0.40%	0.00%	0.00%	-0.40%
Private Equity	26.68%	9.53%	17.15%	0.88%	0.00%	0.00%	0.88%
Hedge Fund/Absolute Return	-10.87%	4.90%	-15.77%	-0.94%	0.00%	0.00%	-0.94%
Real Estate	0.64%	1.39%	-0.75%	-0.07%	0.00%	0.00%	-0.07%
Private Real Asset	-1.64%	-15.26%	13.61%	0.19%	0.00%	0.00%	0.19%
Public Real Assets	-20.01%	-9.58%	-10.43%	-0.67%	0.00%	0.00%	-0.67%
Cash	0.79%	0.82%	-0.03%	0.00%	0.00%	0.00%	0.00%
<b>Total</b>	<b>3.74%</b>	<b>5.74%</b>	<b>-2.01%</b>	<b>-2.01%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>-2.01%</b>

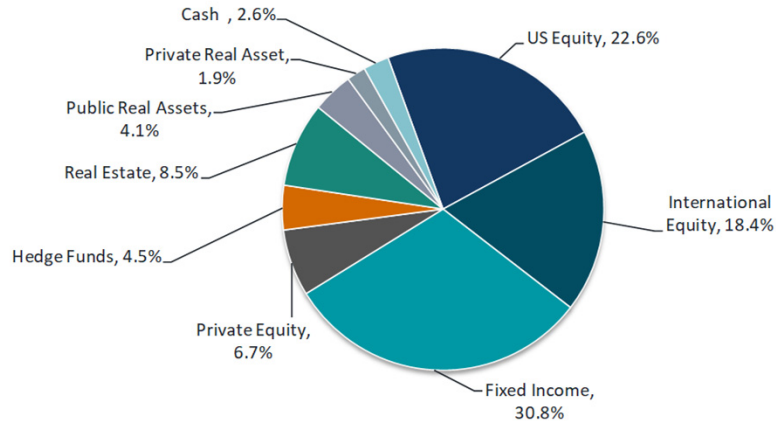
Attribution does not include the impact of the Parametric Minneapolis strategy. Risk Parity closed June 2020.  
\* Interaction Effects include Residual Effects.

# Total Fund

## Asset Allocation Analysis

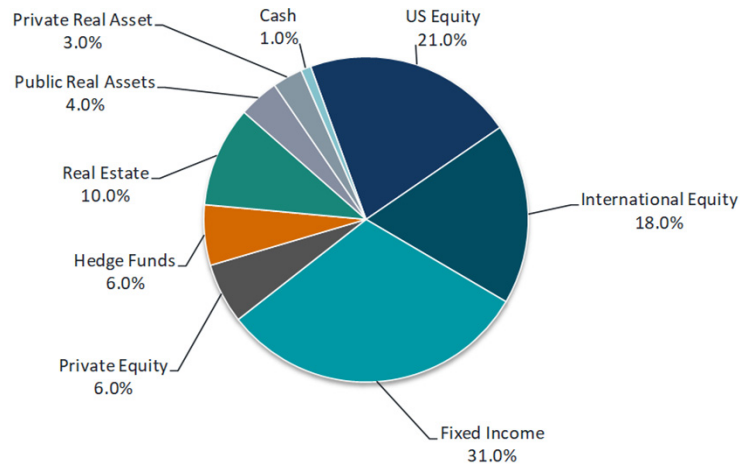
Period Ending: September 30, 2020

Current w/ Overlay



ASSET ALLOCATION	MARKET VALUE W/ OVERLAY	W/ OVERLAY	W/O OVERLAY
US Equity	1,131,615,198	22.6%	22.5%
International Equity	919,336,853	18.4%	18.3%
Fixed Income	1,538,024,061	30.8%	30.5%
Private Equity	335,485,468	6.7%	6.7%
Hedge Funds	223,116,179	4.5%	4.5%
Real Estate	425,334,711	8.5%	8.5%
Public Real Assets	203,918,226	4.1%	4.1%
Private Real Asset	95,333,057	1.9%	1.9%
Cash	128,849,763	2.6%	3.0%
<b>TOTAL</b>	<b>5,001,013,515</b>	<b>100.0%</b>	<b>100.0%</b>

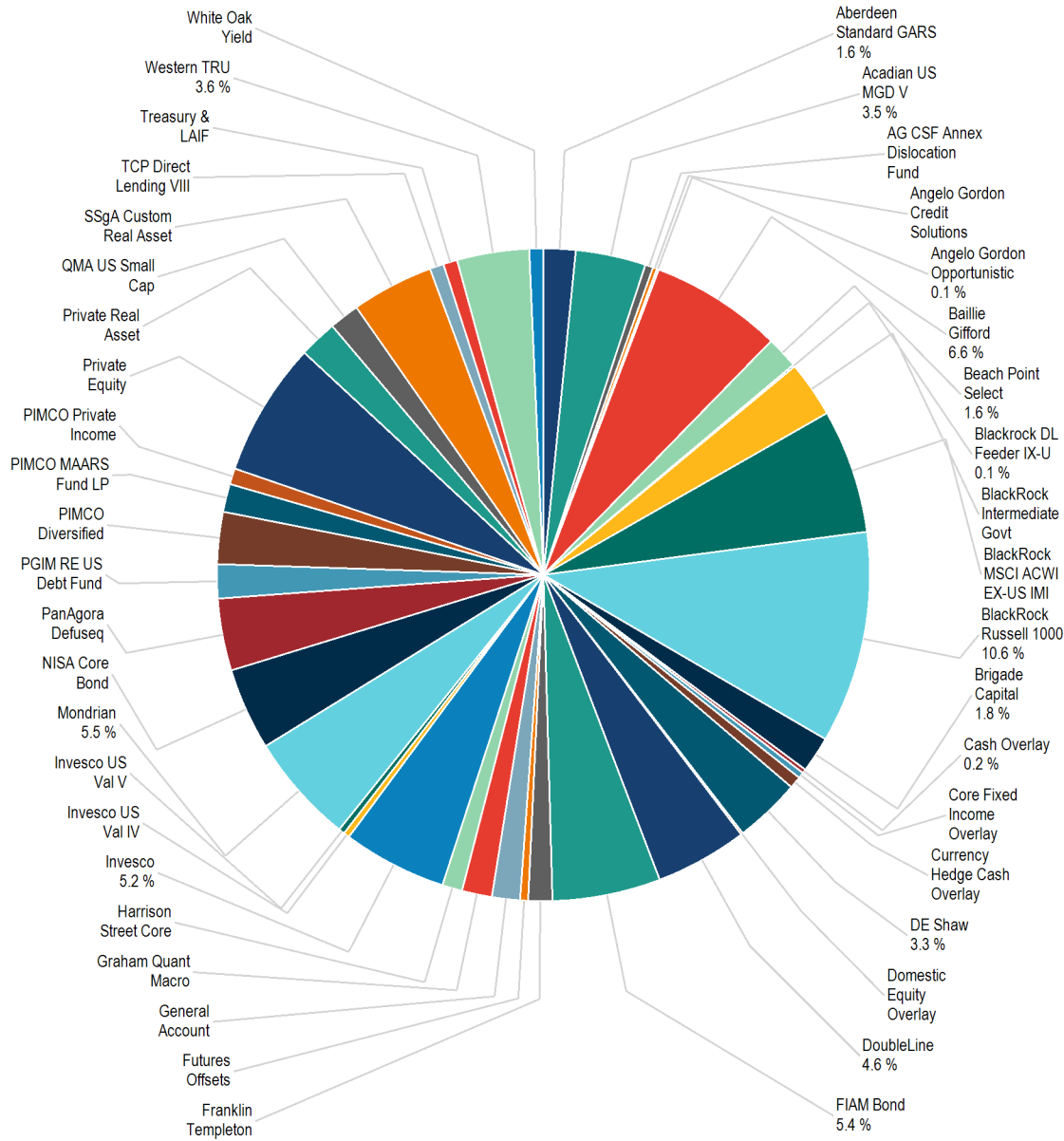
Target



ASSET ALLOCATION	W/ OVERLAY	TARGET	DIFF
US Equity	22.6%	21.0%	1.6%
International Equity	18.4%	18.0%	0.4%
Fixed Income	30.8%	31.0%	-0.2%
Private Equity	6.7%	6.0%	0.7%
Hedge Funds	4.5%	6.0%	-1.5%
Real Estate	8.5%	10.0%	-1.5%
Public Real Assets	4.1%	4.0%	0.1%
Private Real Asset	1.9%	3.0%	-1.1%
Cash	2.6%	1.0%	1.6%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>

# Total Fund Manager Allocation Analysis

Period Ending: September 30, 2020



	Actual	Actual
Aberdeen Standard GARS	\$78,492,828	2%
Acadian US MGD V	\$174,992,295	3%
AG CSF Annex Dislocation Fund	\$17,978,102	0%
Angelo Gordon Credit Solutions	\$9,700,337	0%
Angelo Gordon Opportunistic	\$2,879,174	0%
Angelo Gordon STAR	\$211,353	0%
Baillie Gifford	\$329,635,411	7%
Beach Point Select	\$77,889,968	2%
BlackRock DL Feeder IX-U	\$4,753,490	0%
BlackRock Intermediate Govt	\$140,550,445	3%
BlackRock MSCI ACWI EX-US IMI	\$311,680,886	6%
BlackRock Russell 1000	\$532,255,322	11%
Brigade Capital	\$89,504,254	2%
Cash Overlay	\$11,498,624	0%
Core Fixed Income Overlay	\$12,652,281	0%
Currency Hedge Cash Overlay	\$32,203,196	1%
DE Shaw	\$163,999,014	3%
Domestic Equity Overlay	\$5,352,620	0%
DoubleLine	\$231,147,601	5%
FIAM Bond	\$267,857,425	5%
Franklin Templeton	\$58,277,798	1%
Futures Offsets (SMCE02001)	-\$19,955,241	0%
General Account	\$70,060,133	1%
Graham Quant Macro	\$74,391,329	1%
Harrison Street Core Property	\$50,554,625	1%
International Equity Overlay	\$1,950,340	0%
Invesco	\$260,402,629	5%
Invesco US Val IV	\$14,716,665	0%
Invesco US Val V	\$14,838,498	0%
Mondrian	\$276,070,216	6%
NISA Core Bond	\$204,317,463	4%
PanAgora Defuseq	\$180,991,039	4%
PGIM RE US Debt Fund	\$84,822,294	2%
PIMCO Diversified	\$128,548,915	3%
PIMCO MAARS Fund LP	\$70,232,023	1%
PIMCO Private Income	\$41,573,262	1%
Private Equity	\$335,485,468	7%
Private Real Asset	\$95,333,057	2%
QMA US Small Cap	\$74,024,907	1%
SSgA Custom Real Asset	\$203,918,226	4%
TCP Direct Lending VIII	\$34,316,197	1%
Transition Account	\$5,028	0%
Treasury & LAIF	\$35,038,023	1%
Western TRU	\$181,681,972	4%
White Oak Yield	\$34,184,024	1%
<b>Total</b>	<b>\$5,001,013,515</b>	<b>100%</b>



**Statistics Summary**

**3 Years**

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank	Tracking Error	Tracking Error Rank
Total Fund	4.6%	83	9.1%	44	0.3	76	-0.8	76	1.6%	62
Policy Index	5.9%	39	8.9%	29	0.5	40	--	--	0.0%	1
InvMetrics Public DB > \$1B Net Median	5.5%	--	9.7%	--	0.4	--	-0.4	--	1.3%	--

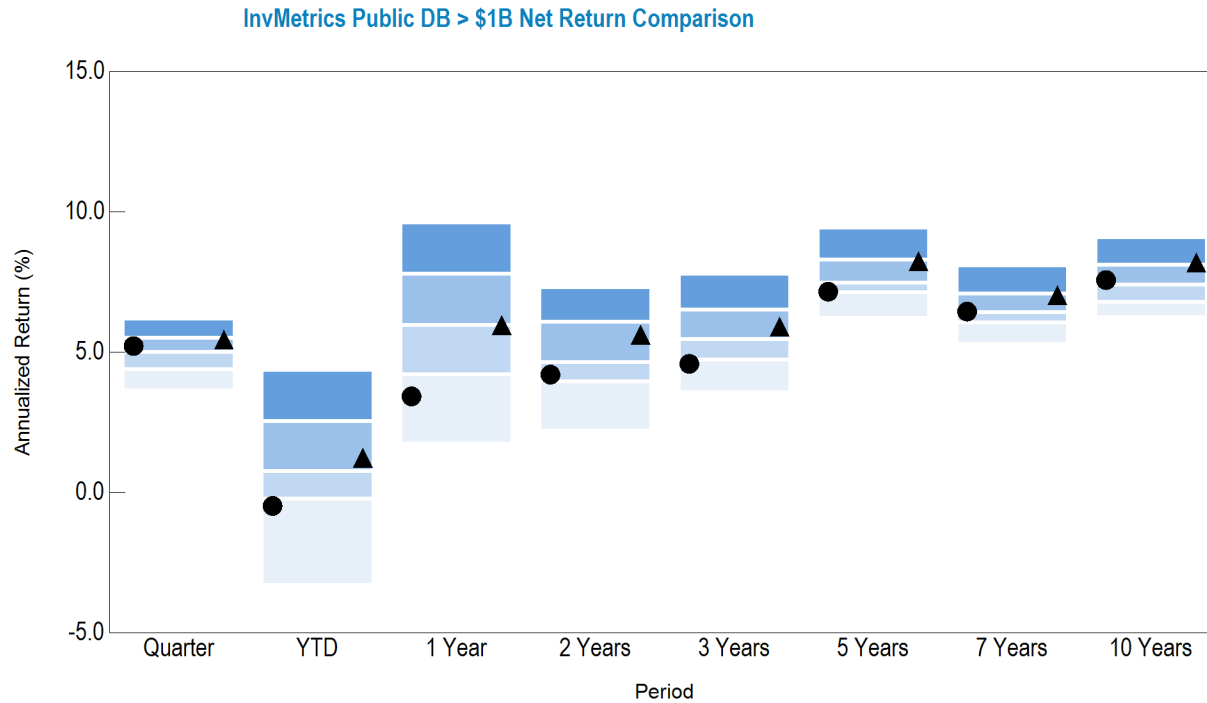
**Statistics Summary**

**5 Years**

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank	Tracking Error	Tracking Error Rank
Total Fund	7.2%	75	7.9%	45	0.8	58	-0.7	85	1.5%	60
Policy Index	8.2%	29	7.9%	45	0.9	35	--	--	0.0%	1
InvMetrics Public DB > \$1B Net Median	7.5%	--	8.3%	--	0.8	--	-0.2	--	1.3%	--

Total Fund  
Peer Universe Comparison

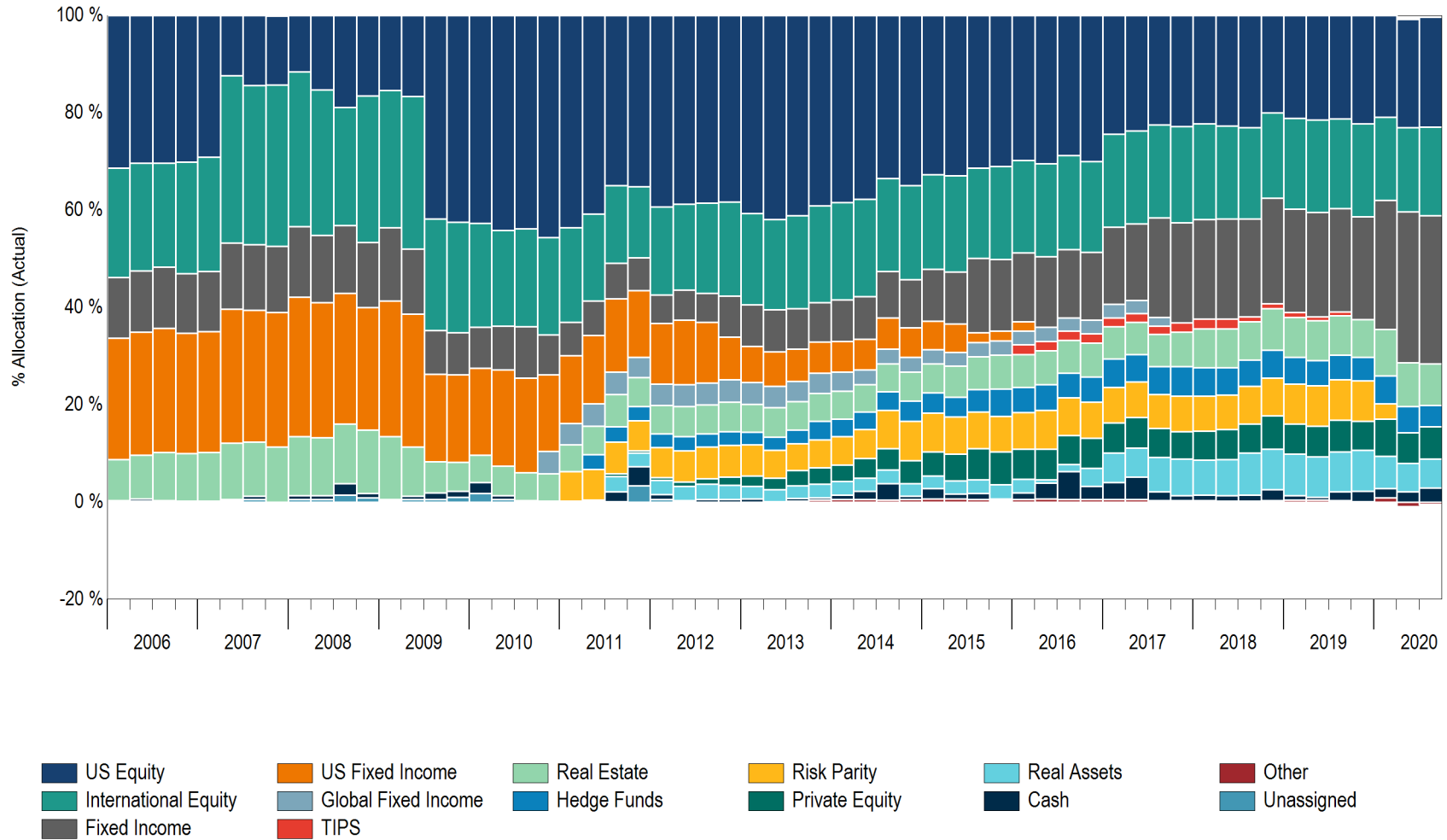
Period Ending: September 30, 2020

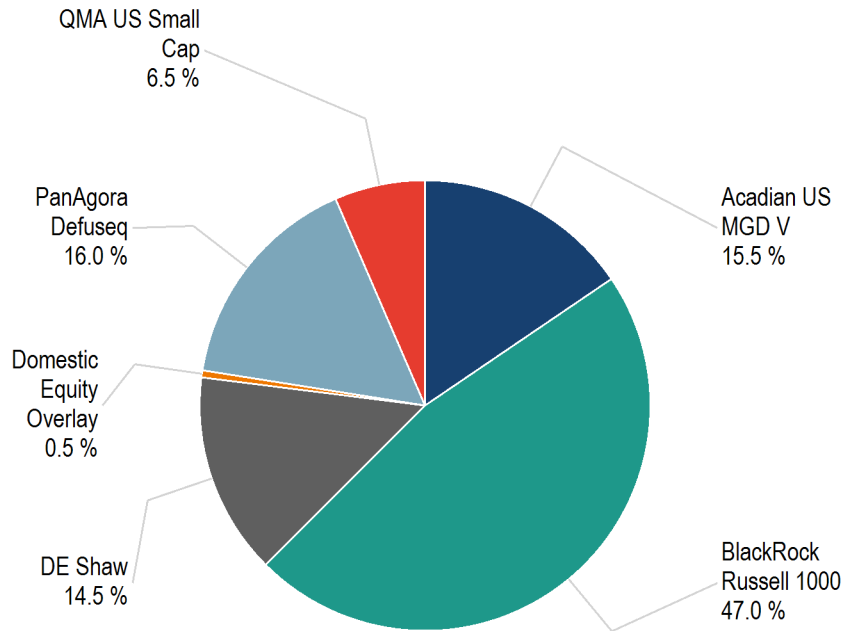


	Return (Rank)							
	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
<b>5th Percentile</b>	6.2	4.4	9.6	7.3	7.8	9.4	8.1	9.1
<b>25th Percentile</b>	5.5	2.6	7.8	6.1	6.5	8.3	7.1	8.1
<b>Median</b>	5.0	0.8	6.0	4.7	5.5	7.5	6.4	7.4
<b>75th Percentile</b>	4.4	-0.2	4.2	4.0	4.8	7.2	6.1	6.8
<b>95th Percentile</b>	3.7	-3.3	1.7	2.2	3.6	6.2	5.3	6.3
<b># of Portfolios</b>	77	77	77	77	77	75	74	69
<b>● Total Fund</b>	5.2 (40)	-0.5 (77)	3.4 (86)	4.2 (67)	4.6 (83)	7.2 (75)	6.5 (50)	7.6 (44)
<b>▲ Policy Index</b>	5.4 (31)	1.2 (44)	6.0 (51)	5.6 (33)	5.9 (39)	8.2 (29)	7.0 (30)	8.2 (24)

Total Fund  
Asset Allocation History

Period Ending: September 30, 2020





	Actual \$	Actual %	Manager Contribution to Excess Return %
Acadian US MGD V	\$174,992,295	15.5%	-0.8%
BlackRock Russell 1000	\$532,255,322	47.0%	0.0%
DE Shaw	\$163,999,014	14.5%	-0.2%
PanAgora Defuseq	\$180,991,039	16.0%	-0.7%
QMA US Small Cap	\$74,024,907	6.5%	-0.2%
Domestic Equity Overlay	\$5,352,620	0.5%	0.0%
Actual vs. Policy Weight Difference			-0.1%
<b>Total</b>	<b>\$1,131,615,198</b>	<b>100.0%</b>	<b>-2.0%</b>

**Statistics Summary**

**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
US Equity	8.9%	18.0%	0.4	-2.1	1.3%
Blended US Equity Index	11.6%	18.4%	0.5	--	0.0%
Russell 3000	11.6%	18.4%	0.5	--	0.0%

Statistics Summary

3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Large Cap Equity	10.4%	17.4%	0.5	-1.3	1.5%
Russell 1000	12.4%	18.2%	0.6	--	0.0%
BlackRock Russell 1000	12.4%	18.2%	0.6	0.4	0.0%
Russell 1000	12.4%	18.2%	0.6	--	0.0%
DE Shaw	9.8%	18.1%	0.5	-1.2	2.2%
Russell 1000	12.4%	18.2%	0.6	--	0.0%
Small Cap Equity	-4.3%	24.8%	-0.2	-1.6	3.9%
Russell 2000	1.8%	23.0%	0.0	--	0.0%
QMA US Small Cap	-4.3%	24.8%	-0.2	-1.6	3.9%
Russell 2000	1.8%	23.0%	0.0	--	0.0%

**Statistics Summary**

**5 Years**

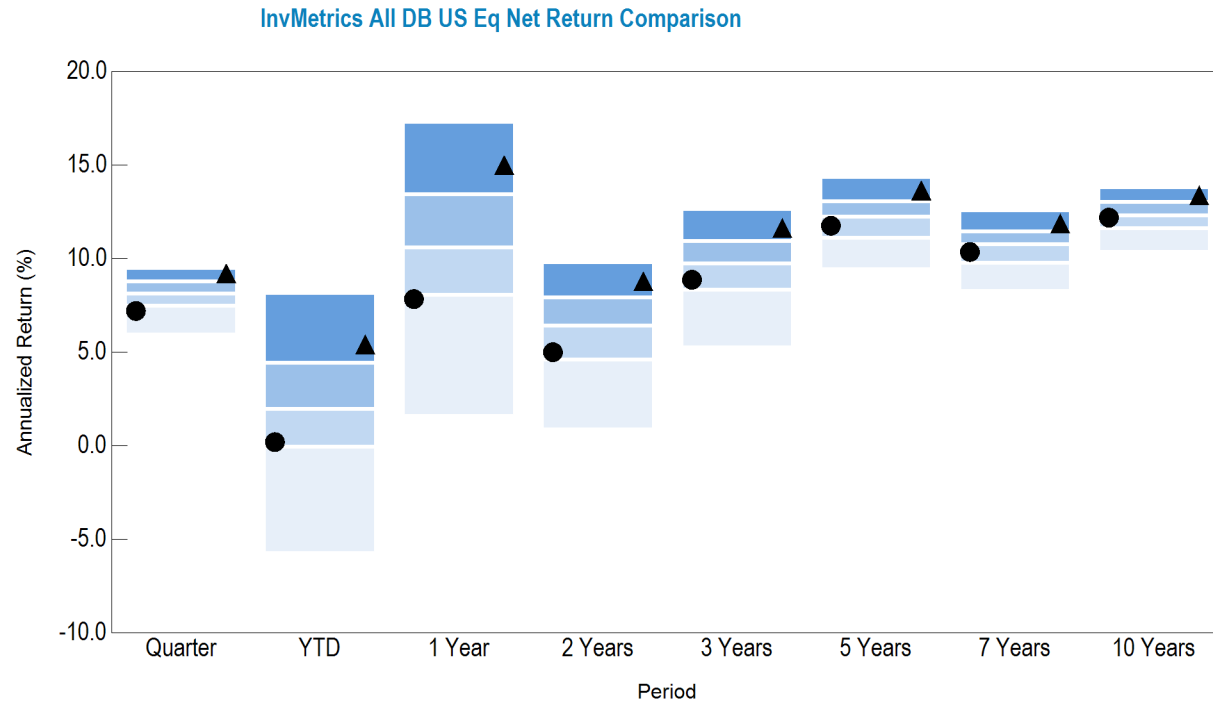
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
US Equity	11.8%	15.2%	0.7	-1.6	1.2%
Blended US Equity Index	13.7%	15.5%	0.8	--	0.0%
Russell 3000	13.7%	15.5%	0.8	0.1	0.3%

**Statistics Summary**

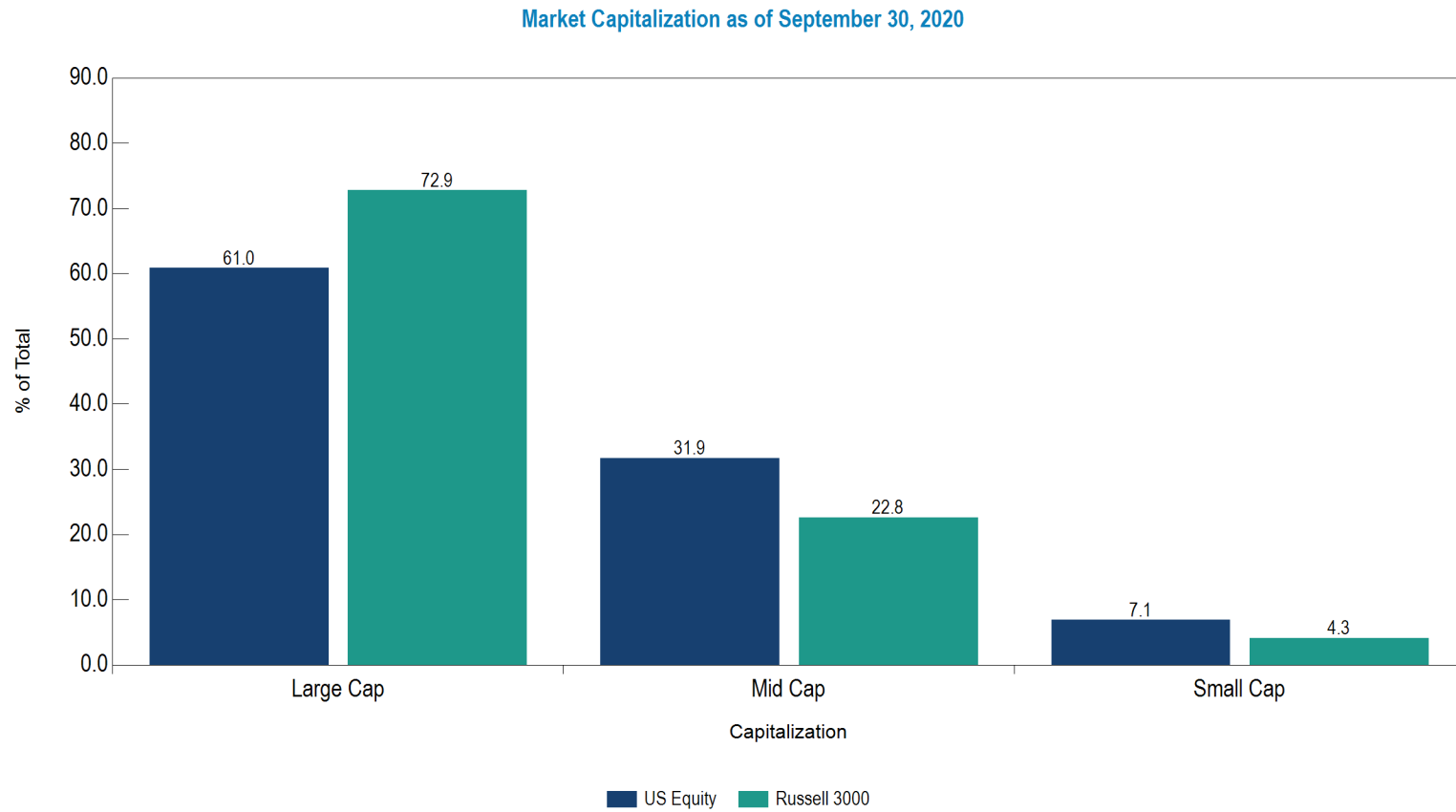
**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Large Cap Equity	13.1%	14.7%	0.8	-0.7	1.5%
Russell 1000	14.1%	15.2%	0.9	--	0.0%
DE Shaw	13.4%	15.4%	0.8	-0.3	2.3%
Russell 1000	14.1%	15.2%	0.9	--	0.0%
Small Cap Equity	3.3%	21.3%	0.1	-1.3	3.6%
Russell 2000	8.0%	20.1%	0.3	--	0.0%





	Return (Rank)							
	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	9.5	8.2	17.3	9.8	12.6	14.4	12.6	13.8
25th Percentile	8.8	4.5	13.5	7.9	11.0	13.1	11.5	13.0
Median	8.2	2.0	10.6	6.4	9.8	12.3	10.8	12.3
75th Percentile	7.5	0.0	8.1	4.6	8.4	11.1	9.8	11.7
95th Percentile	5.9	-5.7	1.6	0.9	5.3	9.4	8.3	10.4
# of Portfolios	561	561	561	555	548	523	480	374
● US Equity	7.2 (83)	0.2 (72)	7.8 (78)	5.0 (72)	8.9 (67)	11.8 (64)	10.4 (62)	12.2 (55)
▲ Blended US Equity Index	9.2 (9)	5.4 (18)	15.0 (14)	8.8 (12)	11.6 (15)	13.7 (13)	11.9 (14)	13.4 (12)



See appendix for the market capitalization breakpoints.

Characteristics

	Portfolio	Russell 3000
Number of Holdings	2,955	3,034
Weighted Avg. Market Cap. (\$B)	277.1	376.0
Median Market Cap. (\$B)	2.9	1.5
Price To Earnings	22.2	24.0
Price To Book	3.9	4.3
Price To Sales	2.0	2.2
Return on Equity (%)	2.2	2.8
Yield (%)	1.7	1.6

Top Holdings

APPLE INC	3.7%
MICROSOFT CORP	3.6%
AMAZON.COM INC	2.8%
FACEBOOK INC	1.2%
PROCTER & GAMBLE CO (THE)	1.2%
VERIZON COMMUNICATIONS INC	1.2%
ALPHABET INC	1.1%
JOHNSON & JOHNSON	1.1%
BERKSHIRE HATHAWAY INC	0.8%
COSTCO WHOLESALE CORP	0.8%

Best Performers

	Return %
SERES THERAPEUTICS INC (MCRB)	494.7%
VIVINT SOLAR INC (VSLR)	327.8%
TUPPERWARE BRANDS CORP (TUP)	324.4%
EASTMAN KODAK CO (KODK)	295.5%
BIG 5 SPORTING GOODS CORP (BGFV)	292.1%
SUNRUN INC (RUN)	290.8%
NEW FORTRESS ENERGY INC (NFE)	239.6%
FORTE BIOSCIENCES INC (FBRX)	232.7%
OWENS & MINOR INC. (OMI)	229.6%
KIRKLAND'S INC (KIRK)	203.0%

Worst Performers

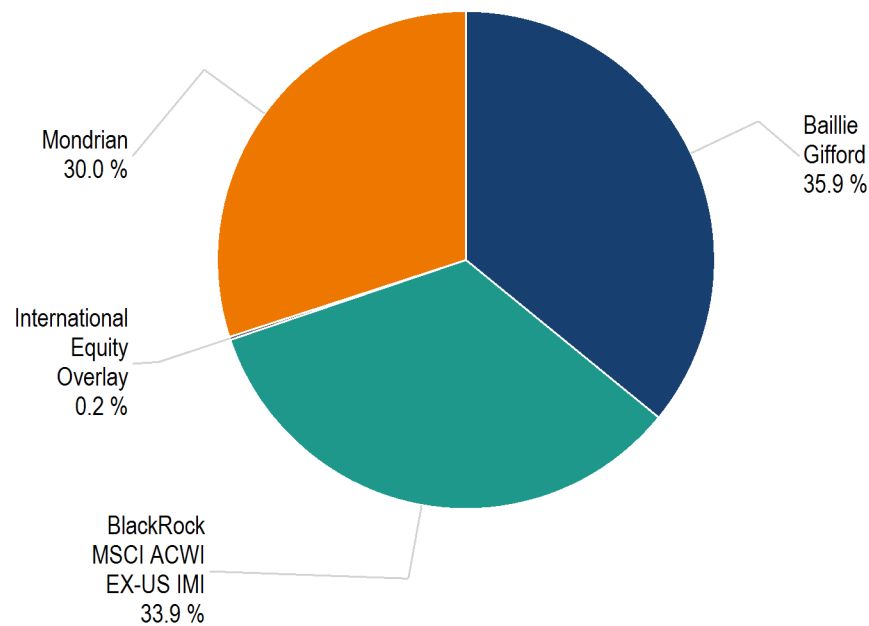
	Return %
COVIA HOLDINGS CORP (CVIAQ)	-97.5%
ENDOLOGIX INC (ELGXQ)	-96.7%
CHAPARRAL ENERGY INC (CHAPQ)	-95.2%
SHILOH INDUSTRIES INC (SHLOQ)	-94.1%
NOBLE HOLDING CORPORATION PLC (NEBLQ)	-93.1%
CALIFORNIA RESOURCES CORP (CRCQQ)	-92.9%
TAILORED BRANDS INC (TLRDQ)	-89.2%
VALARIS PLC (VALPQ)	-86.7%
SATSUMA PHARMACEUTICALS INC (STSA)	-86.5%
ATLAS FINANCIAL HOLDINGS INC (AFHIF)	-82.8%

US Equity Performance Attribution vs. Russell 3000

	Attribution Effects				Returns		Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.1%	0.1%	0.0%	0.0%	-16.5%	-18.9%	2.6%	2.6%			
Materials	-0.1%	-0.1%	0.0%	0.0%	7.8%	11.9%	3.6%	2.7%			
Industrials	-0.1%	-0.1%	0.0%	0.0%	10.3%	11.9%	7.9%	8.8%			
Consumer Discretionary	-0.2%	-0.1%	-0.1%	0.0%	17.9%	19.0%	10.4%	11.4%			
Consumer Staples	-0.1%	-0.1%	0.0%	0.0%	9.2%	10.4%	9.0%	6.2%			
Health Care	-0.2%	-0.2%	0.0%	0.0%	5.2%	6.5%	15.7%	14.7%			
Financials	-0.2%	-0.2%	0.0%	0.0%	1.3%	3.4%	9.9%	10.6%			
Information Technology	-0.5%	-0.5%	-0.1%	0.1%	10.1%	11.9%	23.7%	26.7%			
Communication Services	-0.2%	-0.2%	0.0%	0.0%	7.4%	9.2%	9.3%	9.9%			
Utilities	-0.1%	0.0%	-0.1%	0.0%	3.6%	5.0%	4.5%	2.8%			
Real Estate	-0.1%	-0.1%	0.0%	0.0%	-1.7%	1.3%	3.2%	3.6%			
Cash	0.0%	0.0%	0.0%	0.0%	0.0%	--	0.1%	0.0%			
Unclassified	0.0%	0.0%	0.0%	0.0%	8.7%	--	0.1%	0.0%			
<b>Portfolio</b>	<b>-1.8%</b>	<b>=</b>	<b>-1.6%</b>	<b>+</b>	<b>-0.2%</b>	<b>+</b>	<b>0.0%</b>	<b>7.5%</b>	<b>9.3%</b>	<b>100.0%</b>	<b>100.0%</b>

U.S. Effective Style Map





	Actual \$	Actual %	Manager Contribution to Excess Return %
Baillie Gifford	\$329,635,411	35.9%	2.4%
Mondrian	\$276,070,216	30.0%	0.3%
BlackRock MSCI ACWI EX-US IMI	\$311,680,886	33.9%	0.0%
International Equity Overlay	\$1,950,340	0.2%	0.0%
Actual vs. Policy Weight Difference			-1.5%
<b>Total</b>	<b>\$919,336,853</b>	<b>100.0%</b>	<b>1.3%</b>

**Statistics Summary**

**3 Years**

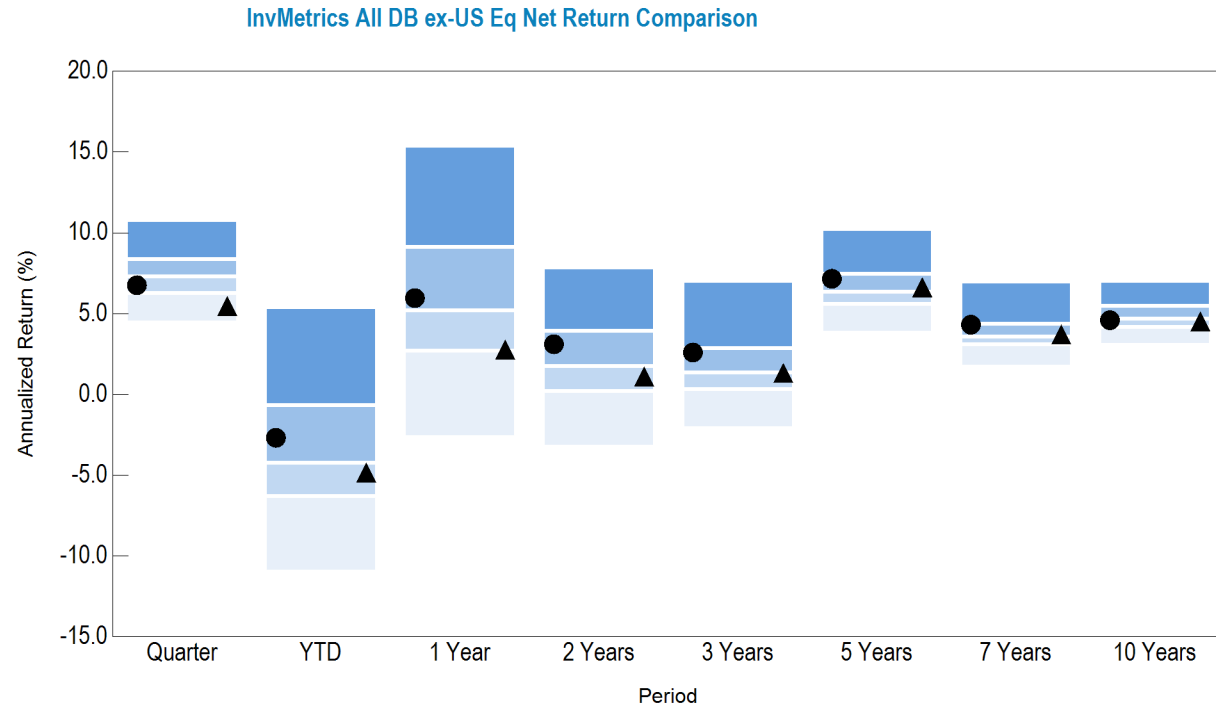
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
International Equity	2.6%	15.5%	0.1	0.9	1.4%
Blended International Equity Index	1.3%	15.6%	0.0	--	0.0%
Developed Markets	2.4%	16.2%	0.0	0.3	2.2%
MSCI ACWI ex USA Gross	1.6%	16.2%	0.0	--	0.0%
Baillie Gifford	10.0%	17.6%	0.5	1.4	5.9%
MSCI ACWI ex US	1.6%	16.2%	0.0	--	0.0%
Mondrian	-3.0%	17.0%	-0.3	0.7	2.2%
MSCI ACWI ex USA Value Gross	-4.5%	17.6%	-0.3	--	0.0%

**Statistics Summary**

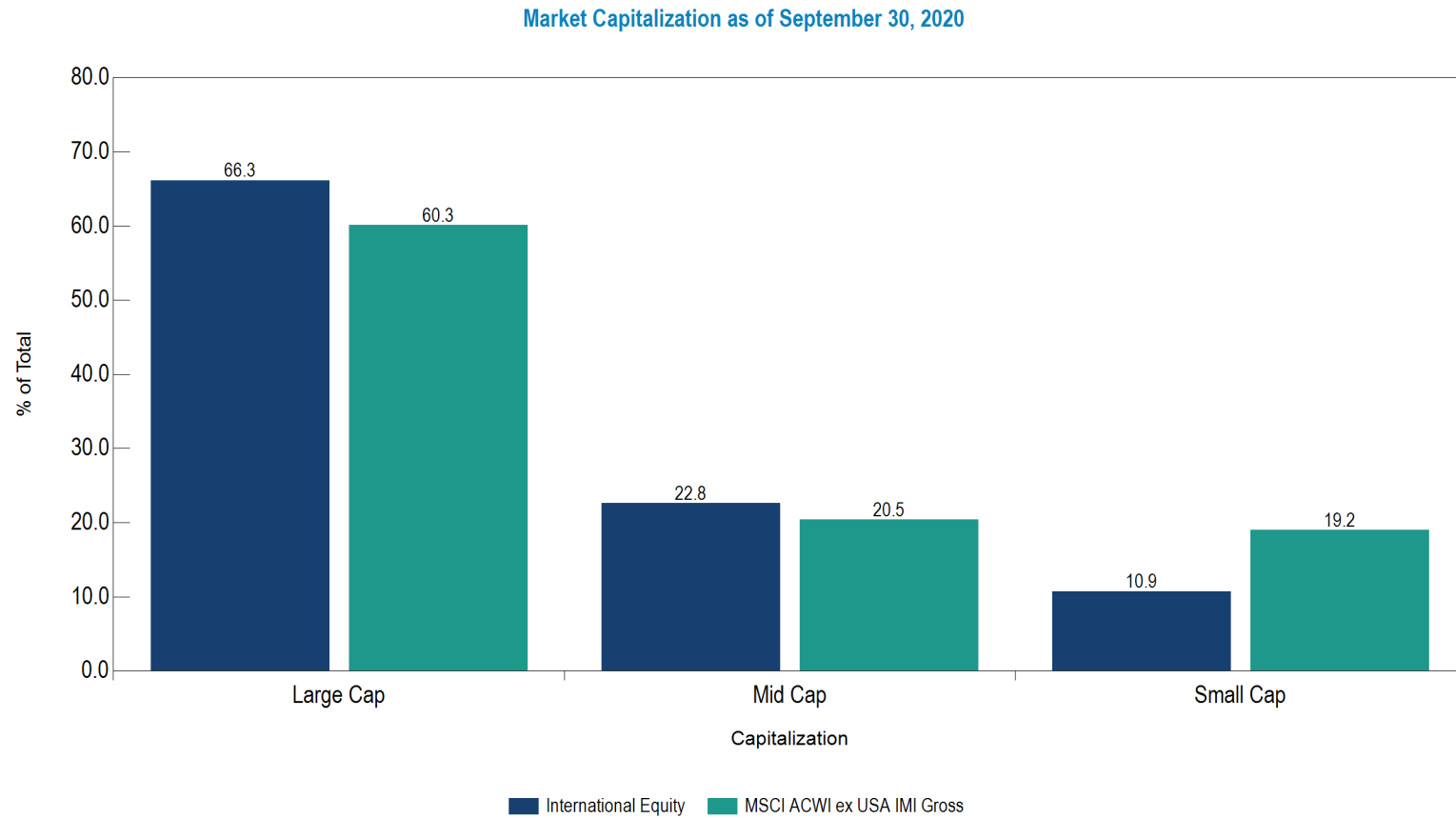
**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
International Equity	7.2%	14.0%	0.4	0.3	1.6%
Blended International Equity Index	6.6%	14.1%	0.4	--	0.0%
Baillie Gifford	12.6%	16.0%	0.7	1.1	5.5%
MSCI ACWI ex US	6.7%	14.5%	0.4	--	0.0%
Mondrian	2.9%	14.8%	0.1	0.0	3.9%
MSCI ACWI ex USA Value Gross	2.8%	15.8%	0.1	--	0.0%





	Return (Rank)							
	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	10.8	5.4	15.4	7.8	7.0	10.2	7.0	7.0
25th Percentile	8.4	-0.6	9.1	4.0	2.9	7.5	4.4	5.5
Median	7.3	-4.2	5.2	1.8	1.4	6.4	3.6	4.7
75th Percentile	6.3	-6.3	2.7	0.2	0.4	5.6	3.1	4.2
95th Percentile	4.5	-10.9	-2.6	-3.2	-2.1	3.8	1.7	3.1
# of Portfolios	361	361	361	358	350	334	306	237
● International Equity	6.8 (64)	-2.7 (39)	6.0 (44)	3.1 (32)	2.6 (28)	7.2 (31)	4.3 (30)	4.6 (56)
▲ Blended International Equity Index	5.5 (89)	-4.8 (62)	2.8 (75)	1.1 (60)	1.3 (51)	6.6 (43)	3.7 (47)	4.5 (61)



See appendix for the market capitalization breakpoints.

Characteristics

	Portfolio	MSCI ACWI ex USA IMI Gross
Number of Holdings	6,447	6,427
Weighted Avg. Market Cap. (\$B)	80.3	84.8
Median Market Cap. (\$B)	1.8	1.7
Price To Earnings	19.0	16.6
Price To Book	3.0	2.8
Price To Sales	1.2	1.1
Return on Equity (%)	9.3	9.8
Yield (%)	2.3	2.6

Top Holdings

ALIBABA GROUP HOLDING LTD	2.0%
SHOPIFY INC	1.5%
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	1.4%
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	1.3%
ZALANDO SE	1.0%
UNITED OVERSEAS BANK LTD	1.0%
ASML HOLDING NV	1.0%
SARTORIUS SHS.PREF.	0.9%
TENCENT HOLDINGS LTD	0.9%
SAMSUNG ELECTRONICS CO LTD	0.9%

Best Performers

	Return %
SHINPOONG PHARMACEUTICAL CO LTD	331.5%
RAKUS CO LTD	305.4%
HAINAN MEILAN INTERNATIONAL AIRPORT CO LTD	300.6%
GENEONE LIFE SCIENCE INC	215.2%
KOREA UNITED PHARMACEUTICALS INC	211.2%
INNER MONGOLIA JUNZHENG ENERGY & CHEMICAL GROUP CO LTD	195.7%
LAURUS LABS LTD	184.5%
DOOSAN HEAVY INDUSTRIES & CONSTRUCTION CO LTD	183.4%
S2 RESOURCES LTD	179.1%
NIO INC (NIO)	174.9%

Worst Performers

	Return %
FINABLR PLC	-94.3%
BELLUS HEALTH INC (BLU.)	-77.9%
ALTUS PROPERTY VENTURES INC	-76.7%
PT SITARA PROPERTINDO	-75.5%
SOULBRAIN (KO:TEC)	-72.9%
PHARMALLY INTERNATIONAL HOLDING CO LTD	-64.9%
NORWEGIAN AIR SHUTTLE (N:NAS)	-64.3%
EUROPCAR MOBILITY GROUP S.A	-63.7%
AURORA CANNABIS INC (ACB.)	-62.3%
DBV TECHNOLOGIES S.A.	-59.1%

International Equity Performance Attribution vs. MSCI ACWI ex USA IMI Gross

	Attribution Effects				Returns		Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	0.0%	-0.1%	0.1%	0.0%	-9.3%	-7.0%	4.0%	4.6%			
Materials	-0.2%	0.1%	-0.1%	-0.1%	12.8%	11.0%	4.5%	8.0%			
Industrials	0.6%	0.4%	0.0%	0.1%	13.0%	9.6%	13.8%	12.3%			
Consumer Discretionary	0.4%	0.0%	0.3%	0.1%	16.3%	16.1%	15.3%	12.5%			
Consumer Staples	-0.2%	-0.2%	0.0%	-0.1%	2.6%	4.9%	9.4%	9.7%			
Health Care	0.0%	0.1%	0.0%	-0.1%	4.7%	4.6%	9.9%	10.4%			
Financials	0.0%	-0.2%	0.2%	0.0%	-0.5%	0.5%	14.4%	17.1%			
Information Technology	0.6%	0.3%	0.2%	0.1%	15.7%	13.4%	13.9%	10.8%			
Communication Services	0.1%	0.0%	0.0%	0.1%	5.2%	4.7%	9.4%	7.1%			
Utilities	0.0%	-0.1%	0.0%	0.0%	0.9%	2.8%	2.7%	3.5%			
Real Estate	0.0%	0.0%	0.1%	0.0%	3.2%	4.0%	1.6%	4.0%			
Cash	0.0%	0.0%	0.0%	0.0%	0.0%	--	0.8%	0.0%			
Unclassified	0.0%	0.0%	0.0%	0.0%	13.6%	--	0.0%	0.0%			
<b>Portfolio</b>	<b>1.1%</b>	<b>=</b>	<b>0.2%</b>	<b>+</b>	<b>0.6%</b>	<b>+</b>	<b>0.2%</b>	<b>7.9%</b>	<b>6.8%</b>	<b>100.0%</b>	<b>100.0%</b>

Int'l Equity Performance Attribution vs. MSCI ACWI ex USA IMI Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>Europe</b>									
Austria	-1.4%	-1.4%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Belgium	3.3%	3.0%	0.2%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%
Czech Republic*	-3.8%	-3.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Denmark	3.1%	15.4%	0.8%	1.5%	-0.2%	0.0%	0.0%	0.1%	-0.2%
Finland	23.4%	14.3%	0.8%	0.7%	0.1%	0.0%	0.0%	0.0%	0.1%
France	6.2%	3.1%	6.0%	6.7%	0.2%	0.0%	0.0%	0.0%	0.2%
Germany	15.4%	11.3%	4.6%	2.5%	0.1%	0.1%	0.1%	0.1%	0.3%
Greece*	3.3%	3.4%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Hungary*	-8.8%	-8.8%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Ireland	37.4%	11.8%	0.7%	0.4%	0.1%	0.0%	0.0%	0.1%	0.2%
Italy	-2.1%	2.9%	1.8%	1.6%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Luxembourg	2.4%	6.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Netherlands	1.1%	6.3%	2.8%	2.7%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Norway	10.4%	10.3%	0.2%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Poland*	-0.2%	-0.2%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Portugal	-6.6%	-2.8%	0.5%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Russia*	-10.1%	-4.8%	0.7%	0.8%	-0.1%	0.0%	0.0%	0.0%	0.0%
Spain	-6.6%	-2.9%	1.6%	1.6%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Sweden	15.0%	16.6%	3.5%	2.4%	0.0%	0.1%	0.0%	0.0%	0.1%
Switzerland	6.0%	5.7%	4.0%	6.6%	0.0%	0.0%	-0.1%	0.0%	0.0%
United Kingdom	3.9%	0.7%	12.3%	9.8%	0.3%	-0.2%	0.1%	0.1%	0.3%

Int'l Equity Performance Attribution vs. MSCI ACWI ex USA IMI Gross

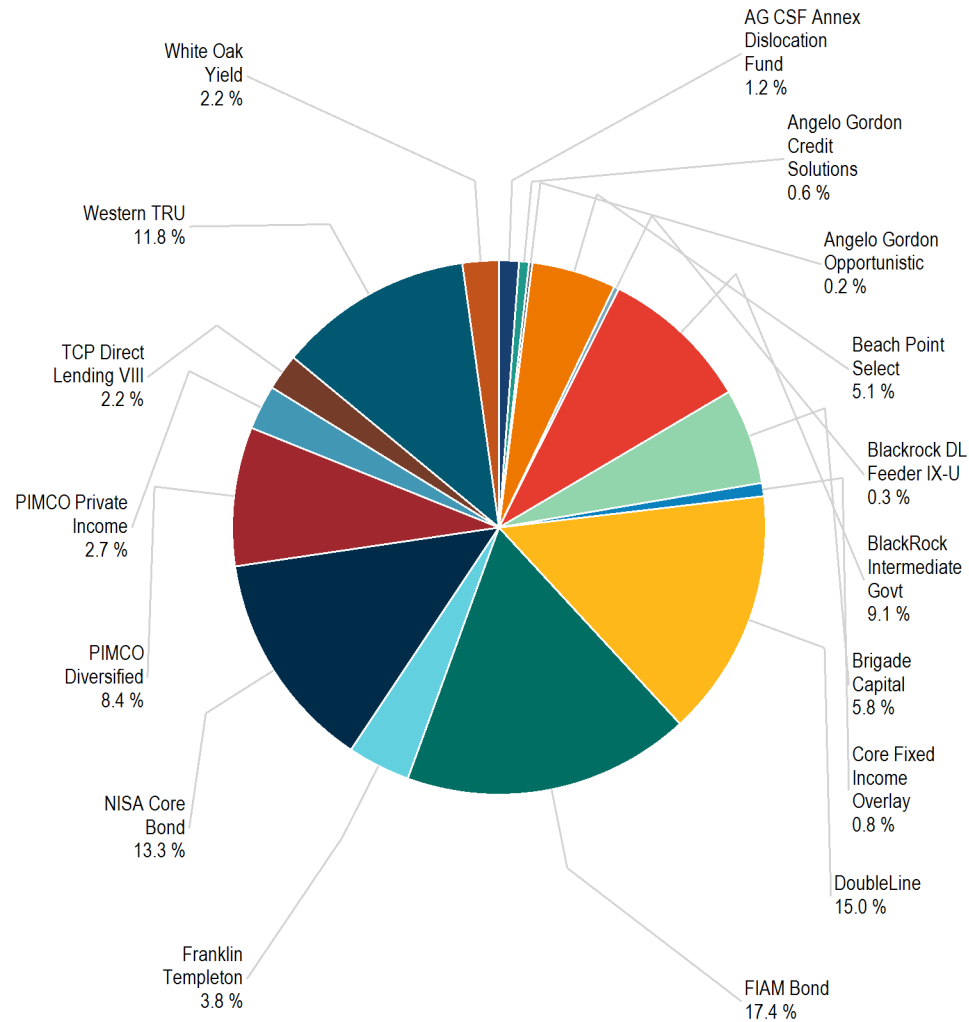
	Returns and Weights				Attribution Effects				Total Effects	
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect		
<b>AsiaPacific</b>										
Australia	2.9%	3.8%	3.0%	4.7%	0.0%	0.1%	-0.1%	0.0%	0.0%	
China*	16.7%	12.3%	6.2%	10.8%	0.5%	-0.4%	0.0%	-0.2%	-0.1%	
Hong Kong	8.3%	2.3%	6.0%	2.2%	0.1%	-0.1%	0.0%	0.2%	0.3%	
India*	15.6%	16.1%	3.2%	2.4%	0.0%	0.1%	0.0%	0.0%	0.1%	
Indonesia*	-4.2%	-5.5%	0.3%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	
Japan	7.4%	7.5%	20.3%	17.9%	0.0%	0.0%	0.1%	0.0%	0.1%	
Korea*	14.4%	14.7%	2.5%	3.5%	0.0%	-0.1%	0.0%	0.0%	-0.1%	
Malaysia*	6.4%	7.2%	0.2%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	
New Zealand	13.9%	3.8%	0.5%	0.3%	0.0%	0.0%	0.0%	0.0%	0.1%	
Pakistan*	16.2%	15.9%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Philippines*	-2.5%	-2.5%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
Singapore	-3.9%	0.6%	2.4%	0.8%	0.0%	-0.1%	0.0%	-0.1%	-0.2%	
Taiwan*	27.3%	14.9%	3.3%	3.9%	0.5%	-0.1%	0.0%	-0.1%	0.3%	
Thailand*	-12.0%	-12.2%	0.2%	0.7%	0.0%	0.1%	0.0%	0.0%	0.1%	
<b>Americas</b>										
Argentina*	-25.2%	-2.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
Brazil*	-0.8%	-2.3%	1.2%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%	
Canada	6.5%	6.8%	4.5%	6.7%	0.0%	0.0%	-0.1%	0.0%	-0.1%	
Chile*	-3.7%	-3.8%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
Colombia*	1.8%	2.0%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
Mexico*	2.1%	4.9%	0.5%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	
Peru*	-5.8%	3.5%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
United States	7.6%	9.5%	2.0%	0.0%	0.0%	0.1%	0.0%	0.0%	0.1%	

Int'l Equity Performance Attribution vs. MSCI ACWI ex USA IMI Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>Other</b>									
Egypt*	4.2%	4.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Israel	-0.4%	1.8%	0.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Qatar*	9.2%	9.1%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Romania**	-2.6%	10.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Saudi Arabia*	11.0%	10.9%	0.3%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
South Africa*	-0.4%	3.6%	1.0%	1.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Turkey*	-14.8%	-14.8%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
United Arab Emirates*	2.8%	6.1%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Totals</b>									
Americas	5.2%	4.9%	8.4%	9.1%	0.1%	0.0%	-0.1%	0.0%	0.0%
Europe	6.4%	4.9%	40.8%	39.4%	0.5%	0.0%	0.2%	0.0%	0.6%
Asia/Pacific	10.0%	8.9%	48.3%	48.5%	0.6%	0.0%	0.0%	0.0%	0.5%
Other	1.6%	4.8%	1.7%	3.0%	-0.1%	0.0%	0.0%	0.1%	-0.1%
Cash	0.0%	--	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Total</b>	<b>7.9%</b>	<b>6.8%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>1.0%</b>	<b>-0.1%</b>	<b>0.1%</b>	<b>0.1%</b>	<b>1.1%</b>
<b>Totals</b>									
Developed	6.6%	5.6%	78.8%	71.4%	0.8%	-0.1%	0.1%	0.1%	0.8%
Emerging*	13.4%	9.9%	20.3%	28.6%	0.9%	-0.4%	0.0%	-0.3%	0.3%
Frontier**	-2.6%	--	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	0.0%	--	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

# Fixed Income Manager Allocation Analysis

Period Ending: September 30, 2020



	Actual \$	Actual %	Manager Contribution to Excess Return %
AG CSF Annex Dislocation Fund	\$17,978,102	1.2%	0.0%
Angelo Gordon Credit Solutions	\$2,879,174	0.2%	0.0%
Angelo Gordon Opportunistic	\$211,353	0.0%	0.0%
Angelo Gordon STAR	\$9,700,337	0.6%	0.0%
Beach Point Select	\$77,889,968	5.1%	0.1%
Blackrock DL Feeder IX-U	\$4,753,490	0.3%	0.0%
BlackRock Intermediate Govt	\$140,550,445	9.1%	0.0%
Brigade Capital	\$89,504,254	5.8%	0.1%
DoubleLine	\$231,147,601	15.0%	0.2%
FIAM Bond	\$267,857,425	17.4%	0.1%
Franklin Templeton	\$58,277,798	3.8%	-0.1%
NISA Core Bond	\$204,317,463	13.3%	0.0%
PIMCO Diversified	\$128,548,915	8.4%	0.0%
PIMCO Private Income	\$41,573,262	2.7%	0.0%
TCP Direct Lending VIII	\$34,316,197	2.2%	0.0%
Western TRU	\$181,681,972	11.8%	0.3%
White Oak Yield	\$34,184,024	2.2%	-0.1%
Core Fixed Income Overlay	\$12,652,281	0.8%	0.0%
Actual vs. Policy Weight Difference			-0.3%
<b>Total</b>	<b>\$1,538,024,061</b>	<b>100.0%</b>	<b>0.4%</b>



Statistics Summary

3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Fixed Income	4.4%	3.4%	0.8	-0.3	1.8%
Blended Fixed Income Index	5.0%	4.0%	0.9	--	0.0%
Core Fixed	4.8%	2.8%	1.2	-0.3	1.5%
BBgBarc US Aggregate TR	5.2%	3.4%	1.1	--	0.0%
BlackRock Intermediate Govt	4.2%	2.5%	1.0	3.1	0.1%
BBgBarc US Govt Int TR	4.0%	2.5%	1.0	--	0.0%
FIAM Bond	6.0%	3.8%	1.2	0.5	1.6%
BBgBarc US Aggregate TR	5.2%	3.4%	1.1	--	0.0%
Western TRU	3.1%	6.6%	0.2	0.2	6.6%
3-Month Libor Total Return USD	1.9%	0.2%	1.3	--	0.0%
Opportunistic Credit	3.8%	6.6%	0.3	-0.3	4.3%
BBgBarc BA Intermediate HY	5.0%	7.9%	0.4	--	0.0%
Angelo Gordon Opportunistic	8.9%	17.9%	0.4	0.2	17.9%
BBgBarc US Aggregate TR	5.2%	3.4%	1.1	--	0.0%
Angelo Gordon STAR	14.5%	12.4%	1.0	0.7	12.4%
BBgBarc US Aggregate TR	5.2%	3.4%	1.1	--	0.0%
Beach Point Select	5.5%	8.5%	0.5	0.1	4.6%
BBgBarc BA Intermediate HY	5.0%	7.9%	0.4	--	0.0%
Brigade Capital	1.3%	11.7%	0.0	-0.6	6.7%
BBgBarc BA Intermediate HY	5.0%	7.9%	0.4	--	0.0%
PIMCO Diversified	4.7%	6.6%	0.5	0.1	1.3%
Blended PIMCO Diversified Index	4.5%	7.6%	0.4	--	0.0%

Statistics Summary

3 Years

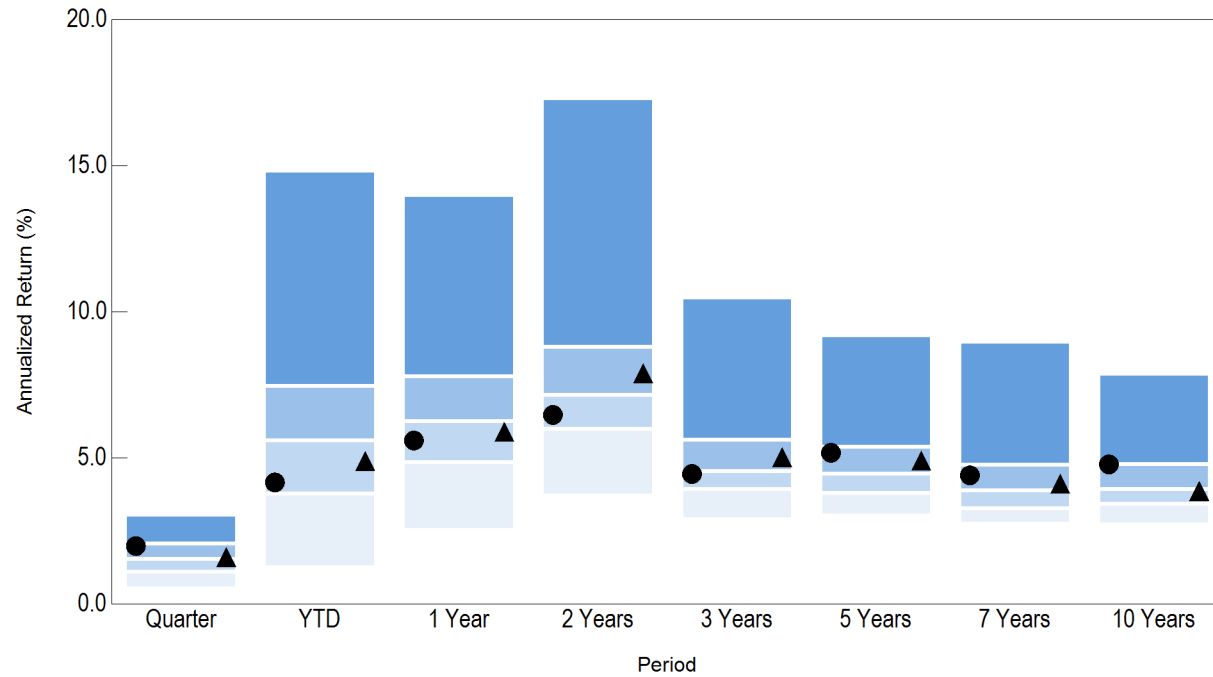
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Franklin Templeton	-2.2%	6.9%	-0.5	-0.8	7.6%
BBgBarc Multiverse TR	4.0%	4.2%	0.6	--	0.0%
Private Credit	6.9%	3.9%	1.3	0.0	2.3%
Cliffwater Direct Lending Index	6.8%	5.0%	1.0	--	0.0%
TCP Direct Lending VIII	6.0%	3.1%	1.4	-0.2	4.4%
Cliffwater Direct Lending Index	6.8%	5.0%	1.0	--	0.0%
White Oak Yield	6.5%	3.5%	1.4	-0.1	3.2%
Cliffwater Direct Lending Index	6.8%	5.0%	1.0	--	0.0%

Statistics Summary

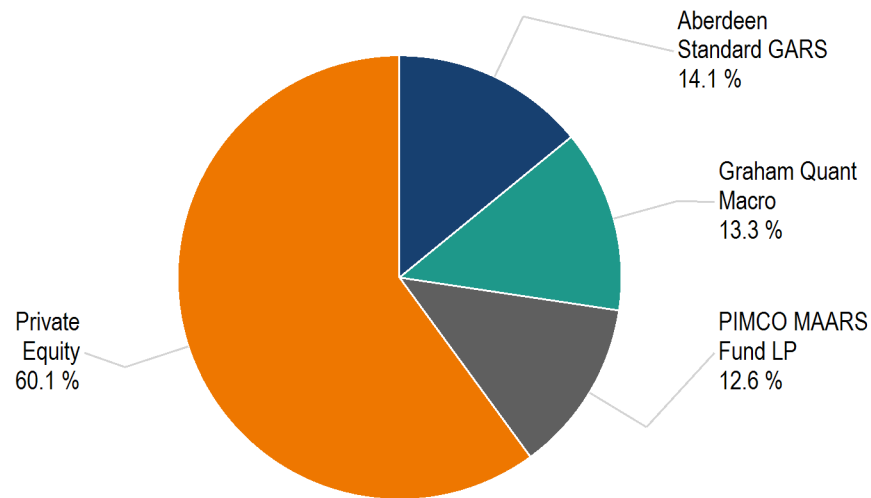
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Fixed Income	5.2%	3.2%	1.3	0.1	2.1%
Blended Fixed Income Index	4.9%	3.6%	1.0	--	0.0%
Core Fixed	4.6%	2.8%	1.3	0.3	1.7%
BBgBarc US Aggregate TR	4.2%	3.2%	1.0	--	0.0%
FIAM Bond	5.1%	3.5%	1.1	0.7	1.4%
BBgBarc US Aggregate TR	4.2%	3.2%	1.0	--	0.0%
Western TRU	4.5%	5.7%	0.6	0.5	5.7%
3-Month Libor Total Return USD	1.5%	0.2%	1.5	--	0.0%
Opportunistic Credit	6.0%	5.8%	0.9	-0.1	3.8%
BBgBarc BA Intermediate HY	6.5%	6.7%	0.8	--	0.0%
Angelo Gordon Opportunistic	8.3%	14.2%	0.5	0.3	14.3%
BBgBarc US Aggregate TR	4.2%	3.2%	1.0	--	0.0%
Angelo Gordon STAR	12.7%	10.4%	1.1	0.8	10.7%
BBgBarc US Aggregate TR	4.2%	3.2%	1.0	--	0.0%
Beach Point Select	7.4%	7.1%	0.9	0.2	3.9%
BBgBarc BA Intermediate HY	6.5%	6.7%	0.8	--	0.0%
Brigade Capital	5.0%	10.3%	0.4	-0.2	6.1%
BBgBarc BA Intermediate HY	6.5%	6.7%	0.8	--	0.0%
Franklin Templeton	1.7%	6.9%	0.1	-0.3	8.4%
BBgBarc Multiverse TR	4.1%	4.8%	0.6	--	0.0%

InvMetrics All DB Total Fix Inc Net Return Comparison



	Return (Rank)							
	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	3.0	14.8	14.0	17.3	10.5	9.2	9.0	7.9
25th Percentile	2.1	7.5	7.8	8.8	5.6	5.4	4.8	4.8
Median	1.6	5.6	6.3	7.2	4.6	4.5	3.9	3.9
75th Percentile	1.1	3.8	4.9	6.0	3.9	3.8	3.3	3.4
95th Percentile	0.5	1.3	2.5	3.7	2.9	3.0	2.8	2.7
# of Portfolios	311	311	311	310	305	287	266	207
● Fixed Income	2.0 (30)	4.2 (70)	5.6 (62)	6.5 (67)	4.4 (56)	5.2 (31)	4.4 (34)	4.8 (26)
▲ Blended Fixed Income Index	1.6 (49)	4.9 (60)	5.9 (56)	7.9 (39)	5.0 (41)	4.9 (38)	4.1 (42)	3.9 (56)



	Actual \$	Actual %	Manager Contribution to Excess Return %
Aberdeen Standard GARS	\$78,492,828	14.1%	0.4%
Graham Quant Macro	\$74,391,329	13.3%	0.2%
PIMCO MAARS Fund LP	\$70,232,023	12.6%	-0.1%
Private Equity	\$335,485,468	60.1%	2.2%
Actual vs. Policy Weight Difference			1.0%
<b>Total</b>	<b>\$558,601,647</b>	<b>100.0%</b>	<b>3.7%</b>

Statistics Summary

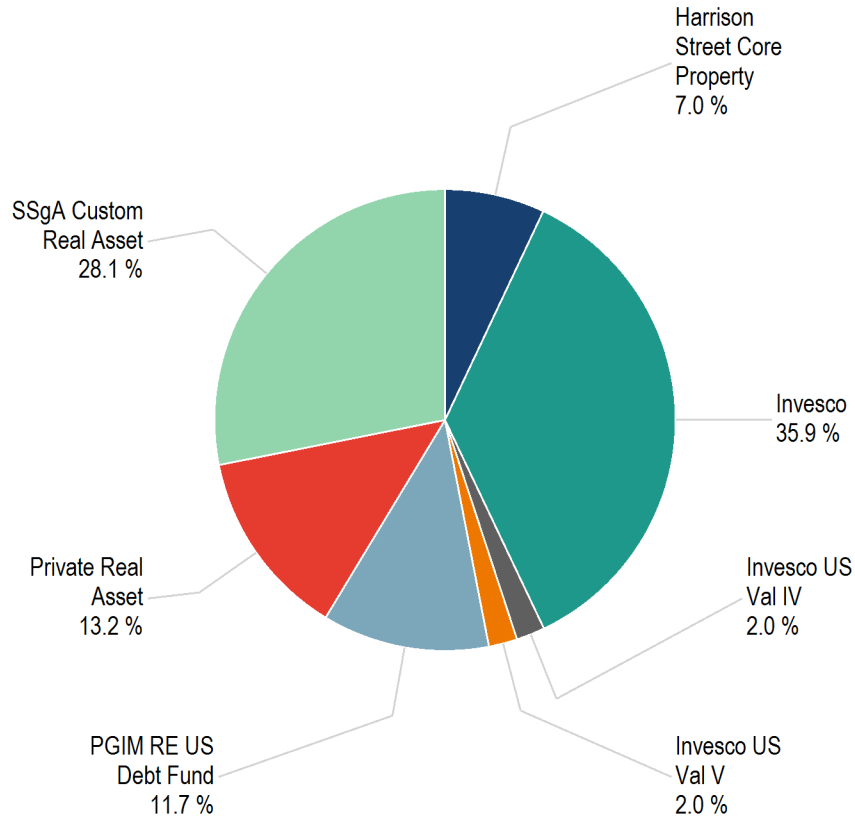
3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Alternatives	7.5%	11.2%	0.5	-0.1	10.9%
Blended Alternatives Index	8.8%	8.8%	0.8	--	0.0%
Private Equity	22.4%	18.3%	1.1	0.6	18.3%
Blended Private Equity Index	11.1%	17.5%	0.5	--	0.0%
Hedge Fund/Absolute Return	-7.7%	6.8%	-1.4	-2.0	6.8%
Libor 1 month +4%	5.7%	0.2%	18.4	--	0.0%
Aberdeen Standard GARS	2.9%	4.8%	0.3	-0.6	4.9%
Libor 1 month +4%	5.7%	0.2%	18.4	--	0.0%

**Statistics Summary**

**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Alternatives	7.8%	9.3%	0.7	-0.2	9.3%
Blended Alternatives Index	9.8%	7.5%	1.2	--	0.0%
Private Equity	18.8%	15.3%	1.2	0.3	16.3%
Blended Private Equity Index	14.5%	14.8%	0.9	--	0.0%
Hedge Fund/Absolute Return	-3.5%	5.7%	-0.8	-1.5	5.8%
Libor 1 month +4%	5.3%	0.2%	17.4	--	0.0%



	Actual \$	Actual %	Manager Contribution to Excess Return %
Harrison Street Core Property	\$50,554,625	7.0%	0.0%
Invesco	\$260,402,629	35.9%	-0.3%
Invesco US Val IV	\$14,716,665	2.0%	0.0%
Invesco US Val V	\$14,838,498	2.0%	0.0%
PGIM RE US Debt Fund	\$84,822,294	11.7%	0.1%
Private Real Asset	\$95,333,057	13.2%	-1.4%
SSGA Custom Real Asset	\$203,918,226	28.1%	0.0%
Actual vs. Policy Weight Difference			-0.7%
<b>Total</b>	<b>\$724,585,994</b>	<b>100.0%</b>	<b>-2.2%</b>



Statistics Summary

3 Years

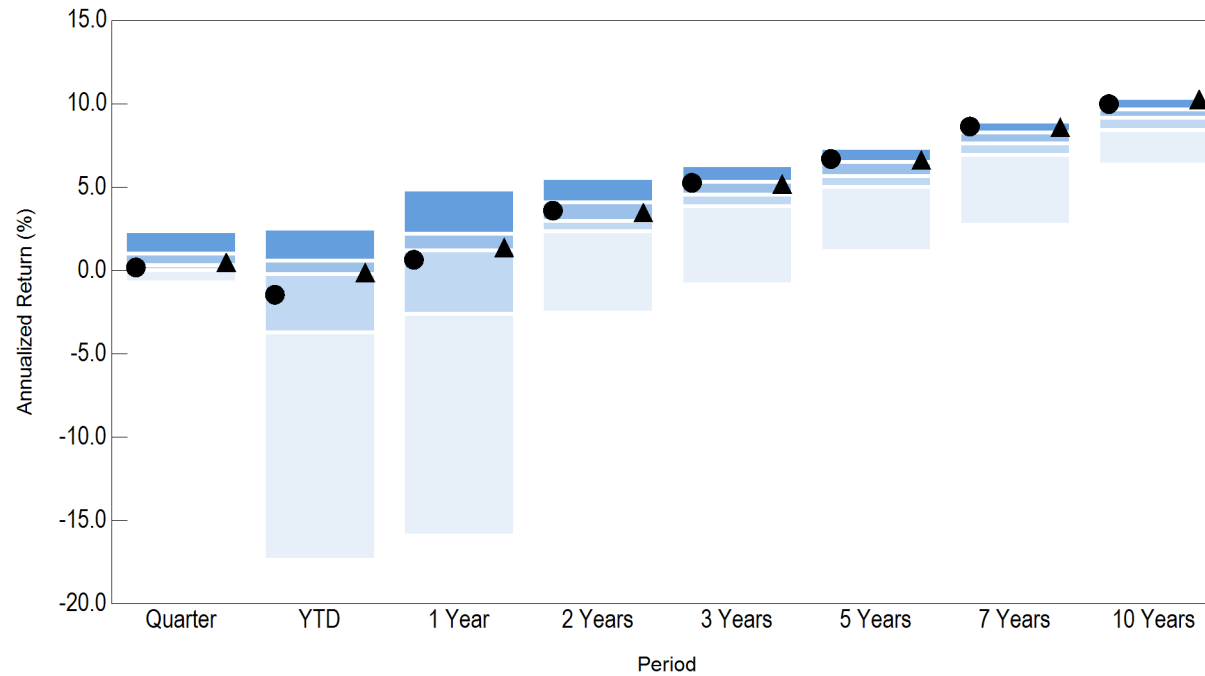
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Inflation Hedge	-0.8%	6.8%	-0.4	-1.1	2.4%
Blended Inflation Hedge Index	1.9%	5.9%	0.1	--	0.0%
Real Estate	5.3%	3.6%	1.0	0.1	1.1%
NCREIF ODCE	5.2%	2.9%	1.2	--	0.0%
Invesco	4.6%	4.2%	0.7	-0.3	1.9%
NCREIF ODCE	5.2%	2.9%	1.2	--	0.0%
Invesco US Val IV	7.8%	5.7%	1.1	0.7	3.5%
NCREIF ODCE	5.2%	2.9%	1.2	--	0.0%
PGIM RE US Debt Fund	5.9%	2.5%	1.7	0.4	1.8%
NCREIF ODCE	5.2%	2.9%	1.2	--	0.0%
Private Real Asset	-3.7%	9.7%	-0.5	0.0	18.0%
Blended Private Real Asset Index	-2.9%	18.8%	-0.2	--	0.0%
Public Real Assets	-7.1%	19.1%	-0.5	-1.0	4.4%
Blended Public Real Asset Index	-2.5%	15.9%	-0.3	--	0.0%
SSgA Custom Real Asset	-2.4%	15.6%	-0.3	0.0	0.8%
SSgA Custom Real Asset Index	-2.5%	15.9%	-0.3	--	0.0%

Statistics Summary

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error Rank
Real Estate	6.7%	3.7%	1.5	0.0	31
NCREIF ODCE	6.6%	3.3%	1.7	--	1
Invesco	6.2%	4.0%	1.2	-0.3	--
NCREIF ODCE	6.6%	3.3%	1.7	--	--
Private Real Asset	4.0%	22.1%	0.1	0.1	--
Blended Private Real Asset Index	1.3%	14.7%	0.0	--	--

InvMetrics All DB Real Estate Pub Net Return Comparison



Return (Rank)

5th Percentile	2.3	2.5	4.8	5.5	6.3	7.3	8.9	10.3
25th Percentile	1.0	0.6	2.2	4.1	5.3	6.5	8.3	9.7
Median	0.4	-0.2	1.2	3.0	4.6	5.7	7.6	9.2
75th Percentile	0.0	-3.7	-2.6	2.4	3.9	5.0	6.9	8.5
95th Percentile	-0.7	-17.3	-15.9	-2.5	-0.8	1.2	2.8	6.4
# of Portfolios	93	93	93	89	89	84	79	64
● Real Estate	0.2 (63)	-1.5 (73)	0.6 (59)	3.6 (39)	5.3 (29)	6.7 (20)	8.6 (12)	10.0 (11)
▲ NCREIF ODCE	0.5 (44)	-0.1 (48)	1.4 (45)	3.5 (40)	5.2 (33)	6.6 (22)	8.6 (13)	10.3 (7)

## **Acadian Asset Management – Acadian U.S. Managed Volatility**

Acadian attempts to take advantage of the mispricing of risk by building low-risk equity portfolios that hold predominantly low-risk stocks, and then also adding information on the correlation structure of equities to help further reduce risk through diversification.

## **Angelo, Gordon & Co. – AG STAR Fund**

The STAR Fund will focus on CMBS and non-Agency RMBS priced between 25-75% of par, which AG believes are even today mispriced due to their complex nature and a dearth of natural buyers capable of accurately valuing these assets. In addition, AG will target securities that are well-positioned to benefit from home and commercial property price stabilization and recovery, and/or borrower credit quality improvement. In this regard the STAR Fund will be more aggressive than the PPIP Fund since it will target securities that are more geared to a recovery of the commercial and residential real estate markets. The Fund will utilize a moderate amount of leverage (1x to 1.5x) and is targeting a base-case 15% net IRR with a downside return in the mid/high single digits and an upside projection of 25%+ returns.

## **Angelo, Gordon & Co. – AG Opportunistic Whole Loan Fund**

As bank balance sheets have strengthened since the crisis, Angelo Gordon expects approximately \$40 billion of re-performing loans and non-performing loans will trade hands each year in the near term. By acquiring these loans at a discounted price and replacing original servicers with better-focused special servicers, Angelo Gordon believes it can improve operational efficiency and generate attractive returns. To take advantage of this opportunity, Angelo Gordon established this Opportunistic Whole Loan Fund to make investments primarily in a portfolio of non-performing loans and re-performing, but will also include investments in new residential mortgage loans and excess mortgage servicing rights. Opportunistic investments in commercial mortgage loans and other mortgage related investments may also be included in the Fund's portfolio. Angelo Gordon has been an active participant in the residential and consumer debt market since 2008. The Partnership's investment approach to residential mortgage loans and securities is guided by an analytically based investment process anchored by distressed asset valuation and cash flow modeling. Angelo Gordon's analysis of re-performing and non-performing loans begins with its loan due diligence process. This process will include a review of substantially all of the properties in the pool, as well as a review of the loan files backing the loan pool. In addition, a macro overlay is embedded in the investment process which incorporates general economic trends, along with specific views on interest rates, unemployment, collateral appreciation or depreciation, governmental intervention in creditors' rights and liquidation timelines.

## **Angelo, Gordon & Co. – Credit Solutions**

This fund is Angelo, Gordon's re-entry into the special situations private fund market. The fund expects to hold concentrated positions in the US and within Europe in both public and private markets.

## **Angelo, Gordon & Co. – CSF (Annex) Dislocation**

Angelo Gordon completed syndication of its AG Credit Solutions Fund (“CSF”) in December of 2019. CSF was designed to capture opportunities in a late-cycle credit market and the initial stages of a market dislocation. Angelo Gordon designed and documented CSF to allow the placement of an annex fund in times of dislocation and credit deterioration. Given the price movements in the credit markets in March of 2020, driven by the lack of liquidity, financing needs of investment grade and non-investment grade borrowers, and anticipated impacts (restructurings, rescue financings, liquidations, etc.), Angelo Gordon came to market with the \$1.8 billion AG CSF Annex Dislocation Fund (“ADF”). ADF’s investment aim is to target senior securities of world-class businesses with irreplaceable assets and strong cash flow profiles which, because of market stress, can be purchased at a material discount to what we believe is a company’s long-term intrinsic value. ADF will address corporate credit-based opportunities created in three main areas: 1) trading-based price dislocations that reduce creation multiples (price through the debt that must be repaid before value accrues to other stakeholders) while generating high current income; 2) opportunities in issuers tied to industries directly impacted by COVID-19 where the market’s perception of the impact differs from the actual impact; and 3) corporate debt issuers that will be materially impacted by the crisis and will need to restructure, but whose creation value is materially lower than the issuer’s intrinsic value.

## **Baillie Gifford – ACWI ex US Focus Equities**

ACWI ex US Focus is a fundamental growth strategy. Research is organized primarily by regional teams, with each member of the ACWI ex US Focus Portfolio Construction Group representing a regional team. Four global sector groups also contribute research. Baillie Gifford conducts approximately 2000 company meetings annually both in Edinburgh and onsite. Companies are evaluated on their growth opportunity relative to the average company, their ability to execute on that opportunity, and the degree to which probability of future success is already valued by the market. Baillie Gifford’s basic philosophy is that share prices ultimately follow earnings. They believe that the stock market has a recurring tendency to under-appreciate the value of long-term compound growth. The process seeks to add value through use of proprietary fundamental research to identify companies exhibiting some combination of sustained above average growth, and attractive financial characteristics. The portfolio generally holds 80-120 stocks, with country and sector weights +/-6% relative to the index and industry weights +/- 5% relative to the index.

## **Beach Point Capital Management, L.P. - Beach Point Select Fund**

Beach Point Select Fund is a commingled fund vehicle within the firm's Opportunistic Credit strategy. This fund focuses on off-the-run, complex, and less-liquid securities. It is a best ideas portfolio of distressed debt, special situations, private/direct loans, catalyst-driven high yield bonds and bank loans, and credit-informed equities with a North American and European focus. The Select Fund differs from other funds and accounts in the Opportunistic Credit strategy by pursuing a more concentrated portfolio and emphasizing a higher percentage of less-liquid/private investments. Beach Point invests up and down the entire capital structure and it constructs portfolios with a bottom-up, research-driven approach that also takes into account top-down macro considerations. Its investment process includes idea generation, detailed credit analysis, relative value decision making and investment selection, portfolio construction and on-going monitoring. The ultimate goal of its investment process is to produce a well-diversified investment portfolio with limited downside risk and substantial upside potential.

## **BlackRock – Intermediate Government Index**

The Intermediate Government Index Fund seeks to track the results of an index composed of U.S. dollar-denominated government, government related, and investment grade U.S. corporate bonds with maturities between 1 and 10 years.

## **BlackRock – MSCI ACWI ex US IMI Index**

The ACWI ex US IMI Index Fund seeks to replicate the return of the MSCI ACWI ex US IMI Index. This index represents the developed equity markets outside of North America, including small cap equity.

## **BlackRock – Russell 1000 Index**

The Russell 1000 Index Fund tracks large U.S. companies and achieve broad diversification with low costs by fully replicating the Russell 1000 Index.

## **BlackRock – Direct Lending Fund**

Upon completion of the TCP acquisition, the former TCP team is raising a direct lending portfolio. The fund will invest in privately originated, performing senior secured debt primarily in North American based companies with an average EV of \$750 million.

## **Brigade – Opportunistic Credit**

Opportunistic Credit is a fundamental, bottom-up strategy focused on high yield corporate bonds and bank loans with tactical allocations to structured securities, convertibles and other sectors of the bond markets as they become attractive on a relative value basis. While performing credits represent the majority, Brigade will invest up to 35% of the portfolio in distressed securities and restructuring situations if these types of opportunities are attractive on a risk-adjusted basis and the timing is right with respect to the credit cycle. The portfolio is comprised of mostly North American issuers, but they are not restricted geographically and expect to have a moderate allocation to Europe over time. Although the portfolio is generally long-only, Brigade has the ability to implement a limited amount of tactical macro hedges.

## **DE Shaw – DE Shaw US Broad Market Core Alpha Extension Fund**

The D. E. Shaw group believes that there exist some market inefficiencies that may be identified through quantitative analysis, advanced technology, and the insight of practitioners. Identifying these inefficiencies involves a process of hypothesis formulation, testing, and validation. Importantly, to avoid data-mining, the hypothesis formulation precedes the analysis of the historical data. D.E. Shaw's Structured Equity strategies rely largely on quantitative and computational investment techniques developed by the D. E. Shaw over the last 19 years in the course of research conducted for purposes of managing the firm's hedge funds. In addition to its beta one strategies, D.E. Shaw manages substantial assets in its hedge fund strategies. D.E. Shaw's investment process involves a suite of quantitative models, each designed to capitalize on a distinct and uncorrelated set of market inefficiencies. Some of these models are technical in nature and involve price and volume inputs. Other models rely on fundamental data, such as figures gleaned from corporate balance sheets or income statements. Still others, again quantitative, anticipate or react to a particular corporate event or set of events. These models typically operate with forecast horizons of a few weeks to many months. The ability to trade on shorter-term signals distinguishes D.E. Shaw from many of its long only and 130/30 peers. Portfolio construction involves the use of a proprietary optimizer which runs dynamically throughout the trading day. The portfolio is broadly diversified with several hundred long and short positions. Over- and under-weighting of sectors and industries relative to the benchmark will be quite modest, with the intention that most of the alpha be generated by security selection. The US Broad Market Core Alpha Extension Fund is a 130/30 strategy which maintains a beta that is approximately neutral to the Russell 1000 Index.

## **DoubleLine – Securitized Income**

The DoubleLine Securitized Income strategy is an actively managed, liquid, long only, intermediate-term fixed income product. The primary objective of the strategy is to seek and maximize current income and total return by utilizing a combination of Agency MBS and structured credit. The DoubleLine Structured Products team aims to offer clients investment grade exposure to both interest rate duration and credit spread to provide a more attractive total return profile compared to the benchmark in its Securitized Income portfolios.

## **Franklin Templeton Investments – Global Fixed Income**

Franklin Templeton manages the global bond mandate in an unconstrained fashion using a top-down, fundamental framework. In the short term and on a country-by-country basis there are often inefficiencies in global bond and currency markets, however, over the longer term the market will generally price to fundamentals. Thus, FT focuses on fundamental research to identify long-term opportunities and uses short-term market inefficiencies to build positions in such investments. The investment and portfolio construction process begin with the determination of the Fund's or institutional client's investment objectives, resulting in a set of risk-return parameters and exposure limits within which the portfolio is managed. Next the firm's global economic outlook for the industrialized countries is developed, with a focus on interest rate and exchange rate forecasts. The portfolio's interest rate outlook is a function of global general equilibrium macroeconomic analysis as well as country-specific research. Macroeconomic conditions in the G-3 economies are analyzed first, primarily with respect to how current and projected growth and inflation dynamics are expected to influence monetary policy. This analysis is then extended out to the rest of the industrialized countries (G-13) as well as emerging markets, which results in broad targets for cash, duration, currencies and the developed/emerging market mix. Using the firm's interest rate and exchange rate outlook, probability-weighted horizon returns for bonds of various countries are then calculated. This analysis is used to establish specific country weights and duration targets based on risk-adjusted expected total return measured in the portfolio's base currency. Analysis of emerging markets includes sovereign credit analysis along with greater emphasis on capital flows, inter-market dynamics and trends in the level of risk aversion in the market.

## **Graham – Quant Macro Fund**

Graham Quant Macro ("GQM") is a directional, long and short strategy that utilizes fundamental and price-based indicators to establish return forecasts across global interest rates, foreign exchange, stock indices and commodities. The strategy incorporates a variety of submodels that generate macro fundamental forecasts, assess yield and earnings differentials, compare current valuations relative to historic fair value, and analyze directional price trends across markets. Quantitative risk management and portfolio construction techniques are used to diversify risk across the portfolio and enhance risk-adjusted returns. Historically, the average holding period has been approximately eight to ten weeks, although the sub-models will make daily adjustments to positions. The strategy is designed to have low correlation to traditional markets and other alternative strategies and has the potential to provide significant portfolio diversification benefits.

## **Harrison Street Core Property**

Based in Chicago, Harrison Street's exclusive focus since inception in 2005 has been investing in non-core property sectors of the real estate market. The Harrison Street Core Fund is an open-end fund that invests primarily in stabilized education, healthcare, and self-storage real estate assets in the United States using modest leverage with an emphasis on generating current income. The focus on these alternative property types is intended to concentrate on areas of the real estate market that are less GDP sensitive with demand drivers that are more demographic driven such as aging populations, education growth and healthcare delivery. Each of these areas tend to be less tied to the business cycle, have fragmented ownership and more operationally intensive. The fund acts as a diversifier within real estate portfolios with sector exposures that are not a typical focus of other core ODCE funds.

## **INVESCO Realty Advisors – INVESCO Core Equity, LLC**

SamCERA is a founding member of INVESCO's open-end Core Equity real estate fund and rolled its separate account properties into the fund. INVESCO Core Equity, LLC (the "Fund") is a perpetual life, open-end vehicle which invests in a diversified portfolio of institutional quality office, retail, industrial and multifamily residential real estate assets. The Fund buys core properties that are located within the United States, typically requiring an investment of \$10 million or more. The portfolio cannot be more than 30% leveraged.

## **INVESCO Realty Advisors – INVESCO US Val IV**

Invesco has provided SamCERA with Core Real Estate exposure since 2004 through the Invesco Core Equity Fund. The Invesco real estate team manages around \$62B in assets with investments and offices around the globe. Invesco Value Fund IV will look to acquire fundamentally sound but broken "core" assets that can be repositioned into institutional-quality, income producing properties. Investments will be limited to direct equity interests in office, multi-family, retail and industrial properties across the US. The Fund is expected to be geographically concentrated in U.S. gateway cities and top 25 Metropolitan Statistical Areas (MSA's). Invesco Value Fund IV will provide a nice compliment to the more conservative Invesco Core Fund and offer the potential of enhanced returns to the SamCERA Real Estate portfolio.

## **INVESCO Realty Advisors – INVESCO US Val V**

Invesco has provided SamCERA with Core Real Estate exposure since 2004 through the Invesco Core Equity Fund and through the Invesco US Value IV Fund since December 2015. The Invesco real estate team manages around \$62B in assets with investments and offices around the globe. Invesco Value Fund V will be similar to the Value Add IV and look to acquire fundamentally sound but broken "core" assets that can be repositioned into institutional-quality, income producing properties. Investments will be limited to direct equity interests in office, multi-family, retail and industrial properties across the US. The Fund is expected to be geographically concentrated in U.S. gateway cities and top 25 Metropolitan Statistical Areas (MSA's).



## **Mondrian Investment Partners – International Equity**

Mondrian is a value-oriented, defensive manager whose investment philosophy is based on the principle that investments must be evaluated for their fundamental long-term value. The firm's philosophy involves three stated investment objectives: 1) provide a rate of return meaningfully greater than the client's domestic rate of inflation, 2) structure client portfolios that preserve capital during protracted international market declines, and 3) provide portfolio performance that is less volatile than benchmark indices and other international managers. Mondrian applies typical value screening criteria to a universe of 1,500 stocks, from which 500 are selected for more detailed work. Through fundamental research, and the deliberations of the Investment Committee, the universe is further reduced to a list of 150 stocks. The investment team conducts detailed fundamental analysis on the remaining stocks, a process which includes applying the firm's dividend discount model consistently across all markets and industries. Mondrian also uses a purchasing power parity model to give an accurate currency comparison of the value of the stocks under consideration. The firm will only consider buying stocks in countries with good investor protection practices and relatively simple repatriation procedures. A computer-based optimization program is employed in the portfolio construction process. Mondrian's portfolio holds 80-125 issues.

## **NISA – Core Bond**

NISA's investment strategy consists of strategic top-down and tactical bottom-up decisions. The Investment committee meets monthly and sets the strategic parameters including sector selection and yield curve positioning.

## **PanAgora Asset Management – Defensive U.S. Equity Low Volatility**

PanAgora's Defensive Equity strategy seeks to balance risk exposures within the portfolio across multiple dimensions to achieve true diversification. The Defensive Equity approach is used to construct equity portfolios designed to achieve tailored exposure to certain factors, including low volatility, multi-factor (value, quality, and momentum), and high dividend yield while maintaining less risk concentration throughout the portfolio.

## **Parametric Currency Overlay – Currency Hedge**

An overlay hedge placed on half of the notional value of international equities. The portfolio uses Parametric for this overlay.

## **PIMCO Diversified**

PIMCO Diversified Income Fund offers a broad and flexible multi-credit approach in a liquid and cost-effective format. The Diversified Income Fund seeks to produce consistent above benchmark performance using diversified sources of alpha from a universe that includes global credit as well as "non-core" credit sectors (ex., securitized, emerging markets).

## **PIMCO – MAARS**

PIMCO MAARS is an alternative risk premia strategy that looks for risks associated with: (1) Supply and Demand Constraints, (2) Behavioral Biases, and (3) Asymmetric Risks (event risk).

## **PIMCO Private Income Fund**

PIMCO Private Income Fund provides an attractive total return oriented global credit exposure utilizing both top-down sector relative value and bottom up security selection. The strategy invests across private residential, commercial, corporate and specialty finance markets.

## **PGIM RE Debt**

PGIM Real Estate US Debt Fund focuses on a loan origination strategy with a mix of 20% senior long duration loans on stable assets, 60% senior short/medium duration loans on stable and transitional assets, and 20% mezzanine mid/long duration debt.

## **Pyramis Global Advisors – Broad Market Duration Commingled Pool**

Pyramis' Broad Market Duration (BMD) investment strategy seeks to achieve absolute and risk-adjusted returns in excess of the BC U.S. Aggregate Index, focusing its investments in US Treasuries, agencies, investment grade corporate bonds, mortgage-backed and asset-backed securities. The BMD commingled pool can also hold small, opportunistic positions in out-of-benchmark securities, such as inflation-linked bonds. The investable universe includes all US dollar denominated, investment grade debt securities. The BMD investment approach emphasizes issuer and sector valuation and individual security selection. Through the integration of fundamental and quantitative research and trading, the BMD strategy is implemented in a team environment. Risk management technology is utilized to explicitly quantify benchmark exposures on a daily basis, and Pyramis uses the same analytical framework to assess both index and portfolio risk. Tracking error should range between 40 and 60 basis points per annum over the benchmark, and stringent portfolio construction risk control rules are strictly adhered to.

## **Quantitative Management Associates – QMA Small-Cap Core**

Quantitative Management Associates (QMA) utilizes a bottom-up quantitative framework in order provide a diversified exposure to core U.S. small-cap stocks, while attempting to produce consistent outperformance versus the benchmark with moderate tracking error levels. QMA uses an adaptive, systematic investment process to exploit opportunities created by mispriced securities to consistently add value over long time periods. Bottom-up stock selection drives exposure to key sources of alpha (valuation, growth, and quality). The QMA stock selection model adapts to changes in company growth rates and market environments by putting more emphasis on valuation for slowly growing companies, and more emphasis on future growth projections for companies with higher projected growth rates.

## **Standard Life Aberdeen Global Absolute Return Strategy (GARS)**

The Standard Life Aberdeen Global Absolute Return Strategy (GARS) was initially launched in 2005 to help address Standard Life's own pension plan's deficit problem. GARS' primary investment objective is to deliver a positive absolute return over the medium to long term with lower volatility than equities, irrespective of market conditions. It seeks returns through dynamic allocation to investment opportunities in traditional and advanced asset classes, and also separately exploits the team's security selection expertise. In the search for attractive investment positions, the team follows a rigorous research process. This includes a variety of research techniques, including broad global macro-economic, fundamental analysis, quantitative research and valuation modeling. The GARS investment process is designed to capitalize on an array of research and investment techniques and draws together the team's three-year investment insights. The team then rigorously examines and review position proposals to approve a high conviction, short list of positions that work well together. Having a cash benchmark means that GARS has a potentially unrestricted investment universe and all portfolio holdings are at the Portfolio Manager's discretion. The GARS portfolio also routinely uses a variety of conventional derivatives for investment, liquidity, efficiency and hedging purposes. The GARS strategy has experienced significant growth in its asset under management since it becomes available to external investors in 2006.

## **State Street Global Advisors (SSgA) Custom Real Asset**

SSgA Custom Real Asset portfolio uses a portfolio of liquid real assets to proxy private real assets. The portfolio is comprised of equal weightings of the Bloomberg Commodity Index, S&P Global Natural Resources Index, and S&P Global Infrastructure Index. The portfolio is used to fund upcoming private real asset mandates.

## **Tennenbaum Capital Partners - TCP Direct Lending Fund VIII**

TCP Direct Lending Fund VIII is a private investment fund managed by Tennenbaum Capital Partners (“TCP”). The Fund is designed to continue TCP’s successful strategy of investing in privately-originated, performing senior secured debt primarily in North America-based companies with target enterprise values between \$100 million and \$1.5 billion. The Fund will include positions in 1st lien, 2nd lien and unitranche debt, with a preference for floating-rate debt, which TCP believes provides better flexibility to adapt to market conditions. TCP’s direct lending strategy has generated attractive investment opportunities across market cycles, as evidenced by the Firm’s prior direct lending track record. Fund VIII targets an unlevered annual yield of approximately 9-12%, with its return primarily driven by current income.

## **Western Asset Management – Total Return Unconstrained (TRU)**

Western Asset’s Total Return Unconstrained strategy (TRU) seeks to provide bond-like risk and return over the long term but does not have a benchmark. This allows for asset allocation based on value rather than using the construction of a benchmark as baseline positioning. The investment approach is active with very broad latitude on duration (-3 to +8 years) and on asset allocation across all of the eligible sectors in a core plus mandate. The portfolio must have at least 50% of its holdings in investment-grade securities. The flexibility offered by this strategy allows for defensive positioning in rising rate environments and opportunistic deployment of capital when value opportunities arise. It also allows the portfolio managers to emphasize (or deemphasize) either credit or rates when one or the other appears to offer greater (or lesser) value. um non-US exposure.

## **White Oak - White Oak Yield Spectrum Fund**

The White Oak Yield Spectrum Fund’s objective is to earn substantial current income by originating, extending, and/or investing in a diversified portfolio of primarily senior secured corporate credit and debt instruments consisting of term loans, asset-based loans and equipment leases and loans issued by small to middle-market companies located primarily in the United States and Canada. It focuses on providing self-originated deals for predominantly non-sponsored, privately-held borrowers.

# Policy Index and Benchmark History

Period Ending: September 30, 2020

Total Plan Policy Index	As of										
	7/1/20	4/1/20	10/1/19	7/1/19	4/1/19	1/1/19	10/1/18	4/1/18	10/1/17	2/1/17	1/1/17
10 Year Treasury +2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
60/40 MSCI World/BBgBarc Global Aggregate (RP)	0.0%	4.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%
60/40 Russell 3000/BBgBarc US Aggregate (RP)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
91 Day T-Bills	1.0%	1.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Aggregate	21.0%	18.0%	14.0%	14.0%	14.0%	14.0%	14.0%	14.0%	14.0%	12.0%	10.0%
BBgBarc BA Intermediate HY	10.0%	8.0%	8.0%	7.0%	7.0%	7.0%	7.0%	7.0%	7.0%	6.0%	6.0%
BBgBarc BBB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Credit BAA	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Multiverse	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	3.0%	3.0%
BBgBarc TIPS	0.0%	0.0%	1.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Bloomberg Commodity	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Citigroup non-US WGBI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
CPI + 5% (RA)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Blended Public Real Asset	4.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	0.0%	0.0%
Blended Private Real Asset	3.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	8.0%	7.0%	5.0%
Libor +4% (HF)	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	5.0%
MSCI ACWI ex-US	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI ACWI ex US IMI 100% Hedged (Net)	9.0%	9.0%	9.0%	7.6%	5.7%	3.8%	1.9%	0.0%	0.0%	0.0%	0.0%
MSCI ACWI ex-US IMI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	19.0%	19.0%
MSCI ACWI ex-US IMI (Net)	9.0%	9.0%	9.0%	11.4%	13.3%	15.2%	17.1%	19.0%	19.0%	0.0%	0.0%
MSCI EAFE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
NCREIF ODCE	10.0%	9.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	8.0%	7.0%	7.0%
NCREIF Property	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Russell 1000	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Russell 1000 Value	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Russell 2000	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Russell 3000	21.0%	22.0%	22.0%	22.0%	22.0%	22.0%	22.0%	21.0%	21.0%	23.0%	28.0%
Russell 3000 +3% (PE)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.0%	7.0%	7.0%
Russell 3000 +3% 1Q Lag (PE)	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	7.0%	0.0%	0.0%	0.0%
S&P 500	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Total Plan Policy Index	As of:													
	10/1/16	9/1/16	1/1/16	7/1/14	1/1/14	2/1/13	1/1/11	10/1/10	1/1/09	5/1/07	6/1/00	3/1/99	9/1/98	7/1/96
10 Year Treasury +2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.0%	10.0%	10.0%
60/40 MSCI World/BBgBarc Global Aggregate (RP)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
60/40 Russell 3000/BBgBarc US Aggregate (RP)	8.0%	8.0%	8.0%	8.0%	8.0%	6.0%	6.0%	6.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
91 Day T-Bills	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Aggregate	10.0%	10.0%	10.0%	10.0%	9.3%	11.0%	11.0%	12.9%	27.0%	27.0%	29.0%	25.0%	21.0%	21.0%
BBgBarc BA Intermediate HY	6.0%	5.0%	5.0%	5.0%	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc BBB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Credit BAA	0.0%	0.0%	0.0%	0.0%	0.0%	3.5%	3.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Multiverse	3.0%	3.0%	3.0%	3.0%	3.8%	4.4%	4.4%	4.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc TIPS	2.0%	2.0%	2.0%	2.0%	2.0%	3.1%	3.3%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Bloomberg Commodity	0.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Citigroup non-US WGBI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	9.0%	9.0%
CPI + 5% (RA)	0.0%	2.0%	2.0%	2.0%	2.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Blended Public Real Asset	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Blended Private Real Asset	5.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Libor +4% (HF)	5.0%	5.0%	5.0%	4.0%	4.0%	3.0%	3.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI ACWI ex-US	0.0%	0.0%	0.0%	0.0%	0.0%	18.0%	18.0%	18.0%	21.0%	21.0%	15.0%	0.0%	0.0%	0.0%
MSCI ACWI ex US IMI 100% Hedged (Net)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI ACWI ex-US IMI	19.0%	20.0%	20.0%	20.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI ACWI ex-US IMI (Net)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI EAFE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%	20.0%	20.0%
NCREIF ODCE	7.0%	7.0%	7.0%	6.0%	6.0%	5.0%	5.0%	5.0%	6.0%	6.0%	0.0%	0.0%	0.0%	0.0%
NCREIF Property	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	6.0%	6.0%	0.0%	0.0%	0.0%
Russell 1000	0.0%	0.0%	24.0%	24.0%	24.0%	28.0%	28.0%	28.0%	37.0%	37.0%	40.0%	22.0%	20.0%	20.0%
Russell 1000 Value	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%	5.0%	0.0%
Russell 2000	0.0%	0.0%	4.0%	6.0%	6.0%	7.0%	7.0%	7.0%	9.0%	9.0%	10.0%	15.0%	15.0%	15.0%
Russell 3000	28.0%	28.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Russell 3000 +3% (PE)	7.0%	7.0%	7.0%	7.0%	7.0%	8.0%	8.0%	8.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Russell 3000 +3% 1Q Lag (PE)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
S&P 500	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	5.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

# Policy Index and Benchmark History

Period Ending: September 30, 2020

Public Equity Benchmark	As of:																	
	7/1/20	10/1/19	7/1/19	4/1/19	1/1/19	10/1/18	10/1/17	2/1/17	10/1/16	9/1/16	1/1/16	1/1/14	10/1/10	5/1/07	6/1/00	3/1/99	9/1/98	1/1/96
MSCI ACWI ex-US	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	34.0%	31.3%	23.1%	0.0%	0.0%	0.0%
MSCI ACWI ex US IMI 100% Hedged (Net)	23.1%	22.5%	18.5%	13.9%	9.3%	4.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI ACWI ex-US IMI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	47.5%	45.2%	40.4%	41.7%	41.7%	40.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI ACWI ex US IMI (Net)	23.1%	22.5%	27.8%	32.4%	37.0%	41.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI EAFE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	32.3%	33.3%	33.3%
Russell 1000	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	50.0%	48.0%	52.8%	55.2%	61.5%	35.5%	33.3%	33.3%
Russell 1000 Value	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.0%	8.4%	0.0%
Russell 2000	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.3%	12.0%	13.2%	13.5%	15.4%	24.2%	25.0%	25.0%
Russell 3000	53.9%	55.0%	53.7%	53.7%	53.7%	53.7%	52.5%	54.8%	59.6%	58.3%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
S&P 500	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	8.4%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

US Equity Benchmark	As of:						
	9/1/16	1/1/16	6/1/00	3/1/99	9/1/98	7/1/96	1/1/95
Russell 1000	0.0%	85.7%	80.0%	52.0%	50.0%	50.0%	69.0%
Russell 1000 Value	0.0%	0.0%	0.0%	12.0%	12.5%	0.0%	0.0%
Russell 2000	0.0%	14.3%	20.0%	36.0%	37.5%	37.5%	14.0%
Russell 3000	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
S & P 500	0.0%	0.0%	0.0%	0.0%	0.0%	12.5%	17.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

International Equity Benchmark	As of:								
	10/1/19	7/1/19	4/1/19	1/1/19	10/1/18	10/1/17	1/1/14	6/1/00	1/1/96
MSCI ACWI ex US	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%
MSCI ACWI ex US IMI 100% Hedged (Net)	50.0%	40.0%	30.0%	20.0%	10.0%	0.0%	0.0%	100.0%	0.0%
MSCI ACWI ex US IMI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%
MSCI ACWI ex US IMI (Net)	50.0%	60.0%	70.0%	80.0%	90.0%	100.0%	0.0%	0.0%	0.0%
MSCI EAFE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	100.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Fixed Income Benchmark	As of:														
	7/1/20	4/1/20	10/1/19	10/1/17	2/1/17	10/1/16	4/1/16	7/1/14	1/1/14	2/1/13	1/1/11	10/1/10	6/1/00	3/1/99	7/1/96
BBgBarc Aggregate	67.7%	69.2%	63.6%	66.7%	57.1%	52.6%	55.5%	50.0%	46.3%	50.0%	50.0%	58.6%	100.0%	83.3%	70.0%
BBgBarc BA Intermediate HY	32.3%	30.8%	36.4%	33.3%	28.6%	31.6%	27.8%	25.0%	25.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc BBB	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	7.3%	0.0%	0.0%	0.0%
BBgBarc Credit BAA	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.0%	15.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Multiverse	0.0%	0.0%	0.0%	0.0%	14.3%	15.8%	16.7%	15.0%	18.8%	20.0%	20.0%	20.5%	0.0%	0.0%	0.0%
BBgBarc TIPS	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.0%	10.0%	14.0%	15.0%	13.6%	0.0%	0.0%	0.0%
Citigroup non-US WGBI	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	16.7%	30.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Opportunistic Credit Benchmark	As of:	
	1/1/14	12/1/09
BBgBarc BA Intermediate HY	100.0%	0.0%
BBgBarc Credit BAA	0.0%	100.0%
	100.0%	100.0%

# Policy Index and Benchmark History

Period Ending: September 30, 2020

Alternatives Benchmark	As of:						
	10/1/18	4/1/18	2/1/17	4/1/16	1/1/16	1/1/14	1/1/11
60/40 Russell 3000/BBgBarc US Aggregate (RP)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	30.0%
Bloomberg Commodity	0.0%	0.0%	0.0%	0.0%	17.7%	18.8%	15.0%
CPI + 5% (RA)	0.0%	0.0%	0.0%	0.0%	11.8%	12.5%	0.0%
Libor +4% (HF)	50.0%	46.2%	46.2%	41.7%	29.4%	25.0%	15.0%
Russell 3000 +3% (PE)	0.0%	0.0%	53.8%	58.3%	41.2%	43.8%	40.0%
Russell 3000 +3% 1Q Lag (PE)	50.0%	53.8%	0.0%	0.0%	0.0%	0.0%	0.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Private Equity Benchmark	As of:	
	4/1/18	10/1/10
Russell 3000 +3% 1Q Lag	100.0%	0.0%
Russell 3000 +3%	0.0%	100.0%
	100.0%	100.0%

Hedge Fund Benchmark	As of:
	10/1/10
Libor +4%	100.0%
	100.0%

Inflation Hedge	As of:						
	7/1/20	4/1/20	10/1/19	4/1/18	2/1/17	10/1/16	4/1/16
BBgBarc TIPS	0.00%	0.00%	5.88%	11.1%	12.5%	14.3%	14.3%
Bloomberg Commodity	0.00%	0.00%	0.00%	0.0%	0.0%	0.0%	21.4%
CPI + 5% (RA)	0.00%	0.00%	0.00%	0.0%	0.0%	0.0%	14.3%
Blended Liquid Real Asset	23.53%	35.29%	35.29%	33.3%	0.0%	0.0%	0.0%
Blended Private Real Asset	17.65%	11.77%	11.77%	11.1%	43.8%	35.7%	0.0%
NCREIF ODCE	58.82%	52.94%	47.06%	44.4%	43.8%	50.0%	50.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Public Real Asset Benchmark	As of:		
	5/1/20	10/1/16	1/1/14
Bloomberg Roll Select Commodity	25.0%	33.3%	0.0%
S&P Global Large-MidCap Commodity and Resources	25.0%	33.3%	0.0%
S&P Global Infrastructure	25.0%	33.4%	0.0%
CPI + 5%	0.0%	0.0%	100.0%
BBgBarc TIPS	25.0%	0.0%	0.0%
	100.0%	100.0%	100.0%

Private Real Asset Benchmark	As of:		
	4/1/18	10/1/16	1/1/14
Bloomberg Roll Select Commodity	0.0%	34.0%	0.0%
S&P Global Large-MidCap Commodity and Resources	0.0%	33.0%	0.0%
50/50 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL	100.0%	0.0%	0.0%
S&P Global Infrastructure	0.0%	33.0%	0.0%
CPI + 5%	0.0%	0.0%	100.0%
	100.0%	100.0%	100.0%

Private RA Secondary Benchmark	As of:
	9/1/14
Cambridge Associates Private Natural Resources 1 Qtr Lag	50.0%
Cambridge Associates Private Infrastructure 1 Qtr Lag	50.0%
	100.0%

Real Estate Benchmark	As of:		
	1/1/09	6/1/00	7/1/96
10 Year Treasury +2%	0.0%	0.0%	100.0%
NCREIF ODCE	100.0%	0.0%	0.0%
NCREIF Property	0.0%	100.0%	0.0%
	100.0%	100.0%	100.0%

# Policy Index and Benchmark History

Period Ending: September 30, 2020

Baillie Gifford Benchmark	As of:	
	1/1/14	5/1/12
MSCI ACWI ex-US	100.0%	0.0%
MSCI EAFE	0.0%	100.0%
	<b>100.0%</b>	<b>100.0%</b>

Baillie Gifford Secondary Benchmark	As of:	
	1/1/14	5/1/12
MSCI ACWI ex-US Growth	100.0%	0.0%
MSCI EAFE Growth	0.0%	100.0%
	<b>100.0%</b>	<b>100.0%</b>

Brigade Secondary Benchmark	As of:	
	8/1/10	
BBgBarc High Yield	50.0%	
Credit Suisse Leveraged Loans	50.0%	
	<b>100.0%</b>	

PIMCO Diversified	As of:	
	9/1/17	
JPMorgan EMBI Global	33.333%	
BofAMLBB-BRatedDvlpdMktsHYHgdUSD	33.333%	
Global Agg Credit Ex EM USD hedged	33.334%	
	<b>100.0%</b>	

SSgA Custom Real Asset	As of:	
	5/1/20	11/1/16
Bloomberg Roll Select Commodity	25.00%	33.33%
S&P Global Large-MidCap Commodity and Resources	25.00%	33.33%
S&P Global Infrastructure	25.00%	33.34%
BBgBarc TIPS	25.00%	0.00%
	<b>100.0%</b>	<b>100.0%</b>

**Acadian Asset Management**

First \$50 million:	0.27% per annum
Next \$50 million:	0.225% per annum
Thereafter:	0.18% per annum

**Baillie Gifford**

First \$25 million:	0.60% per annum
Next \$75 million:	0.50% per annum
Next \$300 million:	0.40% per annum
Thereafter:	0.30% per annum

**BlackRock-Russell 1000 Index Fund**

On All Assets:	0.01% per annum
----------------	-----------------

**BlackRock-Intermediate Govt Bond Index Fund**

On All Assets:	0.025% per annum
----------------	------------------

**BlackRock-MSCI ACWI ex US IMI Index Fund**

On All Assets:	0.045% per annum
----------------	------------------

**DoubleLine**

On All Assets:	0.30% per annum
----------------	-----------------

**Franklin Templeton Investment**

First \$50 million:	0.40% per annum
Next \$50 million:	0.30% per annum
Thereafter:	0.25% per annum

**FIAM Bond**

First \$50 million:	0.25% per annum
Next \$50 million:	0.20% per annum
Next \$100 million:	0.125% per annum
Thereafter:	0.10% per annum

**PanAgora Asset Management**

First \$50 million:	0.25% per annum
Next \$50 million:	0.15% per annum
Thereafter:	0.10% per annum

**Parametric Overlay**

First \$50 million:	0.12% per annum
Next \$100 million:	0.10% per annum
Thereafter:	0.05% per annum
Plus monthly reporting fee of \$1500	

**Parametric Currency Overlay**

First \$250 million:	0.05% per annum
Thereafter:	0.03% per annum

**PIMCO Diversified**

On All Assets:	0.75% per annum
----------------	-----------------

**QMA**

First \$100 million:	0.55% per annum
Next \$100 million:	0.53% per annum
Thereafter:	0.49% per annum

**Western Asset Management**

On All Assets:	0.25% per annum
Performance Fee:	20.00%

**Mondrian Investment Partners**

**Assets Below \$190 million**

First \$20 million:	1.00% per annum
Thereafter:	0.33% per annum

**Assets Above \$190 million**

First \$50 million:	1.00% per annum
Next \$150 million:	0.19% per annum
Thereafter:	0.33% per annum

**NISA**

First \$500 million:	0.15% per annum
Thereafter:	0.125% per annum



# Manager Compliance (Net)

Period Ending: September 30, 2020

Name	Primary Benchmark	Rule 1	Rule 2	Rule 3
Acadian US MGD V	Russell 1000	--	--	--
DE Shaw	Russell 1000	R	✓	R
PanAgora Defuseq	Russell 1000	--	--	--
QMA US Small Cap	Russell 2000	--	--	--
Baillie Gifford	MSCI ACWI ex US	✓	✓	✓
Mondrian	MSCI ACWI ex USA Value Gross	✓	R	✓
DoubleLine	BBgBarc US Aggregate TR	--	--	--
FIAM Bond	BBgBarc US Aggregate TR	✓	✓	✓
NISA Core Bond	BBgBarc US Aggregate TR	--	--	--
Western TRU	3-Month Libor Total Return USD	✓	✓	R
AG CSF Annex Dislocation Fund	BBgBarc BA Intermediate HY	--	--	--
Angelo Gordon Opportunistic	BBgBarc US Aggregate TR	✓	--	R
Angelo Gordon STAR	BBgBarc US Aggregate TR	✓	--	✓
Angelo Gordon Credit Solutions	BBgBarc BA Intermediate HY	--	--	--
Beach Point Select	BBgBarc BA Intermediate HY	✓	✓	✓
Brigade Capital	BBgBarc BA Intermediate HY	R	R	R
PIMCO Diversified	Blended PIMCO Diversified Index	--	--	--
Franklin Templeton	BBgBarc Multiverse TR	--	--	--
Blackrock DL Feeder IX-U	Cliffwater Direct Lending Index	--	--	--
PIMCO Private Income	BBgBarc BA Intermediate HY	--	--	--
TCP Direct Lending VIII	Cliffwater Direct Lending Index	--	--	--
White Oak Yield	Cliffwater Direct Lending Index	--	--	--
Aberdeen Standard GARS	Libor 1 month +4%	--	--	--
Graham Quant Macro	Libor 1 month +4%	--	--	--
PIMCO MAARS Fund LP	Libor 1 month +4%	--	--	--

Rule 1 - Manager has underperformed the benchmark index for the five year period.

Rule 2 - Manager has underperformed the 50th percentile in the appropriate style universe for the five year period.

Rule 3 - Excess 5 Year Sharpe Ratio vs. Benchmark is positive

# Manager Compliance (Gross)

Period Ending: September 30, 2020

Name	Primary Benchmark	Rule 1	Rule 2	Rule 3
Acadian US MGD V	Russell 1000	--	--	--
DE Shaw	Russell 1000	R	✓	✓
PanAgora Defuseq	Russell 1000	--	--	--
QMA US Small Cap	Russell 2000	--	--	--
Baillie Gifford	MSCI ACWI ex US	✓	✓	✓
Mondrian	MSCI ACWI ex USA Value Gross	✓	✓	✓
DoubleLine	BBgBarc US Aggregate TR	--	--	--
FIAM Bond	BBgBarc US Aggregate TR	✓	✓	✓
NISA Core Bond	BBgBarc US Aggregate TR	--	--	--
Western TRU	3-Month Libor Total Return USD	✓	✓	R
AG CSF Annex Dislocation Fund	BBgBarc BA Intermediate HY	--	--	--
Angelo Gordon Opportunistic	BBgBarc US Aggregate TR	✓	--	R
Angelo Gordon STAR	BBgBarc US Aggregate TR	✓	--	✓
Angelo Gordon Credit Solutions	BBgBarc BA Intermediate HY	--	--	--
Beach Point Select	BBgBarc BA Intermediate HY	✓	✓	✓
Brigade Capital	BBgBarc BA Intermediate HY	R	R	R
PIMCO Diversified	Blended PIMCO Diversified Index	--	--	--
Franklin Templeton	BBgBarc Multiverse TR	--	--	--
Blackrock DL Feeder IX-U	Cliffwater Direct Lending Index	--	--	--
PIMCO Private Income	BBgBarc BA Intermediate HY	--	--	--
TCP Direct Lending VIII	Cliffwater Direct Lending Index	--	--	--
White Oak Yield	Cliffwater Direct Lending Index	--	--	--
Aberdeen Standard GARS	Libor 1 month +4%	--	--	--
Graham Quant Macro	Libor 1 month +4%	--	--	--
PIMCO MAARS Fund LP	Libor 1 month +4%	--	--	--

Rule 1 - Manager has underperformed the benchmark index for the five year period.

Rule 2 - Manager has underperformed the 50th percentile in the appropriate style universe for the five year period.

Rule 3 - Excess 5 Year Sharpe Ratio vs. Benchmark is positive



**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**

4<sup>TH</sup> QUARTER 2020  
Investment Landscape

# Recent Verus research

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

## Annual outlooks

### 2020 PRIVATE OUTLOOK

In the 2020 Private Equity Outlook, we focus attention on General Partner-led (GP-led) secondary transactions that have evolved and are no longer just associated with general partners trying to dispose of lingering assets that have become hard to sell. The outlook also addresses:

- The significant pull back in private equity in 2020
- Our expectations for a decline in both capital calls and distributions from buyout funds likely leading to negative net cash flows for the coming quarters
- Headwinds for perspective IPO's
- Impacts from Covid-19 on many portfolios
- Our view on how the secondary market is very different than it was during the last economic downturn

## Topics of interest

### BROADENING DIVERSITY CONSIDERATION

CIO Ian Toner, CFA, and Public Markets Managing Director Marianne Feeley, CFA, outline broader elements of diversity – beyond ownership – that may be used to characterize the demographic qualities of an investment firm. It frames the broader approach to understanding diversity that we are adapting at Verus, which is an integral part of our process of collecting and using information about investment managers.

### AEIOU > PPPPP

Manager research and selection have long been described in the language of Ps – people, process, etc. Verus believes the familiar Ps approach, while useful, leaves out important aspects of manager assessment and their products because of its focus on inputs. We outline a vowel-based approach that concentrates research on factors that are more likely to drive investment outcomes.

## Webinar replays

### BROADENING DIVERSITY CONSIDERATION

### AEIOU > PPPPP

# Table of contents



---

VERUSINVESTMENTS.COM

SEATTLE 206-622-3700

LOS ANGELES 310-297-1777

SAN FRANCISCO 415-362-3484

PITTSBURGH 412-784-6678

---

Economic environment 6

---

Fixed income rates & credit 21

---

Equity 27

---

Other assets 37

---

Appendix 42

# 3<sup>rd</sup> quarter summary

## THE ECONOMIC CLIMATE

- Real GDP contracted at a -9.0% rate year-over-year in Q2 (-31.4% quarterly annualized rate)—likely the most sudden economic recession in American history. **p. 10**
- Europe is experiencing a drastic second wave of COVID-19 which has been sweeping across the continent. The seven-day average daily case growth of the EU and the U.K. combined rose from 4,699 to 48,807 during Q3. **p. 9**
- Election polls and the betting markets are indicating that Joe Biden is leading President Trump materially as we move into the final weeks pre-election. In 2016, the story was largely the same, as Clinton was expected to win up until the day before the election. **p. 18**

## PORTFOLIO IMPACTS

- U.S. and emerging markets have recovered most losses year-to-date, while international remain negative. Global equities are now positive for 2020 despite an earnings recession and considerable economic uncertainty. **p. 29**
- U.S. core inflation increased to a more normal level, rising 1.7% year-over-year in August from 1.2% in June. Inflation expectations also normalized. The 10yr U.S. TIPS inflation breakeven rate recovered to 1.6%, from a low of 0.5% on March 19th. The breakeven rate of inflation is now on par with actual year-over-year inflation. **p. 11**

## THE INVESTMENT CLIMATE

- The Federal Reserve announced a notable change to its inflation targeting approach, now aiming to achieve “inflation moderately above 2% for some time so that inflation averages 2% over time and longer-term inflation expectations remain well anchored at 2%.” This was a reversal from the prior goal of achieving 2% inflation. **p. 22**
- The Federal Reserve maintained an accommodative tone, and most members of the FOMC held their view that short rates are likely to stay near-zero through 2023—eventually moving to 2.50% over the longer-term. **p. 22**
- According to FactSet, S&P 500 Q3 earnings are expected to be down -20.5%. However, earnings in Q2 beat expectations by 12.5% (-31.6% YoY vs. -44.1%). Another large positive surprise in Q3 would be welcome news to investors. **p. 28**

## ASSET ALLOCATION ISSUES

- U.S. equities delivered +8.9% over the quarter, reaching a new high in September before giving back some gains. The S&P 500 is up +5.6% year-to-date, despite an earnings recession and considerable economic uncertainty. **p. 30**
- The U.S. dollar fell -3.5% in Q3, continuing a downward trend since a sudden jump in March on safe-haven buying. The dollar has now completely unwound the gains experienced during the market sell-off. **p. 38**

A more neutral risk positioning may be warranted in the current environment

There seems to be a high degree of uncertainty regarding the future market path

# What drove the market in Q3?

“Europeans face prospect of 2nd lockdowns as COVID cases surge”

DAILY NEW CONFIRMED CASES IN THE EU27 AND THE U.K. COMBINED

4/30	5/31	6/30	7/31	8/31	9/30
14,261	5,985	4,699	9,127	22,225	48,807

Article Source: CBS News, September 21<sup>st</sup>, 2020

“Second \$1,200 stimulus checks had bipartisan support. Now they could be a longshot”

U.S. PERSONAL INCOME GROWTH (YEAR-OVER-YEAR)

Mar	Apr	May	Jun	Jul	Aug
1.8%	14.1%	9.3%	7.8%	8.1%	4.7%

Article Source: CNBC, September 9<sup>th</sup>, 2020

“The US job market is gradually recovering from the pandemic lockdown shock”

U-3 UNEMPLOYMENT RATE

Apr	May	Jun	Jul	Aug	Sep
14.7%	13.3%	11.1%	10.2%	8.4%	7.9%

Article Source: CNN Business, September 3<sup>rd</sup>, 2020

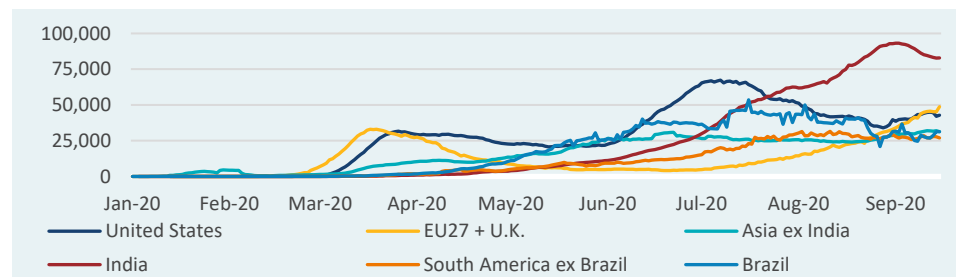
“The market isn’t convinced the Federal Reserve can achieve its inflation objective”

TEN-YEAR BREAK-EVEN INFLATION RATES

4/30	5/31	6/30	7/31	8/31	9/30
1.1%	1.1%	1.3%	1.6%	1.8%	1.6%

Article Source: CNBC, September 17<sup>th</sup>, 2020

SEVEN-DAY TRAILING AVERAGE DAILY CASE GROWTH BY REGION



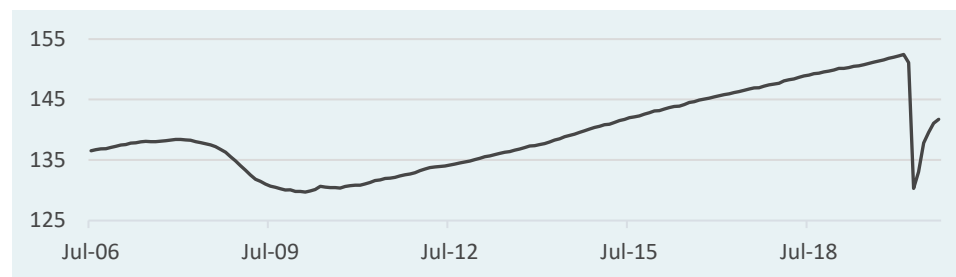
Source: Bloomberg, as of 9/30/20

U.S. PERSONAL INCOME GROWTH (YEAR-OVER-YEAR)



Source: Bureau of Economic Analysis, Bloomberg, as of 8/31/20

NON-FARM EMPLOYEES ON U.S. PAYROLLS (MILLIONS)



Source: Bureau of Labor Statistics, Bloomberg, as of 9/30/20

# Economic environment



# U.S. economics summary

— Real GDP contracted at a -9.0% rate year-over-year in the second quarter (-31.4% quarterly annualized rate)—likely the most sudden economic recession in American history.

— The Atlanta Fed’s forecast for third quarter growth is -10.7% year-over-year (+33.8% quarterly annualized rate). This projection was based on the expectations that consumption rebounds materially, household investment picks up, businesses begin re-stocking shelves that were allowed to run empty, and supporting fiscal policy.

— The U.S. labor market partially recovered from the recent shock. Unemployment fell from 14.7% in April to 7.9% in September. A report released in September indicated 60% of temporary business closures during the pandemic were now permanent.

— Correlation between election results and market performance

has been weak, and the outcome depends greatly on how the data is sliced and the timing of economic events. The S&P 500 has experienced stronger gains with a Democrat in power, though the results are skewed by extreme events such as the Great Depression.

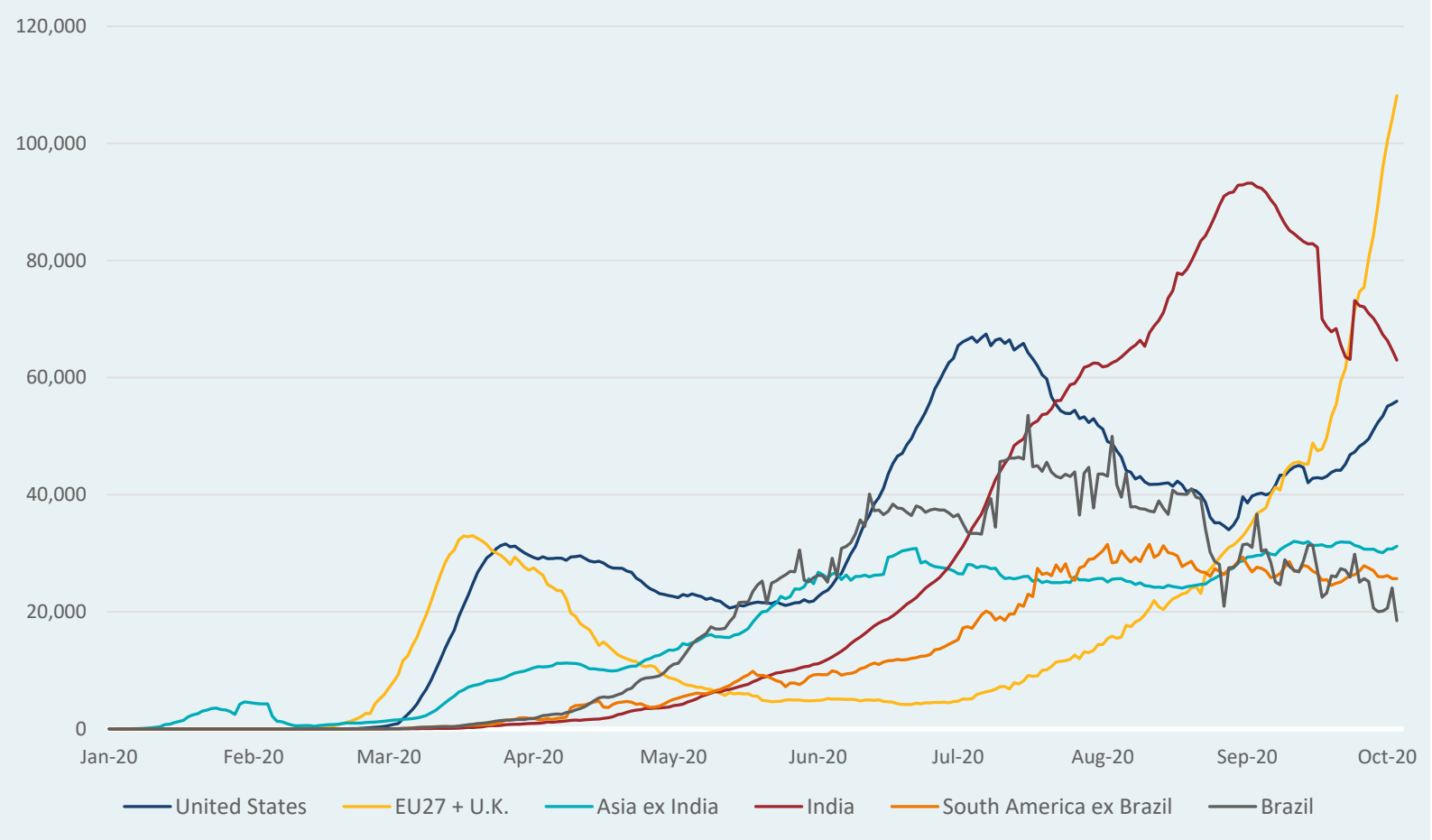
— The NFIB Small Business Optimism Index recovered to 104.0 in Q3, which was in line with pre-pandemic levels. The survey concluded that half of the jobs lost in March and April have been recouped, but that the pace of recovery has slowed.

— The median home price increased 11.1% year-over-year in September, according to Realtor.com. U.S. housing supply has reached record tightness. In August, 3.3 months worth of homes were on the market, which was the lowest inventory ever recorded since the government began tracking this data in 1963.

	Most Recent	12 Months Prior
GDP (YoY)	(9.0%) 6/30/20	2.0% 6/30/19
Inflation (CPI YoY, Core)	1.7% 8/31/20	2.4% 8/31/19
Expected Inflation (5yr-5yr forward)	1.7% 9/30/20	1.7% 9/30/19
Fed Funds Target Range	0% – 0.25% 9/30/20	1.75% – 2.00% 9/30/19
10-Year Rate	0.7% 9/30/20	1.7% 9/30/19
U-3 Unemployment	7.9% 9/30/20	3.5% 9/30/19
U-6 Unemployment	12.8% 9/30/20	6.9% 9/30/19

# COVID-19 update

## Seven-day trailing daily average case growth by region



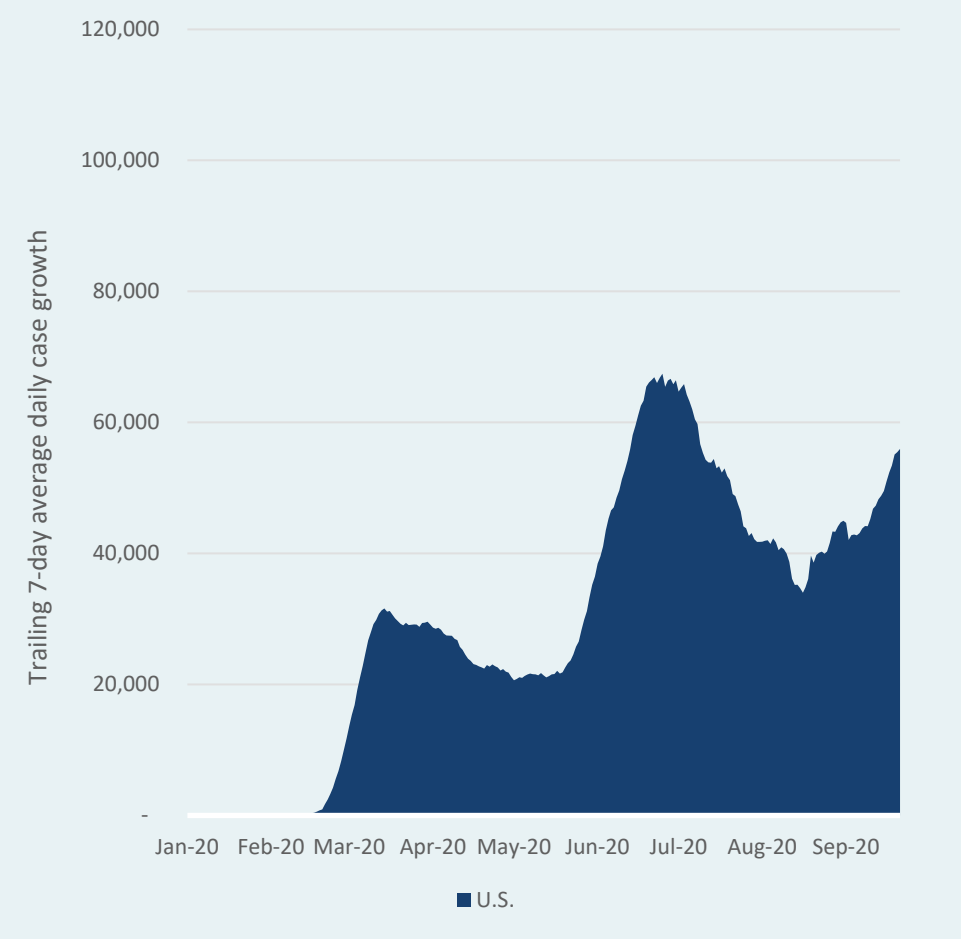
Case growth has increased exponentially across Europe over the past month, resulting in broad reimplementations of economically-restrictive social distancing controls

Deaths have begun to increase on a several-week lag to local case growth, as expected, but remain at lower levels than those seen earlier this year

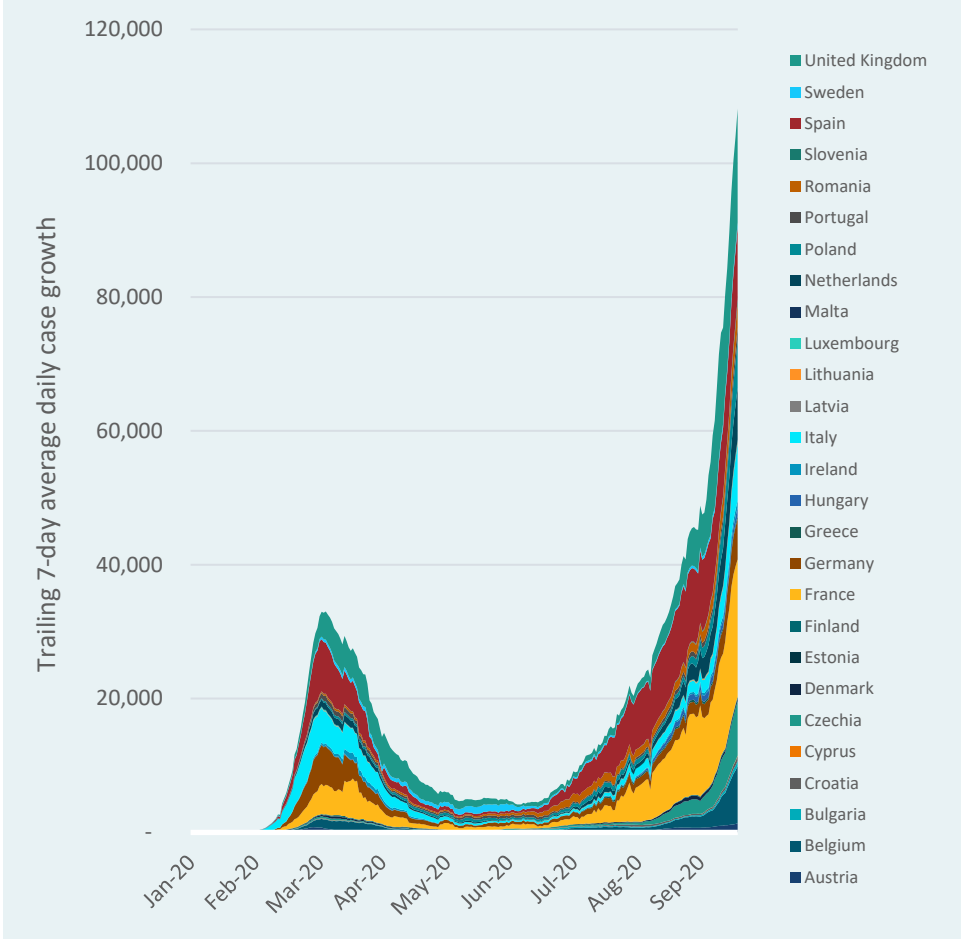
Source: Bloomberg, as of 10/18/20

# COVID-19 update

## UNITED STATES



## EU27 + UNITED KINGDOM



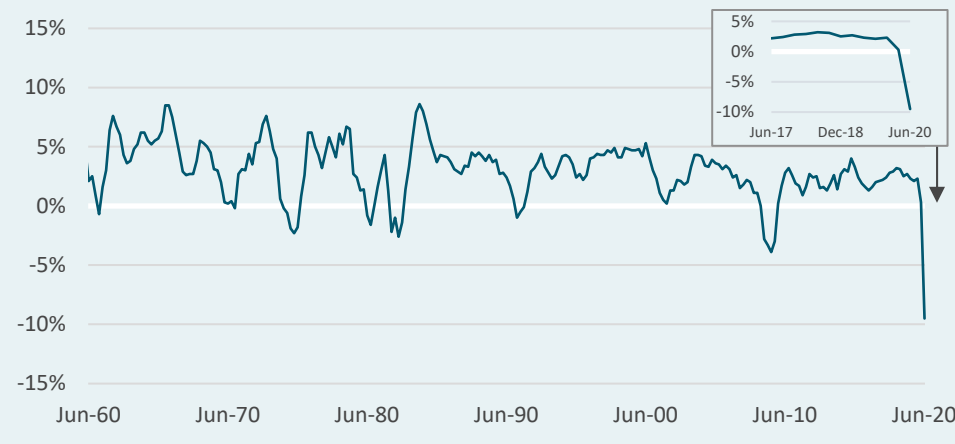
Source: Bloomberg, as of 10/18/20

# GDP growth

Real GDP contracted -9.0% year-over-year in Q2 (-31.4% quarterly annualized rate)—likely the most sudden economic recession in American history. Personal consumption expenditures shrunk at a quarterly annualized pace of -24%. The decline was driven by a significant pullback in spending on services (-22%) as economic activity remained constrained. U.S. households and businesses exhibited conservatism in the face of an uncertain outlook on both the virus and policy response fronts. Fixed investment slumped -5.3% and private inventories fell -3.5% as companies appeared unwilling to proactively restock their shelves. Trade remained a tailwind to GDP as the value of imported goods declined more than the value of exported goods.

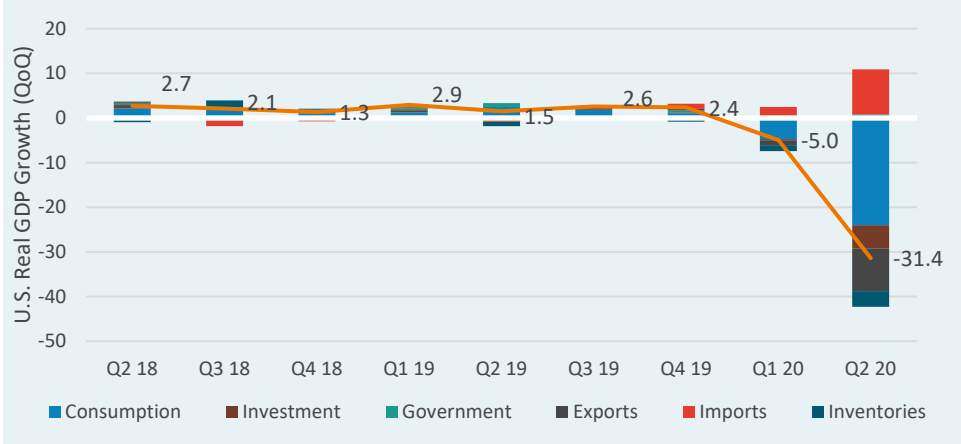
The Atlanta Fed’s forecast for third quarter-growth was +33.8% on a quarter-over-quarter annualized basis (-10.7% year-over-year), as of September 30<sup>th</sup>. This projection was based on an expectation for consumption to rebound materially, household investment to pick up, businesses to begin re-stocking shelves which were allowed to run empty in the second quarter, and a continuation of supportive fiscal policy. Looking ahead, the strength of the economic recovery will likely remain predicated on the willingness and ability of consumers to spend, the willingness of businesses to supply that demand, and the magnitude of fiscal support.

U.S. REAL GDP GROWTH (YOY)



Source: Bloomberg, as of 6/30/20

U.S. GDP GROWTH ATTRIBUTION



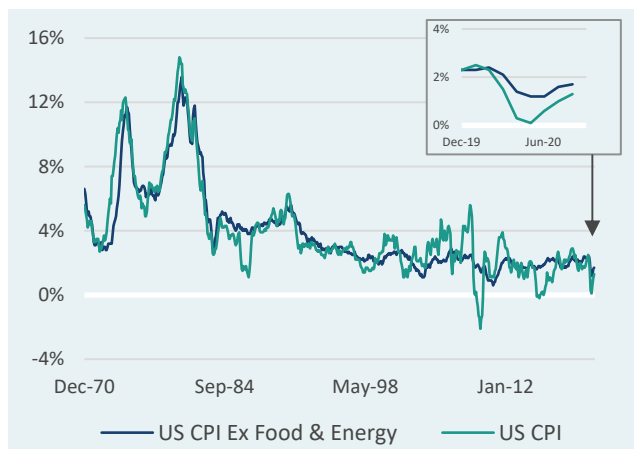
Source: BEA, annualized quarterly rate, as of 6/30/20

# Inflation

Growth in headline inflation continued to rebound toward more normal levels in Q3, reaching 1.4% year-over-year in September after bottoming at 0.1% in May. Food items—specifically meats, poultry, fish, eggs, and dairy-related products—continued to drive the recovery in demand for groceries due to COVID-driven restaurant closures. Core inflation, which excludes the more volatile food and energy components, picked up from 1.2% to 1.7% as price increases for used cars and trucks (+10.3%) and medical care services (+4.9%) outweighed a dip in airline fares (-25.0%).

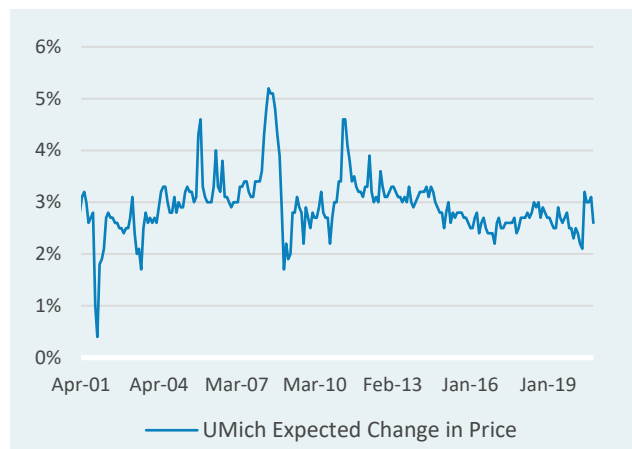
Ten- and 30-year breakeven inflation rates recovered from 1.3% to 1.6% and from 1.6% to 1.8%, respectively, as market participants likely became slightly more bullish on longer-term growth and inflation outlooks. Still, there remains skepticism around the Fed’s ability to sustainably achieve its inflation target average of 2.0%. Year-over-year growth in core PCE inflation recovered to 1.6% in August but remained below the Fed’s target. Officials have stated that in the future they will be less likely to clamp down on rising inflation with restrictive policy and will be more likely to let inflation run above 2.0% for some time.

## U.S. CPI (YOY)



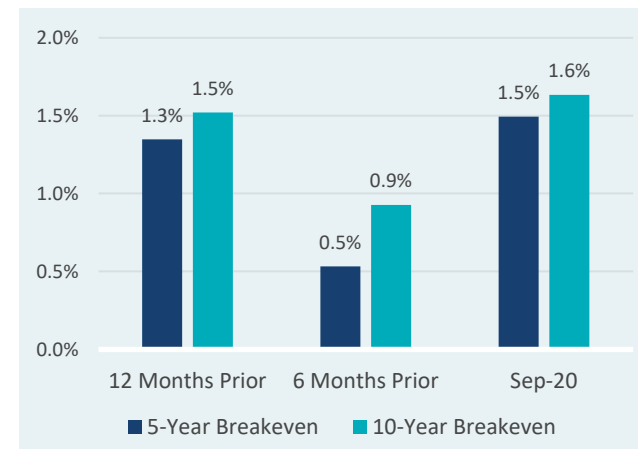
Source: Bloomberg, as of 8/31/20

## CONSUMER INFLATION EXPECTATIONS



Source: University of Michigan, as of 9/30/20

## BREAKEVEN INFLATION RATES



Source: Bloomberg, as of 9/30/20

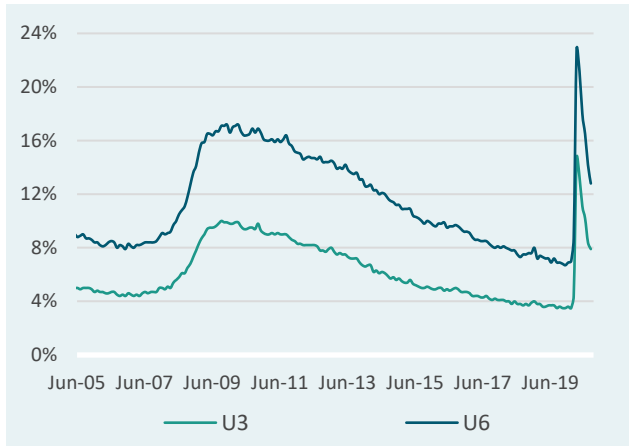
# Labor market

The U.S. labor market has partially recovered from the shock sustained in Q1 and Q2. Unemployment fell from 14.7% in April to 7.9% in September. During the economic contraction, the labor participation rate also fell rather dramatically. Most job losses during the pandemic were described by workers as temporary in nature. Most “temporary” job losses have in fact turned out to be temporary, as indicated below. A smaller portion of temporary job losses have unfortunately been reclassified as permanent. We remain watchful regarding how many temporary job losses transition into the “permanent” category in the coming months.

A report released by Yelp in September indicated 60% of businesses that had temporarily closed during the COVID-19 pandemic are now permanently closed. The businesses hit the hardest included: restaurants, bars, retail, fitness, and beauty services. It will be important to monitor whether workers come back to the labor force and once again search for employment as the U.S. economy recovers, or whether these trends result in longer-term unemployment.

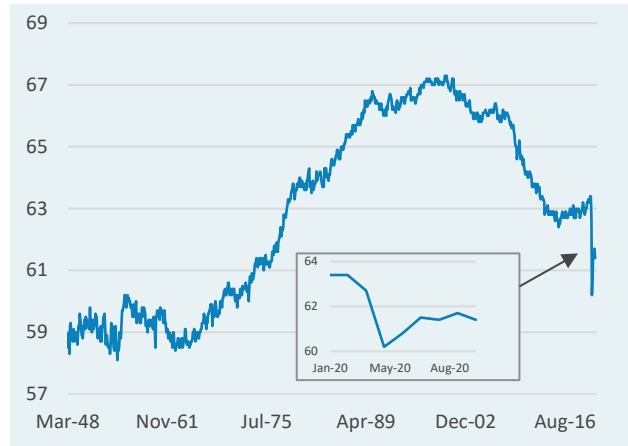
U.S. workers continue to come back to the labor force

## U.S. UNEMPLOYMENT



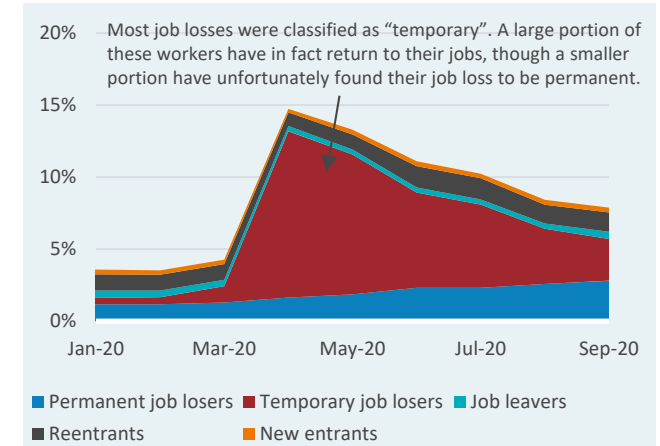
Source: FRED, as of 9/30/20

## LABOR PARTICIPATION RATE



Source: FRED, as of 9/30/20

## UNEMPLOYMENT DECOMPOSITION BY REASON

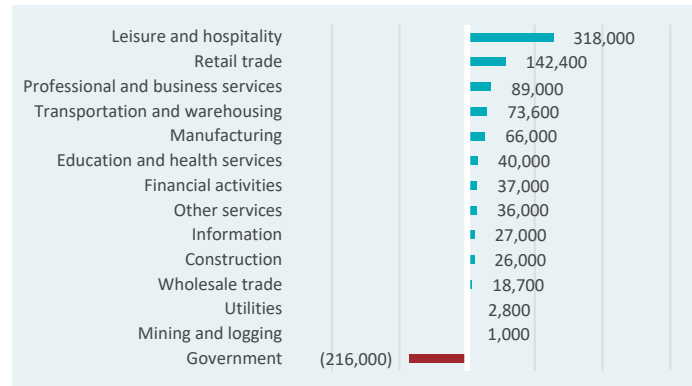


Source: BLS, as of 9/30/20

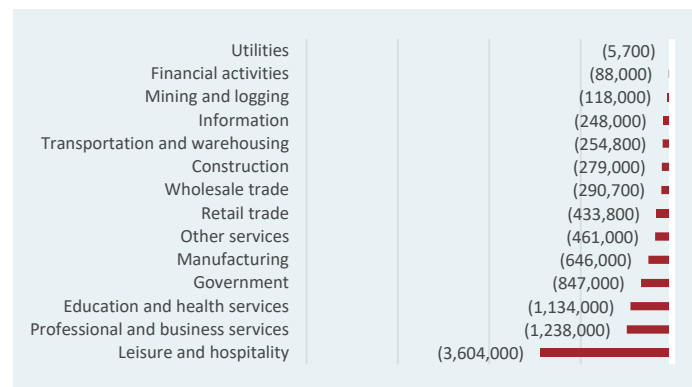
# September 2020 jobs report

+661,000 (exp. +859,000) - net revisions to prior two months = +145k

## 1-MONTH CHANGE



## 12-MONTH CHANGE



## TRAILING % CHANGE



Payrolls continued to recover in the harder-hit services sectors in the third quarter, but payrolls remain well below pre-pandemic levels

All major sectors still have lower payrolls relative to September 2019

Source: BLS, as of 9/30/20

# The consumer

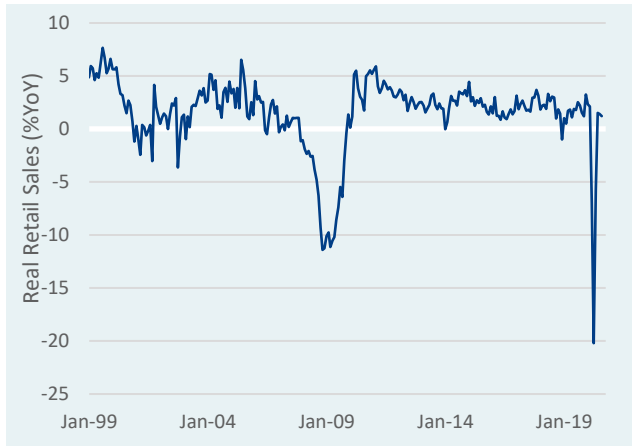
After collapsing -20% year-over-year in April, U.S. real retail sales have now fully recovered and were positive +1.2% in August. Larger purchases, such as automobiles and homes, also slowed considerably earlier in the year but have since rebounded.

The current combination of ultra-low interest rates and vast government fiscal stimulus appears to be supporting many parts of the economy. Despite the inability of households to spend on some traditional discretionary items, other types of purchases have swelled. Recent consumption patterns seem

to indicate that government support is having the intended effect and that the economy is stabilizing.

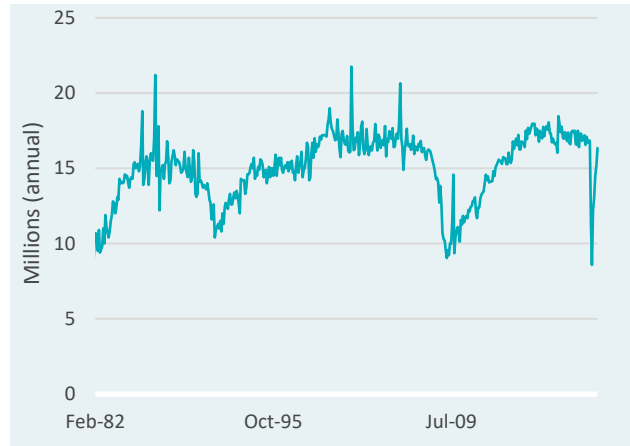
The U.S. personal savings rate fell to 14% in August, largely due to the ending of special unemployment benefits, which expired on July 31<sup>st</sup>. Broad economic uncertainty typically increases the desire for saving, which is likely the case in today's environment. But perhaps an even greater effect is the overall inability or unwillingness of households to spend on certain items such as vacations and restaurant dining.

**REAL RETAIL SALES GROWTH (YOY)**



Source: FRED, as of 8/31/20

**AUTO SALES**



Source: Federal Reserve, as of 9/30/20

**PERSONAL SAVINGS RATE**



Source: FRED, as of 8/31/20



# Sentiment

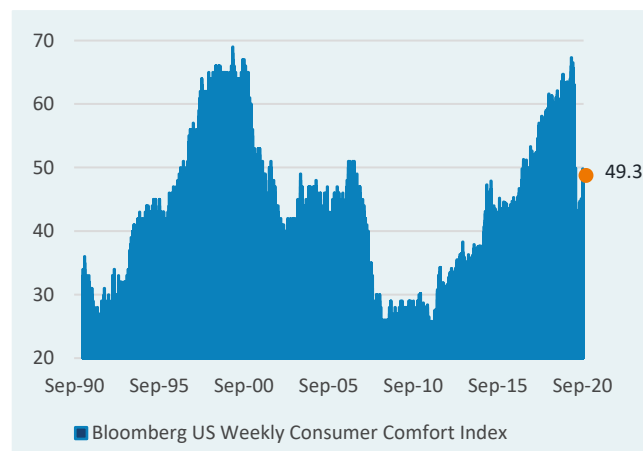
Despite the more optimistic picture painted by a recovery in consumer spending, auto sales, and the housing market, consumer sentiment remains far below the near record-highs of early 2020.

The Bloomberg Consumer Comfort Index attempts to gauge Americans' views on the economy, their personal financial situation, and buying conditions. The index sits at 49.3, compared to a high of 67.3 in January. The University of Michigan Consumer Sentiment Survey attempts to gauge attitudes about the business climate, personal finances, and

spending conditions. The index currently sits at 80.4, down from 101.0 in February.

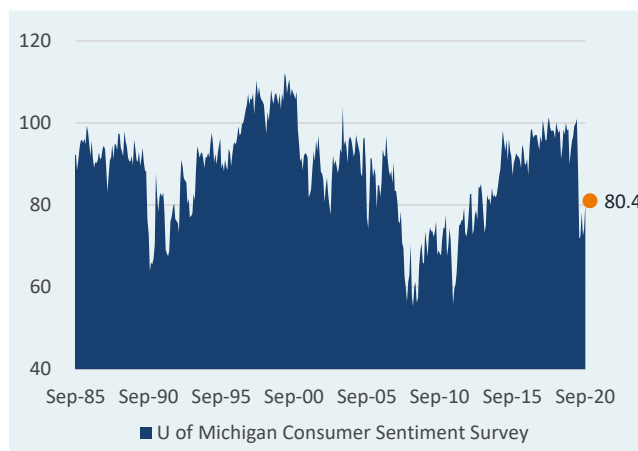
The NFIB Small Business Optimism Index recovered to 104.0 in Q3, which is in line with pre-pandemic levels. The survey concluded that half of the jobs lost in March and April have been recouped, but that the pace of recovery has slowed. Businesses generally expect the economy to continue growing, and hiring plans are now on track with pre-COVID levels.

## CONSUMER COMFORT



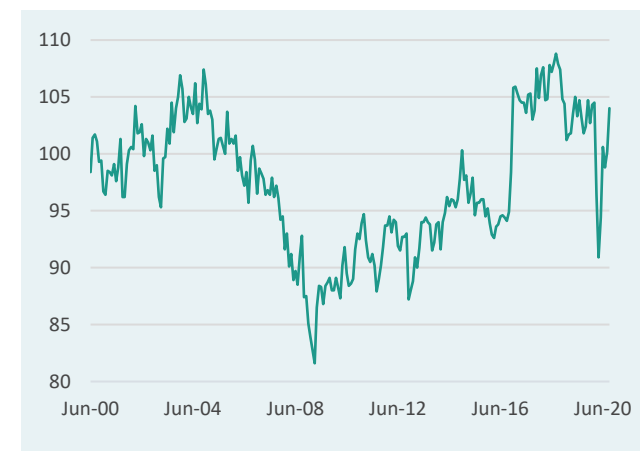
Source: Bloomberg, as of 9/30/20

## CONSUMER SENTIMENT



Source: University of Michigan, as of 9/30/20

## SMALL BUSINESS OPTIMISM



Source: NFIB, as of 9/30/20

# Housing

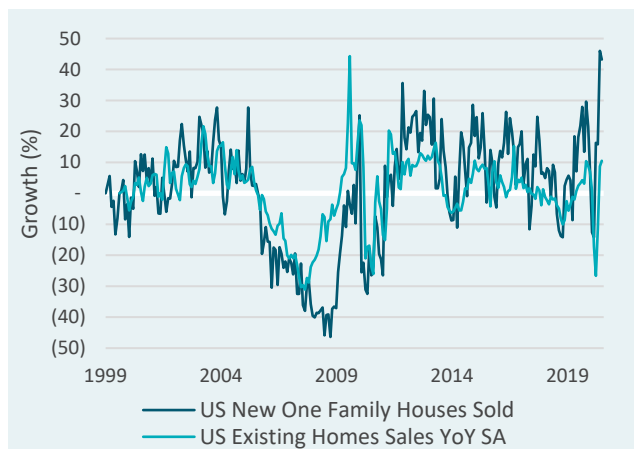
Existing home sales increased intensely over the summer, with existing home purchase activity up 10.5% year-over-year and new home sales higher by a whopping 43.2%. A variety of forces have likely aligned to deliver recent strength, including record-low mortgage interest rates, the desire of many Americans to increase their living space due to the new working-from-home environment, and a record-thin supply of homes on the market.

The portion of U.S. mortgages in the COVID-19 government forbearance program dropped significantly to 5.6% during

the first week of October. This compared to 6.8% the previous week and a high of 8.6% earlier in the year, according to mortgage data firm Black Knight. This positive news eases concerns that the COVID-19 slowdown might lead to another housing crisis.

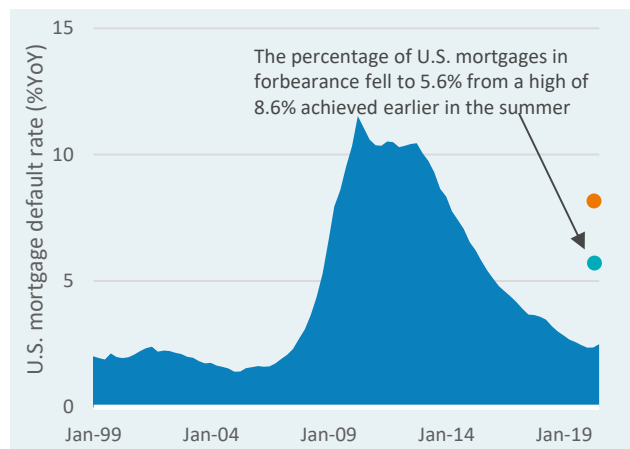
The extremely tight supply of homes has been a major contributor to the recent housing boom. In August, 3.3 months worth of homes were available on the market, which was the lowest inventory level ever recorded since the U.S. government began tracking this data in 1963.

**U.S. HOME SALES (YOY)**



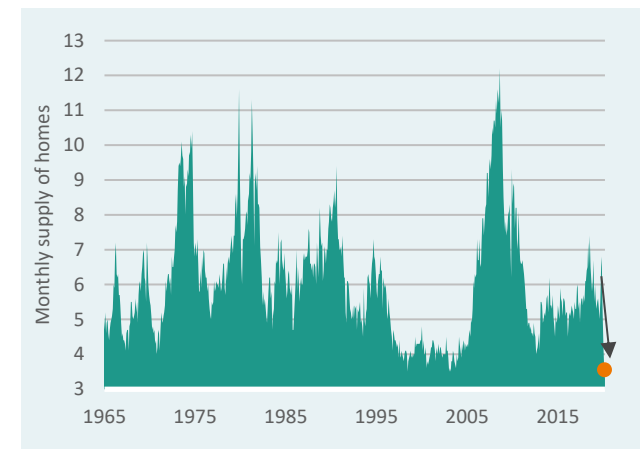
Source: FRED, as of 8/31/20

**MORTGAGE DEFAULT RATE (%)**



Source: FRED, as of 6/30/20, Black Knight as of 10/9/20

**U.S. HOME SUPPLY**



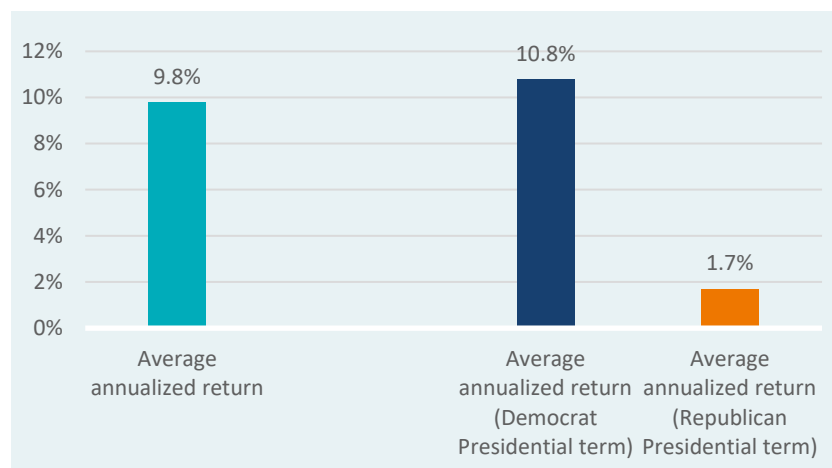
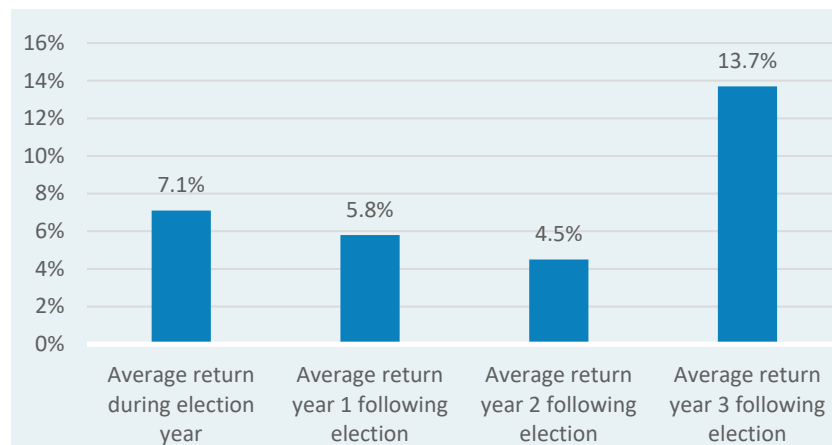
Source: FRED, as of 8/31/20

# U.S. presidential election

Correlation between election results and long-term market performance has generally been weak, and the outcome depends greatly on how the data is sliced, as well as the timing of economic and geopolitical events which are often unrelated to elections. The S&P 500 has experienced stronger gains with a Democrat in power, though the results are skewed by extreme events such as the Great Depression (Herbert Hoover saw a -77.1% total return during his presidency, followed by a +205.5% total return in Franklin D. Roosevelt's first term). These events have had a significant impact on the "average" market performance of Democrat and Republican Presidencies.

Markets seem to view a Donald Trump reelection as a positive for markets. But recently investors have also warmed to the idea of a Joe Biden victory, due to expectations for greater fiscal support to the economy which may counteract negative effects of Democratic Party proposals for higher corporate taxes and tax hikes on wealthier households.

**PRESIDENTIAL ELECTION & U.S. EQUITY PERFORMANCE (1928 – 2016)**



The relationship between election years and market performance has been muddy

Source: Schwab, Bloomberg – S&P 500 Index

Note: Stronger equity performance during one party or the other does not necessarily imply that the party's leadership led to that market performance. The timing of large and significant shocks to the economy such as the Great Depression, natural disasters, and geopolitical turmoil have influenced the performance figures above.

# How are we viewing the polling data?

The polls and the betting markets indicate that Biden is leading President Trump materially as we move into the final weeks pre-election. In 2016, the story was largely the same, as Clinton was expected to win up until the day before the election.

“Clinton has 90 percent chance of winning” – Reuters, 11/7/2016

“Election 2016: Hillary Clinton looks poised to lock it up” – Politico, 11/7/2016

“Odds of Clinton win jump on prediction markets” – Financial Times, 11/7/2016

“Polls: Hillary Clinton in position to win the election” – Business Insider, 11/7/2016

Several factors are likely to distort the picture painted by the polling data, including, but not limited to, the following:

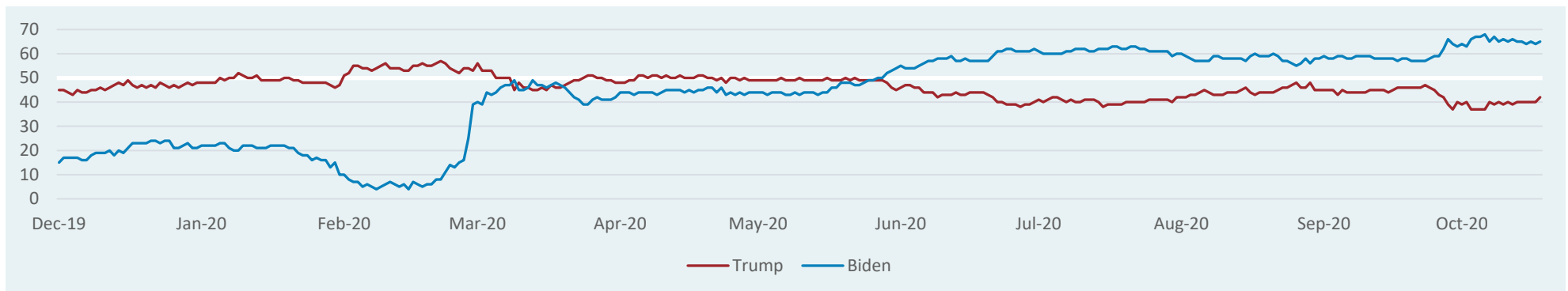
**Shy Trump factor:** Voters in certain parts of the country may be less willing to express that they would vote for Trump, and this dynamic may be even more prevalent than it was in 2016.

**Oversampling:** Pollsters do their best to build population samples representative of likely actual voter turnout, but these samples are often flawed. Back in 2016, Democrats were often over-represented in poll samples, which may have incorrectly skewed polling averages in favor of Hillary Clinton. There appears to be some evidence of this effect influencing polling averages this year as well.

**Mail-in voting:** The increase in reliance on mail-in ballots could delay the distribution of final election results and provide both candidates the opportunity to contest the election results in key swing states.

**Late deciding:** Voters may break for Trump or Biden in the final few days pre-election, but this is more likely to be a smaller factor than it was in 2016.

## PREDICTIT ODDS – WHO WILL WIN THE 2020 U.S. PRESIDENTIAL ELECTION?



Source: PredictIt, as of 10/21/20

# International economics summary

- Growth contracted sharply in international developed economies in Q2. Gross domestic product in the Eurozone contracted -14.7% from the prior year, and Japanese GDP sank -9.9% over the same period, despite the deployment of fiscal support to the tune of roughly 40% of Japan's GDP.
- European officials implemented stricter social distancing controls with hopes of stymying the second wave of COVID-19 sweeping across the continent. The seven-day average daily case growth of the EU27 and the United Kingdom combined rose from 4,699 to 48,807 over the third quarter.
- The IMF revised its global growth projections for 2020 and 2021 from -4.9% and 5.4% to -4.4% and 5.2%, respectively. The IMF's model assumes social distancing controls will continue to act as a drag on growth into 2021, and that local transmission of the virus will be falling everywhere by 2023.
- Inflation remained muted globally in the third quarter, supporting arguments that the pandemic's impact has been more disinflationary than inflationary over the short term. The Eurozone's consumer price index ended the quarter -0.3% below its level from September 2019, though most of the deflationary pressures were supplied by an -8.2% decline in energy prices.
- Eurozone retail sales volumes grew 3.7% from the prior year in August (exp. 2.2%), driven by a sharp surge in online purchases and clothing sales. The vigorous rebound in consumer spending has been attributed to pent-up demand and incomes, which have been largely stable due to furlough schemes. Many analysts expect a "normalization" of retail sales in the fourth quarter, under the assumption that current spending levels are unlikely to be sustainable.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	(9.0%) 6/30/20	1.3% 8/31/20	7.9% 9/30/20
Eurozone	(14.7%) 6/30/20	(0.3%) 9/30/20	8.1% 8/31/20
Japan	(9.9%) 6/30/20	0.2% 9/30/20	3.0% 8/31/20
BRICS Nations	(3.1%) 6/30/20	3.3% 6/30/20	5.3% 6/30/20
Brazil	(11.4%) 6/30/20	2.4% 8/31/20	13.8% 7/31/20
Russia	(8.0%) 6/30/20	3.3% 9/30/20	6.4% 8/31/20
India	(23.9%) 6/30/20	6.7% 8/31/20	8.5% 12/31/17
China	4.9% 9/30/20	2.4% 8/31/20	3.8% 6/30/20

# International economics

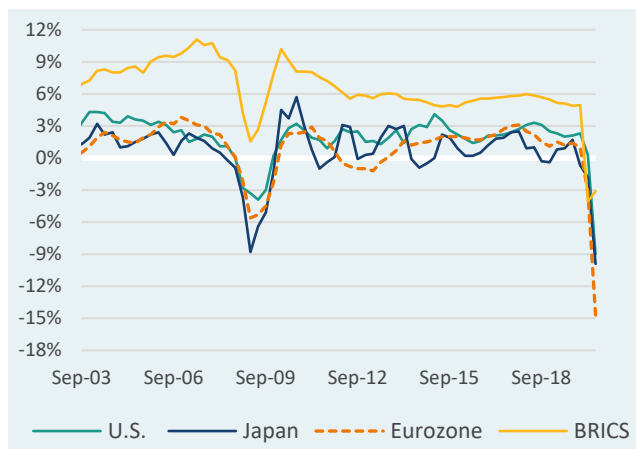
As expected, growth contracted sharply in international developed economies around the world in Q2. Eurozone gross domestic product contracted -14.7% from the prior year, and Japanese growth sank -9.9% over the same period, despite the deployment of fiscal support to the tune of roughly 40% of Japanese GDP.

Growth in most of the emerging markets complex also took a major hit. GDP contracted -11.4% in Brazil, -8.0% in Russia, and -23.9% in India which has been especially hard hit by the coronavirus. China stood out as an exception, and reportedly mustered year-over-year GDP growth of +4.9% in Q3. China's

growth was supported by the People's Bank of China, which cut its 1-year medium-term lending facility rate from 3.15% to 2.95%. Many emerging economies are in a better position to provide monetary stimulus, given higher interest rates.

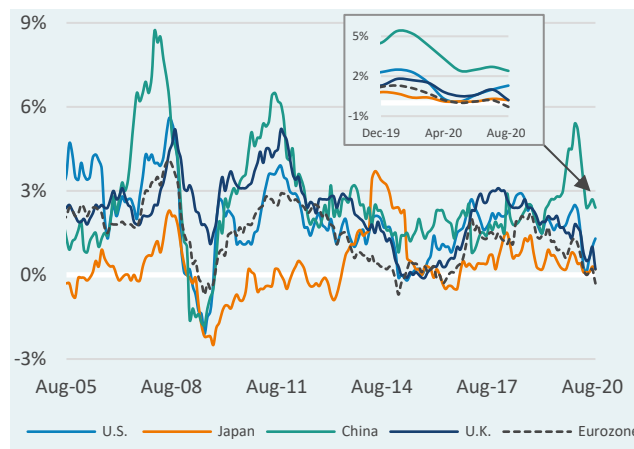
Unemployment in the Eurozone rose from 7.8% to 8.1%, just 0.2% above the quarter-end rate in the United States, as Europe contends with disinflationary pressures. Year-over-year growth of the harmonized consumer price index fell from +0.3% into negative territory at -0.3%. The Union's harmonized measure, however, does not include rents and house prices—a key distinction from the U.S. CPI basket.

**REAL GDP GROWTH (YOY)**



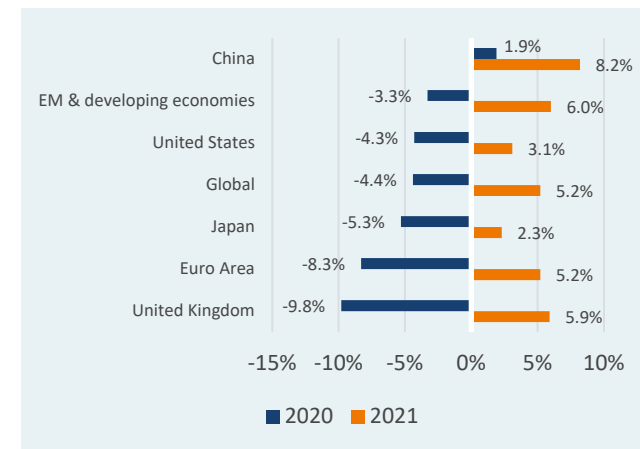
Source: Bloomberg, as of 6/30/20

**INFLATION (CPI YOY)**



Source: Bloomberg, as of 8/31/20

**IMF GLOBAL OUTLOOK GROWTH PROJECTIONS**



Source: International Monetary Fund, as of 10/13/20

# Fixed income rates & credit

# Interest rate environment

- Global interest rate levels remained extremely depressed relative to long-term averages in Q3, and the 10-year U.S. Treasury yield traded in a relatively narrow range between 0.50%-0.75%.
- The Federal Reserve maintained an accommodative tone, and most members of the Federal Open Market Committee remained of the view that short rates are likely to stay near-zero through 2023, and eventually move toward 2.50% over the longer-term. The Fed repeated that while it has the power to lend, it does not hold the power to spend, and additional fiscal support will likely be required from Congress.
- The U.S. Fed made an adjustment to its policy approach related to its inflation target. Instead of targeting stable prices, defined as 2% annual growth in personal consumption expenditures (PCE), the Fed will now implement an average inflation targeting approach aimed at achieving “inflation moderately above 2% for some time so that inflation averages 2% over time and longer-term inflation expectations remain well anchored at 2%.”
- Officials at the Bank of England (BOE) reportedly warmed to the idea of pursuing a negative interest rate policy, and markets are now pricing in negative overnight rates by May 2021. Many analysts have stated that the BOE is likely to remain extremely supportive and may provide additional monetary accommodation in the form of quantitative easing before year-end.
- Investors were paid for betting on longer-term reflation of growth and inflation, likely due to their expectations for further fiscal and monetary accommodation moving forward. Ten-year breakeven inflation rates recovered from 1.3% to 1.6%, and key term spreads indicated a moderate steepening in the U.S. yield curve.

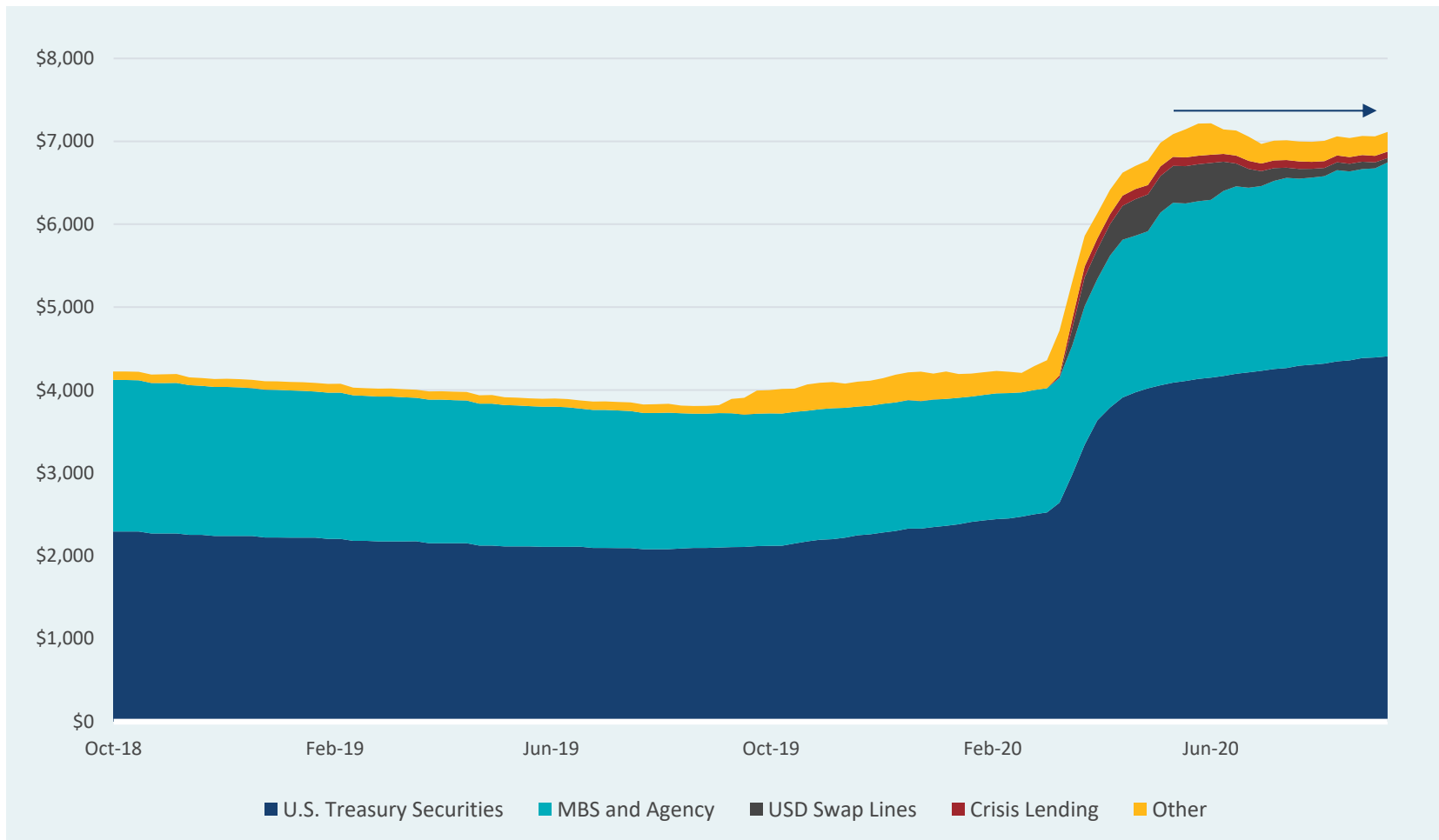
Area	Short Term (3M)	10-Year
United States	0.09%	0.68%
Germany	(0.63%)	(0.52%)
France	(0.64%)	(0.24%)
Spain	(0.54%)	0.25%
Italy	(0.48%)	0.87%
Greece	(0.08%)	1.02%
U.K.	0.01%	0.23%
Japan	(0.15%)	0.01%
Australia	0.12%	0.79%
China	2.29%	3.13%
Brazil	1.93%	7.45%
Russia	4.09%	6.29%

Source: Bloomberg, as of 9/30/20



# Monetary stimulus

FED BALANCE SHEET, MILLIONS



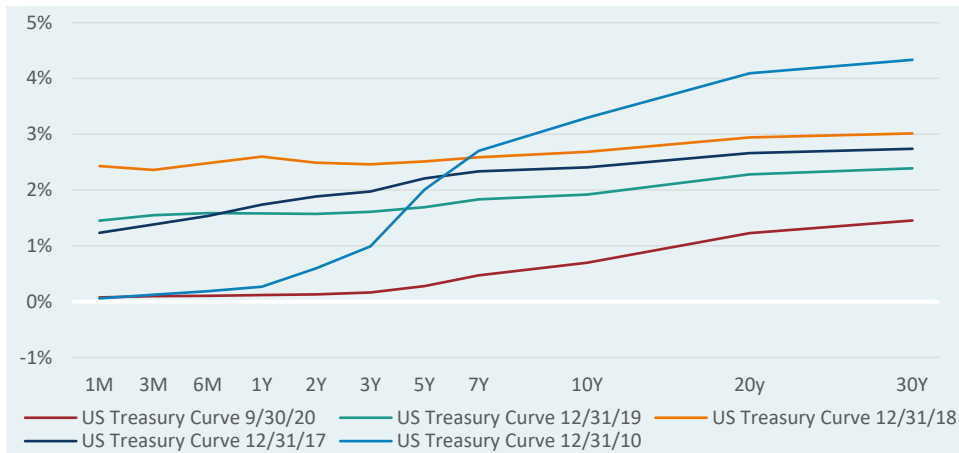
Fed balance sheet levels have remained flat

The Fed provided significant monetary accommodation in Q2. Officials have implied that further stimulus will likely need to come in the form of fiscal support

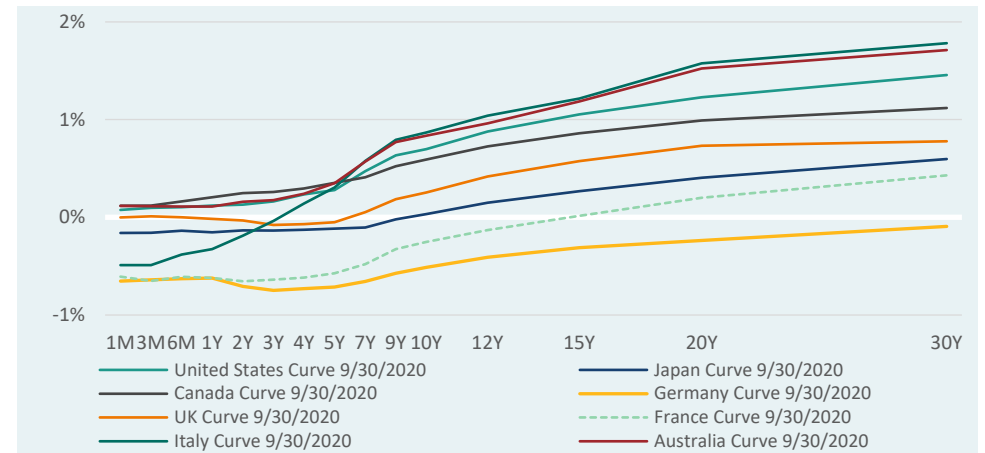
Source: FRED, Bloomberg, as of 9/16/20

# Yield environment

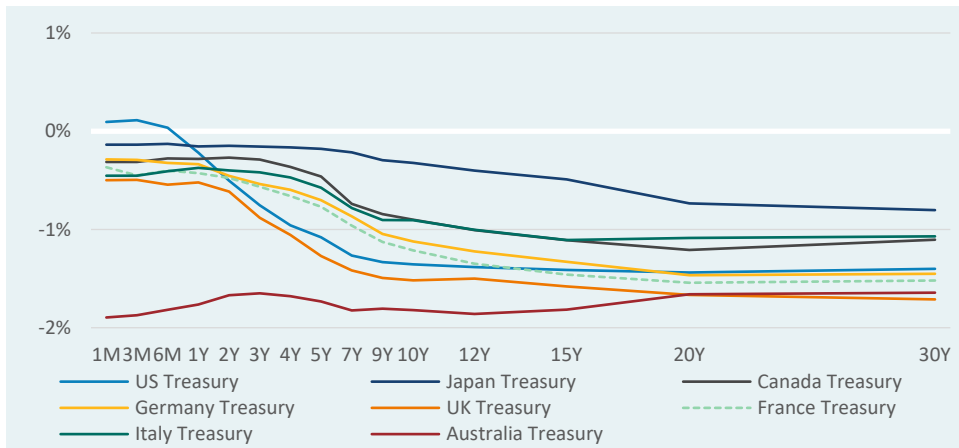
## U.S. YIELD CURVE



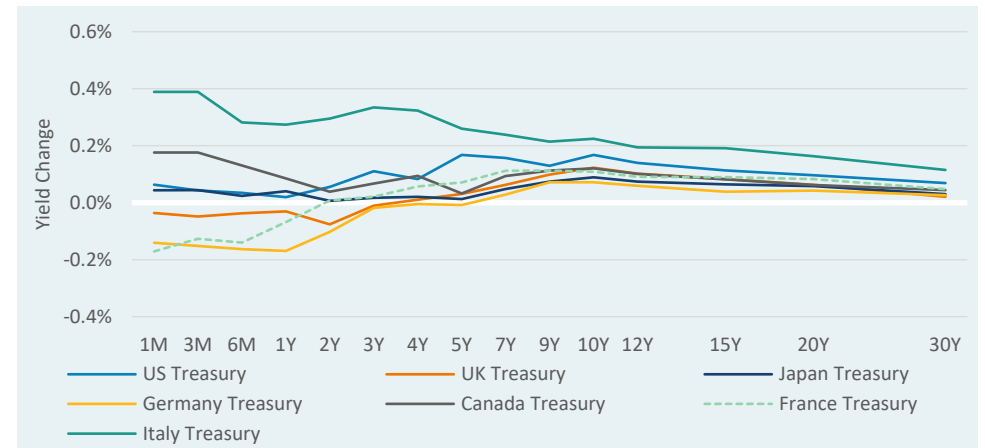
## GLOBAL GOVERNMENT YIELD CURVES



## YIELD CURVE CHANGES OVER LAST FIVE YEARS



## IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 9/30/20

# Credit environment

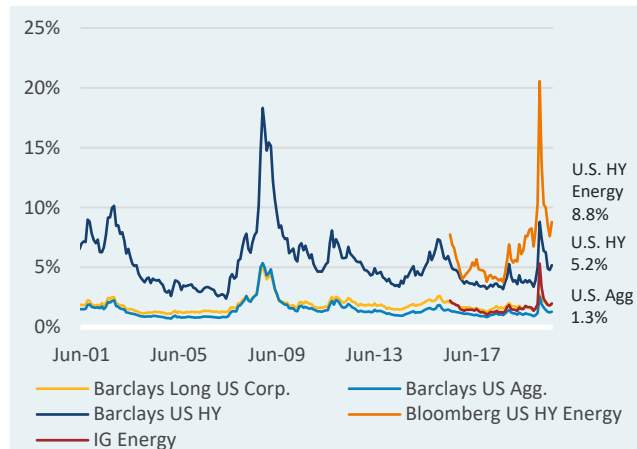
Credit markets performed positively in the third quarter as yields continued to fall from March highs. Buoyed by ongoing support from the Fed as well as increased investor demand for yield, investment grade credit returned 1.5% over the quarter while high yield and leveraged loans returned +4.6% and +4.1%, respectively. Within high yield, lower quality issues outperformed higher quality.

Investment-grade credit has now returned +6.4% year-to-date through September, while high yield performance turned positive at +0.6% and leveraged loans remained negative at -0.8% year-to-date.

Credit spreads fell across the board in Q3 but high yield led the way. Corporate investment grade spreads fell 14 bps through the quarter to 136 bps while high yield spreads fell 109 bps to 517 bps.

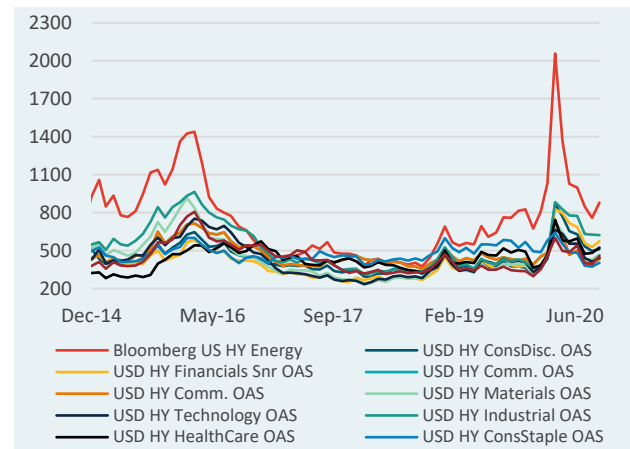
As a result of the post-March recovery, approximately two-thirds of global investment grade debt is now yielding less than 1%, and more debt is currently trading at a negative yield than at above the 2% level. While yields in the U.S. are still modestly higher than pre-pandemic levels, credit markets are priced similarly to how they were in January, despite a very different fundamental picture.

## SPREADS



Source: Barclays, Bloomberg, as of 9/30/20

## HIGH YIELD SECTOR SPREADS (BPS)



Source: Bloomberg, as of 9/30/20

Market	Credit Spread (OAS)	
	9/30/20	9/30/19
Long U.S. Corp	1.9%	1.7%
U.S. Inv Grade Corp	1.4%	1.2%
U.S. High Yield	5.2%	3.7%
U.S. Bank Loans*	5.3%	4.5%

Source: Barclays, Credit Suisse, Bloomberg, as of 9/30/20

\*Discount margin (4-year life)

# Default & issuance

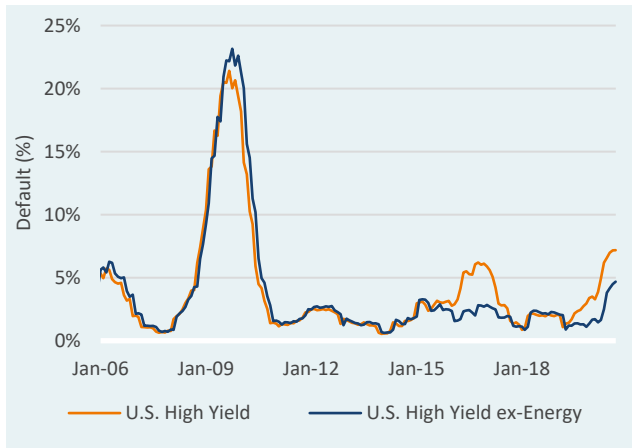
Default activity over the quarter slowed considerably from record numbers in Q2 but remained elevated relative to history. In the third quarter, 26 companies defaulted on \$19.3 billion, bringing the year-to-date default total to \$123.4 billion. This year-to-date figure would rank as the second highest annual default total on record.

The U.S. high yield default rate fell -0.4% in the quarter to 5.8% but remains 3.2% higher than the start of the year. Conversely, the U.S. leveraged loan default rate rose and hit a five-year-high at 4.3%, 2.6% higher year-to-date.

Certain high yield bond issuers took advantage of the low rate environment throughout Q3 and continued to come to market at a record pace. Gross issuance was \$131.9 billion over the quarter, which was second only to \$145.5 billion in Q2, the highest on record. Total gross issuance year-to-date has been \$350.3 billion.

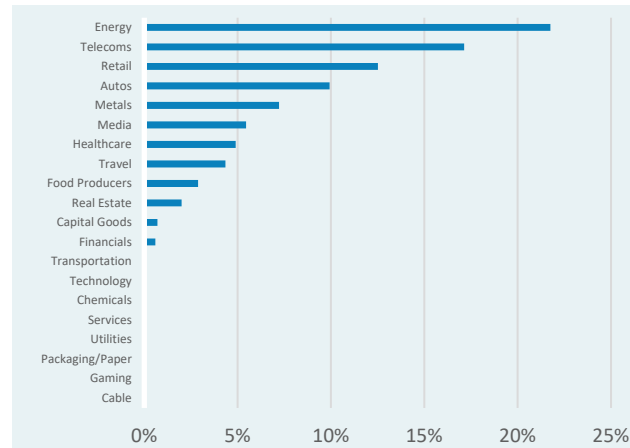
Investment grade issuance fell to nearly half the rate of the second quarter but remains elevated. New investment grade issuance totaled \$371 billion. A year-to-date \$1.54 trillion worth of new investment grade debt was nearly 70% higher than during the same period of 2019.

**HY DEFAULT RATE (ROLLING 1-YEAR)**



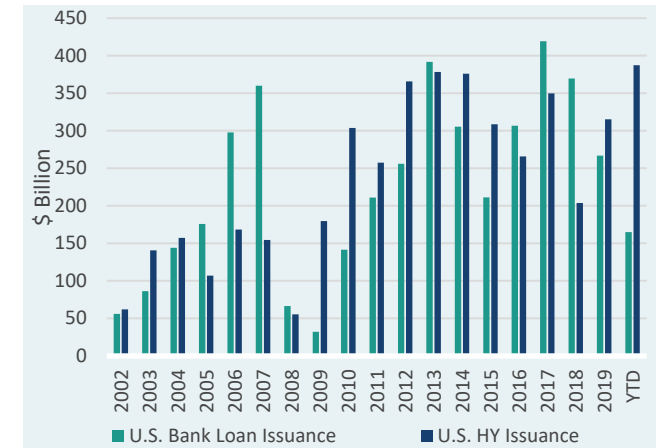
Source: BofA Merrill Lynch, as of 9/30/20

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



Source: BofA Merrill Lynch, as of 9/30/20 – par weighted

**U.S. ISSUANCE (\$ BILLIONS)**



Source: BofA Merrill Lynch, as of 9/30/20

# Equity

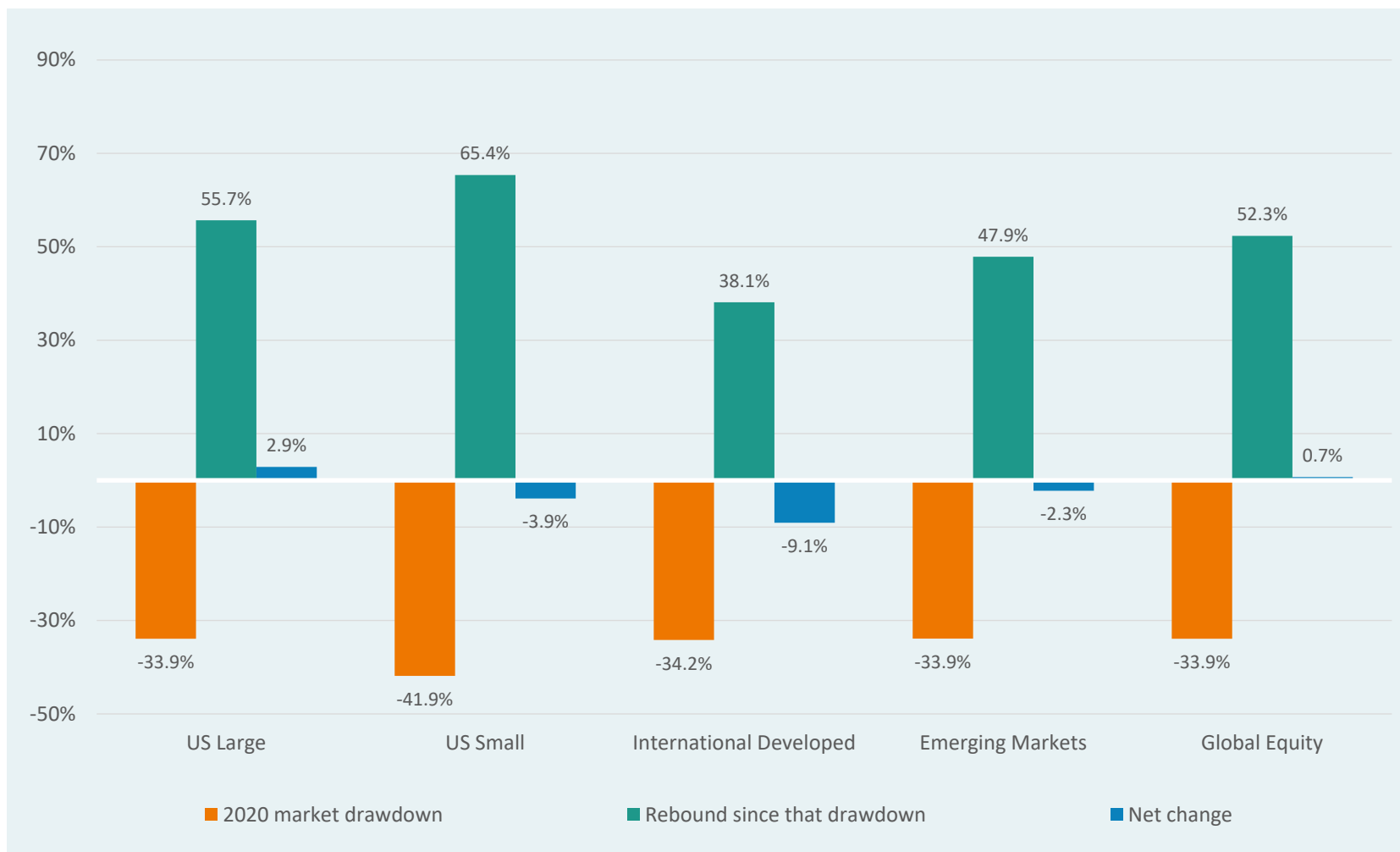
# Equity environment

- U.S. equities reached a new high in September before pulling back later in the month. U.S. and emerging markets have recovered most losses year-to-date, while international developed equities remain more negative. Global equities are now positive for 2020 despite an earnings recession and considerable economic uncertainty.
  - Emerging market equities outperformed during the quarter (MSCI Emerging Markets +9.6%) followed by domestic equities (S&P 500 +8.9%) and international developed (MSCI EAFE +4.8%).
  - According to FactSet, S&P 500 Q3 earnings are expected to be down -20.5%. However, earnings in Q2 beat expectations by 12.5% (-31.6% YoY vs. -44.1%). Another large positive surprise in Q3 would be welcome news to investors. The Cboe VIX Index moderated in June
- from heightened levels and remained generally rangebound during the third quarter. The VIX ended the month of September at 26, higher than the long-term average of 19.
- The U.S. dollar fell -3.5% in the third quarter, continuing a downward trend since a sudden jump in March on safe-haven buying. The dollar has now completely unwound the gains experienced during the market sell-off.
  - U.S. growth stocks beat value stocks in the third quarter, continuing an incredible run of market leadership (Russell 1000 Growth +13.2%, Russell 1000 Value +5.6%), while large cap stocks outperformed small cap stocks (Russell 1000 +9.5%, Russell 2000 +4.9%).

	QTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (S&P 500)	8.9%		15.1%	
US Small Cap (Russell 2000)	4.9%		0.4%	
US Large Value (Russell 1000 Value)	5.6%		(5.0%)	
US Large Growth (Russell 1000 Growth)	13.2%		37.5%	
International Large (MSCI EAFE)	4.8%	1.3%	0.5%	(3.1%)
Eurozone (Euro Stoxx 50)	3.5%	(0.6%)	(1.7%)	(6.8%)
U.K. (FTSE 100)	0.1%	(4.1%)	(13.9%)	(17.0%)
Japan (NIKKEI 225)	6.8%	4.7%	10.9%	10.2%
Emerging Markets (MSCI Emerging Markets)	9.6%	8.5%	10.5%	12.8%

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 9/30/20

# Equity market peak-to-trough



Equity markets around the world have recovered most of their losses

As of 10/15/20 - "Peak-to-trough" is defined as the total loss from the highest value achieved in 2020 to the lowest value achieved following the COVID-19 market drawdown. "Net change" is the difference between the market price on October 15<sup>th</sup> and the highest value achieved in 2020. Indexes include: S&P 500, Russell 2000, MSCI EAFE, MSCI Emerging Markets, MSCI ACWI.

# Domestic equity

U.S. equities delivered +8.9% in Q3, reaching a new high in September before pulling back later in the month. The S&P 500 is up +5.6% year-to-date, despite an earnings recession and considerable economic uncertainty.

Consumer Discretionary (+15.1%) and Materials (+13.3%) sectors led in Q3, with Energy (-19.7%) delivering further underperformance. Information Technology stocks have shown impressive performance year-to-date (+27.5%) and have captured headlines as some company valuations have

reached lofty levels. Large technology names have seen greater volatility recently, and exhibited a quick pullback during the first week of September. Growth stocks continue to be in vogue in the current low-growth environment.

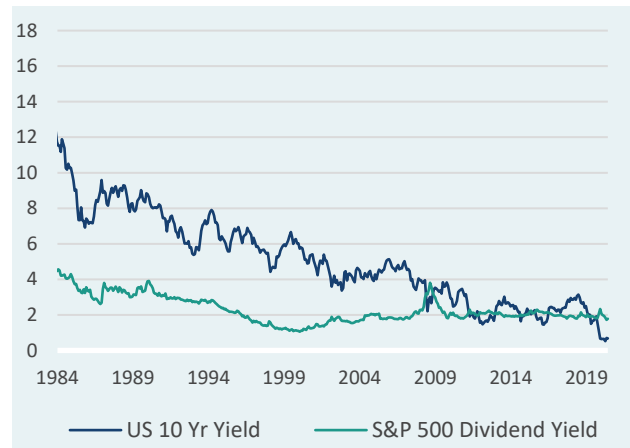
Many investors are justifiably questioning the rationale for such strong risk asset performance, at a time when so much uncertainty exists around public health and the economy, and at a time when some business models may no longer be viable due to COVID-19.

## S&P 500



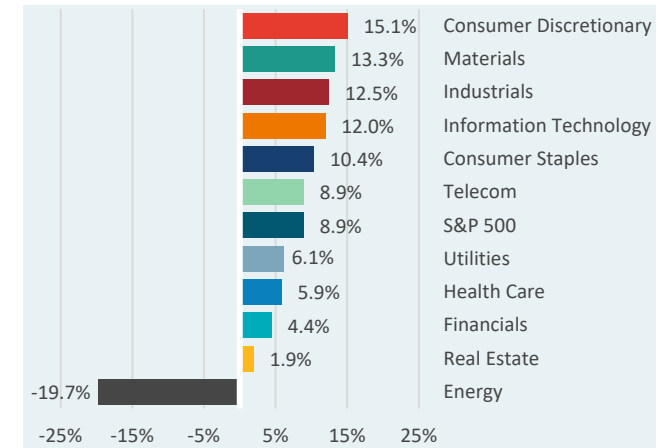
Source: Standard & Poor's, as of 9/30/20

## DIVIDEND YIELD VS BOND YIELD



Source: Standard & Poor's, as of 9/30/20

## Q3 SECTOR PERFORMANCE



Source: Standard & Poor's, as of 9/30/20



# Domestic equity size & style

U.S. growth stocks beat value stocks during Q3, continuing an incredible run of market leadership (Russell 1000 Growth +13.2%, Russell 1000 Value +5.6%), while large cap stocks outperformed small cap stocks (Russell 1000 +9.5%, Russell 2000 +4.9%).

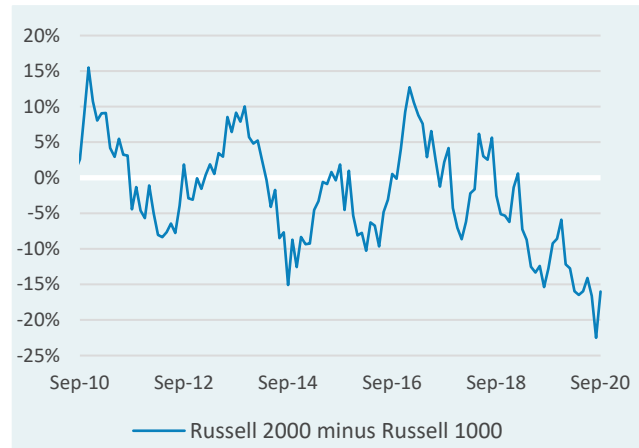
It seems that 2020 has been the perfect storm for value stocks. Commodities sectors were experiencing oversupply leading up to the onset of COVID-19, and the virus greatly accelerated these problems, resulting in a historic crash to prices (the Energy sector contains many value stocks). The Energy sector has delivered -45.2% over the past year. At the same time, the world has been rapidly changing in terms of technological progress, and COVID-19 appears to have accelerated these trends, contributing to extreme

outperformance of the growth-tilted Information Technology sector at +47.2% over the past year.

We recognize that recent value underperformance is anomalous, but we also recognize that much of this price action has been due to global trends that may not necessarily reverse over the short-term. It is very difficult to successfully make short-term bets on style factors, as factors can be incredibly noisy and vulnerable to sector randomness. Value is historically cheap, but a catalyst for a value turnaround is not yet evident. We continue to believe that a buy-and-hold approach to style investing is the best course of action, most of the time, but we are closely watching this space.

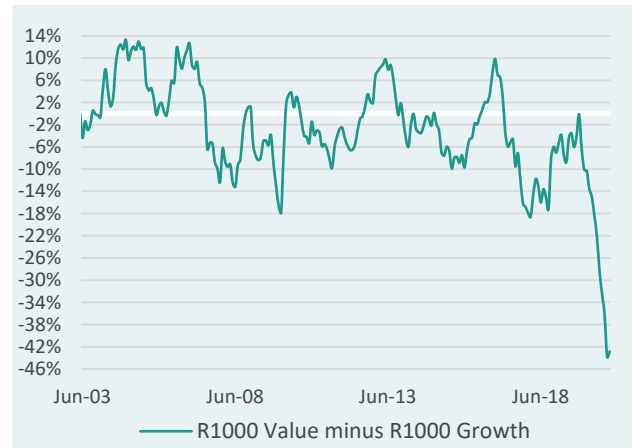
Sector performance has fueled dramatic negative performance of the value premium

**SMALL CAP VS LARGE CAP (YOY)**



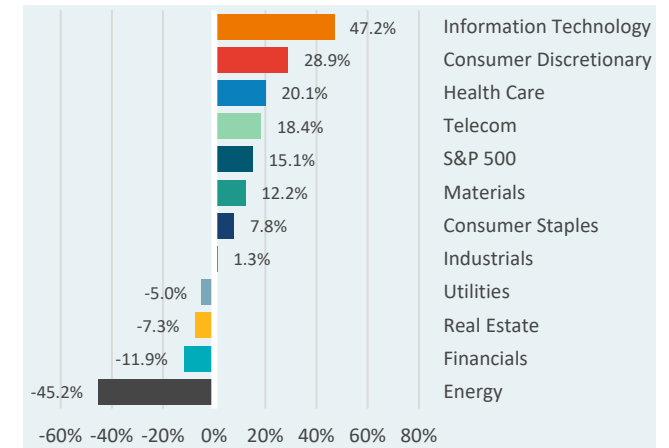
Source: FTSE, as of 9/30/20

**VALUE VS GROWTH (YOY)**



Source: FTSE, as of 9/30/20

**S&P 500 SECTOR PERFORMANCE (1-YEAR)**



Source: Standard & Poor's, as of 9/30/20

# International developed equity

International equities continued to recover through Q3, though the MSCI EAFE Index (+4.8%) materially lagged the MSCI Emerging Markets Index (+9.6%) and the S&P 500 Index (+8.9%). Dollar weakness coinciding with the risk recovery through the summer was a major theme and dampened the underperformance of international developed equities relative to U.S. equities in U.S. dollar terms. The three largest currency exposures embedded in the MSCI EAFE Index—the euro (32%), the yen (26%), and the pound sterling (13%)—appreciated +4.4%, +2.2%, and +4.6% relative to the greenback over the course of the quarter.

In the second quarter, MSCI EAFE Index revenues dropped nearly -20%, and earnings dropped nearly -60%, pushing certain valuation metrics including price/earnings ratios to historic highs. Moving into Q3 earnings season, analysts are anticipating a historic turnaround in corporate profits, which could help bring valuations back to more normal levels.

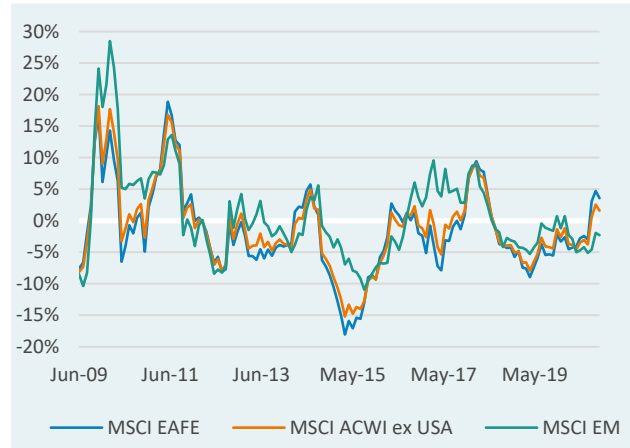
The MSCI EAFE Growth Index returned +8.4% over the third quarter, outpacing the MSCI EAFE Value Index (+1.2%) in U.S. dollar terms, extending its outperformance over the year-to-date to a staggering +23.6%.

**INTERNATIONAL DEVELOPED EQUITIES**



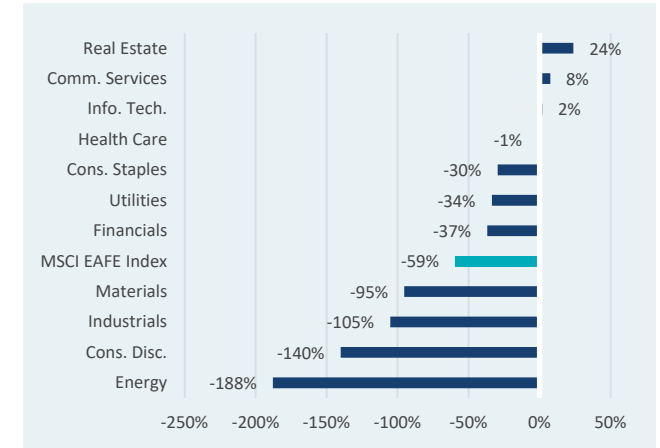
Source: MSCI, as of 9/30/20

**EFFECT OF CURRENCY (1-YEAR ROLLING)**



Source: MSCI, as of 9/30/20

**Q2 2020 EARNINGS GROWTH – MSCI EAFE INDEX**



Source: MSCI, Bloomberg, as of 9/30/20

# Emerging market equity

Emerging market equities (MSCI EM +9.6%) outperformed U.S. (S&P 500 +8.9%) and international developed equities (MSCI EAFE +4.8%) over the quarter. Looking across the emerging market complex, Latin American equities underperformed (MSCI EM Latin American -1.3%) which was a continuation of a longer-term trend. Latin American stocks have drastically underperformed over the previous 10-year period (MSCI EM Latin America -5.7%, MSCI EM +2.5%).

Inflation remained subdued relative to longer-term averages, due in large part to energy prices remaining under pressure. The Emerging Markets Citi Inflation Surprise Index rose from

-28.8 to -6.6 over the quarter, implying that the magnitude of inflation data misses lessened between June and September.

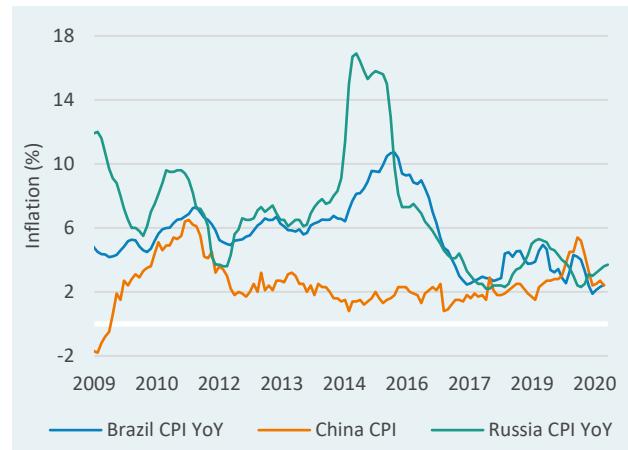
Emerging market currencies broadly appreciated relative to the U.S. dollar, and Asian currencies outperformed. The offshore Chinese renminbi rallied 4.2% versus the greenback to ¥6.78, its strongest level since mid-2019. Part of the rally in the yuan has been attributed to FTSE Russell's recent decision to add Chinese government bonds to its World Government Bond Index. This change would take effect in 2021, and would likely result in increased foreign capital inflows.

## EMERGING MARKET EQUITY



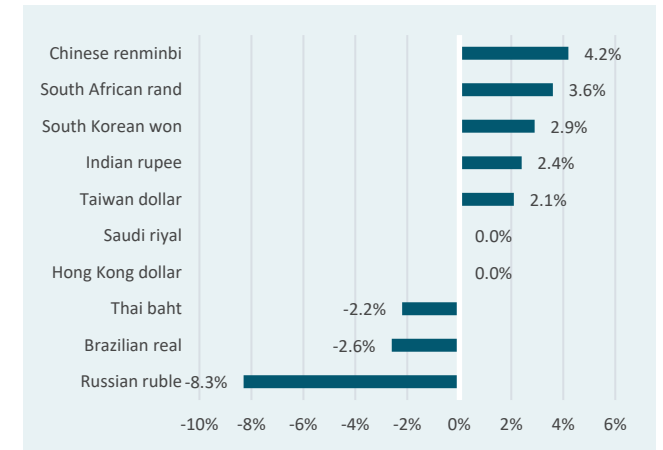
Source: MSCI, as of 9/30/20

## INFLATION (YOY)



Source: Bloomberg, as of 9/30/20

## Q3 CURRENCY PERFORMANCE – MSCI EM INDEX



Source: Bloomberg, as of 9/30/20

# Equity valuations

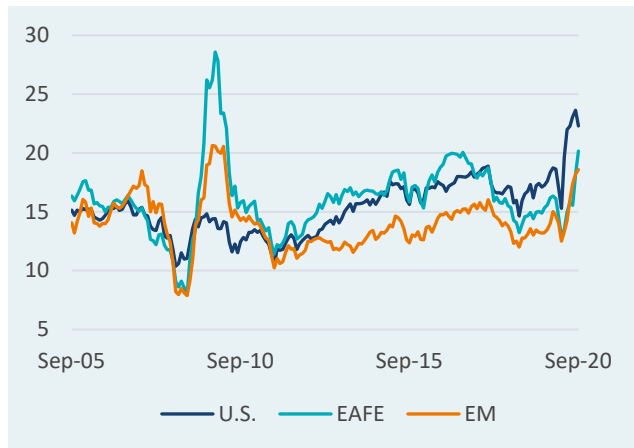
U.S. equity valuation levels moderated in September after continuing to rise through July and August. Prices ended the quarter little changed relative to 12-month earnings forecasts (22.3 Price/Earnings). The moderation of U.S. equity valuations was driven in part by a tech-driven sell-off across U.S. large-caps, and in part by improvement in the earnings growth and outlook.

The blended net profit margin for the S&P 500 Index in Q3, which combines actual reported results and estimated results for companies which have yet to report, is 9.7%. If the

blended net profit margin were to materialize, it would mark the first quarterly improvement in the profitability metric since the second quarter of 2019, and could provide further fundamental backing for current price levels. Analysts are expecting net profit margins to continue to improve. Estimated profit margins for Q4 2020, Q1 2021, and Q2 2021 ended the quarter at 9.8%, 10.4%, and 11.0%, respectively.

Equity dividend yields remain attractive relative to nominal government bond yields, especially in Europe, and could further entice investors to reach for yield through risk assets.

## FORWARD P/E RATIOS



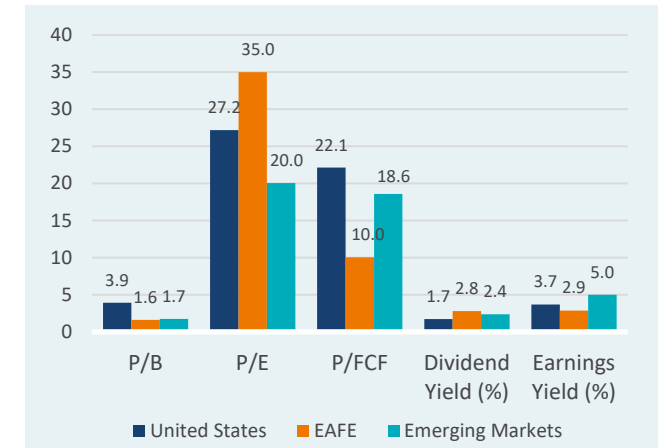
Source: MSCI, 12m forward P/E, as of 9/30/20

## S&P 500 NET PROFIT MARGINS



Source: FactSet, as of 9/30/20

## VALUATION METRICS (3-MONTH AVERAGE)



Source: Bloomberg, MSCI as of 9/30/20 - trailing P/E

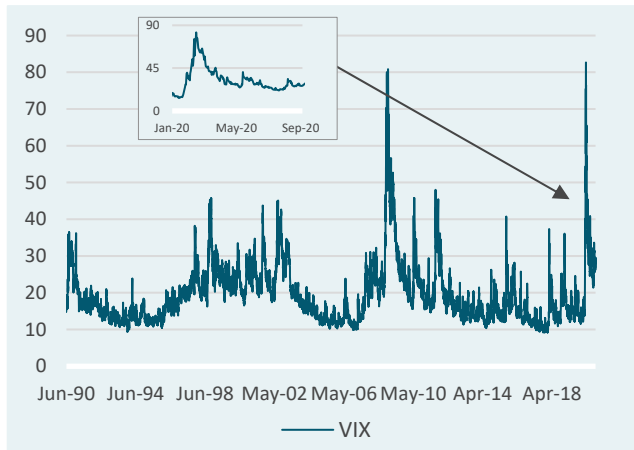
# Equity volatility

The Cboe VIX Index moderated in June from heightened levels, and remained generally rangebound during the third quarter. The VIX ended September at 26, but remains elevated relative to the long-term average of 19.

U.S. equities have historically exhibited the lowest risk among developed and emerging markets. In recent years, this relationship has flipped, with U.S. stocks showing higher volatility than developed market stocks, and nearly on par with emerging market equities.

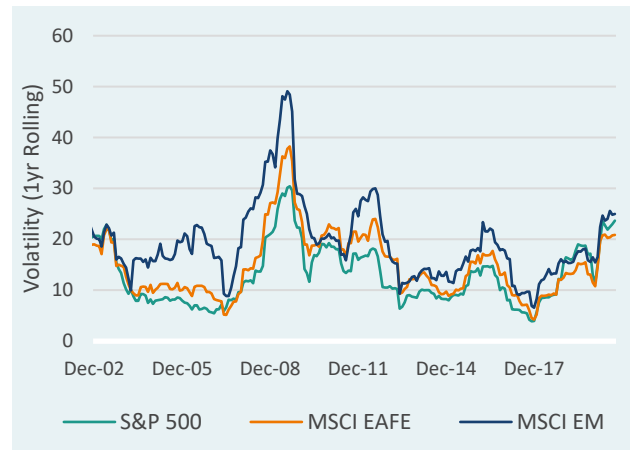
Expectations for short-term equity volatility faded through the summer. The VIX term structure continued to indicate an expectation for heightened volatility around the Presidential election in the beginning of November. Toward the end of the quarter, concerns over the impact of mail-in voting on the timeliness of electoral results reporting led some market participants to position around the prospect of a contested election and its consequences for equity markets. Polling data indicates a widening lead for Biden. The prospect of a “Blue Wave” appears to have emboldened some traders to sell longer-dated VIX futures contracts.

## U.S. IMPLIED VOLATILITY (VIX)



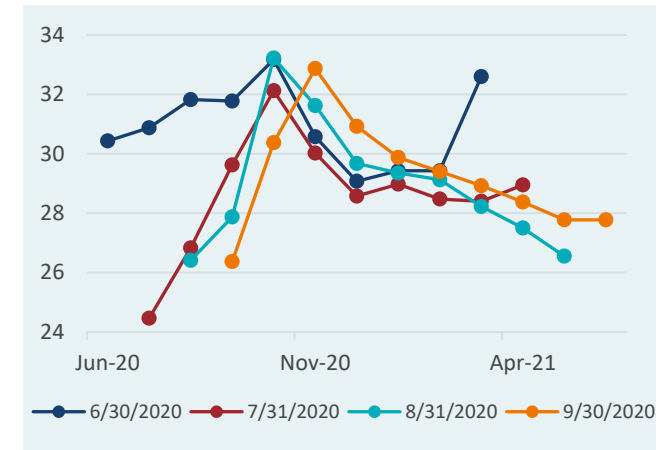
Source: Cboe, as of 9/30/20

## REALIZED VOLATILITY



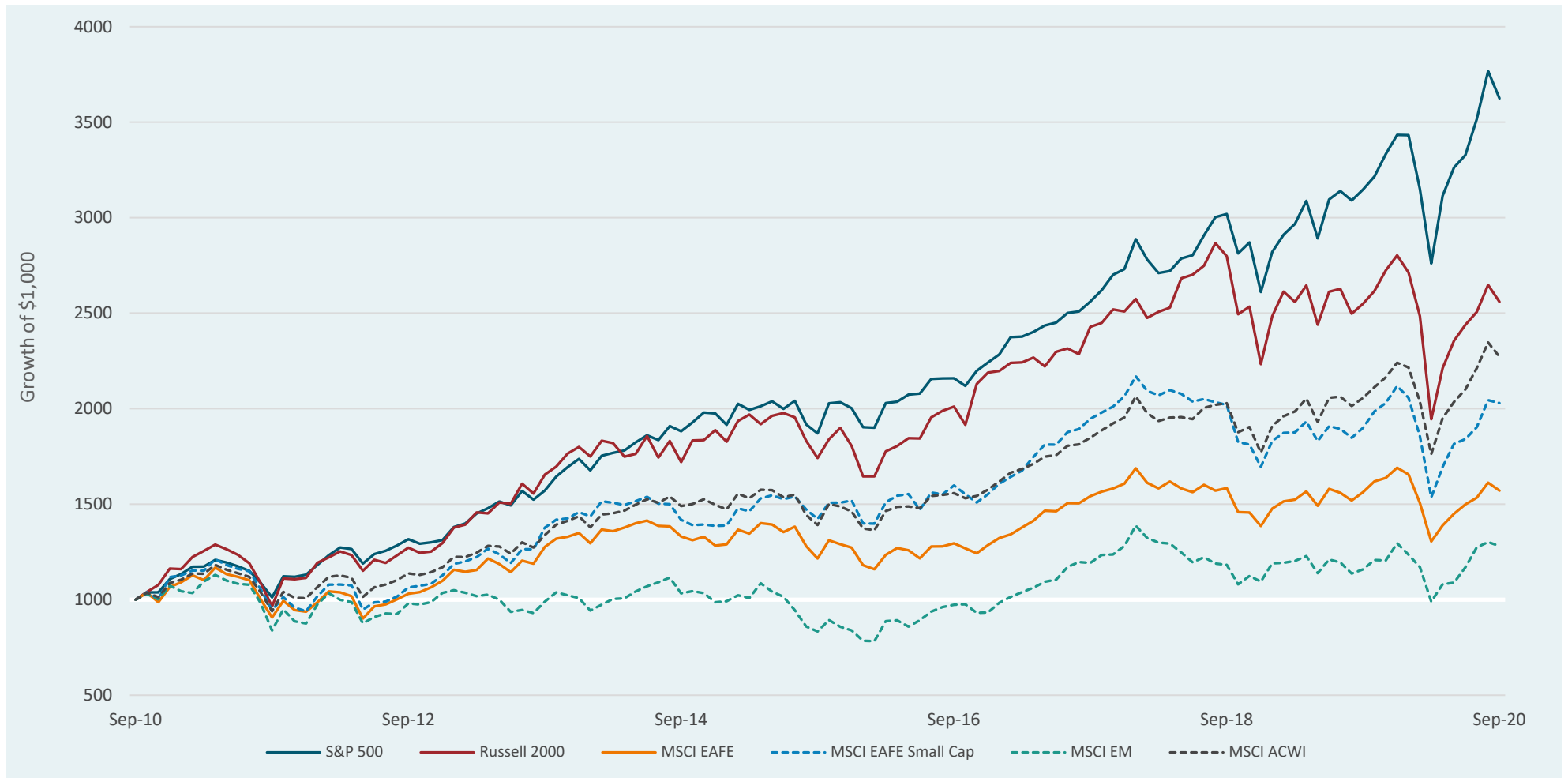
Source: Standard & Poor's, MSCI, as of 9/30/20

## HISTORICAL VIX TERM STRUCTURES



Source: Bloomberg, as of 9/30/20

# Long-term equity performance



Source: Morningstar, as of 9/30/20

# Other assets

# Currency

The U.S. dollar fell -3.5% in the third quarter, continuing a downward trend since a sudden jump in March on safe-haven buying. Though the dollar did show some signs of stabilization in September as equities took a step back, the Bloomberg Dollar Spot Index has now completely unwound the gains experienced during the market sell-off.

Interest rate differentials between U.S. Treasury bonds and international developed sovereign bonds have begun to separate once again. U.S. Treasury yields traded in a relatively narrow range while European yields

drifted lower, perhaps as a result of speculation on further quantitative easing from the European Central Bank. A continuation of this trend could be supportive of the dollar bull case, looking ahead.

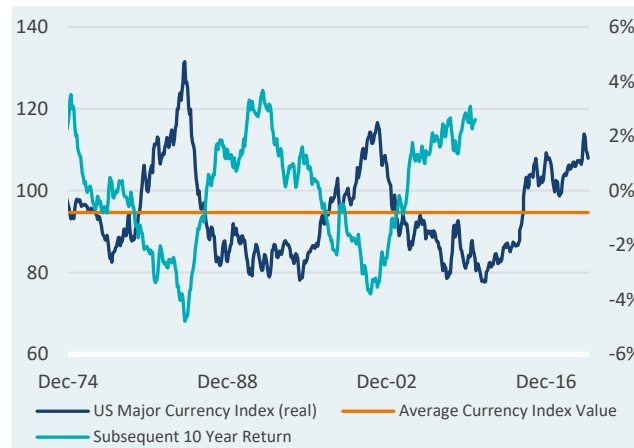
Despite the significant rally of the euro (+4.4%) relative to the greenback in Q3, the common currency remains cheap according to the OECD's purchasing power parity data. At quarter-end, the euro was -20.8% cheap relative to the U.S. dollar, which was significant but still at its least undervalued level since September 2018.

## BLOOMBERG DOLLAR SPOT INDEX



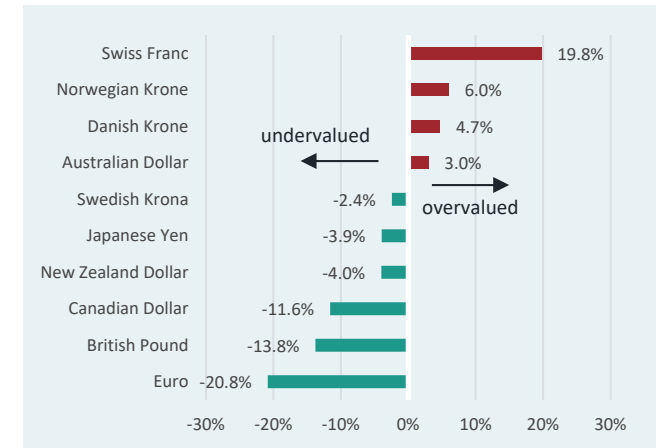
Source: Bloomberg, as of 9/30/20

## USD CURRENCY LEVEL & SUBSEQUENT RETURN



Source: Federal Reserve, as of 9/30/20

## G10 FX VALUATIONS – OECD PPP (VS USD)



Source: OECD, Bloomberg, as of 9/30/20



# Equity factors: A closer look

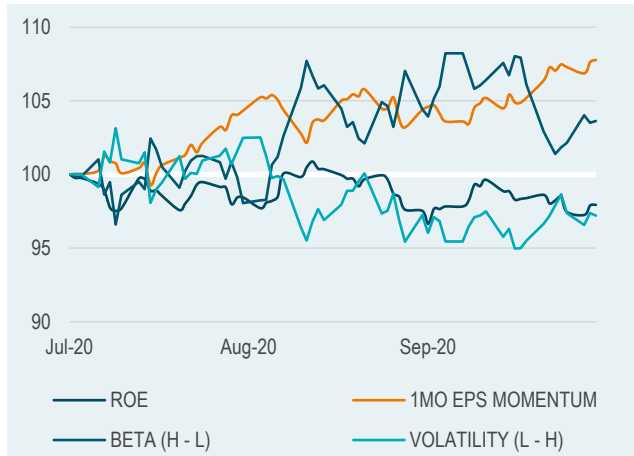
Investors rewarded stocks with improving earnings prospects during the third quarter as one-month earnings momentum (long/short, sector neutral, S&P 500) was the top performing factor for the period. Stocks with higher beta and higher historic volatility also continued to rally during most of the quarter. In contrast, higher quality stocks sold off during the period.

Over the trailing 5-year period, the respective growth, quality and price momentum factors finished with modestly negative results. These factors also showed some recent sensitivity to the dramatic market movements caused by the

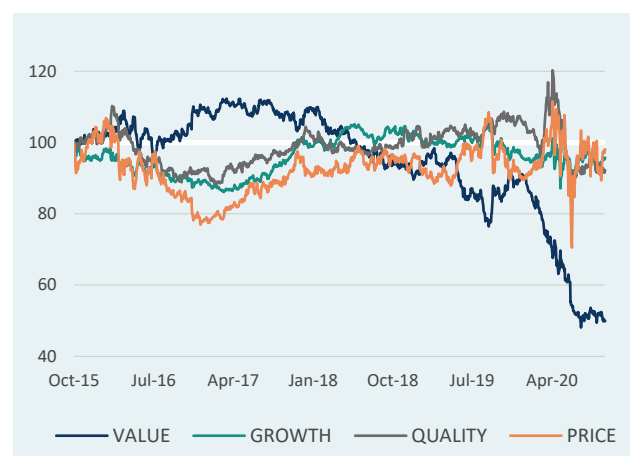
pandemic. In contrast, the value factor remains mired in a long-term drawdown.

The pandemic has caused significant dispersion as investors rushed into stocks perceived to benefit from the crisis. In contrast, the stocks thought to gain most from a potential recovery back to normalcy continue to lag both the beneficiaries and the broad market. The structural risk to the recovery theme is a potential permanent change in behavior as certain activities, such as travel and tourism, remain depressed relative to pre-COVID norms.

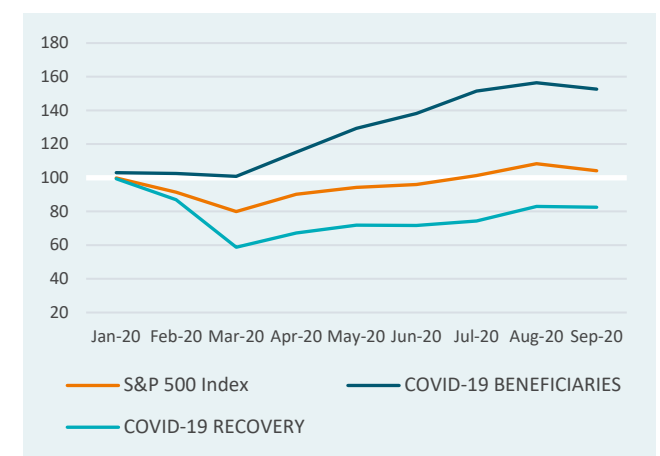
**2020 Q3 FACTOR PERFORMANCE**



**2015Q4 – 2020Q3 FACTOR PERFORMANCE**



**COVID-19 BASKETS**



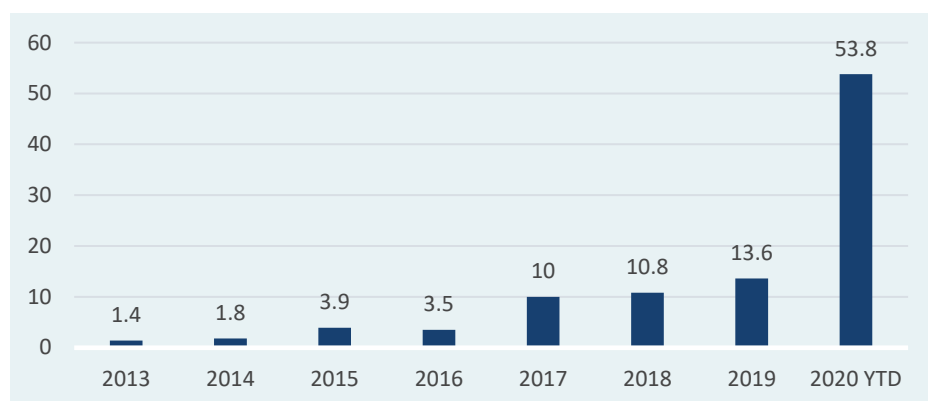
Source: JP Morgan US Equity Strategy

# SPACs at a glance

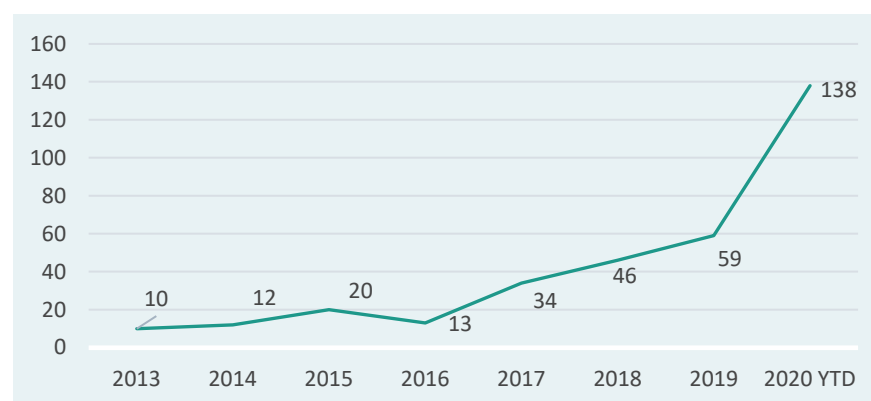
Special Purpose Acquisition Companies, commonly abbreviated as SPACs, have proliferated substantially in 2020, especially in the third quarter. This has been driven by recent market volatility, increasing initial public offering (IPO) risks and inefficiencies, coupled with record retail investor trading volume. The reputation of SPACs is improving as notable investors and operators continue to enter the space.

- A SPAC is a “blank check” shell company formed specifically to acquire a late-stage private company target. From the SPAC sponsor’s point of view, it is analogous to creating a Private Equity fund that renders only one investment, which becomes publicly traded upon the merger process known as “de-SPAC”.
- SPACs allow private companies to undergo public listing quicker, bypassing a traditional IPO process.

**TOTAL SPACS CAPITAL RAISED (\$BN)**



**NUMBER OF SPAC IPOs**



Source: SPAC Research, as of 10/9/20

# Implications for institutional investors

- SPACs have experienced significant volatility around a historic negative return level.

## SPAC RETURNS % POST-MERGER COMPLETION

Sample of SPAC transactions completed since January 2018



- We believe the rise of SPACs will continue to disrupt different asset classes in various ways.
  - In Venture Capital and Leveraged Buyouts, SPAC serves as a new potential exit channel for companies that pre-empts a traditional IPO, generating earlier liquidity for GPs and LPs.
  - SPACs have become a deal source for mutual funds, private markets and hedge fund managers to invest via a PIPE.
  - In SPACs, milestone-based compensation for the management team are more acceptable and normalized as compared to a traditional IPO. This could potentially lead to better alignment of company and GP incentives and interests.

SPACs have yet to be proven as an attractive asset class for prudent investors

We are currently assessing the longer-term impact of SPACs on the private & public markets

Source: Goldman Sachs Global Investment Research, Dealogic, UBS, as of 7/30/20.

# Appendix

# Periodic table of returns

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	YTD	5-Year	10-Year
Large Cap Growth	38.7	66.4	31.8	14.0	25.9	56.3	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	13.3	31.7	37.3	6.7	36.4	24.3	20.1	17.3
US Bonds	27.0	43.1	22.8	8.4	10.3	48.5	22.2	21.4	26.9	16.2	1.4	37.2	26.9	7.8	18.1	38.8	13.2	5.7	21.3	30.2	1.9	31.4	6.8	14.1	13.8
Large Cap Equity	20.3	33.2	12.2	7.3	6.7	47.3	20.7	20.1	23.5	15.8	-6.5	34.5	24.5	2.6	17.9	34.5	13.0	0.9	17.3	25.0	0.0	28.5	6.4	11.4	12.3
Small Cap Growth	19.3	27.3	11.6	3.3	1.6	46.0	18.3	14.0	22.2	11.8	-21.4	32.5	19.2	1.5	17.5	33.5	11.8	0.6	12.1	22.2	-1.5	26.5	3.9	9.0	9.9
60/40 Global Portfolio	16.2	26.5	7.0	2.8	1.0	39.2	16.5	7.5	18.4	11.6	-25.9	28.4	16.8	0.4	16.4	33.1	6.0	0.0	11.8	21.7	-3.5	25.5	3.6	8.0	9.9
Hedge Funds of Funds	8.7	21.3	4.1	-2.4	-6.0	29.9	14.3	6.3	15.5	10.3	-33.8	23.3	16.1	-2.1	15.3	23.3	4.9	-0.8	11.2	14.6	-6.0	22.4	2.5	8.0	9.3
Cash	15.6	24.3	6.0	2.5	-5.9	30.0	14.5	7.1	16.6	10.9	-28.9	27.2	16.7	0.1	16.3	32.5	5.6	-0.4	11.3	17.1	-4.8	22.0	0.4	7.7	7.1
Real Estate	4.9	20.9	-3.0	-5.6	-11.4	29.7	12.9	5.3	15.1	7.0	-35.6	20.6	15.5	-2.9	14.6	12.1	4.2	-1.4	8.0	13.7	-8.3	18.6	-0.3	6.1	6.2
Emerging Markets Equity	1.2	13.2	-7.3	-9.1	-15.5	25.2	11.4	4.7	13.3	7.0	-36.8	19.7	13.1	-4.2	11.5	11.0	3.4	-2.5	7.1	7.8	-9.3	18.4	-1.2	5.3	4.6
International Equity	-2.5	11.4	-7.8	-9.2	-15.7	23.9	9.1	4.6	10.4	5.8	-37.6	18.9	10.2	-5.5	10.5	9.0	2.8	-3.8	5.7	7.7	-11.0	8.7	-7.1	4.2	3.6
Small Cap Equity	-5.1	7.3	-14.0	-12.4	-20.5	11.6	6.9	4.6	9.1	4.4	-38.4	11.5	8.2	-5.7	4.8	0.1	0.0	-4.4	2.6	7.0	-11.2	7.8	-8.7	4.1	2.9
Large Cap Value	-6.5	4.8	-22.4	-19.5	-21.7	9.0	6.3	4.2	4.8	-0.2	-38.5	5.9	6.5	-11.7	4.2	-2.0	-1.8	-7.5	1.0	3.5	-12.9	7.7	-11.6	3.1	2.5
Commodities	-25.3	-0.8	-22.4	-20.4	-27.9	4.1	4.3	3.2	4.3	-1.6	-43.1	0.2	5.7	-13.3	0.1	-2.3	-4.5	-14.9	0.5	1.7	-13.8	6.4	-12.1	1.1	0.6
Small Cap Value	-27.0	-1.5	-30.6	-21.2	-30.3	1.0	1.4	2.4	2.1	-9.8	-53.2	-16.9	0.1	-18.2	-1.1	-9.5	-17.0	-24.7	0.3	0.9	-14.6	2.1	-21.5	-3.1	-6.0

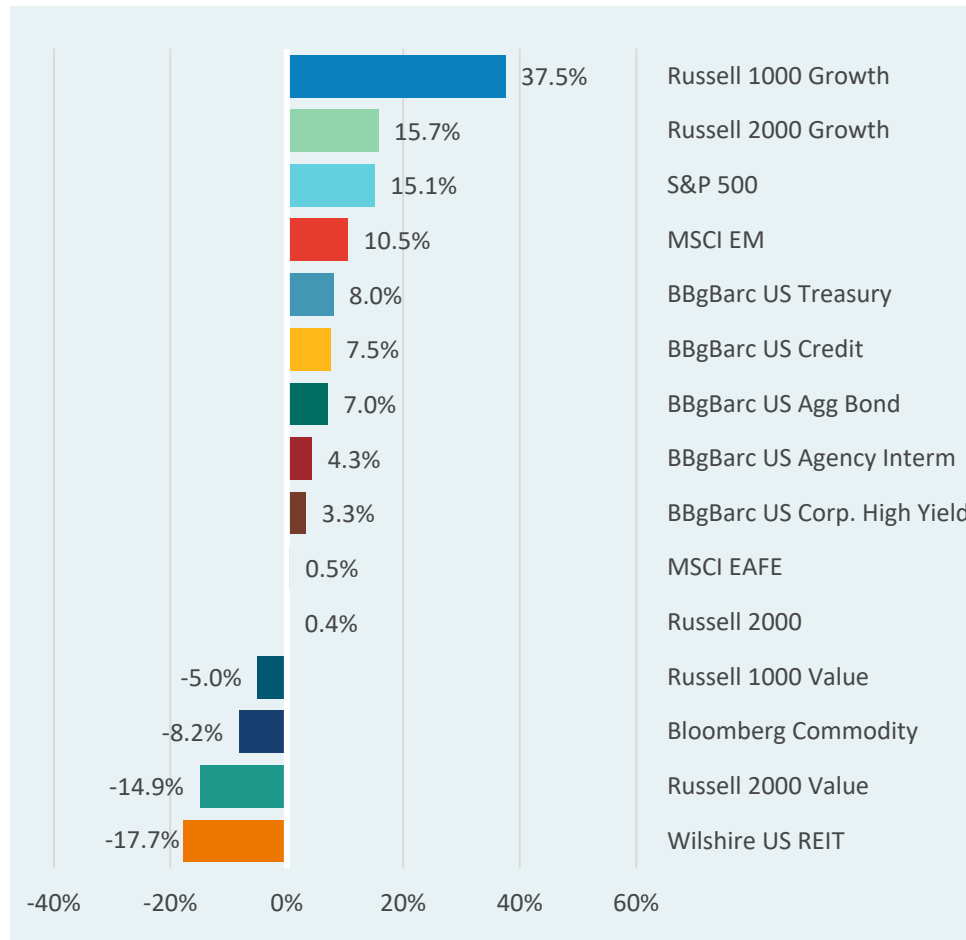
BEST  
↑  
↓  
WORST

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

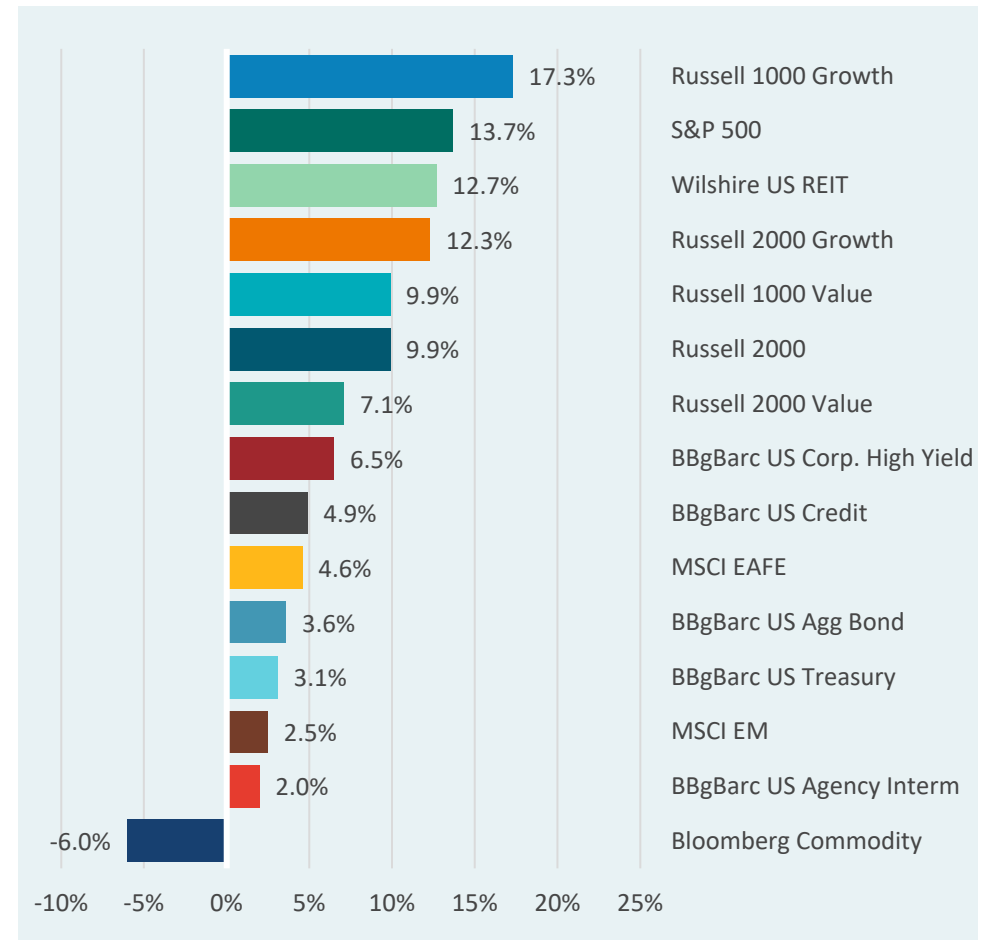
Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BBgBarc US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, BBgBarc Global Bond. NCREIF Property Index performance data as of 6/30/20.

# Major asset class returns

ONE YEAR ENDING SEPTEMBER



TEN YEARS ENDING SEPTEMBER



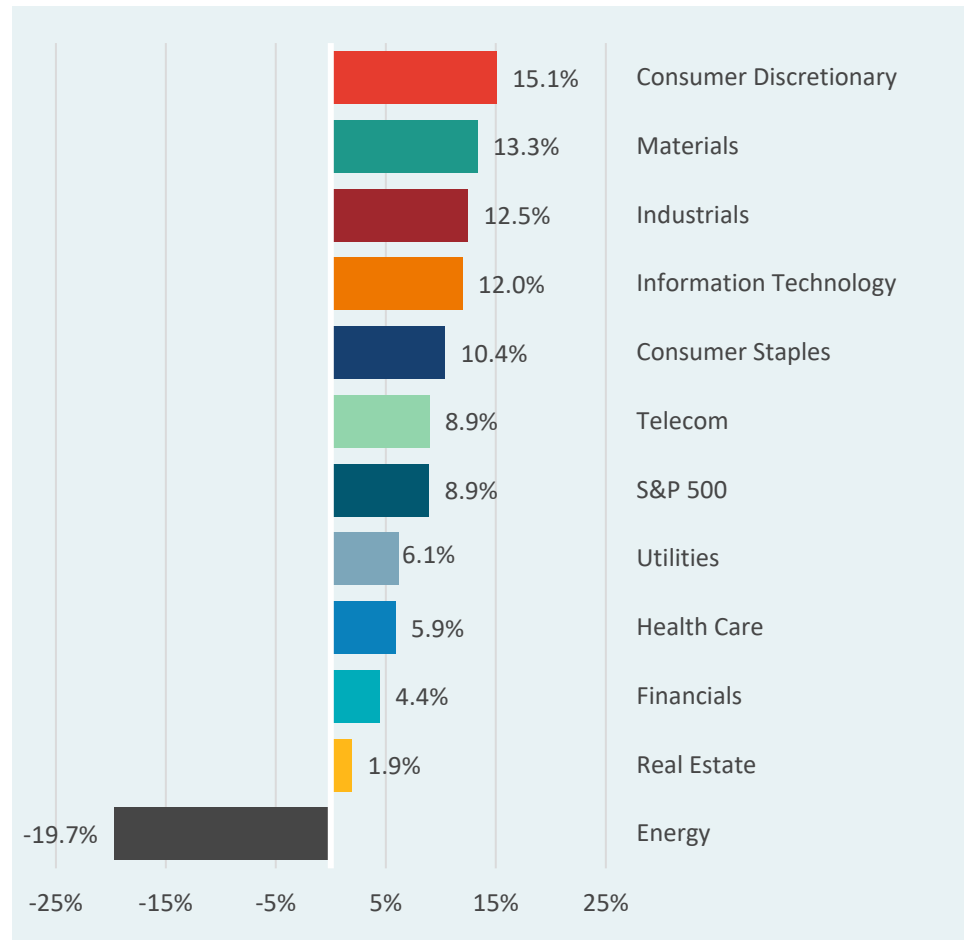
\*Only publicly traded asset performance is shown here. Performance of private assets is typically released with a 3- to 6-month delay.

Source: Morningstar, as of 9/30/20

Source: Morningstar, as of 9/30/20

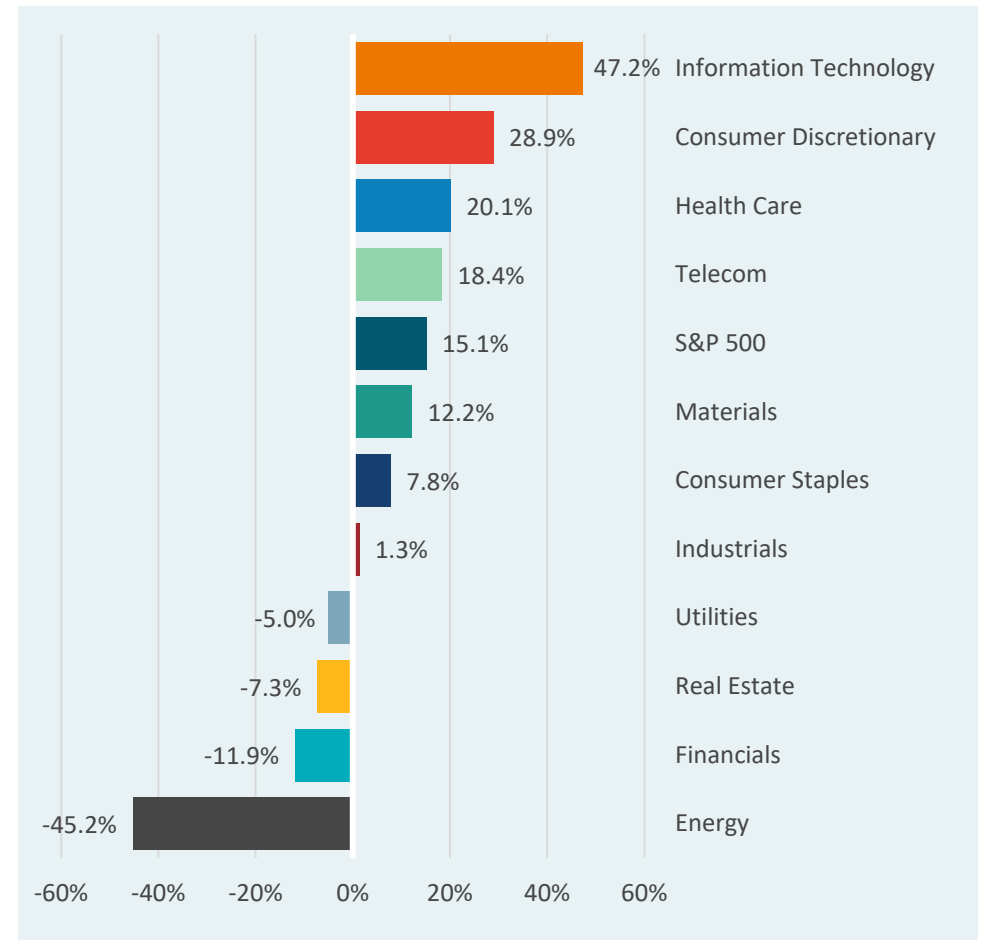
# S&P 500 sector returns

Q3 2020



Source: Morningstar, as of 9/30/20

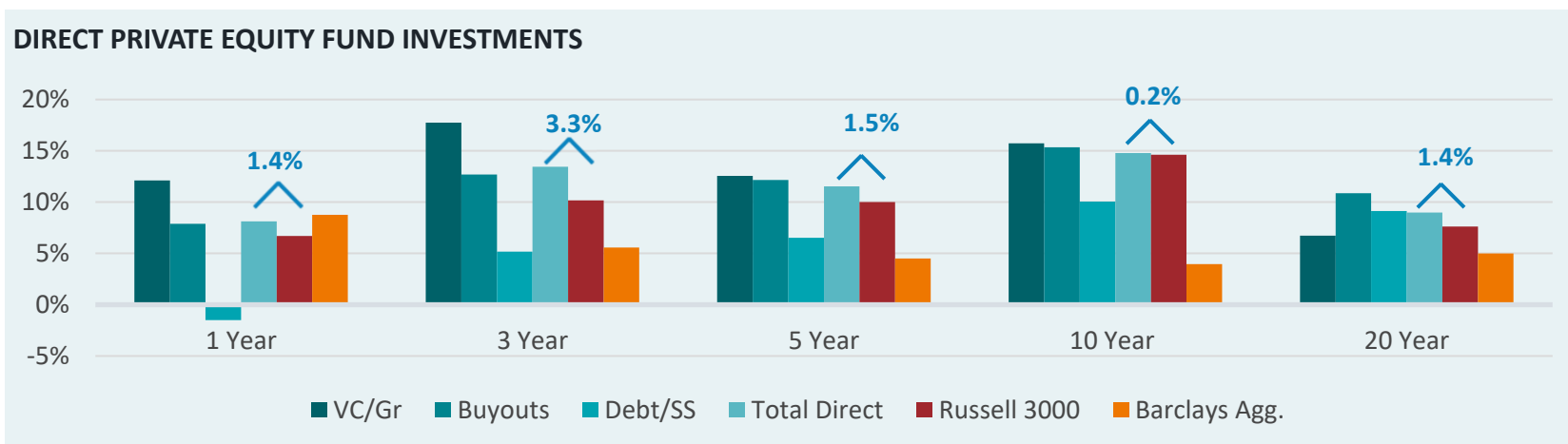
ONE YEAR ENDING SEPTEMBER



Source: Morningstar, as of 9/30/20

# Private equity vs. public performance

As of 6/30/2020



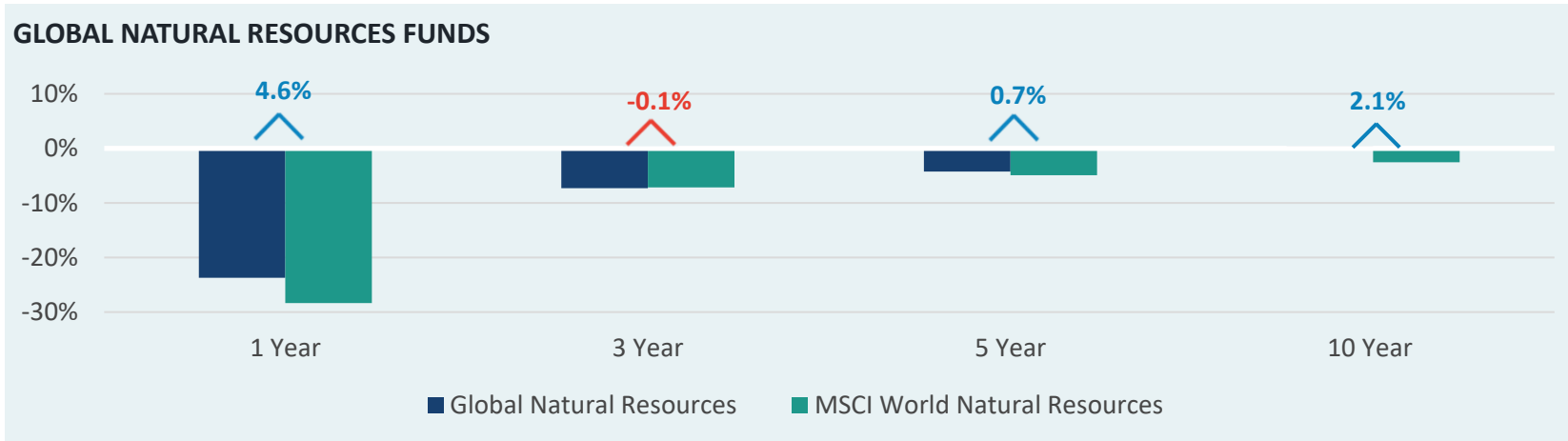
Direct P.E Fund Investments outperformed comparable public equities across all time periods.

Sources: Thomson Reuters Cambridge Universe's PME Module: U.S. Private Equity Funds sub asset classes as of June 30, 2020. Public Market Equivalent returns resulted from "Total Direct's" identical cash flows invested into and distributed from respective traditional asset comparable.



# Private natural resources vs. liquid natural resources performance

As of 6/30/2020



N.R. funds underperformed the MSCI World Natural Resources benchmark across all time periods, except on a 3 year basis

Sources: Thomson Reuters C|A PME: Global Natural Resources (vintage 1999 and later, inception of MSCI World Natural Resources benchmark) universes as of June 30, 2020. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real assets universes.

# Detailed index returns

## DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Core Index</b>							
S&P 500	(3.8)	8.9	5.6	15.1	12.3	14.1	13.7
S&P 500 Equal Weighted	(2.5)	6.7	(4.7)	2.5	6.5	10.3	12.0
DJ Industrial Average	(2.2)	8.2	(0.9)	5.7	10.0	14.0	12.7
Russell Top 200	(4.2)	10.2	9.6	20.3	14.3	15.6	14.5
Russell 1000	(3.7)	9.5	6.4	16.0	12.4	14.1	13.8
Russell 2000	(3.3)	4.9	(8.7)	0.4	1.8	8.0	9.9
Russell 3000	(3.6)	9.2	5.4	15.0	11.6	13.7	13.5
Russell Mid Cap	(1.9)	7.5	(2.3)	4.6	7.1	10.1	11.8
<b>Style Index</b>							
Russell 1000 Growth	(4.7)	13.2	24.3	37.5	21.7	20.1	17.3
Russell 1000 Value	(2.5)	5.6	(11.6)	(5.0)	2.6	7.7	9.9
Russell 2000 Growth	(2.1)	7.2	3.9	15.7	8.2	11.4	12.3
Russell 2000 Value	(4.7)	2.6	(21.5)	(14.9)	(5.1)	4.1	7.1

## INTERNATIONAL EQUITY

<b>Broad Index</b>							
MSCI ACWI	(3.2)	8.1	1.4	10.4	7.1	10.3	8.5
MSCI ACWI ex US	(2.5)	6.3	(5.4)	3.0	1.2	6.2	4.0
MSCI EAFE	(2.6)	4.8	(7.1)	0.5	0.6	5.3	4.6
MSCI EM	(1.6)	9.6	(1.2)	10.5	2.4	9.0	2.5
MSCI EAFE Small Cap	(0.7)	10.3	(4.2)	6.8	1.4	7.4	7.3
<b>Style Index</b>							
MSCI EAFE Growth	(0.7)	8.4	4.6	13.4	7.1	9.2	7.0
MSCI EAFE Value	(4.6)	1.2	(18.3)	(11.9)	(5.9)	1.1	2.1
<b>Regional Index</b>							
MSCI UK	(5.0)	(0.2)	(23.4)	(15.8)	(5.6)	(0.4)	2.0
MSCI Japan	1.0	6.9	(0.7)	6.9	3.9	7.5	6.2
MSCI Euro	(3.8)	4.2	(9.1)	(1.9)	(2.1)	4.4	3.5
MSCI EM Asia	(1.1)	11.9	8.0	21.5	5.7	11.3	5.5
MSCI EM Latin American	(5.1)	(1.3)	(36.1)	(29.4)	(11.8)	2.1	(5.7)

## FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
BBgBarc US TIPS	(0.4)	3.0	9.2	10.1	5.8	4.6	3.6
BBgBarc US Treasury Bills	0.0	0.0	0.7	1.2	1.7	1.2	0.7
BBgBarc US Agg Bond	(0.1)	0.6	6.8	7.0	5.2	4.2	3.6
<b>Duration</b>							
BBgBarc US Treasury 1-3 Yr	0.0	0.1	3.1	3.6	2.7	1.8	1.3
BBgBarc US Treasury Long	0.4	0.1	21.3	16.3	11.9	8.2	7.2
BBgBarc US Treasury	0.1	0.2	8.9	8.0	5.5	3.7	3.1
<b>Issuer</b>							
BBgBarc US MBS	(0.1)	0.1	3.6	4.4	3.7	3.0	3.0
BBgBarc US Corp. High Yield	(1.0)	4.6	0.6	3.3	4.2	6.8	6.5
BBgBarc US Agency Interim	0.1	0.3	4.0	4.3	3.3	2.4	2.0
BBgBarc US Credit	(0.3)	1.5	6.4	7.5	6.2	5.7	4.9

## OTHER

<b>Index</b>							
Bloomberg Commodity	(3.4)	9.1	(12.1)	(8.2)	(4.2)	(3.1)	(6.0)
Wilshire US REIT	(3.4)	1.3	(16.7)	(17.7)	0.4	5.7	12.7
CS Leveraged Loans	0.7	4.1	(0.8)	0.8	3.2	4.6	5.0
Alerian MLP	(13.6)	(16.3)	(48.3)	(50.7)	(21.9)	(12.4)	(4.0)
<b>Regional Index</b>							
JPM EMBI Global Div	(1.9)	2.3	(0.5)	1.3	3.5	6.1	5.4
JPM GBI-EM Global Div	(2.0)	0.6	(6.3)	(1.4)	0.2	4.8	0.5
<b>Hedge Funds</b>							
HFRI Composite	(1.2)	4.1	0.5	4.0	2.7	4.0	3.6
HFRI FOF Composite	(0.4)	4.2	2.5	5.6	2.9	3.1	2.9
<b>Currency (Spot)</b>							
Euro	(1.9)	4.4	4.5	7.6	(0.3)	1.0	(1.5)
Pound	(3.4)	4.6	(2.4)	4.9	(1.2)	(3.1)	(2.0)
Yen	0.5	2.2	3.0	2.4	2.2	2.6	(2.3)

Source: Morningstar, HFR, as of 9/30/20

# Definitions

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

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

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

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

# Notices & disclosures

**Past performance is no guarantee of future results.** This report or presentation is provided for informational purposes only and is directed to institutional clients and eligible institutional counterparties only and should not be relied upon by retail investors. Nothing herein constitutes investment, legal, accounting or tax advice, or a recommendation to buy, sell or hold a security or pursue a particular investment vehicle or any trading strategy. The opinions and information expressed are current as of the date provided or cited only and are subject to change without notice. This information is obtained from sources deemed reliable, but there is no representation or warranty as to its accuracy, completeness or reliability. Verus Advisory Inc. expressly disclaim any and all implied warranties or originality, accuracy, completeness, non-infringement, merchantability and fitness for a particular purpose. This report or presentation cannot be used by the recipient for advertising or sales promotion purposes.

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

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

Verus<sup>777</sup> is a registered trademark of Verus Advisory, Inc.

# Glossary

---

**Allocation Effect:** An attribution effect that describes the amount attributable to the managers' asset allocation decisions, relative to the benchmark.

**Alpha:** The excess return of a portfolio after adjusting for market risk. This excess return is attributable to the selection skill of the portfolio manager. Alpha is calculated as:  $\text{Portfolio Return} - [\text{Risk-free Rate} + \text{Portfolio Beta} \times (\text{Market Return} - \text{Risk-free Rate})]$ .

**Benchmark R-squared:** Measures how well the Benchmark return series fits the manager's return series. The higher the Benchmark R-squared, the more appropriate the benchmark is for the manager.

**Beta:** A measure of systematic, or market risk; the part of risk in a portfolio or security that is attributable to general market movements. Beta is calculated by dividing the covariance of a security by the variance of the market.

**Book-to-Market:** The ratio of book value per share to market price per share. Growth managers typically have low book-to-market ratios while value managers typically have high book-to-market ratios.

**Capture Ratio:** A statistical measure of an investment manager's overall performance in up or down markets. The capture ratio is used to evaluate how well an investment manager performed relative to an index during periods when that index has risen (up market) or fallen (down market). The capture ratio is calculated by dividing the manager's returns by the returns of the index during the up/down market, and multiplying that factor by 100.

**Correlation:** A measure of the relative movement of returns of one security or asset class relative to another over time. A correlation of 1 means the returns of two securities move in lock step, a correlation of -1 means the returns of two securities move in the exact opposite direction over time. Correlation is used as a measure to help maximize the benefits of diversification when constructing an investment portfolio.

**Excess Return:** A measure of the difference in appreciation or depreciation in the price of an investment compared to its benchmark, over a given time period. This is usually expressed as a percentage and may be annualized over a number of years or represent a single period.

**Information Ratio:** A measure of a manager's ability to earn excess return without incurring additional risk. Information ratio is calculated as: excess return divided by tracking error.

**Interaction Effect:** An attribution effect that describes the portion of active management that is contributable to the cross interaction between the allocation and selection effect. This can also be explained as an effect that cannot be easily traced to a source.

**Portfolio Turnover:** The percentage of a portfolio that is sold and replaced (turned over) during a given time period. Low portfolio turnover is indicative of a buy and hold strategy while high portfolio turnover implies a more active form of management.

**Price-to-Earnings Ratio (P/E):** Also called the earnings multiplier, it is calculated by dividing the price of a company's stock into earnings per share. Growth managers typically hold stocks with high price-to-earnings ratios whereas value managers hold stocks with low price-to-earnings ratios.

**R-Squared:** Also called the coefficient of determination, it measures the amount of variation in one variable explained by variations in another, i.e., the goodness of fit to a benchmark. In the case of investments, the term is used to explain the amount of variation in a security or portfolio explained by movements in the market or the portfolio's benchmark.

**Selection Effect:** An attribution effect that describes the amount attributable to the managers' stock selection decisions, relative to the benchmark.

**Sharpe Ratio:** A measure of portfolio efficiency. The Sharpe Ratio indicates excess portfolio return for each unit of risk associated with achieving the excess return. The higher the Sharpe Ratio, the more efficient the portfolio. Sharpe ratio is calculated as:  $\text{Portfolio Excess Return} / \text{Portfolio Standard Deviation}$ .

**Sortino Ratio:** Measures the risk-adjusted return of an investment, portfolio, or strategy. It is a modification of the Sharpe Ratio, but penalizes only those returns falling below a specified benchmark. The Sortino Ratio uses downside deviation in the denominator rather than standard deviation, like the Sharpe Ratio.

**Standard Deviation:** A measure of volatility, or risk, inherent in a security or portfolio. The standard deviation of a series is a measure of the extent to which observations in the series differ from the arithmetic mean of the series. For example, if a security has an average annual rate of return of 10% and a standard deviation of 5%, then two-thirds of the time, one would expect to receive an annual rate of return between 5% and 15%.

**Style Analysis:** A return based analysis designed to identify combinations of passive investments to closely replicate the performance of funds

**Style Map:** A specialized form or scatter plot chart typically used to show where a Manager lies in relation to a set of style indices on a two-dimensional plane. This is simply a way of viewing the asset loadings in a different context. The coordinates are calculated by rescaling the asset loadings to range from -1 to 1 on each axis and are dependent on the Style Indices comprising the Map.

## Disclaimer

---

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

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

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

Verus will make every reasonable effort to obtain and include accurate market values. However, if managers or custodians are unable to provide the reporting period's market values prior to the report issuance, Verus may use the last reported market value or make estimates based on the manager's stated or estimated returns and other information available at the time. These estimates may differ materially from the actual value. Hedge fund market values presented in this report are provided by the fund manager or custodian. Market values presented for private equity investments reflect the last reported NAV by the custodian or manager net of capital calls and distributions as of the end of the reporting period. These values are estimates and may differ materially from the investments actual value. Private equity managers report performance using an internal rate of return (IRR), which differs from the time-weighted rate of return (TWRR) calculation done by Verus. It is inappropriate to compare IRR and TWRR to each other. IRR figures reported in the illiquid alternative pages are provided by the respective managers, and Verus has not made any attempts to verify these returns. Until a partnership is liquidated (typically over 10-12 years), the IRR is only an interim estimated return. The actual IRR performance of any LP is not known until the final liquidation.

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

**SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**  
**Board of Retirement**

December 8, 2020

Agenda Item 6.3

**TO:** Board of Retirement

**FROM:** Michael Coultrip, Chief Investment Officer



**SUBJECT:** Approval of Change to SamCERA's Policy Benchmark

**Recommendation**

Approve changing the absolute return benchmark and the absolute return portion of the policy benchmark from LIBOR + 4% to SOFR + 4%.

**Discussion**

The London Interbank Offered Rate (LIBOR) is the benchmark interest rate in which major global banks lend to one another in the international interbank market for short term loans. It is used as a reference rate and a benchmark to approximate the risk-free rate for adjustable rate and short-term instruments. The rate has been subject to manipulation by various member banks and, as a result, in 2017 the U.K. Financial Conduct Authority decided not to support the use of the rate beyond 2021.

As a result, the U.S. Federal Reserve and the Alternative Reference Rate Committee selected the Secured Overnight Financing Rate (SOFR) in 2017 as the recommended replacement.

**Attachment**

Verus Recommendation Memo on LIBOR Replacement

# Memorandum

**To:** SamCERA  
**From:** Verus  
**Date:** December 8, 2020  
**RE:** LIBOR Replacement

---

## **Executive Summary**

*The London Interbank Offered Rate (LIBOR) is the benchmark interest rate at which major global banks lend to one another in the international interbank market for short-term loans. As LIBOR is going to be discontinued by the end of 2021 as a reference rate, this memo recommends that SamCERA change all LIBOR-related benchmarks to the Secured Overnight Financing Rate (SOFR). The benchmarks effected are within the total policy index and the absolute return benchmarks.*

## **Analysis**

LIBOR has been the standard reference rate commonly used to approximate the interest rate for adjustable-rate products. As a benchmark this was used to approximate the risk-free rate for those instruments. LIBOR is based on transactions among banks that do not occur as often as prior to the Great Financial Crisis (2008). In addition, LIBOR rates, which are struck daily by polling major global banks what they would charge other banks for short-term loans, have been subject to manipulation and “rate rigging”. These dynamics have made the LIBOR rate as an index less reliable and credible. In 2017, the U.K Financial Conduct Authority, which is the regulator that oversees LIBOR, indicated they would no longer back LIBOR past 2021. The absolute return portfolio’s benchmark for SamCERA is LIBOR + 4% and needs to be updated.

As a result of LIBOR’s eventual discontinuation as a reference rate, the Federal Reserve and the Alternative Reference Rate Committee (ARRC) selected the Secured Overnight Financing Rate (SOFR) in 2017 as the recommended replacement. The New York Fed began publishing SOFR in April 2018. Due to the recommendation, the market started using SOFR and in 2019 Fannie Mae, Freddie Mac, and other major banks started to link their floating interest rates to SOFR.

SOFR impacts dollar-denominated derivatives and loans and is based on transactions in the overnight Treasury repurchase market (repo market), which averages \$1 trillion of transactions per day. SOFR is calculated as a volume-weighted median of transactions daily and so uses large amounts of transparent, observable data in its calculation.

## **Recommendation**

Based on the eventual discontinuation of LIBOR, Verus and SamCERA staff believe LIBOR should be replaced in SamCERA’s benchmarks where applicable. SOFR is the preferred alternative following a detailed review by the Fed and ARRC, and it is now a broadly used floating interest rate reference index. The absolute return benchmark and absolute return portion of the policy benchmark would change to SOFR +4% following the acceptance of this recommendation.

---

**Past performance is no guarantee of future results.** This document is provided for informational purposes only and is directed to institutional clients and eligible institutional counterparties only and is not intended for retail investors. Nothing herein constitutes investment, legal, accounting or tax investment vehicle or any trading strategy. This document may include or imply estimates, outlooks, projections and other “forward-looking statements.” No assurance can be given that future results described or implied by any forward looking information will be achieved. Investing entails risks, including possible loss of principal. Verus – also known as Verus Advisory™.




SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

December 8, 2020

Agenda Item 6.4

**TO:** Board of Retirement

**FROM:** Michael Coultrip, Chief Investment Officer 

**SUBJECT:** Approval of Resolution Amending the Investment Policy Statement

**Recommendation**

Adopt a resolution amending the SamCERA Investment Policy Statement.

**Background**

SamCERA's Investment Policy Statement ("Policy") is periodically updated to reflect the Board's recent decisions regarding investments. The Board typically updates the Policy twice a year as warranted. The Investment Policy Statement was last updated in July 2020.

**Discussion**

In July 2020, the Board amended Section 11.0 "Inflation Hedge Investment Policies" to change the Private Real Assets target allocation to Infrastructure and Natural Resources from a 50%/50% split to a 75%/25% split, respectively.

In December 2020, the Board is expected to approve changing the Absolute Return benchmark and the absolute return portion of the policy benchmark from LIBOR + 4% to SOFR + 4%.

Staff recommends amending Section 6.0 "Asset Allocation & Portfolio Structure" and Section 10.0 "Diversifying Assets Investment Policies" to reflect these changes.

Staff is also proposing the following additional changes to the Investment Policy Statement:

Amend Section 2.0 "Management of the Fund" and Section 5.0 "General Investment Policies" to more clearly state that staff is responsible for managing the allocation, including initiating any adjustments to that allocation amount, to existing managers whose investments are held in a separate account or open-end evergreen commingled fund, subject to the allocation ranges set forth in Section 6.0.

For those managers whose investments are held in closed-end (or non-perpetual life) commingled funds (e.g. private equity, private real assets, private credit, value-add real estate), staff will seek Board approval for any additional allocation to those funds, including re-up commitments.

**Attachments**

Proposed Amendments to the Investment Policy Statement (Redlined Version)

Proposed Amendments to the Investment Policy Statement (Clean Version)

Resolution Revising the Investment Policy Statement and Attached Investment Policy Statement



# SamCERA's Investment Policy Statement

Latest Revision December~~July~~ 2020

## **1.0 ESTABLISHMENT OF INVESTMENT POLICY**

The Board of Retirement (the “Board”), having exclusive authority and exclusive fiduciary responsibility for the investment and administration of the Trust Fund (the “Fund”), hereby establishes the following Investment Policy (the “Policy”) for the investment of the San Mateo County Employees’ Retirement Association (“SamCERA”) assets. The Board reserves the right to amend, supplement or rescind this Policy at any time.

The purpose of this Policy is to assist SamCERA in effectively supervising its investments in order to meet the requirements of the California Constitution, the County Employees Retirement Law of 1937 (“the 1937 Act”), the Mission and Goals of SamCERA and other requirements, and to encourage effective communication between SamCERA and its investment managers (the “Manager(s)”) and investment consultants (the “Consultant(s)”).

### **A. GOVERNING DOCUMENTS FOR THE INVESTMENTS OF THE FUND.**

The powers and duties of the Board are set forth in the 1937 Act and in Article XVI of the State Constitution. They are further defined by the Mission and Goals adopted by the Board.

SamCERA was created by San Mateo County Ordinance No. 564 adopted by the Board of Supervisors, effective July 1, 1944. This ordinance established the retirement system in accordance with the provisions of California's County Employees' Retirement Law of 1937.

#### **Constitution of the State of California**

Article XVI, Section 17, relates to the administration of the system and investment of the Fund assets. It reads in pertinent part:

“(a)...The assets of a public pension or retirement system are trust funds and shall be held for the exclusive purposes of providing benefits to participants in the pension or retirement system and their beneficiaries and defraying reasonable expenses of administering the system.

“(b) The members of the retirement board of a public pension or retirement system shall discharge their duties with respect to the system solely in the interest of, and for the exclusive purposes of providing benefits to, participants and their beneficiaries, minimizing employer contributions thereto, and defraying reasonable expenses of administering the system. A retirement board's duty to its participants and their beneficiaries shall take precedence over any other duty.

“(c) The members of the retirement board of a public pension or retirement system shall discharge their duties with respect to the system with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with these matters would use in the conduct of an enterprise of a like character and with like aims.

“(d) The members of the retirement board of a public pension or retirement system shall diversify the investments of the system so as to minimize the risk of loss and to

maximize the rate of return, unless under the circumstances it is clearly not prudent to do so.”

### **The 1937 Act**

The 1937 Act contains language similar to that in the State Constitution regarding the investments of the Fund:

Government Code section 31595.

“The board has exclusive control of the investment of the employees retirement fund. The assets of a public pension or retirement system are trust funds and shall be held for the exclusive purposes of providing benefits to participants in the pension or retirement system and their beneficiaries and defraying reasonable expenses of administering the system. Except as otherwise expressly restricted by the California Constitution and by law, the board may, in its discretion, invest, or delegate the authority to invest, the assets of the fund through the purchase, holding, or sale of any form or type of investment, financial instrument, or financial transaction when prudent in the informed opinion of the board.

The board and its officers and employees shall discharge their duties with respect to the system: (a) Solely in the interest of, and for the exclusive purposes of providing benefits to, participants and their beneficiaries, minimizing employer contributions thereto, and defraying reasonable expenses of administering the system.

(b) With the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with these matters would use in the conduct of an enterprise of a like character and with like aims.

(c) Shall diversify the investments of the system so as to minimize the risk of loss and to maximize the rate of return, unless under the circumstances it is clearly prudent not to do so.

### **SamCERA’s Mission and Goals**

The Board has adopted a Mission and Goals statement. The Mission summarizes SamCERA’s reason to exist.

“Mission: SamCERA exists to serve as loyal fiduciary for its members and as prudent administrator of the retirement system.”

The Mission is further defined by three goals. One goal speaks to the management of the assets of the Fund. This asset management goal reads:

“Prudently manage the assets in order to appropriately fund the actuarial liabilities of the retirement system, to ensure the ability to pay all earned benefits while minimizing the costs to employers.”

In recognition of the requirements of the California Constitution, the 1937 Act, the SamCERA Mission and Goals and other legal requirements, the SamCERA Board has established this Investment Policy.

## 2.0 MANAGEMENT OF THE FUND

### A. ROLES AND PRINCIPAL DUTIES

The Fund investments shall be prudently planned, implemented, managed, and monitored by the Board. Investment Staff (the “Staff”), Investment Consultant (the “Consultant”), Custodian Bank (the “Custodian”), and Investment Managers (the “Managers”) shall support the Board in this activity. The roles are set forth below:

1. The Board establishes and maintains the investment policy, including: investment philosophy, investment objectives, strategic asset allocation, allocation-level performance benchmarks, and risk philosophy. The Board makes investment and monitoring decisions based upon the recommendations of Staff, Consultants, and other service providers engaged by the Board. The Board reviews and monitors all investments, as well as the policies, guidelines and procedures required to prudently administer the Fund and to effectively mitigate risk to the Fund. From time to time, the Board will utilize its Investment Committee to assist the Board in these activities and related specified tasks.
2. Staff oversees the Fund’s investment program activities, implements the Board’s decisions, manages the existing fund investments, and makes recommendations to the Board regarding Fund management, including investment-related policies and procedures. Staff makes recommendations regarding the selection of the Consultant, Managers, Custodian as set forth below and monitors the performance and compliance of these and other investment related service providers.
3. The Consultant reviews, analyzes and evaluates the Fund’s effectiveness and efficiency and makes fund management related recommendations. Consultant assists Staff in implementing the Board’s decisions and developing all investment-related policies. Consultant’s responsibilities are detailed in the service agreement between SamCERA and Consultant.
4. The Custodian provides custody of SamCERA’s investment assets. In addition, the Custodian manages the securities lending program. The Custodian’s responsibilities are detailed in the service agreement between SamCERA and Custodian.
5. The Managers manage their mandated allocations in accordance with all applicable laws, Board-established policies, guidelines and procedures, as well as specific investment guidelines. For separately managed accounts, managers’ responsibilities are detailed in the Investment Management Agreements (IMA) between SamCERA and each Manager. For commingled funds, managers’ responsibilities are detailed in the related Fund documents.

## **B. INVESTMENT PORTFOLIO MANAGEMENT**

The Board, with the assistance of Staff and Consultant, select and monitor Managers to manage the assets of the Fund.

### **1. Hiring New Managers**

For public markets manager searches (i.e. non private equity and private real assets), Staff will inform the Board about the search process, including scope of the mandate, and the investment style, benchmark, and the minimum qualifications for candidates. Staff will update the Board on the short list of potential managers. Consultant and Staff will perform due diligence activities deemed applicable by the Chief Investment Officer, which may include analysis of performance records, meetings, due diligence questionnaires, interviews, and on-site visits. Upon completion of such due diligence, Staff and Consultant will bring a finalist to the Board for approval. The recommendation shall provide the Board with a summary description of the conducted due diligence activities.

For private markets (private equity and private real assets), the Consultant, with Staff input, sources managers that can best fit the desired mandate consistent with the annual pacing study and applicable investment policy. Consultant and Staff will bring potential private markets opportunities to the Board for approval. An exception to this policy is when an [investment decision](#) for a private market [opportunity investment](#) must be made prior to the date of the next regularly scheduled Board meeting. In these instances, and for investments of \$~~32~~5 million or less, the Chief Executive Officer is authorized to make [an](#) ~~the~~ [investment-related](#) decision after consulting with the Board Chair, or if the Chair is not available, the Vice Chair, and one member of the Investment Committee as long as such decision is in the best interest of the fund and consistent with applicable Board policy. Any action under this authorization will be reported to the Board at a subsequent regularly scheduled meeting.

### **2. Managing and Monitoring Existing Managers**

The Board monitors the individual investment managers on a continuous basis through information provided by Staff, the Consultant, the Managers, and other investment service providers. Monthly, the Chief Investment Officer will present a preliminary performance report to the Board that is meant to provide a high-level summary of how the fund and each monthly-valued manager is performing. In addition, for SamCERA's separate accounts, Staff receives holdings and attribution reports from each separate account Manager on a monthly basis. For commingled funds, staff receives from the Manager either monthly or quarterly portfolio performance, attribution, exposure, and commentary reports.

Quarterly, the Consultant, with assistance from the Chief Investment Officer, will present an investment performance report to the Board, as specified in Section 14.0 (Quarterly Investment

Performance Reporting) in the Investment Policy. This report provides a more detailed performance attribution for the total plan and individual Managers, and helps to identify any short-term outlier deviations from expectations.

Semi-annually (month-end June and December of each year), every public markets (i.e. not private equity or private real asset) Manager completes a compliance statement identifying any significant firm, regulatory, and portfolio issues. In addition, semi-annually as of June and December of each year, Consultant will present performance reports for both the Private Equity and Private Real Assets programs that summarize each program and shows total program performance and program diversification by strategy, geography, industry, and vintage year.

Annually, Staff and Consultant will convene an investment strategy session, as specified in Section 15.0 (Annual Investment Strategy) in the Investment Policy, to allow a longer-term assessment of the Managers and the total fund performance. Lastly, all public markets Managers are interviewed annually by Staff and Consultant, and must complete a due diligence questionnaire.

During these presentations at SamCERA, Managers will provide an update on the Manager's organization and business plan, any changes to the investment process, and a summary of investment performance. Staff and Consultant report to the Board following these meetings.

After the Board approves an initial investment to be held in a separate account or open-end evergreen commingled fund, staff will be responsible for managing that allocation, including initiating any adjustments to that allocation amount, consistent with the allocation ranges outlined in Section 6.0. For those investments held in closed-end (or non-perpetual life) commingled funds (e.g. private equity, private real assets, private credit, value-add real estate), staff will seek Board approval for any additional allocation to those funds, including re-up commitments, unless the timing of the decision is subject to the policy exception set forth in paragraph 1.

### **3. Terminating Existing Managers**

The Board recognizes investments may need to be adjusted or removed from the Fund from time to time for a variety of reasons, including organization changes at the Manager, changes in Manager style, underperformance relative to expectations, and the Managers' strategy is no longer appropriate for the fund. The Board determines if a Manager should be terminated after receiving input and or recommendations from Staff and Consultant.

In situations in which developments give immediate concern that an investment with a Manager is no longer prudent for the investment program and a termination or other related investment decision should be made prior to the next regularly scheduled Board meeting, the Chief Executive Officer is authorized to terminate the Manager and or move Fund assets after consulting with the Board Chair (or Vice Chair or Secretary based on availability, in that order) and one member

of the Investment Committee. Situations causing an immediate concern, include, but are not limited to, when: (1) the firm suffers the resignation or other loss of its key portfolio managers on the strategy, (2) the firm dissolves, ceases to exist, or is otherwise incapable of carrying out its activities in the ordinary course of its business, (3) the firm is actually or effectively shut down by a regulatory agency or is accused of theft or fraud or other serious malfeasance by a regulatory agency, or (4) the fund's investment is in jeopardy of material loss. The Board will be promptly notified of the determination by the Chief Executive Officer.

### **3.0 INVESTMENT OBJECTIVES**

The Board shall develop an investment program, consistent with the Investment Beliefs and General Investment Policies as stipulated in Sections 4.0 and 5.0, respectively, in order to meet the following objectives:

- A. Generate risk-adjusted returns that exceed the Asset Allocation Policy Benchmark (as defined in Section 6.0) on a net-of-fee basis over five-year rolling periods.
- B. Achieve a Fund return that meets or exceeds the long-term forecast of capital market returns for the asset allocation portfolio benchmark over multiple economic cycles (e.g. 15-20 years).
- C. Provide a more consistent return stream than a traditional 60% Equity / 40% Fixed Income portfolio as measured by lower portfolio drawdowns over a full market cycle.

### **4.0 INVESTMENT BELIEFS**

The following section summarizes the Board's investment beliefs that have guided it in the development of this Policy document and will guide it in the oversight of the Plan assets.

- Strategic asset allocation is the primary driver of portfolio risk and return.
- SamCERA should have a long-term horizon and not be tempted to deviate from its long-term plan in response to short-term volatility.
- Everything else being equal, simplicity is preferred over complexity.
- For those asset classes evidencing market efficiencies, the manager structure may favor the employment of passive strategies.
- Focus on income and capital appreciation should be balanced and not overly dependent on one or the other.
- Diversification is fundamental.
- There is no single definition of risk. There are various measures of 'risk' that can be used for various purposes.
- The portfolio should be diversified across many risk dimensions/timeframes.



- SamCERA should not pursue investments that will not adequately compensate it for the risks that those investments bring.
- Costs matter.

## 5.0 GENERAL INVESTMENT POLICIES

Consistent with the investment beliefs contained in Section 4.0, it is the investment policy of the Board to:

- Achieve long-term risk-adjusted returns consistent with its fiduciary duty.
- Pursue an investment strategy that reduces the volatility of returns through prudent diversification of the portfolio across a broad selection of distinct asset classes, as provided for in Section 6.0 of this Investment Policy.
- Further diversify other risks, including extreme events, liquidity, and leverage by looking beyond traditional asset class definitions by utilizing multiple lenses on portfolio risks.
- Adopt an asset allocation target to guide the structure of the investment portfolio, as provided for in Section 6.0, and reevaluate on an annual basis.
- Reevaluate the asset-liability study every three to five years.
- Delegate to staff the management of existing investment managers, and for those strategies in separately managed accounts and evergreen (or open-end) commingled fund structures, the on-going adjustments to allocations to such managers consistent with the investment policies and investment ranges contained in Section 6.0.
- Delegate full discretion, including whether to include environmental, social, and governance factors, if such factors have a direct relationship to the economic and financial value of an investment, when analyzing the financial merits of competing investment choices on behalf of SamCERA, to each investment manager to the extent authorized in their Investment Management Agreement (IMA).
- Adopt objectives that encourage investment managers to maximize their performance, within acceptable risk parameters, relative to their individual investment style benchmark.
- Refrain from drastically shifting asset class allocations over short time spans, unless it is in the Fund's best interest to do so.
- Rebalance the portfolio in accordance ~~with~~ the Rebalancing Policy set forth in Section 7.0.

## 6.0 ASSET ALLOCATION & PORTFOLIO STRUCTURE

### A. Asset Allocation by Performance Driver

In addition to grouping investments into traditional asset classes (Public Equity, Fixed Income, Alternative Assets, Inflation Hedge and Liquidity), SamCERA also groups its investments by the underlying performance drivers within each asset class composite. As part of this process, SamCERA classifies its portfolio into three main drivers of performance listed below.

#### **Growth**

The Growth category includes assets in which their primary driver of returns is tied to the general strength of economic output. These assets will generally do well when economic conditions are favorable, but generally struggle in times of economic weakness and recession. Assets classified in the Growth category include Public Equity (consisting of U.S. and International Equity), Private Equity within Alternatives, and Opportunistic Credit within Fixed Income.

#### **Diversifying**

Diversifying assets provide protection from equity risk and may be characterized as being more defensive (i.e. may help provide stability when markets fall) or more absolute-return oriented (i.e. performance is not as dependent on the overall strength of equity markets). Assets classified in the Diversifying category include Core Fixed Income, and Absolute Return within Alternatives.

#### **Inflation Hedge**

Lastly, Inflation Hedge assets provide additional diversification from equity risk and provide a potential hedge against unexpected inflation. Assets classified in this category include Real Estate, Public Real Assets, and Private Real Assets.

### Asset Allocation Policy

Performance Driver View	Target Allocation	Rebalancing Range	Traditional Asset Class View **
<b>Growth</b>	<b>55%</b>	<b>±3%</b>	
Public Equity	39%	±3%	Public Equity
Private Equity *	6%	±2%	Alternatives
Opportunistic Credit	10%	±2%	Fixed Income
<b>Diversifying</b>	<b>28%</b>	<b>±2%</b>	
Core Fixed Income	21%	±2%	Fixed Income
Absolute Return	6%	±2%	Alternatives
Liquidity	1%	±2%	Liquidity
<b>Inflation Hedge</b>	<b>17%</b>	<b>±2%</b>	
Real Estate	10%	±2%	Inflation Hedge
Private Real Assets *	3%	±2%	Inflation Hedge
Public Real Assets	4%	±2%	Inflation Hedge

\* Recognizing the illiquidity of the asset class, rebalancing will be considered over six- to twelve-month periods.

\*\* Traditional Asset Allocation: 39% Public Equity, 31% Fixed Income, 12% Alternatives, 17% Inflation Hedge, and 1% Liquidity.

### B. Growth Asset Allocation

Growth assets shall be allocated to managers within the following asset/sub-asset classes:

GROWTH ASSET CLASSES	TARGET ALLOCATION	REBALANCE RANGE
<b>Public Equity</b>	39%	±3%
Large Capitalization Domestic	19.0%	±2%
Passive Core	8.0%	±2%
Active Core	3.0%	±2%
Active Low-Volatility Core	8.0%	±2%
Small Capitalization Domestic	2.0%	±2%
Active Core	2.0%	±2%

International	18.0%	±2%
Passive Core	6.0%	±2%
Growth	6.0%	±2%
Value	6.0%	±2%
<b>Private Equity</b>	6%	±2%
<b>Opportunistic Credit</b>	10%	±2%
<b>Total Growth</b>	55%	±3%

### C. Diversifying Asset Allocation

Diversifying assets shall be allocated to managers within the following asset/sub-asset classes:

DIVERSIFYING ASSET CLASSES	TARGET ALLOCATION	REBALANCE RANGE
<b>Core Fixed Income</b>	21%	±2%
Core	14.0%	±2%
Core Securitized	4.0%	±2%
Core Unconstrained	3.0%	±2%
<b>Absolute Return</b>	6%	±2%
<b>Liquidity</b>	1%	±2%
<b>TOTAL DIVERSIFYING</b>	28%	±2%

### D. Inflation Hedge Asset Allocation

Inflation Hedge assets shall be allocated as follows:

INFLATION HEDGE ASSET CLASSES	TARGET ALLOCATION	REBALANCE RANGE
<b>Real Estate</b>	10.0%	±2%
<b>Private Real Assets</b>	3.0%	±2%
<b>Public Real Assets</b>	4.0%	±2%
<b>TOTAL INFLATION HEDGE ASSETS</b>	17.0%	±2%

## E. Asset Allocation Policy Benchmark

The Asset Allocation Policy Benchmark defined below is derived by assigning a passive benchmark to each of the sub-asset classes referenced in Sections 6.0 (A) through 6.0 (D) and weighting each by the Target Allocation. The performance of the Asset Allocation Policy Benchmark is computed by the Plan's investment consultant.

Benchmark	Asset Allocation Policy Benchmark
<b>Growth Assets</b>	<b>55%</b>
Russell 3000 Index	21%
MSCI ACWI x US IMI Index Hedged*	18%
Russell 3000 +3% (One Quarter Lagged)	6%
BC BA Intermediate High Yield Index	10%
<b>Diversifying Assets</b>	<b>28%</b>
BC Aggregate Index	21%
<del>SOFRLIBOR</del> + 4%	6%
91 Day T-Bills	1%
<b>Inflation Hedge</b>	<b>17%</b>
NCREIF ODCE	10%
Custom Private Real Asset Index***	3%
Custom Public Real Asset Index***	4%

\* 50% hedge ratio starting 10/1/19.

\*\*Comprised of 75% S&P Global Infrastructure Index and 25% S&P Global LargeMidCap Commodity and Resources Index + 2% (One Quarter Lagged)

\*\*\*Comprised of 25% Bloomberg Roll Select Commodity Index, 25% Bloomberg US TIPS Index, 25% S&P Global LargeMidCap Commodity and Resources Index, and 25% S&P Global Infrastructure Index.

~~\*\*\*Comprised of 50% S&P Global LargeMidCap Commodity and Resources Index, 7550% S&P Global Infrastructure Index + 2% (One Quarter Lagged), 25% S&P Global LargeMidCap Commodity and Resources Index~~

## 7.0 REBALANCING POLICY

A. The Chief Investment Officer (CIO) shall rebalance the portfolio as needed in conformance with the asset allocation tactical ranges set forth in Section 6.0.

B. The potential need to rebalance will be continuously monitored, and will be subject to deviations within the established rebalance ranges specified in Section 6.0.

- C. The CIO will have discretion to rebalance to Target or to some other allocation, as long as it is within policy ranges.
- D. Cash flows will be used first to rebalance, and to the extent possible, exchange-traded derivatives will be used to rebalance in a cost-effective manner.
- E. All rebalancing activity shall be reported to the Board at the next scheduled meeting.

## **8.0 GENERAL MANAGER INVESTMENT PERFORMANCE POLICIES**

The responsibility for securities selection, purchase and sale decisions, and proxy voting (where appropriate) is delegated to the external investment managers. The individual investment guideline parameters (including diversification constraints, concentration limits, asset type exclusions, etc.) and performance objectives for each investment manager will be established within the IMA or other applicable legal agreement(s) with each firm.

The Board expects to measure investment performance quarterly and will generally follow prudent time horizons when evaluating short term, intermediate term, and long term performance of its investment managers. Generally, the Board defines underperformance as: Cumulative annualized performance (net of fees) over a three-year period below a broad market-based benchmark return times 0.9, or five year return (net of fees) below the broad market based benchmark return.

Performance will also be evaluated in light of the manager's stated style and discipline.

## **9.0 GROWTH ASSETS INVESTMENT POLICIES**

### GROWTH ASSETS OVERVIEW:

Assets classified in the Growth category include Public Equity (consisting of U.S. and International Equity), Private Equity within Alternatives, and Opportunistic Credit within Fixed Income.

**Public Equity:** Public equity assets include funds shares/stock of a company through a public market. SamCERA invests utilizing both passive approaches (meant to track the performance and characteristics of major market indices, like the Russell 1000 Index and MSCI ACWI ex US IMI Index), and via active approaches that are meant to outperform the major market benchmarks. Public Equity is expected to produce returns higher than that provided from Fixed Income but at potentially higher levels of volatility. Exposure to this asset class will provide return streams generally correlated to that of general economic growth. There are two primary components to the Public Equity category: 1) Domestic Equity, and 2) International Equity.

- 1) Domestic Equity:** SamCERA further breaks out its U.S. public equity holdings into two sub-composites: 1) U.S. Large Capitalization Domestic, which is comprised of U.S. companies valued generally over \$10 billion, and 2) U.S. Small Capitalization Domestic, which is comprised of U.S. companies valued generally under \$2 billion.

For the domestic equity program, the majority of the tracking error will come from stock selection via active management as the overall manager structure for domestic equities will not possess any significant biases in terms of investment style. The Domestic Equity composite will consist of two sub-composites: 1) Large-Capitalization Equity, and 2) Small-Capitalization Equity. Large Capitalization Equity will consist of four Core strategies: one passive, one low-tracking error active, and two low-volatility active strategies. Small-Capitalization Equity will consist of an actively-managed Core strategy.

- 2) International Equity:** International Equity consists of developed (public companies domiciled in developed market countries such as Germany, France, UK, Japan, etc.) and emerging markets (public companies domiciled in emerging market countries such as China, Brazil, Mexico, Russia, etc.) International Equity will consist of three strategies: 1) a passive Core component, 2) Active Value, and 3) Active Growth. All three strategies will have exposure to both developed and emerging markets).

**Private Equity:** Private Equity are funds, typically illiquid investments, that directly invest in private companies, or that engage in buyouts of public companies. Private Equity is expected to be one of the highest returning asset classes over the long-term. Its role in the portfolio is to provide high return potential in order to maximize the ability of the Fund to meet its performance objectives.

The Private Equity program will contain manager allocations to three primary sub-categories: 1) Buyouts, 2) Venture Capital, and 3) Debt/Special Situations. These allocations will be implemented via allocation to primary and secondary fund investments and co-investment opportunities. The sub-allocation targets and target ranges are summarized below:

<b>Sub-Category</b>	<b>Target Allocation</b>	<b>Range</b>
Buyouts	60%	+/- 20%
Venture Capital	20%	0 – 30%
Debt/Special Situations	20%	+/- 10%

The responsibility for private equity sourcing is delegated to SamCERA’s investment consultant. The private equity portfolio shall adhere to the following investment guidelines covering diversification and quality:

- (a) Diversification: Subject to availability of sufficient attractive opportunities, the portfolio is to be diversified over multiple years by the following:

Vintage Year: It is expected that roughly equal amounts of new funding will be committed in each calendar year, with deviations permitted to accommodate market opportunities and to facilitate initial entry into the asset class.

**Investment Manager:** The reported value plus unfunded commitments of any one investment manager (excluding fund of funds) up to no more than twenty (20) percent of the reported value plus unfunded commitments of the total private equity portfolio.

**Geography:** Through commitments to funds located and/or investing both in and outside of the United States.

**Industry:** It is expected that the private equity portfolio will be generally diversified by sector/industry.

(b) **Quality:** All commitments to private equity by SamCERA must be of institutional quality as evidenced by other tax-exempt institutional investors' commitments to the investment manager's prior or current funds.

Fund managers are expected to comply with SamCERA's private placement disclosure rules.

**Opportunistic Credit:** Fixed income assets are debt investments that provide a return in periodic payments in debt instruments issued by governments and corporations. Opportunistic Credit is expected to be the highest-risk category within fixed income, and will be used to enhance return by investing via public and private investments in non-traditional sectors of the fixed income market, including emerging market debt, high yield bonds, direct lending, bank loans, convertible bonds, and CMBS/ABS securities. This sub-category will be exposed to general economic risk factors, similar to public equities, but may provide a steadier stream of returns than public equity asset classes.

#### GROWTH ASSETS PERFORMANCE OBJECTIVE:

The performance objective of the Growth Assets Composite is to outperform, on a net-of-fee basis, a customized index (Customized Benchmark Portfolio) incorporating the weighted average components for four composite sub-asset classes (which results in the following weights: 38% Russell 3000, 33% MSCI ACWI ex US IMI Index hedged\*, 11% Russell 3000 Index + 3% (one quarter lagged), and 18% Barclays BA Intermediate High Yield Index).

The Public Equity composite has a maximum tracking error of 3% to its composite benchmark while the Opportunistic Credit composite has a maximum tracking error of 2% to its composite benchmark.

#### GROWTH ASSETS RISK EXPOSURES AND RISK MITIGATION:

**Public Equity:** The primary risk factors for Public Equity are correlation to general economic growth, high volatility in returns, and potential illiquidity in smaller-capitalization and certain emerging market stocks. SamCERA will control for these risk factors by diversifying the plan across assets that exhibit limited correlation to economic growth. In addition, SamCERA's rebalancing ranges for small-cap equity will help ensure adequate diversification within the equity portion of the SamCERA portfolio.



**Private Equity:** Private Equity, while expected to provide attractive returns, also have a number of risks. Chief among these are illiquidity risk and leverage. By their nature Private Equity is generally illiquid in that the life of these fund investments can be as long as ten to twelve years. SamCERA recognizes that this illiquidity is a necessary characteristic (and source of return premium) for these asset classes and as such will endeavor to take this illiquidity into account at the total plan level when addressing total plan liquidity needs during strategic planning asset liability studies. Leverage can be employed by private equity managers to enhance the overall risk-adjusted returns. SamCERA will control leverage exposure through partnership selection and portfolio construction and diversification.

**Opportunistic Credit:** Opportunistic Credit is generally the highest risk, lowest liquidity sub-category within Fixed Income. SamCERA will take into account unique risk factors when constructing the fixed income portfolio to help ensure that the overall risk profile of the total portfolio is consistent with expectations. Opportunistic Credit typically includes the risk factors contained in Core and Core Unconstrained, but, depending on the mandate, with higher emphasis to credit default risks, emerging markets sovereign/corporate default risk, potential leverage, and potential illiquidity. It is expected that strategies within Opportunistic Credit will have a maximum leverage ratio of 2.5x at the fund level (i.e. certain holdings may be levered higher than the 2.5x limit, as long as the fund (or strategy) has a maximum 2.5x leverage). Strategies employing higher leverage will be relegated to the debt/special situations category of Private Equity (see above).

<b>GROWTH ASSET CLASSES</b>	<b>BENCHMARK INDEX</b>
<b>Growth Assets</b>	<b>Customized Benchmark Portfolio</b>
<b>Public Equity</b>	
<b>Domestic Equity</b>	<b>Russell 3000</b>
Large Capitalization Domestic Equity	Russell 1000
Passive Core	Russell 1000
Active Core	Russell 1000
Active Low Volatility Core	Russell 1000
Small Capitalization Domestic Equity	Russell 2000
Active Core	Russell 2000
<b>International Equity</b>	<b>MSCI All Country World ex US IMI hedged*</b>
International Passive Core	MSCI ACWI ex US IMI
International Growth	MSCI ACWI Free ex US Growth
International Value	MSCI ACWI Free ex US Value
<b>Private Equity</b>	<b>Russell 3000 + 3% (One Quarter Lagged)</b>

\* 50% hedge ratio starting 10/1/19.

## 10.0 DIVERSIFYING ASSETS INVESTMENT POLICIES

### DIVERSIFYING ASSETS OVERVIEW:

Assets classified in the Diversifying category include Core Fixed Income, Absolute Return within Alternatives, and Liquidity.

**Fixed Income:** Fixed income assets are debt investments that provide a return in periodic payments in debt instruments issued by governments and corporations. Core Fixed Income is generally the lowest risk and highest liquidity sub-category within Fixed Income. It is expected to provide a lower, but steadier stream of returns than public equity asset classes, and also to reduce the risk of the overall portfolio as bonds have lower risk than most other major asset classes. That said, there are a number of sub-categories within Core Fixed Income, which exhibit different risk/return trade-offs and hold slightly different tasks in terms of role in the portfolio, but have the common goal of dampening portfolio volatility. Core Fixed Income is broken out into three subcategories:

- 1) Core, 2) Core Securitized, and 3) Core Unconstrained

**Core:** Core is generally considered the lowest-risk fixed income category, and one that invests in primarily liquid, investment grade U.S. Dollar denominated bonds. It also generally consists of sectors that comprise the Bloomberg Barclays Aggregate Bond Index. Core's role in the portfolio is to dampen portfolio volatility and protect the portfolio in times of economic duress.

**Core Securitized:** Core Securitized is a low/medium-risk fixed income sub-category, and contains securitized sectors, including mortgage-backed securities, commercial mortgage-backed securities, and asset-backed securities. Core Securitized's role in the portfolio, in addition to dampening portfolio volatility, is to provide higher yield and slightly lower interest rate sensitivity as compared to the Bloomberg Barclays Aggregate Bond Index.

**Core Unconstrained:** Core Unconstrained is a medium-risk fixed income sub-category, and contains the sectors contained in Core plus high yield (below investment grade bonds), non-U.S. Dollar denominated bonds, and emerging market fixed income securities. Core Unconstrained's role in the portfolio is a combination of total portfolio volatility dampening and some moderate return enhancement.

**Absolute Return:** The Absolute Return category will focus on funds that have an absolute return orientation and are not expected to contain significant levels of public market beta over the long term. This category is expected to provide a diversifying return stream to the total plan that is not correlated to the public markets. Suitable investment strategies include multi-strategy funds, alternative risk premia funds, GTAA or global macro funds, and CTA/Managed Futures trend following funds. It is expected that this category will be implemented via commingled funds and not in separate accounts so that SamCERA's

investment in any single fund would be ‘ring-fenced’ (i.e. any potential losses would be limited to the investment in the single fund, and not extend to the total plan assets).

**Liquidity:** The Liquidity category currently consists of cash and cash-equivalent type investments with short duration.

DIVERSIFYING ASSETS PERFORMANCE OBJECTIVE:

The performance objective of the Diversifying Assets Composite is to outperform, on a net-of-fee-basis, a customized index (Customized Benchmark Portfolio) incorporating the weighted average components for three composite sub-asset classes (which results in the following weights: 75% Bloomberg Barclays Aggregate Index, 21% to ~~SOFRLIBOR~~ + 4%, and 4% to 91 Day T-Bills). The Core Fixed Income sub-asset class has a maximum tracking error of 2% to its composite benchmark.

DIVERSIFYING ASSETS RISK EXPOSURES AND RISK MITIGATION:

The Core Fixed Income sub-sectors have different risk factor exposures. SamCERA will take into account these unique risk factors when constructing the Core Fixed Income portfolio to help ensure that the overall risk profile of the total portfolio is consistent with expectations.

**Core:** The primary risk factors are sensitivity to changes in interest rates, changes in mortgage prepayment speeds, and investment-grade corporate and sovereign credit risk.

**Core Securitized:** The primary risk factors are complexity, credit and prepayment risk across various securitized sectors (e.g. ABS, CMBS, and RMBS) with interest rate sensitivity being a relatively lower risk factor as compared to assets within Core (above). The focus is on higher quality securitized investments to minimize credit risk.

**Core Unconstrained:** The primary risk factors typically include the risk factors found in Core with additional exposures to high-yield default risks, emerging markets sovereign/corporate default risk, and potential illiquidity. The allocation to these risk exposures will be dynamic over time as the portfolio is not constrained to a benchmark.

**Absolute Return:** Absolute Return, while expected to provide attractive returns that are less correlated to the returns provided by public asset classes, also has a number of risks. Chief among these is leverage. Leverage can be employed by absolute return managers to enhance the overall risk-adjusted returns. SamCERA will control leverage exposure through fund selection as well as portfolio construction and diversification.

DIVERSIFYING ASSET CLASSES	BENCHMARK INDEX
DIVERSIFYING ASSETS	CUSTOMIZED BENCHMARK PORTFOLIO
<b>Core Fixed Income</b>	
Core/Core Securitized/Core Unconstrained	Bloomberg Barclays Aggregate Bond Index
<b>Absolute Return</b>	<del>SOFRLIBOR</del> + 4%

## 11.0 INFLATION HEDGE INVESTMENT POLICIES

### INFLATION HEDGE OVERVIEW:

The Inflation Hedge category combines inflation-sensitive assets under a single asset class to simplify the asset allocation process and enable better performance monitoring of the plan's overall, direct exposure to assets with inflation-hedging properties. The plan also has indirect exposure to inflation-sensitive assets through other asset classes, such as Public Equity, Fixed Income, and Alternatives. When determining the appropriate allocation of inflation protection, both direct and indirect exposures to inflation-sensitive assets across the plan are taken into account. The Inflation Hedge category is expected to provide a high degree of inflation beta, attractive risk-adjusted returns and diversification benefits to the overall plan.

Inflation Hedge is broken out into four subcategories:

- 1) Real Estate, 2) Private Real Assets, and 3) Public Real Assets

**Real Estate:** Real Estate is expected to provide a return and risk profile between that provided by fixed income and equities. Real estate will be composed of three sub-categories: 1) Core, 2) Value-Add, and 3) Debt. The majority of exposure will be in Core real estate assets of the highest quality located in the best locations in North America, Europe, and Asia. Value-Add properties are expected to provide somewhat higher return potential along with somewhat higher risk than Core assets. Real Estate Debt strategies range from lower risk senior loans on stable properties to higher risk/return mezzanine and construction loans. SamCERA utilizes Debt strategies for risk mitigation and to enhance the portfolio's yield.

Income will be a large part of the return stream generated from the Real Estate portfolio. The role of this portfolio is to provide diversification benefits, some protection against unanticipated inflation, and a steady income stream. Higher risk Opportunistic/Development real estate strategies will reside in the Private Real Assets composite due to their higher-risk, longer time horizon, and the less liquid nature of the investment set compared to Core, Value-Add, and Debt strategies. The sub-allocation targets and target ranges are summarized below:

<b>Real Estate Strategy</b>	<b>Target Allocation</b>	<b>Range</b>
Core Real Estate	60%	50 -70%
Value-Add Real Estate	20%	0 - 30%
Real Estate Debt	20%	0 - 30%

**Private Real Assets:** Private Real Assets are expected to provide attractive total and risk-adjusted returns that exhibit low correlations with traditional asset classes but positive correlation with inflation. Private Real Assets will be composed of two sub-categories: 1) Infrastructure (Core and Value-Add, Secondary, Midstream Energy, and Power), and 2)

Natural Resources (Energy Exploration & Production, Mining, Farmland, Timber, and Water). These allocations will be implemented via allocation to primary and secondary fund investments and co-investment opportunities. The sub-allocation targets and target ranges are summarized below:

<b>Sub-Category</b>	<b>Target Allocation</b>	<b>Range</b>
Infrastructure	75%	+/- 25%
Natural Resources	25%	+/- 25%

**Public Real Assets:** Similar to Private Real Assets, Public Real Assets is expected to provide positive correlation to inflation, but with potentially higher beta to public equity markets. Public Real Assets may be used to fund new strategies in Private Real Assets and will be composed of four sub-categories: 1) Commodities, 2) U.S. TIPS, 3) Listed Global Natural Resources, and 4) Listed Global Infrastructure. All four sub-categories are meant to provide some protection from higher levels of unanticipated inflation while providing a diversifying return stream from that of public markets.

The sub-allocation targets and target ranges are summarized below:

<b>Sub-Category</b>	<b>Target Allocation</b>	<b>Range</b>
Commodities	25%	0 - 50%
U.S. TIPS	25%	0 - 50%
Listed Global Natural Resources	25%	0 – 50%
Listed Global Infrastructure	25%	0 – 50%

INFLATION HEDGE PERFORMANCE OBJECTIVE:

The performance objective of the Inflation Hedge Composite is to outperform, on a net-of-fee basis, a customized index (Customized Benchmark Portfolio) incorporating the weighted average components for three composite sub-asset classes (which results in the following weights: 59% NCREIF ODCE, 23% Custom Public Real Asset Index, and 18% Custom Private Real Asset Index).

INFLATION HEDGE RISK EXPOSURES AND RISK MITIGATION:

**Real Estate:** Many real estate funds utilize leverage to enhance returns. Lack of liquidity is also a concern, but less so for core real estate and senior debt investments. Value-add, mezzanine debt, and opportunistic strategies also tend to have more exposure to general economic conditions than core properties.

These risks will be mitigated in a number of ways. First, the primary emphasis of SamCERA’s real estate program will be focused on Core properties, with a secondary emphasis to Value-Add properties and Debt strategies. Opportunistic-oriented strategies will reside in our Private Real Assets portfolio due to their higher risk profile. In addition, SamCERA’s core real estate fund has a leverage limit of 35%, and SamCERA also sits on the Fund’s Advisory Committee.

**Private Real Assets:** By their nature, Private Real Assets are generally illiquid in that the life of these fund investments can be as long as ten to twelve years. SamCERA recognizes that this illiquidity is a necessary characteristic (and source of return premium) for these asset classes and as such will endeavor to take this illiquidity into account at the total plan level when addressing total plan liquidity needs during strategic planning asset liability studies. Leverage can be employed by alternative managers to enhance the overall risk-adjusted returns. SamCERA will control leverage exposure through partnership selection and portfolio construction and diversification.

<b>INFLATION HEDGE ASSET CLASSES</b>	<b>BENCHMARK INDEX</b>
<b>INFLATION HEDGE ASSETS</b>	<b>CUSTOMIZED BENCHMARK PORTFOLIO</b>
REAL ESTATE	NCREIF ODCE
PRIVATE REAL ASSETS	CUSTOM PRIVATE REAL ASSET INDEX
PUBLIC REAL ASSETS	CUSTOM PUBLIC REAL ASSET INDEX

**12.0 QUARTERLY INVESTMENT PERFORMANCE REPORTING**

The quarterly investment performance reports will be designed as a risk management tool and will afford the Board the opportunity to timely identify potential risk issues within the portfolio and to assess the relative performance of the investment managers.

The report will provide sufficient information to assess the following:

- A. Total and active risk assessment at total fund, composite and individual manager level.
- B. Performance attribution at total fund, composite and individual manager level.
- C. Adherence to the investment style for which the manager is retained, as measured by the quarterly risk adjusted active return (deviation of the manager's performance from the specified performance benchmark) over the last quarter, six months, one-, three-, and five-year periods, including updates from previous quarterly reports regarding adherence to the style for which the firm was retained;
- D. Ability of the active manager to demonstrate consistently positive information ratios, including updates from previous quarterly reports regarding the firm's information ratios;

E. Quarterly, annual, three- and five-year total time-weighted returns relative to the specified performance benchmark and manager style peer group.

### **13.0 ANNUAL INVESTMENT STRATEGY**

Annually, the Board/Staff shall convene an investment strategy session (typically as part of the annual retreat) with the objective of addressing strategic investment policy issues and to deliberate any policies that could benefit the performance of the retirement Fund. The agenda for these sessions should include (but is not limited to) the following information:

- (a) Compare the Fund's actual investment performance for the prior fiscal year against the investment objectives set forth in Section 3.0 and evaluate the relative success or failure of the prior year's performance; specific commentary to this objective shall be an integral part of the performance measurement process.
- (b) Compare each investment manager's investment performance for the prior fiscal year against the relevant benchmarks and peer groups and evaluate the relative success or failure of their prior year's performance.
- (c) Evaluate and review the total Fund performance attribution and contribution to return at the composite level to isolate performance drivers.
- (d) Evaluate and review the various risk exposures of the plan versus appropriate policy limits and on-going trends through time.
- (e) Evaluate and review the portfolio rebalancing activity for the year.
- (f) Evaluate the Fund's liquidity requirements for the current and next fiscal years.
- (g) Compare each investment manager's fees to their respective peer universe.

### **14.0 PROXY VOTING**

The Investment Managers are delegated authority for the voting of proxies, subject to the following guidelines:

- A. All proxies shall be voted in the best interest of the shareholders, but in no instance shall the economic interests of the retirement Fund be subordinated to any other interest.
- B. Investment managers shall provide staff with quarterly reports on all proxies cast, in a mutually acceptable format.

### **15.0 SECURITIES LENDING**

A. Pursuant to Section 2.0 (A), the Custodian shall manage a securities lending program to enhance income in accordance with the terms and conditions set forth in a mutually acceptable securities lending agreement and guaranty.

B. The Board reserves exclusive authority to approve the securities lending agreement prior to the commencement of securities lending activity.

C. Unless otherwise specified in the agreement(s):

(i) All loans shall be marked-to-market daily.

(ii) Collateral on each loan shall be maintained daily at 102% of loan value for domestic securities and 105% of loan value for international securities.

(iii) Acceptable collateral shall be in the form of cash or obligations issued or guaranteed by the U.S. Government, or its agencies or instrumentalities.

(iv) Borrower must have a long-term credit rating of either "A" from S&P or "A2" from Moody's. For split rated borrowers, the higher rating shall prevail if not the same rating, with the lower rating having a minimum long-term credit rating of either "A-" from S&P or "A3" from Moody's.

(v) The maximum allowable amount of assets on loan to any single borrower shall not be greater than \$3 million.

(vi) The maximum total amount of program assets on loan shall not be greater than \$10 million.

D. The Chief Investment Officer shall be responsible for monitoring the securities lending program and recommending changes as appropriate.

## **APPENDIX A**

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

**Investment Committee Charter as Amended**

RESOLUTION 99-00-09

*This Resolution, adopted by the Board of Retirement (Board) of the San Mateo County Employees' Retirement Association (SamCERA), sets forth the Charter for the Board's Investment Committee.*

**WHEREAS**, Article XVI, §17 of the Constitution of the State of California as amended in 1992 to read, in pertinent part, as follows:

*Notwithstanding any other provisions of law or this Constitution to the contrary, the retirement board of a public pension or retirement system shall have plenary authority and fiduciary*



responsibility for investment of moneys and administration of the system, subject to all of the following:

(a) The retirement board ... shall have the sole and exclusive fiduciary responsibility over the assets of the ... system. The retirement board shall also have sole and exclusive responsibility to administer the system in a manner that will assure prompt delivery of benefits and related services to the participants and their beneficiaries. The assets ... are trust funds and shall be held for the exclusive purposes of providing benefits to participants ... and their beneficiaries and defraying reasonable expenses of administering the system.

(b) The members of the retirement board ... shall discharge their duties with respect to the system solely in the interest of, and for the exclusive purposes of providing benefits to, participants and their beneficiaries, minimizing employer contributions thereto, and defraying reasonable expenses of administering the system. A retirement board's duty to its participants and their beneficiaries shall take precedence over any other duty.

(c) The members of the retirement board ... shall discharge their duties with respect to the system with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with these matters would use in the conduct of an enterprise of a like character and with like aims.

(d) The members of the retirement board...shall diversify the investments of the system so as to minimize the risk of loss and to maximize the rate of return, unless under the circumstances it is clearly not prudent to do so.

(e) The retirement board..., consistent with the exclusive fiduciary responsibilities vested in it, shall have the sole and exclusive power to provide for actuarial services in order to assure the competency of the assets of the... system. &

**WHEREAS**, California Government Code §31595 states, as follows:

*The Board has exclusive control of the investment of the employees retirement fund. The assets of a public pension or retirement system are trust funds and shall be held for the exclusive purposes of providing benefits to participants in the pension or retirement system and their beneficiaries and defraying reasonable expenses of administering the system. Except as otherwise expressly restricted by the California Constitution and by law, the Board may, in its discretion, invest, or delegate the authority to invest, the assets of the fund through the purchase, holding, or sale of any form or type of investment, financial instrument, or financial transaction when prudent in the informed opinion of the Board...; &*

**WHEREAS**, The Board of Retirement, wishes to exercise these powers as follows:

**EXERCISE OF POWERS:** *The Board shall exercise its investment, management and administrative authority and responsibility through the approval of motions recorded in public meeting &*

**WHEREAS**, the Board has adopted SamCERA's Investment Policy and amendments thereto to direct the investments of the Retirement Fund and now wishes to establish an Investment Committee to guide the future evolution of SamCERA's Investment Policy. Therefore, be it

**RESOLVED** that the Board hereby establishes a standing Investment Committee to direct the Board in its ongoing evaluation of SamCERA's Investment Policy, including but not limited to

- 1.0 CONDUCT ASSET ALLOCATION STUDIES
  - 1.1 Determine the characteristics of the Policy's liabilities in regards to the nature of Fund's cash flows
- 2.0 DEVELOP ASSET MIX ALTERNATIVES TO MEET LIABILITY REQUIREMENTS
  - 2.1 Establish allowable asset classes
  - 2.2 Determine asset class benchmarks
  - 2.3 Develop risk, return & correlation projections
- 3.0 EVALUATE EFFICIENT FRONTIER ALTERNATIVES
  - 3.1 Define risk, return and correlation
  - 3.2 Evaluate mean variance optimization
  - 3.3 Determine low risk alternatives and high risk alternatives
  - 3.4 Scale portfolios between two extremes
  - 3.5 Evaluate optimized efficient frontier
  - 3.6 Integrate optimized efficient frontier with asset-liability relationships
- 4.0 ANALYZE BOARD RISK TOLERANCE
  - 4.1 Assess risk/reward trade-offs
  - 4.2 Assess contribution rate sensitivity & variability
  - 4.3 Assess ability to exceed actuarial interest rate
  - 4.4 Assess comfort level with characteristics of specific asset mixes
- 5.0 RECOMMEND PREFERRED ASSET MIX
  - 5.1 Evaluate differences from current target
  - 5.2 Evaluate Board's willingness to implement new target asset mix
  - 5.3 Evaluate appropriateness of variance from peer public fund norms
- 6.0 RECOMMEND AMENDMENTS TO SAMCERA'S INVESTMENT POLICY
  - 6.1 Adjust target asset mix
  - 6.2 Introduce new benchmarks
  - 6.3 Include required asset class/portfolio modifications
- 7.0 RECOMMEND REVISIONS TO MANAGER STRUCTURE
  - 7.1 Adjust manager/style line-up as necessary
  - 7.2 Introduce new managers/asset classes
  - 7.3 Terminate managers/asset classes as necessary
  - 7.4 Establish active & passive allocation targets as appropriate
- 8.0 IMPLEMENT CHANGES TO MANAGER STRUCTURE
  - 8.1 Recommend time-line & approach to revise structure
  - 8.2 Conduct manager evaluations
  - 8.3 Establish portfolio and asset allocation rebalancing procedures
- 9.0 EVALUATE MANAGER PERFORMANCE
  - 9.1 Monitor results of managers both gross and net of investment management fees
  - 9.2 Assess consistency of portfolio decision making
  - 9.3 Evaluate organizational, ownership, personnel & other firm developments
- 10.0 RECOMMEND AND EVALUATE INVESTMENT CONSULTANT STRUCTURE & PERFORMANCE

- 10.1 Recommend for Board determination the retention and termination of Investment Consultant(s) as necessary
- 10.2 Define and assign special projects as warranted
- 10.3 Monitor performance of Investment Consultant(s)
- 10.4 Conduct evaluations of Investment Consultant(s)
- 10.5 Evaluate organizational, ownership, personnel and other firm developments
- 11.0 INITIATE & EVALUATE SPECIAL INVESTMENT STUDIES
- 12.0 UNDERTAKE OTHER WORK ASSIGNED TO IT BY THE BOARD Be it further

**RESOLVED** that the Chair may appoint the members of the Investment Committee per Regulation 2.5.1. Be it further

**RESOLVED** that the Chief Executive Officer is hereby instructed to provide the Committee with access to all appropriate and available resources and records, so long as such access is consistent with sound fiduciary practices. Be it further

**RESOLVED** that the Chief Executive Officer is hereby authorized to provide compensation of \$100 per meeting for not more than two meetings per month to the members of the Committee eligible for such compensation, per GC§31521. Be it further

**RESOLVED** that the Board hereby reserves to itself sole authority to accept, modify, or reject the recommendations, which the Investment Committee may present from time to time pursuant to the provisions of this Resolution, per Regulation 2.3.

ADOPTED by unanimous vote, January 25, 2000

AMMENDED by unanimous vote, May 22, 2001

AMMENDED by unanimous vote, October 25, 2004

## **APPENDIX B**

### **Derivatives Investment Policy**

#### **1) Introduction**

There is a genuine need to allow SamCERA's separate account managers to evaluate new securities and introduce them into their portfolios, given that the investment process followed by the investment managers complies with the subsequent provisions of this policy statement. This policy statement allows SamCERA's separate account Managers to exercise reasonable investment freedom, while minimizing the possibility of adverse implications for the Board.

#### **2) Derivative Definition**

A 'derivative' commonly is defined as a financial instrument whose performance is derived, at least in part, from the performance of an underlying asset (such as a security or an index of securities).

#### **3) Types of Securities Included or Excluded**

Since the derivative sector of the market is likely to experience considerable change, provisions must be made for the general characteristics of a derivative security, its evaluation and monitoring. Therefore, it is most appropriate to not attempt to definitively list all of the derivative securities that are covered by this policy. Instead, what will be explicitly stated is the investment process that governs derivative investments and the evaluation and monitoring requirements of this policy.

#### **4) Approach to Policy**

An approach has been developed which states allowable derivative investments, limited allocation derivative investments and restricted derivative investments.

Derivative securities not specified in the above three groups of securities must be evaluated in accordance with the following section entitled Derivative Investment Process. If the security meets these provisions and the spirit of these policies, the manager may establish a prudent position in the instrument. However, the manager must be able to demonstrate the appropriateness of such an investment in light of SamCERA's guidelines.

#### **5) Counter-Party Evaluation**

When entering into a non-exchange traded derivative investment, the investment manager must fully evaluate the other side of the derivative transaction—the counter-parties to the trade. Due to the possibility of counter-party default, SamCERA's investment managers must evaluate the risks associated with the counter-party as if an investment were being made in the traditional securities issued by the counter-party.

At a minimum, the investment manager must evaluate the counter-party's following criteria:

- a) Corporate earnings stream
- b) Corporate asset quality
- c) Capitalization
- d) Corporate liquidity
- e) Moody's and Standard & Poor's debt ratings
- f) Other fundamental investment and risk characteristics

For those counter-parties that are broker/dealers, they must:

- a) Have investment grade (Moody's and S&P rated) debt
- b) Be registered with the SEC
- c) Have significant net capital to protect against potential adverse market circumstances

For those counter-parties that are financial institutions (banks), they must have:

- a) Investment grade (Moody's and S&P rated) debt
- b) Total assets in excess of \$1 billion
- c) Significant net capital to protect against potential adverse market circumstances

The investment manager must monitor individual investment and total portfolio exposure to counter-parties. Individual counter-party exposure must be well diversified and not concentrated in a small number of organizations.

## **6) Purposes for Derivatives**

The acceptable investment purposes for the use of derivatives are as follows:

- a. Appropriate to use futures, options and forward currency contracts to assist investment managers in mitigating portfolio risk.
- b. Useful substitute for an existing, traditional investment. In certain circumstances it may be cheaper, quicker or easier to invest in a derivative instrument or security rather than transacting in the cash or traditional security market.
- c. Provides investment value to the portfolio, while being consistent with SamCERA's overall and specific investment policies.
- d. Obtains investment exposure that is appropriate with the manager's investment strategy and SamCERA's investment guidelines, but could not be made through traditional investment securities.

Given that one or more of these investment purposes are clearly met, it is the responsibility of the investment manager to explain and demonstrate how derivative investments impact portfolio risk and the context of the investment within the overall portfolio.

Any other derivative investment purpose is not allowed. Derivatives may not be introduced into the portfolio to create economic leverage or to create investment exposures that are otherwise excluded by SamCERA's Investment Policy. However, if a manager develops an investment purpose other than those listed above which he/she feels is legitimate and consistent with the spirit of SamCERA's guidelines, this purpose should be proposed in writing to the Board.

## **7) Investment Restrictions and Derivatives Policy**

For the purpose of these guidelines, convertible debt, traditional zero coupon bonds, mortgage pass-through securities and asset-backed securities are not viewed as derivatives. Based upon the factors enumerated in the above Section 4 entitled Approach to Policy, the following guidelines have been established:

### ***Allowable derivative investments***

- a. Stable and well-structured mortgage CMO's (Collateralized Mortgage Obligations)
- b. Financial futures (if Exchange Traded)
- c. Currency forward contracts and currency options (Exchange and OTC traded)
- d. Interest rate swaps

### ***Derivative investments with allocation limits***

- a. Interest only mortgage CMO's
- b. Principal only mortgage CMO's
- c. Options (if Exchange Traded)
- d. Caps and floors as they apply to the above stated allowable derivative investments
- e. Credit Default Swaps (CDS)

Derivative investments with allocation limits, as listed above, may not represent more than 5% of the individual portfolio manager's assets (based on market value) managed for SamCERA. At the same time, derivative investments with allocation limits in aggregate may not expose the individual manager's portfolio to losses in excess of 5% of the manager's total assets managed for SamCERA. In addition, the use of options, caps and floors, and CDS may be used only for defensive investment purposes.

Managers investing in the above-defined limited allocation derivative instruments should ensure that portfolio exposure is maintained within the stated constraints, and communicate the assumptions and model used to estimate VAR (Value at Risk) and/or other reasonable risk measurement procedures annually to the Boards.

### ***Restricted derivative investments***

- a. Inverse floating rate notes and bonds
- b. Structured notes

Restricted derivatives cannot be held in SamCERA's separate account portfolios at any time.

## **8) Risk Analysis and Monitoring of Derivatives**

For those securities that are classified as derivative investments with allocation limits, the investment managers are required to test and measure derivative investment sensitivities to changes in key risk factors. These risk factors include extreme changes in interest rates, volatility, liquidity, credit quality, and cash market prices.

These risk factors will be assessed prior to initial investment and on a quarterly basis. Results of such risk testing on derivative investments with allocation limits will be supplied to SamCERA on an annual basis (December 31). If the investment manager identifies additional risks that should be evaluated, these other risk factors should be added to the list and handled in a manner consistent with the previously stated approach.

## **9) Derivative Investment Process**

Investment managers are expected to cover the following issues before purchasing a derivative instrument or security, whether specifically stated as an allowable derivative investment, a derivative investment with

allocation limits, or a derivative not specifically discussed in the Investment Restrictions and Derivatives Policy section above:

- a. Determine if the purpose for investing in a derivative security is consistent with one or more of the purposes in the previous section entitled Purposes for Derivatives.
- b. Determine where the security fits into the classification system, if at all, stated in the Investment Restrictions and Derivatives Policy.
- c. Evaluate, at a minimum, the counter-party risk and the risks stated in the Risk Analysis and Monitoring section of the derivatives policy.
- d. Evaluate the derivative in a comparably thorough manner as the firm would any other traditional investment opportunity.

### **10) Reporting Requirements**

It is the responsibility of SamCERA's investment managers to certify and demonstrate that their portfolios are in compliance with SamCERA's overall guidelines as well as those that apply to derivative investments. On an annual basis (December 31), SamCERA's investment managers will provide the following minimum monitoring information on all derivative securities:

- a. A general statement from the investment manager that its portfolio is in compliance with this Derivatives Policy.
- b. When stating the market value of the derivative exposure, the manager will specify the security pricing sources. The pricing source must be exchange-listed.
- c. A statement of the risks (credit risk—an evaluation of potential counter-party default on obligations, market risk—percent of portfolio invested in derivatives, and any other relevant risks) associated with the derivative investments.
- d. Potential adverse impact on market values if extreme adverse market movements occur.
- e. A statement regarding the liquidity of the derivative investments.
- f. Summary comments and the firm's list of approved counter-parties, ratings, and a statement regarding any changes to this list.
- g. An overall statement discussing the legal and regulatory risks associated with the portfolio manager's investments in derivatives.

## **Appendix C**

### **DISCLOSURE OF PLACEMENT AGENT FEES, GIFTS, AND CAMPAIGN CONTRIBUTIONS**

*This amended policy is effective immediately upon adoption. This policy is intended to supplement any applicable provisions of state or federal law, which shall govern in the event of any inconsistency.*

#### **I. PURPOSE**

This Policy is adopted pursuant to the requirements set forth in Government Code Section 7513.85 to help ensure that the San Mateo County Employees' Retirement Association (SamCERA) investment decisions are made solely on the merits of the investment opportunity. This Policy requires broad, timely, and updated disclosure of all Placement Agents, as that term is defined by Government Code section 7513.8, their relationships, compensation and fees.

#### **II. APPLICATION**

This Policy applies broadly to every type of SamCERA investment managers including general partners, sponsors of hedge funds, private equity funds, real estate funds and infrastructure funds, as well as public market investment managers.

This Policy as amended applies to all agreements with External Managers that are entered into after the date this Policy is adopted and all existing agreements if, after the date this amended Policy is adopted, the agreement is amended to continue, terminate, or extend the term of the agreement or the investment period, increase the commitment of funds by SamCERA or increase or accelerate the fees or compensation payable to the External Manager (Referred to hereafter as "Amendment".) In the case of an Amendment, the disclosure provisions of this Policy shall apply to the Amendment and not to the original agreement.

#### **III. RESPONSIBILITIES**

##### **A. The Board is responsible for:**

1. Not entering into any agreement with an External Manager that does not agree in writing to comply with this policy.
2. Not entering into any agreement with an External Manager who has violated this policy within the previous five years. However, this prohibition may be reduced by a majority vote of the Board at a public session upon a showing of good cause.



**B. Each External Manager is responsible for:**

1. Executing an agreement that provides the External Manager will comply with this policy.
2. Providing the following information to SamCERA Investment Staff within 45 days of the time investment discussions are initiated by the External Manager, but in any event, prior to the completion of due diligence. In the case of Amendments, the Placement Agent Information Disclosure is required prior to execution of the Amendment.
  - a. Disclosure of payments or compensation by the External Manager or any of its principals, employees, agents or affiliates, directly or indirectly, to any person or entity to act as a Placement Agent in connection with SamCERA investments.
  - b. A resume for each officer, partner, principal of the Placement Agent detailing the person's education, professional designations, regulatory licenses and investment and work experience. If any such person is a current or former SamCERA Board Member, employee or Consultant or a member of the immediate family of any such person, this fact shall be specifically noted.
  - c. A description of any and all compensation of any kind provided or agreed to be provided to a Placement Agent, including the nature, timing and value thereof. Compensation to Placement Agents shall include, but not be limited to, compensation to third parties as well as employees of the External Manager who solicit or market investments to SamCERA or who are paid based upon investment commitments secured by such employees.
  - d. A description of the services to be performed by the Placement Agent and a statement as to whether the Placement Agent is utilized by the External Manager with all prospective clients or only with a subset of the External Manager's prospective clients.
  - e. A written copy of any and all agreements between the External Manager and the Placement Agent.
  - f. A statement whether the placement agent, or any of its affiliates, are registered with the Securities and Exchange Commission or the Financial Industry Regulatory Association, or any similar regulatory agent in a country other than the United States, and the details of that registration or explanation as to why no registration is required.
  - g. A statement whether the placement agent, or any of its affiliates, is

registered as a lobbyist with any state or national government.

h. The names of any current or former SamCERA Board Members, employees, or Consultants who suggested the retention of the Placement Agent.

3. Providing an update of any changes to any of the information provided pursuant to section B.2 above within 30 calendar days of the date that the External Manager knew or should have known of the change in information.
4. Representing and warranting the accuracy of the information described in section B.2 above.
5. Causing its engaged Placement Agent to disclose, prior to acting as a Placement Agent to SamCERA:
  - a. All campaign contributions made by the Placement Agent to any publicly elected SamCERA Board Member during the prior 24-month period. Additionally, any subsequent campaign contribution made by the Placement Agent to any publicly elected SamCERA Board Member during the time the Placement Agent is receiving compensation in connection with a SamCERA investment shall also be disclosed.
  - b. All gifts, as defined in Government Code Section 82028, given by the Placement Agent to any SamCERA Board Member during the prior 24-month period. Additionally, any subsequent gift made by the Placement Agent to any SamCERA Board Member during the time the Placement Agent is receiving compensation in connection with a SamCERA investment shall also be disclosed.
6. SamCERA reserves the right to deem the failure to disclose the information required by 5(a) and 5(b) as a material breach of the agreement with the External Manager.

**C. SamCERA Investment Staff (“Staff”) are responsible for:**

1. Providing External Managers with a copy of this Policy at the time that discussions are initiated with respect to a prospective investment or engagement.
2. Confirming that the information in section B above has been received within 45 days of the time the execution of the investment contract or Amendment.
3. For new contracts and amendments to contracts existing as of the date of the initial adoption of this Policy, securing the agreement of the External Manager in the final written agreement between SamCERA and the External Manager to provide in the event that there was or is an intentional material omission or

inaccuracy in the Placement Agent Information Disclosure or any other violation of this Policy, SamCERA reserves the right to reimbursement of any management or advisory fees paid by SamCERA from the date of violation to the date of the imposition of the fees.

4. Prohibiting any External Manager or Placement Agent from soliciting new investments from SamCERA for five years after they have committed a material violation of this Policy; provided, however, that SamCERA's Board, by majority vote at a noticed, public meeting, may reduce this prohibition upon a showing of good cause.
5. Providing the Board with Placement Agent information relating to each investment at the time the investment is brought to the Board for its decision.
6. Maintaining Placement Agent Information Disclosures as a public record and reporting to the Board any a material violation of this Policy.

**Adopted December 14, 2010**

**Amended October 25, 2011**

**Amended March 28, 2017**

**DEFINITIONS:**

*The following definitions are excerpted from California Government Code section 7513.8 and are current as of March 28, 2017. Should the legislature subsequently amend the definitions below, the definition of these terms as amended shall supersede the definitions contained in this policy.*

**“External Manager”** means either of the following: (1) a Person who is seeking to be, or is, retained by a board or an Investment Vehicle to manage a portfolio of securities or other assets for compensation; (2) a Person who manages an Investment Fund and who offers or sells, or has offered or sold, an ownership interest in the Investment Fund to a board or an Investment Vehicle. (All code section references are to the Government Code, unless otherwise noted.)

**“Person”** means an individual, corporation, partnership, limited partnership, limited liability company, or association, either domestic or foreign.

**“Investment Vehicle”** means a corporation, partnership, limited partnership, limited liability company, association, or other entity, either domestic or foreign, managed by an External Manager in which a board is the majority investor and that is organized in order to invest with, or retain the investment management services of, other External Managers.

**“Investment Fund”** means a private equity fund, public equity fund, venture capital fund, hedge fund, fixed income fund, real estate fund, infrastructure fund, or similar pooled investment

entity that is, or holds itself out as being, engaged primarily, or proposes to engage primarily, in the business of investing, reinvesting, owning, holding, or trading securities or other assets. Notwithstanding the preceding sentence, an investment company that is registered with the Securities and Exchange Commission pursuant to the Investment Company Act of 1940 (15 U.S.C. Sec. 8a-1 et seq.) and that makes a public offering of its securities is not an Investment Fund.

**“Placement Agent”** means any Person directly or indirectly hired, engaged, or retained by, or serving for the benefit of or on behalf of, an External Manager or an Investment Fund managed by an External Manager, and who acts or has acted for compensation as a finder, solicitor, marketer, consultant, broker or other intermediary in connection with the offer or sale to a board or an Investment Vehicle either of the following: in the case of an External Manager as defined in subpart (1) of the definition of an External Manager, the investment management services of the External Manager; in the case of an External Manager as defined in subpart (2) of the definition of an External Manager, an ownership interest in an Investment Fund managed by the External Manager. Notwithstanding the preceding sentence, an individual who is an employee, officer, director, equityholder, partner, member, or trustee of an External Manager and who spends one-third or more of his or her time, during a calendar year, managing the securities or assets owned, controlled, invested, or held by the External Manager is not a Placement Agent.



# **SamCERA's Investment Policy Statement**

**Latest Revision December 2020**

## **1.0 ESTABLISHMENT OF INVESTMENT POLICY**

The Board of Retirement (the “Board”), having exclusive authority and exclusive fiduciary responsibility for the investment and administration of the Trust Fund (the “Fund”), hereby establishes the following Investment Policy (the “Policy”) for the investment of the San Mateo County Employees’ Retirement Association (“SamCERA”) assets. The Board reserves the right to amend, supplement or rescind this Policy at any time.

The purpose of this Policy is to assist SamCERA in effectively supervising its investments in order to meet the requirements of the California Constitution, the County Employees Retirement Law of 1937 (“the 1937 Act”), the Mission and Goals of SamCERA and other requirements, and to encourage effective communication between SamCERA and its investment managers (the “Manager(s)”) and investment consultants (the “Consultant(s)”).

### **A. GOVERNING DOCUMENTS FOR THE INVESTMENTS OF THE FUND.**

The powers and duties of the Board are set forth in the 1937 Act and in Article XVI of the State Constitution. They are further defined by the Mission and Goals adopted by the Board.

SamCERA was created by San Mateo County Ordinance No. 564 adopted by the Board of Supervisors, effective July 1, 1944. This ordinance established the retirement system in accordance with the provisions of California's County Employees' Retirement Law of 1937.

#### **Constitution of the State of California**

Article XVI, Section 17, relates to the administration of the system and investment of the Fund assets. It reads in pertinent part:

“(a)...The assets of a public pension or retirement system are trust funds and shall be held for the exclusive purposes of providing benefits to participants in the pension or retirement system and their beneficiaries and defraying reasonable expenses of administering the system.

“(b) The members of the retirement board of a public pension or retirement system shall discharge their duties with respect to the system solely in the interest of, and for the exclusive purposes of providing benefits to, participants and their beneficiaries, minimizing employer contributions thereto, and defraying reasonable expenses of administering the system. A retirement board's duty to its participants and their beneficiaries shall take precedence over any other duty.

“(c) The members of the retirement board of a public pension or retirement system shall discharge their duties with respect to the system with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with these matters would use in the conduct of an enterprise of a like character and with like aims.

“(d) The members of the retirement board of a public pension or retirement system shall diversify the investments of the system so as to minimize the risk of loss and to

maximize the rate of return, unless under the circumstances it is clearly not prudent to do so.”

### **The 1937 Act**

The 1937 Act contains language similar to that in the State Constitution regarding the investments of the Fund:

Government Code section 31595.

“The board has exclusive control of the investment of the employees retirement fund. The assets of a public pension or retirement system are trust funds and shall be held for the exclusive purposes of providing benefits to participants in the pension or retirement system and their beneficiaries and defraying reasonable expenses of administering the system. Except as otherwise expressly restricted by the California Constitution and by law, the board may, in its discretion, invest, or delegate the authority to invest, the assets of the fund through the purchase, holding, or sale of any form or type of investment, financial instrument, or financial transaction when prudent in the informed opinion of the board.

The board and its officers and employees shall discharge their duties with respect to the system: (a) Solely in the interest of, and for the exclusive purposes of providing benefits to, participants and their beneficiaries, minimizing employer contributions thereto, and defraying reasonable expenses of administering the system.

(b) With the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with these matters would use in the conduct of an enterprise of a like character and with like aims.

(c) Shall diversify the investments of the system so as to minimize the risk of loss and to maximize the rate of return, unless under the circumstances it is clearly prudent not to do so.

### **SamCERA’s Mission and Goals**

The Board has adopted a Mission and Goals statement. The Mission summarizes SamCERA’s reason to exist.

“Mission: SamCERA exists to serve as loyal fiduciary for its members and as prudent administrator of the retirement system.”

The Mission is further defined by three goals. One goal speaks to the management of the assets of the Fund. This asset management goal reads:

“Prudently manage the assets in order to appropriately fund the actuarial liabilities of the retirement system, to ensure the ability to pay all earned benefits while minimizing the costs to employers.”

In recognition of the requirements of the California Constitution, the 1937 Act, the SamCERA Mission and Goals and other legal requirements, the SamCERA Board has established this Investment Policy.

## **2.0 MANAGEMENT OF THE FUND**

### **A. ROLES AND PRINCIPAL DUTIES**

The Fund investments shall be prudently planned, implemented, managed, and monitored by the Board. Investment Staff (the “Staff”), Investment Consultant (the “Consultant”), Custodian Bank (the “Custodian”), and Investment Managers (the “Managers”) shall support the Board in this activity. The roles are set forth below:

1. The Board establishes and maintains the investment policy, including: investment philosophy, investment objectives, strategic asset allocation, allocation-level performance benchmarks, and risk philosophy. The Board makes investment and monitoring decisions based upon the recommendations of Staff, Consultants, and other service providers engaged by the Board. The Board reviews and monitors all investments, as well as the policies, guidelines and procedures required to prudently administer the Fund and to effectively mitigate risk to the Fund. From time to time, the Board will utilize its Investment Committee to assist the Board in these activities and related specified tasks.
2. Staff oversees the Fund’s investment program activities, implements the Board’s decisions, manages the existing fund investments, and makes recommendations to the Board regarding Fund management, including investment-related policies and procedures. Staff makes recommendations regarding the selection of the Consultant, Managers, Custodian as set forth below and monitors the performance and compliance of these and other investment related service providers.
3. The Consultant reviews, analyzes and evaluates the Fund’s effectiveness and efficiency and makes fund management related recommendations. Consultant assists Staff in implementing the Board’s decisions and developing all investment-related policies. Consultant’s responsibilities are detailed in the service agreement between SamCERA and Consultant.
4. The Custodian provides custody of SamCERA’s investment assets. In addition, the Custodian manages the securities lending program. The Custodian’s responsibilities are detailed in the service agreement between SamCERA and Custodian.
5. The Managers manage their mandated allocations in accordance with all applicable laws, Board-established policies, guidelines and procedures, as well as specific investment guidelines. For separately managed accounts, managers’ responsibilities are detailed in the Investment Management Agreements (IMA) between SamCERA and each Manager. For commingled funds, managers’ responsibilities are detailed in the related Fund documents.



## **B. INVESTMENT PORTFOLIO MANAGEMENT**

The Board, with the assistance of Staff and Consultant, select and monitor Managers to manage the assets of the Fund.

### **1. Hiring New Managers**

For public markets manager searches (i.e. non private equity and private real assets), Staff will inform the Board about the search process, including scope of the mandate, and the investment style, benchmark, and the minimum qualifications for candidates. Staff will update the Board on the short list of potential managers. Consultant and Staff will perform due diligence activities deemed applicable by the Chief Investment Officer, which may include analysis of performance records, meetings, due diligence questionnaires, interviews, and on-site visits. Upon completion of such due diligence, Staff and Consultant will bring a finalist to the Board for approval. The recommendation shall provide the Board with a summary description of the conducted due diligence activities.

For private markets (private equity and private real assets), the Consultant, with Staff input, sources managers that can best fit the desired mandate consistent with the annual pacing study and applicable investment policy. Consultant and Staff will bring potential private markets opportunities to the Board for approval. An exception to this policy is when a decision for a private market investment must be made prior to the date of the next regularly scheduled Board meeting. In these instances, and for investments of \$35 million or less, the Chief Executive Officer is authorized to make an investment-related decision after consulting with the Board Chair, or if the Chair is not available, the Vice Chair, and one member of the Investment Committee as long as such decision is in the best interest of the fund and consistent with applicable Board policy. Any action under this authorization will be reported to the Board at a subsequent regularly scheduled meeting.

### **2. Managing and Monitoring Existing Managers**

The Board monitors the individual investment managers on a continuous basis through information provided by Staff, the Consultant, the Managers, and other investment service providers. Monthly, the Chief Investment Officer will present a preliminary performance report to the Board that is meant to provide a high-level summary of how the fund and each monthly-valued manager is performing. In addition, for SamCERA's separate accounts, Staff receives holdings and attribution reports from each separate account Manager on a monthly basis. For commingled funds, staff receives from the Manager either monthly or quarterly portfolio performance, attribution, exposure, and commentary reports.

Quarterly, the Consultant, with assistance from the Chief Investment Officer, will present an investment performance report to the Board, as specified in Section 14.0 (Quarterly Investment

Performance Reporting) in the Investment Policy. This report provides a more detailed performance attribution for the total plan and individual Managers, and helps to identify any short-term outlier deviations from expectations.

Semi-annually (month-end June and December of each year), every public markets (i.e. not private equity or private real asset) Manager completes a compliance statement identifying any significant firm, regulatory, and portfolio issues. In addition, semi-annually as of June and December of each year, Consultant will present performance reports for both the Private Equity and Private Real Assets programs that summarize each program and shows total program performance and program diversification by strategy, geography, industry, and vintage year.

Annually, Staff and Consultant will convene an investment strategy session, as specified in Section 15.0 (Annual Investment Strategy) in the Investment Policy, to allow a longer-term assessment of the Managers and the total fund performance. Lastly, all public markets Managers are interviewed annually by Staff and Consultant, and must complete a due diligence questionnaire.

During these presentations at SamCERA, Managers will provide an update on the Manager's organization and business plan, any changes to the investment process, and a summary of investment performance. Staff and Consultant report to the Board following these meetings.

After the Board approves an initial investment to be held in a separate account or open-end evergreen commingled fund, staff will be responsible for managing that allocation, including initiating any adjustments to that allocation amount, consistent with the allocation ranges outlined in Section 6.0. For those investments held in closed-end (or non-perpetual life) commingled funds (e.g. private equity, private real assets, private credit, value-add real estate), staff will seek Board approval for any additional allocation to those funds, including re-up commitments, unless the timing of the decision is subject to the policy exception set forth in paragraph 1.

### **3. Terminating Existing Managers**

The Board recognizes investments may need to be adjusted or removed from the Fund from time to time for a variety of reasons, including organization changes at the Manager, changes in Manager style, underperformance relative to expectations, and the Managers' strategy is no longer appropriate for the fund. The Board determines if a Manager should be terminated after receiving input and or recommendations from Staff and Consultant.

In situations in which developments give immediate concern that an investment with a Manager is no longer prudent for the investment program and a termination or other related investment decision should be made prior to the next regularly scheduled Board meeting, the Chief Executive Officer is authorized to terminate the Manager and or move Fund assets after consulting with the Board Chair (or Vice Chair or Secretary based on availability, in that order) and one member

of the Investment Committee. Situations causing an immediate concern, include, but are not limited to, when: (1) the firm suffers the resignation or other loss of its key portfolio managers on the strategy, (2) the firm dissolves, ceases to exist, or is otherwise incapable of carrying out its activities in the ordinary course of its business, (3) the firm is actually or effectively shut down by a regulatory agency or is accused of theft or fraud or other serious malfeasance by a regulatory agency, or (4) the fund's investment is in jeopardy of material loss. The Board will be promptly notified of the determination by the Chief Executive Officer.

### **3.0 INVESTMENT OBJECTIVES**

The Board shall develop an investment program, consistent with the Investment Beliefs and General Investment Policies as stipulated in Sections 4.0 and 5.0, respectively, in order to meet the following objectives:

- A. Generate risk-adjusted returns that exceed the Asset Allocation Policy Benchmark (as defined in Section 6.0) on a net-of-fee basis over five-year rolling periods.
- B. Achieve a Fund return that meets or exceeds the long-term forecast of capital market returns for the asset allocation portfolio benchmark over multiple economic cycles (e.g. 15-20 years).
- C. Provide a more consistent return stream than a traditional 60% Equity / 40% Fixed Income portfolio as measured by lower portfolio drawdowns over a full market cycle.

### **4.0 INVESTMENT BELIEFS**

The following section summarizes the Board's investment beliefs that have guided it in the development of this Policy document and will guide it in the oversight of the Plan assets.

- Strategic asset allocation is the primary driver of portfolio risk and return.
- SamCERA should have a long-term horizon and not be tempted to deviate from its long-term plan in response to short-term volatility.
- Everything else being equal, simplicity is preferred over complexity.
- For those asset classes evidencing market efficiencies, the manager structure may favor the employment of passive strategies.
- Focus on income and capital appreciation should be balanced and not overly dependent on one or the other.
- Diversification is fundamental.
- There is no single definition of risk. There are various measures of 'risk' that can be used for various purposes.
- The portfolio should be diversified across many risk dimensions/timeframes.

- SamCERA should not pursue investments that will not adequately compensate it for the risks that those investments bring.
- Costs matter.

## **5.0 GENERAL INVESTMENT POLICIES**

Consistent with the investment beliefs contained in Section 4.0, it is the investment policy of the Board to:

- A. Achieve long-term risk-adjusted returns consistent with its fiduciary duty.
- B. Pursue an investment strategy that reduces the volatility of returns through prudent diversification of the portfolio across a broad selection of distinct asset classes, as provided for in Section 6.0 of this Investment Policy.
- C. Further diversify other risks, including extreme events, liquidity, and leverage by looking beyond traditional asset class definitions by utilizing multiple lenses on portfolio risks.
- D. Adopt an asset allocation target to guide the structure of the investment portfolio, as provided for in Section 6.0, and reevaluate on an annual basis.
- E. Reevaluate the asset-liability study every three to five years.
- F. Delegate to staff the management of existing investment managers, and for those strategies in separately managed accounts and evergreen (or open-end) commingled fund structures, the on-going adjustments to allocations to such managers consistent with the investment policies and investment ranges contained in Section 6.0.
- G. Delegate full discretion, including whether to include environmental, social, and governance factors, if such factors have a direct relationship to the economic and financial value of an investment, when analyzing the financial merits of competing investment choices on behalf of SamCERA, to each investment manager to the extent authorized in their Investment Management Agreement (IMA).
- H. Adopt objectives that encourage investment managers to maximize their performance, within acceptable risk parameters, relative to their individual investment style benchmark.
- I. Refrain from drastically shifting asset class allocations over short time spans, unless it is in the Fund's best interest to do so.
- J. Rebalance the portfolio in accordance with the Rebalancing Policy set forth in Section 7.0.

## 6.0 ASSET ALLOCATION & PORTFOLIO STRUCTURE

### A. Asset Allocation by Performance Driver

In addition to grouping investments into traditional asset classes (Public Equity, Fixed Income, Alternative Assets, Inflation Hedge and Liquidity), SamCERA also groups its investments by the underlying performance drivers within each asset class composite. As part of this process, SamCERA classifies its portfolio into three main drivers of performance listed below.

#### **Growth**

The Growth category includes assets in which their primary driver of returns is tied to the general strength of economic output. These assets will generally do well when economic conditions are favorable, but generally struggle in times of economic weakness and recession. Assets classified in the Growth category include Public Equity (consisting of U.S. and International Equity), Private Equity within Alternatives, and Opportunistic Credit within Fixed Income.

#### **Diversifying**

Diversifying assets provide protection from equity risk and may be characterized as being more defensive (i.e. may help provide stability when markets fall) or more absolute-return oriented (i.e. performance is not as dependent on the overall strength of equity markets). Assets classified in the Diversifying category include Core Fixed Income, and Absolute Return within Alternatives.

#### **Inflation Hedge**

Lastly, Inflation Hedge assets provide additional diversification from equity risk and provide a potential hedge against unexpected inflation. Assets classified in this category include Real Estate, Public Real Assets, and Private Real Assets.

<b>Asset Allocation Policy</b>			
<b>Performance Driver View</b>	<b>Target Allocation</b>	<b>Rebalancing Range</b>	<b>Traditional Asset Class View **</b>
<b>Growth</b>	<b>55%</b>	<b>±3%</b>	
Public Equity	39%	±3%	Public Equity
Private Equity *	6%	±2%	Alternatives
Opportunistic Credit	10%	±2%	Fixed Income
<b>Diversifying</b>	<b>28%</b>	<b>±2%</b>	
Core Fixed Income	21%	±2%	Fixed Income

Absolute Return	6%	±2%	Alternatives
Liquidity	1%	±2%	Liquidity
<b>Inflation Hedge</b>	<b>17%</b>	<b>±2%</b>	
Real Estate	10%	±2%	Inflation Hedge
Private Real Assets *	3%	±2%	Inflation Hedge
Public Real Assets	4%	±2%	Inflation Hedge

\* Recognizing the illiquidity of the asset class, rebalancing will be considered over six- to twelve-month periods.

\*\* Traditional Asset Allocation: 39% Public Equity, 31% Fixed Income, 12% Alternatives, 17% Inflation Hedge, and 1% Liquidity.

## B. Growth Asset Allocation

Growth assets shall be allocated to managers within the following asset/sub-asset classes:

GROWTH ASSET CLASSES	TARGET ALLOCATION	REBALANCE RANGE
<b>Public Equity</b>	39%	±3%
Large Capitalization Domestic	19.0%	±2%
Passive Core	8.0%	±2%
Active Core	3.0%	±2%
Active Low-Volatility Core	8.0%	±2%
Small Capitalization Domestic	2.0%	±2%
Active Core	2.0%	±2%
International	18.0%	±2%
Passive Core	6.0%	±2%
Growth	6.0%	±2%
Value	6.0%	±2%
<b>Private Equity</b>	6%	±2%
<b>Opportunistic Credit</b>	10%	±2%
<b>Total Growth</b>	55%	±3%

## C. Diversifying Asset Allocation

Diversifying assets shall be allocated to managers within the following asset/sub-asset classes:

<b>DIVERSIFYING ASSET CLASSES</b>	<b>TARGET ALLOCATION</b>	<b>REBALANCE RANGE</b>
<b>Core Fixed Income</b>	21%	±2%
Core	14.0%	±2%
Core Securitized	4.0%	±2%
Core Unconstrained	3.0%	±2%
<b>Absolute Return</b>	6%	±2%
<b>Liquidity</b>	1%	±2%
<b>TOTAL DIVERSIFYING</b>	28%	±2%

#### **D. Inflation Hedge Asset Allocation**

Inflation Hedge assets shall be allocated as follows:

<b>INFLATION HEDGE ASSET CLASSES</b>	<b>TARGET ALLOCATION</b>	<b>REBALANCE RANGE</b>
<b>Real Estate</b>	10.0%	±2%
<b>Private Real Assets</b>	3.0%	±2%
<b>Public Real Assets</b>	4.0%	±2%
<b>TOTAL INFLATION HEDGE ASSETS</b>	17.0%	±2%

#### **E. Asset Allocation Policy Benchmark**

The Asset Allocation Policy Benchmark defined below is derived by assigning a passive benchmark to each of the sub-asset classes referenced in Sections 6.0 (A) through 6.0 (D) and weighting each by the Target Allocation. The performance of the Asset Allocation Policy Benchmark is computed by the Plan's investment consultant.

<b>Benchmark</b>	<b>Asset Allocation Policy Benchmark</b>
<b>Growth Assets</b>	<b>55%</b>
Russell 3000 Index	21%
MSCI ACWI x US IMI Index Hedged*	18%
Russell 3000 +3% (One Quarter Lagged)	6%
BC BA Intermediate High Yield Index	10%
<b>Diversifying Assets</b>	<b>28%</b>

BC Aggregate Index	21%
SOFR + 4%	6%
91 Day T-Bills	1%
<b>Inflation Hedge</b>	<b>17%</b>
<hr/>	
NCREIF ODCE	10%
Custom Private Real Asset Index**	3%
Custom Public Real Asset Index***	4%

\* 50% hedge ratio starting 10/1/19.

\*\*Comprised of 75% S&P Global Infrastructure Index and 25% S&P Global LargeMidCap Commodity and Resources Index + 2% (One Quarter Lagged)

\*\*\*Comprised of 25% Bloomberg Roll Select Commodity Index, 25% Bloomberg US TIPS Index, 25% S&P Global LargeMidCap Commodity and Resources Index, and 25% S&P Global Infrastructure Index.

## 7.0 REBALANCING POLICY

A. The Chief Investment Officer (CIO) shall rebalance the portfolio as needed in conformance with the asset allocation tactical ranges set forth in Section 6.0.

B. The potential need to rebalance will be continuously monitored, and will be subject to deviations within the established rebalance ranges specified in Section 6.0.

C. The CIO will have discretion to rebalance to Target or to some other allocation, as long as it is within policy ranges.

D. Cash flows will be used first to rebalance, and to the extent possible, exchange-traded derivatives will be used to rebalance in a cost-effective manner.

E. All rebalancing activity shall be reported to the Board at the next scheduled meeting.

## 8.0 GENERAL MANAGER INVESTMENT PERFORMANCE POLICIES

The responsibility for securities selection, purchase and sale decisions, and proxy voting (where appropriate) is delegated to the external investment managers. The individual investment guideline parameters (including diversification constraints, concentration limits, asset type exclusions, etc.) and performance objectives for each investment manager will be established within the IMA or other applicable legal agreement(s) with each firm.

The Board expects to measure investment performance quarterly and will generally follow prudent time horizons when evaluating short term, intermediate term, and long term performance of its investment managers. Generally, the Board defines underperformance as: Cumulative annualized performance (net of fees) over a three-year period below a broad market-based benchmark return times 0.9, or five year return (net of fees) below the broad market based benchmark return.



Performance will also be evaluated in light of the manager's stated style and discipline.

## 9.0 GROWTH ASSETS INVESTMENT POLICIES

### GROWTH ASSETS OVERVIEW:

Assets classified in the Growth category include Public Equity (consisting of U.S. and International Equity), Private Equity within Alternatives, and Opportunistic Credit within Fixed Income.

**Public Equity:** Public equity assets include funds shares/stock of a company through a public market. SamCERA invests utilizing both passive approaches (meant to track the performance and characteristics of major market indices, like the Russell 1000 Index and MSCI ACWI ex US IMI Index), and via active approaches that are meant to outperform the major market benchmarks. Public Equity is expected to produce returns higher than that provided from Fixed Income but at potentially higher levels of volatility. Exposure to this asset class will provide return streams generally correlated to that of general economic growth. There are two primary components to the Public Equity category: 1) Domestic Equity, and 2) International Equity.

- 1) Domestic Equity:** SamCERA further breaks out its U.S. public equity holdings into two sub-composites: 1) U.S. Large Capitalization Domestic, which is comprised of U.S. companies valued generally over \$10 billion, and 2) U.S. Small Capitalization Domestic, which is comprised of U.S. companies valued generally under \$2 billion.

For the domestic equity program, the majority of the tracking error will come from stock selection via active management as the overall manager structure for domestic equities will not possess any significant biases in terms of investment style. The Domestic Equity composite will consist of two sub-composites: 1) Large-Capitalization Equity, and 2) Small-Capitalization Equity. Large Capitalization Equity will consist of four Core strategies: one passive, one low-tracking error active, and two low-volatility active strategies. Small-Capitalization Equity will consist of an actively-managed Core strategy.

- 2) International Equity:** International Equity consists of developed (public companies domiciled in developed market countries such as Germany, France, UK, Japan, etc.) and emerging markets (public companies domiciled in emerging market countries such as China, Brazil, Mexico, Russia, etc.)

International Equity will consist of three strategies: 1) a passive Core component, 2) Active Value, and 3) Active Growth. All three strategies will have exposure to both developed and emerging markets).

**Private Equity:** Private Equity are funds, typically illiquid investments, that directly invest in private companies, or that engage in buyouts of public companies. Private Equity is expected to be one of the highest returning asset classes over the long-term. Its role in the portfolio is to provide high return potential in order to maximize the ability of the Fund to meet its performance objectives.

The Private Equity program will contain manager allocations to three primary sub-categories: 1) Buyouts, 2) Venture Capital, and 3) Debt/Special Situations. These allocations will be implemented via allocation to primary and secondary fund investments and co-investment opportunities. The sub-allocation targets and target ranges are summarized below:

<b>Sub-Category</b>	<b>Target Allocation</b>	<b>Range</b>
Buyouts	60%	+/- 20%
Venture Capital	20%	0 – 30%
Debt/Special Situations	20%	+/- 10%

The responsibility for private equity sourcing is delegated to SamCERA’s investment consultant. The private equity portfolio shall adhere to the following investment guidelines covering diversification and quality:

(a) **Diversification:** Subject to availability of sufficient attractive opportunities, the portfolio is to be diversified over multiple years by the following:

**Vintage Year:** It is expected that roughly equal amounts of new funding will be committed in each calendar year, with deviations permitted to accommodate market opportunities and to facilitate initial entry into the asset class.

**Investment Manager:** The reported value plus unfunded commitments of any one investment manager (excluding fund of funds) up to no more than twenty (20) percent of the reported value plus unfunded commitments of the total private equity portfolio.

**Geography:** Through commitments to funds located and/or investing both in and outside of the United States.

**Industry:** It is expected that the private equity portfolio will be generally diversified by sector/industry.

(b) **Quality:** All commitments to private equity by SamCERA must be of institutional quality as evidenced by other tax-exempt institutional investors’ commitments to the investment manager’s prior or current funds.

Fund managers are expected to comply with SamCERA’s private placement disclosure rules.

**Opportunistic Credit:** Fixed income assets are debt investments that provide a return in periodic payments in debt instruments issued by governments and corporations. Opportunistic Credit is expected to be the highest-risk category within fixed income, and will be used to enhance return by investing via public and private investments in non-traditional sectors of the fixed income market, including emerging market debt, high yield bonds, direct lending, bank loans, convertible bonds, and CMBS/ABS securities. This sub-category will be exposed to general economic risk factors, similar to public equities, but may provide a steadier stream of returns than public equity asset classes.

#### GROWTH ASSETS PERFORMANCE OBJECTIVE:

The performance objective of the Growth Assets Composite is to outperform, on a net-of-fee basis, a customized index (Customized Benchmark Portfolio) incorporating the weighted average components for four composite sub-asset classes (which results in the following weights: 38% Russell 3000, 33% MSCI ACWI ex US IMI Index hedged\*, 11% Russell 3000 Index + 3% (one quarter lagged), and 18% Barclays BA Intermediate High Yield Index).

The Public Equity composite has a maximum tracking error of 3% to its composite benchmark while the Opportunistic Credit composite has a maximum tracking error of 2% to its composite benchmark.

#### GROWTH ASSETS RISK EXPOSURES AND RISK MITIGATION:

**Public Equity:** The primary risk factors for Public Equity are correlation to general economic growth, high volatility in returns, and potential illiquidity in smaller-capitalization and certain emerging market stocks. SamCERA will control for these risk factors by diversifying the plan across assets that exhibit limited correlation to economic growth. In addition, SamCERA's rebalancing ranges for small-cap equity will help ensure adequate diversification within the equity portion of the SamCERA portfolio.

**Private Equity:** Private Equity, while expected to provide attractive returns, also have a number of risks. Chief among these are illiquidity risk and leverage. By their nature Private Equity is generally illiquid in that the life of these fund investments can be as long as ten to twelve years. SamCERA recognizes that this illiquidity is a necessary characteristic (and source of return premium) for these asset classes and as such will endeavor to take this illiquidity into account at the total plan level when addressing total plan liquidity needs during strategic planning asset liability studies. Leverage can be employed by private equity managers to enhance the overall risk-adjusted returns. SamCERA will control leverage exposure through partnership selection and portfolio construction and diversification.

**Opportunistic Credit:** Opportunistic Credit is generally the highest risk, lowest liquidity sub-category within Fixed Income. SamCERA will take into account unique risk factors when constructing the fixed income portfolio to help ensure that the overall risk profile of the total portfolio is consistent with expectations. Opportunistic Credit typically includes the risk factors contained in Core and Core Unconstrained, but, depending on the mandate, with higher emphasis to credit default risks, emerging markets sovereign/corporate default risk, potential leverage, and potential illiquidity. It is expected that strategies within Opportunistic Credit will have a maximum leverage ratio of 2.5x at the fund level (i.e. certain holdings may be levered higher than the 2.5x limit, as long as the fund (or strategy) has a maximum 2.5x leverage). Strategies employing higher leverage will be relegated to the debt/special situations category of Private Equity (see above).

<b>GROWTH ASSET CLASSES</b>	<b>BENCHMARK INDEX</b>
<b>Growth Assets</b>	<b>Customized Benchmark Portfolio</b>
<b>Public Equity</b>	
<b>Domestic Equity</b>	<b>Russell 3000</b>
Large Capitalization Domestic Equity	Russell 1000
Passive Core	Russell 1000
Active Core	Russell 1000
Active Low Volatility Core	Russell 1000
Small Capitalization Domestic Equity	Russell 2000
Active Core	Russell 2000
<b>International Equity</b>	<b>MSCI All Country World ex US IMI hedged*</b>
International Passive Core	MSCI ACWI ex US IMI
International Growth	MSCI ACWI Free ex US Growth
International Value	MSCI ACWI Free ex US Value
<b>Private Equity</b>	<b>Russell 3000 + 3% (One Quarter Lagged)</b>
<b>Opportunistic Credit</b>	<b>Barclays Capital BA Intermediate High Yield Index</b>

\* 50% hedge ratio starting 10/1/19.

## 10.0 DIVERSIFYING ASSETS INVESTMENT POLICIES

### DIVERSIFYING ASSETS OVERVIEW:

Assets classified in the Diversifying category include Core Fixed Income, Absolute Return within Alternatives, and Liquidity.

**Fixed Income:** Fixed income assets are debt investments that provide a return in periodic payments in debt instruments issued by governments and corporations. Core Fixed Income is generally the lowest risk and highest liquidity sub-category within Fixed Income. It is expected to provide a lower, but steadier stream of returns than public equity asset classes, and also to reduce the risk of the overall portfolio as bonds have lower risk than most other major asset classes. That said, there are a number of sub-categories within Core Fixed Income, which exhibit different risk/return trade-offs and hold slightly different tasks in terms of role in the portfolio, but have the common goal of dampening portfolio volatility. Core Fixed Income is broken out into three subcategories:

- 1) Core, 2) Core Securitized, and 3) Core Unconstrained

**Core:** Core is generally considered the lowest-risk fixed income category, and one that invests in primarily liquid, investment grade U.S. Dollar denominated bonds. It also generally consists of sectors that comprise the Bloomberg Barclays Aggregate Bond Index. Core's role in the portfolio is to dampen portfolio volatility and protect the portfolio in times of economic duress.

**Core Securitized:** Core Securitized is a low/medium-risk fixed income sub-category, and contains securitized sectors, including mortgage-backed securities, commercial mortgage-backed securities, and asset-backed securities. Core Securitized's role in the portfolio, in addition to dampening portfolio volatility, is to provide higher yield and slightly lower interest rate sensitivity as compared to the Bloomberg Barclays Aggregate Bond Index.

**Core Unconstrained:** Core Unconstrained is a medium-risk fixed income sub-category, and contains the sectors contained in Core plus high yield (below investment grade bonds), non-U.S. Dollar denominated bonds, and emerging market fixed income securities. Core Unconstrained's role in the portfolio is a combination of total portfolio volatility dampening and some moderate return enhancement.

**Absolute Return:** The Absolute Return category will focus on funds that have an absolute return orientation and are not expected to contain significant levels of public market beta over the long term. This category is expected to provide a diversifying return stream to the total plan that is not correlated to the public markets. Suitable investment strategies include multi-strategy funds, alternative risk premia funds, GTAA or global macro funds, and CTA/Managed Futures trend following funds. It is expected that this category will be implemented via commingled funds and not in separate accounts so that SamCERA's investment in any single fund would be 'ring-fenced' (i.e. any potential losses would be limited to the investment in the single fund, and not extend to the total plan assets).

**Liquidity:** The Liquidity category currently consists of cash and cash-equivalent type investments with short duration.

#### DIVERSIFYING ASSETS PERFORMANCE OBJECTIVE:

The performance objective of the Diversifying Assets Composite is to outperform, on a net-of-fee-basis, a customized index (Customized Benchmark Portfolio) incorporating the weighted average components for three composite sub-asset classes (which results in the following weights: 75% Bloomberg Barclays Aggregate Index, 21% to SOFR + 4%, and 4% to 91 Day T-Bills). The Core Fixed Income sub-asset class has a maximum tracking error of 2% to its composite benchmark.

#### DIVERSIFYING ASSETS RISK EXPOSURES AND RISK MITIGATION:

The Core Fixed Income sub-sectors have different risk factor exposures. SamCERA will take into account these unique risk factors when constructing the Core Fixed Income portfolio to help ensure that the overall risk profile of the total portfolio is consistent with expectations.

**Core:** The primary risk factors are sensitivity to changes in interest rates, changes in mortgage prepayment speeds, and investment-grade corporate and sovereign credit risk.

**Core Securitized:** The primary risk factors are complexity, credit and prepayment risk across various securitized sectors (e.g. ABS, CMBS, and RMBS) with interest rate sensitivity being a relatively lower risk factor as compared to assets within Core (above). The focus is on higher quality securitized investments to minimize credit risk.

**Core Unconstrained:** The primary risk factors typically include the risk factors found in Core with additional exposures to high-yield default risks, emerging markets sovereign/corporate default risk, and potential illiquidity. The allocation to these risk exposures will be dynamic over time as the portfolio is not constrained to a benchmark.

**Absolute Return:** Absolute Return, while expected to provide attractive returns that are less correlated to the returns provided by public asset classes, also has a number of risks. Chief among these is leverage. Leverage can be employed by absolute return managers to enhance the overall risk-adjusted returns. SamCERA will control leverage exposure through fund selection as well as portfolio construction and diversification.

DIVERSIFYING ASSET CLASSES	BENCHMARK INDEX
DIVERSIFYING ASSETS	CUSTOMIZED BENCHMARK PORTFOLIO
<b>Core Fixed Income</b>	
Core/Core Securitized/Core Unconstrained	Bloomberg Barclays Aggregate Bond Index
<b>Absolute Return</b>	SOFR + 4%

## 11.0 INFLATION HEDGE INVESTMENT POLICIES

### INFLATION HEDGE OVERVIEW:

The Inflation Hedge category combines inflation-sensitive assets under a single asset class to simplify the asset allocation process and enable better performance monitoring of the plan’s overall, direct exposure to assets with inflation-hedging properties. The plan also has indirect exposure to inflation-sensitive assets through other asset classes, such as Public Equity, Fixed Income, and Alternatives. When determining the appropriate allocation of inflation protection, both direct and indirect exposures to inflation-sensitive assets across the plan are taken into account. The Inflation Hedge category is expected to provide a high degree of inflation beta, attractive risk-adjusted returns and diversification benefits to the overall plan.

Inflation Hedge is broken out into four subcategories:

- 1) Real Estate, 2) Private Real Assets, and 3) Public Real Assets

**Real Estate:** Real Estate is expected to provide a return and risk profile between that provided by fixed income and equities. Real estate will be composed of three sub-categories: 1) Core, 2) Value-Add, and 3) Debt. The majority of exposure will be in Core real estate assets of the highest quality located in the best locations in North America, Europe, and Asia. Value-Add properties are expected to provide somewhat higher return potential along with somewhat higher risk than Core assets. Real Estate Debt strategies range from lower risk senior loans on stable properties to higher risk/return mezzanine and construction loans. SamCERA utilizes Debt strategies for risk mitigation and to enhance the portfolio’s yield.

Income will be a large part of the return stream generated from the Real Estate portfolio. The role of this portfolio is to provide diversification benefits, some protection against

unanticipated inflation, and a steady income stream. Higher risk Opportunistic/Development real estate strategies will reside in the Private Real Assets composite due to their higher-risk, longer time horizon, and the less liquid nature of the investment set compared to Core, Value-Add, and Debt strategies. The sub-allocation targets and target ranges are summarized below:

<b>Real Estate Strategy</b>	<b>Target Allocation</b>	<b>Range</b>
Core Real Estate	60%	50 -70%
Value-Add Real Estate	20%	0 - 30%
Real Estate Debt	20%	0 - 30%

**Private Real Assets:** Private Real Assets are expected to provide attractive total and risk-adjusted returns that exhibit low correlations with traditional asset classes but positive correlation with inflation. Private Real Assets will be composed of two sub-categories: 1) Infrastructure (Core and Value-Add, Secondary, Midstream Energy, and Power), and 2) Natural Resources (Energy Exploration & Production, Mining, Farmland, Timber, and Water). These allocations will be implemented via allocation to primary and secondary fund investments and co-investment opportunities. The sub-allocation targets and target ranges are summarized below:

<b>Sub-Category</b>	<b>Target Allocation</b>	<b>Range</b>
Infrastructure	75%	+/- 25%
Natural Resources	25%	+/- 25%

**Public Real Assets:** Similar to Private Real Assets, Public Real Assets is expected to provide positive correlation to inflation, but with potentially higher beta to public equity markets. Public Real Assets may be used to fund new strategies in Private Real Assets and will be composed of four sub-categories: 1) Commodities, 2) U.S. TIPS, 3) Listed Global Natural Resources, and 4) Listed Global Infrastructure. All four sub-categories are meant to provide some protection from higher levels of unanticipated inflation while providing a diversifying return stream from that of public markets.

The sub-allocation targets and target ranges are summarized below:

<b>Sub-Category</b>	<b>Target Allocation</b>	<b>Range</b>
Commodities	25%	0 - 50%

U.S. TIPS	25%	0 - 50%
Listed Global Natural Resources	25%	0 – 50%
Listed Global Infrastructure	25%	0 – 50%

INFLATION HEDGE PERFORMANCE OBJECTIVE:

The performance objective of the Inflation Hedge Composite is to outperform, on a net-of-fee basis, a customized index (Customized Benchmark Portfolio) incorporating the weighted average components for three composite sub-asset classes (which results in the following weights: 59% NCREIF ODCE, 23% Custom Public Real Asset Index, and 18% Custom Private Real Asset Index).

INFLATION HEDGE RISK EXPOSURES AND RISK MITIGATION:

**Real Estate:** Many real estate funds utilize leverage to enhance returns. Lack of liquidity is also a concern, but less so for core real estate and senior debt investments. Value-add, mezzanine debt, and opportunistic strategies also tend to have more exposure to general economic conditions than core properties.

These risks will be mitigated in a number of ways. First, the primary emphasis of SamCERA’s real estate program will be focused on Core properties, with a secondary emphasis to Value-Add properties and Debt strategies. Opportunistic-oriented strategies will reside in our Private Real Assets portfolio due to their higher risk profile. In addition, SamCERA’s core real estate fund has a leverage limit of 35%, and SamCERA also sits on the Fund’s Advisory Committee.

**Private Real Assets:** By their nature, Private Real Assets are generally illiquid in that the life of these fund investments can be as long as ten to twelve years. SamCERA recognizes that this illiquidity is a necessary characteristic (and source of return premium) for these asset classes and as such will endeavor to take this illiquidity into account at the total plan level when addressing total plan liquidity needs during strategic planning asset liability studies. Leverage can be employed by alternative managers to enhance the overall risk-adjusted returns. SamCERA will control leverage exposure through partnership selection and portfolio construction and diversification.

INFLATION HEDGE ASSET CLASSES	BENCHMARK INDEX
INFLATION HEDGE ASSETS	CUSTOMIZED BENCHMARK PORTFOLIO
REAL ESTATE	NCREIF ODCE
PRIVATE REAL ASSETS	CUSTOM PRIVATE REAL ASSET INDEX
PUBLIC REAL ASSETS	CUSTOM PUBLIC REAL ASSET INDEX



## **12.0 QUARTERLY INVESTMENT PERFORMANCE REPORTING**

The quarterly investment performance reports will be designed as a risk management tool and will afford the Board the opportunity to timely identify potential risk issues within the portfolio and to assess the relative performance of the investment managers.

The report will provide sufficient information to assess the following:

- A. Total and active risk assessment at total fund, composite and individual manager level.
- B. Performance attribution at total fund, composite and individual manager level.
- C. Adherence to the investment style for which the manager is retained, as measured by the quarterly risk adjusted active return (deviation of the manager's performance from the specified performance benchmark) over the last quarter, six months, one-, three-, and five-year periods, including updates from previous quarterly reports regarding adherence to the style for which the firm was retained;
- D. Ability of the active manager to demonstrate consistently positive information ratios, including updates from previous quarterly reports regarding the firm's information ratios;
- E. Quarterly, annual, three- and five-year total time-weighted returns relative to the specified performance benchmark and manager style peer group.

## **13.0 ANNUAL INVESTMENT STRATEGY**

Annually, the Board/Staff shall convene an investment strategy session (typically as part of the annual retreat) with the objective of addressing strategic investment policy issues and to deliberate any policies that could benefit the performance of the retirement Fund. The agenda for these sessions should include (but is not limited to) the following information:

- (a) Compare the Fund's actual investment performance for the prior fiscal year against the investment objectives set forth in Section 3.0 and evaluate the relative success or failure of the prior year's performance; specific commentary to this objective shall be an integral part of the performance measurement process.
- (b) Compare each investment manager's investment performance for the prior fiscal year against the relevant benchmarks and peer groups and evaluate the relative success or failure of their prior year's performance.
- (c) Evaluate and review the total Fund performance attribution and contribution to return at the composite level to isolate performance drivers.
- (d) Evaluate and review the various risk exposures of the plan versus appropriate policy limits and on-going trends through time.
- (e) Evaluate and review the portfolio rebalancing activity for the year.
- (f) Evaluate the Fund's liquidity requirements for the current and next fiscal years.
- (g) Compare each investment manager's fees to their respective peer universe.

#### **14.0 PROXY VOTING**

The Investment Managers are delegated authority for the voting of proxies, subject to the following guidelines:

- A. All proxies shall be voted in the best interest of the shareholders, but in no instance shall the economic interests of the retirement Fund be subordinated to any other interest.
- B. Investment managers shall provide staff with quarterly reports on all proxies cast, in a mutually acceptable format.

#### **15.0 SECURITIES LENDING**

- A. Pursuant to Section 2.0 (A), the Custodian shall manage a securities lending program to enhance income in accordance with the terms and conditions set forth in a mutually acceptable securities lending agreement and guaranty.
- B. The Board reserves exclusive authority to approve the securities lending agreement prior to the commencement of securities lending activity.
- C. Unless otherwise specified in the agreement(s):
  - (i) All loans shall be marked-to-market daily.
  - (ii) Collateral on each loan shall be maintained daily at 102% of loan value for domestic securities and 105% of loan value for international securities.
  - (iii) Acceptable collateral shall be in the form of cash or obligations issued or guaranteed by the U.S. Government, or its agencies or instrumentalities.
  - (iv) Borrower must have a long-term credit rating of either "A" from S&P or "A2" from Moody's. For split rated borrowers, the higher rating shall prevail if not the same rating, with the lower rating having a minimum long-term credit rating of either "A-" from S&P or "A3" from Moody's.
  - (v) The maximum allowable amount of assets on loan to any single borrower shall not be greater than \$3 million.
  - (vi) The maximum total amount of program assets on loan shall not be greater than \$10 million.
- D. The Chief Investment Officer shall be responsible for monitoring the securities lending program and recommending changes as appropriate.

**APPENDIX A**

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
**Investment Committee Charter as Amended**  
RESOLUTION 99-00-09

*This Resolution, adopted by the Board of Retirement (Board) of the San Mateo County Employees' Retirement Association (SamCERA), sets forth the Charter for the Board's Investment Committee.*

**WHEREAS**, Article XVI, §17 of the Constitution of the State of California as amended in 1992 to read, in pertinent part, as follows:

*Notwithstanding any other provisions of law or this Constitution to the contrary, the retirement board of a public pension or retirement system shall have plenary authority and fiduciary responsibility for investment of moneys and administration of the system, subject to all of the following:*

*(a) The retirement board ... shall have the sole and exclusive fiduciary responsibility over the assets of the ... system. The retirement board shall also have sole and exclusive responsibility to administer the system in a manner that will assure prompt delivery of benefits and related services to the participants and their beneficiaries. The assets ... are trust funds and shall be held for the exclusive purposes of providing benefits to participants ... and their beneficiaries and defraying reasonable expenses of administering the system.*

*(b) The members of the retirement board ... shall discharge their duties with respect to the system solely in the interest of, and for the exclusive purposes of providing benefits to, participants and their beneficiaries, minimizing employer contributions thereto, and defraying reasonable expenses of administering the system. A retirement board's duty to its participants and their beneficiaries shall take precedence over any other duty.*

*(c) The members of the retirement board ... shall discharge their duties with respect to the system with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with these matters would use in the conduct of an enterprise of a like character and with like aims.*

*(d) The members of the retirement board...shall diversify the investments of the system so as to minimize the risk of loss and to maximize the rate of return, unless under the circumstances it is clearly not prudent to do so.*

*(e) The retirement board..., consistent with the exclusive fiduciary responsibilities vested in it, shall have the sole and exclusive power to provide for actuarial services in order to assure the competency of the assets of the... system. &*

**WHEREAS**, California Government Code §31595 states, as follows:

*The Board has exclusive control of the investment of the employees retirement fund. The assets of a public pension or retirement system are trust funds and shall be held for the exclusive purposes of providing benefits to participants in the pension or retirement system and their beneficiaries and defraying reasonable expenses of administering the system. Except as otherwise expressly*

*restricted by the California Constitution and by law, the Board may, in its discretion, invest, or delegate the authority to invest, the assets of the fund through the purchase, holding, or sale of any form or type of investment, financial instrument, or financial transaction when prudent in the informed opinion of the Board...; &*

**WHEREAS**, *The Board of Retirement*, wishes to exercise these powers as follows:

**EXERCISE OF POWERS:** *The Board shall exercise its investment, management and administrative authority and responsibility through the approval of motions recorded in public meeting &*

**WHEREAS**, the Board has adopted SamCERA's Investment Policy and amendments thereto to direct the investments of the Retirement Fund and now wishes to establish an Investment Committee to guide the future evolution of SamCERA's Investment Policy. Therefore, be it

**RESOLVED** that the Board hereby establishes a standing Investment Committee to direct the Board in its ongoing evaluation of SamCERA's Investment Policy, including but not limited to

1.0 CONDUCT ASSET ALLOCATION STUDIES

1.1 Determine the characteristics of the Policy's liabilities in regards to the nature of Fund's cash flows

2.0 DEVELOP ASSET MIX ALTERNATIVES TO MEET LIABILITY REQUIREMENTS

- 2.1 Establish allowable asset classes
- 2.2 Determine asset class benchmarks
- 2.3 Develop risk, return & correlation projections

3.0 EVALUATE EFFICIENT FRONTIER ALTERNATIVES

- 3.1 Define risk, return and correlation
- 3.2 Evaluate mean variance optimization
- 3.3 Determine low risk alternatives and high risk alternatives
- 3.4 Scale portfolios between two extremes
- 3.5 Evaluate optimized efficient frontier
- 3.6 Integrate optimized efficient frontier with asset-liability relationships

4.0 ANALYZE BOARD RISK TOLERANCE

- 4.1 Assess risk/reward trade-offs
- 4.2 Assess contribution rate sensitivity & variability
- 4.3 Assess ability to exceed actuarial interest rate
- 4.4 Assess comfort level with characteristics of specific asset mixes

5.0 RECOMMEND PREFERRED ASSET MIX

- 5.1 Evaluate differences from current target
- 5.2 Evaluate Board's willingness to implement new target asset mix
- 5.3 Evaluate appropriateness of variance from peer public fund norms

6.0 RECOMMEND AMENDMENTS TO SAMCERA'S INVESTMENT POLICY

- 6.1 Adjust target asset mix
- 6.2 Introduce new benchmarks
- 6.3 Include required asset class/portfolio modifications

- 7.0 RECOMMEND REVISIONS TO MANAGER STRUCTURE
  - 7.1 Adjust manager/style line-up as necessary
  - 7.2 Introduce new managers/asset classes
  - 7.3 Terminate managers/asset classes as necessary
  - 7.4 Establish active & passive allocation targets as appropriate
- 8.0 IMPLEMENT CHANGES TO MANAGER STRUCTURE
  - 8.1 Recommend time-line & approach to revise structure
  - 8.2 Conduct manager evaluations
  - 8.3 Establish portfolio and asset allocation rebalancing procedures
- 9.0 EVALUATE MANAGER PERFORMANCE
  - 9.1 Monitor results of managers both gross and net of investment management fees
  - 9.2 Assess consistency of portfolio decision making
  - 9.3 Evaluate organizational, ownership, personnel & other firm developments
- 10.0 RECOMMEND AND EVALUATE INVESTMENT CONSULTANT STRUCTURE & PERFORMANCE
  - 10.1 Recommend for Board determination the retention and termination of Investment Consultant(s) as necessary
  - 10.2 Define and assign special projects as warranted
  - 10.3 Monitor performance of Investment Consultant(s)
  - 10.4 Conduct evaluations of Investment Consultant(s)
  - 10.5 Evaluate organizational, ownership, personnel and other firm developments
- 11.0 INITIATE & EVALUATE SPECIAL INVESTMENT STUDIES
- 12.0 UNDERTAKE OTHER WORK ASSIGNED TO IT BY THE BOARD Be it further

**RESOLVED** that the Chair may appoint the members of the Investment Committee per Regulation 2.5.1. Be it further

**RESOLVED** that the Chief Executive Officer is hereby instructed to provide the Committee with access to all appropriate and available resources and records, so long as such access is consistent with sound fiduciary practices. Be it further

**RESOLVED** that the Chief Executive Officer is hereby authorized to provide compensation of \$100 per meeting for not more than two meetings per month to the members of the Committee eligible for such compensation, per GC§31521. Be it further

**RESOLVED** that the Board hereby reserves to itself sole authority to accept, modify, or reject the recommendations, which the Investment Committee may present from time to time pursuant to the provisions of this Resolution, per Regulation 2.3.

ADOPTED by unanimous vote, January 25, 2000

AMMENDED by unanimous vote, May 22, 2001

AMMENDED by unanimous vote, October 25, 2004

## **APPENDIX B**

### **Derivatives Investment Policy**

#### **1) Introduction**

There is a genuine need to allow SamCERA's separate account managers to evaluate new securities and introduce them into their portfolios, given that the investment process followed by the investment managers complies with the subsequent provisions of this policy statement. This policy statement allows SamCERA's separate account Managers to exercise reasonable investment freedom, while minimizing the possibility of adverse implications for the Board.

#### **2) Derivative Definition**

A 'derivative' commonly is defined as a financial instrument whose performance is derived, at least in part, from the performance of an underlying asset (such as a security or an index of securities).

#### **3) Types of Securities Included or Excluded**

Since the derivative sector of the market is likely to experience considerable change, provisions must be made for the general characteristics of a derivative security, its evaluation and monitoring. Therefore, it is most appropriate to not attempt to definitively list all of the derivative securities that are covered by this policy. Instead, what will be explicitly stated is the investment process that governs derivative investments and the evaluation and monitoring requirements of this policy.

#### **4) Approach to Policy**

An approach has been developed which states allowable derivative investments, limited allocation derivative investments and restricted derivative investments.

Derivative securities not specified in the above three groups of securities must be evaluated in accordance with the following section entitled Derivative Investment Process. If the security meets these provisions and the spirit of these policies, the manager may establish a prudent position in the instrument. However, the manager must be able to demonstrate the appropriateness of such an investment in light of SamCERA's guidelines.

#### **5) Counter-Party Evaluation**

When entering into a non-exchange traded derivative investment, the investment manager must fully evaluate the other side of the derivative transaction—the counter-parties to the trade. Due to the possibility of counter-party default, SamCERA's investment managers must evaluate the risks associated with the counter-party as if an investment were being made in the traditional securities issued by the counter-party.

At a minimum, the investment manager must evaluate the counter-party's following criteria:

- a) Corporate earnings stream
- b) Corporate asset quality
- c) Capitalization
- d) Corporate liquidity
- e) Moody's and Standard & Poor's debt ratings
- f) Other fundamental investment and risk characteristics

For those counter-parties that are broker/dealers, they must:

- a) Have investment grade (Moody's and S&P rated) debt
- b) Be registered with the SEC
- c) Have significant net capital to protect against potential adverse market circumstances

For those counter-parties that are financial institutions (banks), they must have:

- a) Investment grade (Moody's and S&P rated) debt
- b) Total assets in excess of \$1 billion
- c) Significant net capital to protect against potential adverse market circumstances

The investment manager must monitor individual investment and total portfolio exposure to counter-parties. Individual counter-party exposure must be well diversified and not concentrated in a small number of organizations.

## **6) Purposes for Derivatives**

The acceptable investment purposes for the use of derivatives are as follows:

- a. Appropriate to use futures, options and forward currency contracts to assist investment managers in mitigating portfolio risk.
- b. Useful substitute for an existing, traditional investment. In certain circumstances it may be cheaper, quicker or easier to invest in a derivative instrument or security rather than transacting in the cash or traditional security market.
- c. Provides investment value to the portfolio, while being consistent with SamCERA's overall and specific investment policies.
- d. Obtains investment exposure that is appropriate with the manager's investment strategy and SamCERA's investment guidelines, but could not be made through traditional investment securities.

Given that one or more of these investment purposes are clearly met, it is the responsibility of the investment manager to explain and demonstrate how derivative investments impact portfolio risk and the context of the investment within the overall portfolio.

Any other derivative investment purpose is not allowed. Derivatives may not be introduced into the portfolio to create economic leverage or to create investment exposures that are otherwise excluded by SamCERA's Investment Policy. However, if a manager develops an investment purpose other than those listed above which he/she feels is legitimate and consistent with the spirit of SamCERA's guidelines, this purpose should be proposed in writing to the Board.

## **7) Investment Restrictions and Derivatives Policy**

For the purpose of these guidelines, convertible debt, traditional zero coupon bonds, mortgage pass-through securities and asset-backed securities are not viewed as derivatives. Based upon the factors enumerated in the above Section 4 entitled Approach to Policy, the following guidelines have been established:

***Allowable derivative investments***

- a. Stable and well-structured mortgage CMO's (Collateralized Mortgage Obligations)
- b. Financial futures (if Exchange Traded)
- c. Currency forward contracts and currency options (Exchange and OTC traded)
- d. Interest rate swaps

***Derivative investments with allocation limits***

- a. Interest only mortgage CMO's
- b. Principal only mortgage CMO's
- c. Options (if Exchange Traded)
- d. Caps and floors as they apply to the above stated allowable derivative investments
- e. Credit Default Swaps (CDS)

Derivative investments with allocation limits, as listed above, may not represent more than 5% of the individual portfolio manager's assets (based on market value) managed for SamCERA. At the same time, derivative investments with allocation limits in aggregate may not expose the individual manager's portfolio to losses in excess of 5% of the manager's total assets managed for SamCERA. In addition, the use of options, caps and floors, and CDS may be used only for defensive investment purposes.

Managers investing in the above-defined limited allocation derivative instruments should ensure that portfolio exposure is maintained within the stated constraints, and communicate the assumptions and model used to estimate VAR (Value at Risk) and/or other reasonable risk measurement procedures annually to the Boards.

***Restricted derivative investments***

- a. Inverse floating rate notes and bonds
- b. Structured notes

Restricted derivatives cannot be held in SamCERA's separate account portfolios at any time.

**8) Risk Analysis and Monitoring of Derivatives**

For those securities that are classified as derivative investments with allocation limits, the investment managers are required to test and measure derivative investment sensitivities to changes in key risk factors. These risk factors include extreme changes in interest rates, volatility, liquidity, credit quality, and cash market prices.

These risk factors will be assessed prior to initial investment and on a quarterly basis. Results of such risk testing on derivative investments with allocation limits will be supplied to SamCERA on an annual basis (December 31). If the investment manager identifies additional risks that should be evaluated, these other risk factors should be added to the list and handled in a manner consistent with the previously stated approach.

**9) Derivative Investment Process**

Investment managers are expected to cover the following issues before purchasing a derivative instrument or security, whether specifically stated as an allowable derivative investment, a derivative investment with



allocation limits, or a derivative not specifically discussed in the Investment Restrictions and Derivatives Policy section above:

- a. Determine if the purpose for investing in a derivative security is consistent with one or more of the purposes in the previous section entitled Purposes for Derivatives.
- b. Determine where the security fits into the classification system, if at all, stated in the Investment Restrictions and Derivatives Policy.
- c. Evaluate, at a minimum, the counter-party risk and the risks stated in the Risk Analysis and Monitoring section of the derivatives policy.
- d. Evaluate the derivative in a comparably thorough manner as the firm would any other traditional investment opportunity.

### **10) Reporting Requirements**

It is the responsibility of SamCERA's investment managers to certify and demonstrate that their portfolios are in compliance with SamCERA's overall guidelines as well as those that apply to derivative investments. On an annual basis (December 31), SamCERA's investment managers will provide the following minimum monitoring information on all derivative securities:

- a. A general statement from the investment manager that its portfolio is in compliance with this Derivatives Policy.
- b. When stating the market value of the derivative exposure, the manager will specify the security pricing sources. The pricing source must be exchange-listed.
- c. A statement of the risks (credit risk—an evaluation of potential counter-party default on obligations, market risk—percent of portfolio invested in derivatives, and any other relevant risks) associated with the derivative investments.
- d. Potential adverse impact on market values if extreme adverse market movements occur.
- e. A statement regarding the liquidity of the derivative investments.
- f. Summary comments and the firm's list of approved counter-parties, ratings, and a statement regarding any changes to this list.
- g. An overall statement discussing the legal and regulatory risks associated with the portfolio manager's investments in derivatives.

## **Appendix C**

### **DISCLOSURE OF PLACEMENT AGENT FEES, GIFTS, AND CAMPAIGN CONTRIBUTIONS**

*This amended policy is effective immediately upon adoption. This policy is intended to supplement any applicable provisions of state or federal law, which shall govern in the event of any inconsistency.*

#### **I. PURPOSE**

This Policy is adopted pursuant to the requirements set forth in Government Code Section 7513.85 to help ensure that the San Mateo County Employees' Retirement Association (SamCERA) investment decisions are made solely on the merits of the investment opportunity. This Policy requires broad, timely, and updated disclosure of all Placement Agents, as that term is defined by Government Code section 7513.8, their relationships, compensation and fees.

#### **II. APPLICATION**

This Policy applies broadly to every type of SamCERA investment managers including general partners, sponsors of hedge funds, private equity funds, real estate funds and infrastructure funds, as well as public market investment managers.

This Policy as amended applies to all agreements with External Managers that are entered into after the date this Policy is adopted and all existing agreements if, after the date this amended Policy is adopted, the agreement is amended to continue, terminate, or extend the term of the agreement or the investment period, increase the commitment of funds by SamCERA or increase or accelerate the fees or compensation payable to the External Manager (Referred to hereafter as "Amendment".) In the case of an Amendment, the disclosure provisions of this Policy shall apply to the Amendment and not to the original agreement.

#### **III. RESPONSIBILITIES**

##### **A. The Board is responsible for:**

1. Not entering into any agreement with an External Manager that does not agree in writing to comply with this policy.
2. Not entering into any agreement with an External Manager who has violated this policy within the previous five years. However, this prohibition may be reduced by a majority vote of the Board at a public session upon a showing of good cause.

**B. Each External Manager is responsible for:**

1. Executing an agreement that provides the External Manager will comply with this policy.
2. Providing the following information to SamCERA Investment Staff within 45 days of the time investment discussions are initiated by the External Manager, but in any event, prior to the completion of due diligence. In the case of Amendments, the Placement Agent Information Disclosure is required prior to execution of the Amendment.
  - a. Disclosure of payments or compensation by the External Manager or any of its principals, employees, agents or affiliates, directly or indirectly, to any person or entity to act as a Placement Agent in connection with SamCERA investments.
  - b. A resume for each officer, partner, principal of the Placement Agent detailing the person's education, professional designations, regulatory licenses and investment and work experience. If any such person is a current or former SamCERA Board Member, employee or Consultant or a member of the immediate family of any such person, this fact shall be specifically noted.
  - c. A description of any and all compensation of any kind provided or agreed to be provided to a Placement Agent, including the nature, timing and value thereof. Compensation to Placement Agents shall include, but not be limited to, compensation to third parties as well as employees of the External Manager who solicit or market investments to SamCERA or who are paid based upon investment commitments secured by such employees.
  - d. A description of the services to be performed by the Placement Agent and a statement as to whether the Placement Agent is utilized by the External Manager with all prospective clients or only with a subset of the External Manager's prospective clients.
  - e. A written copy of any and all agreements between the External Manager and the Placement Agent.
  - f. A statement whether the placement agent, or any of its affiliates, are registered with the Securities and Exchange Commission or the Financial Industry Regulatory Association, or any similar regulatory agent in a country other than the United States, and the details of that registration or explanation as to why no registration is required.
  - g. A statement whether the placement agent, or any of its affiliates, is

registered as a lobbyist with any state or national government.

h. The names of any current or former SamCERA Board Members, employees, or Consultants who suggested the retention of the Placement Agent.

3. Providing an update of any changes to any of the information provided pursuant to section B.2 above within 30 calendar days of the date that the External Manager knew or should have known of the change in information.
4. Representing and warranting the accuracy of the information described in section B.2 above.
5. Causing its engaged Placement Agent to disclose, prior to acting as a Placement Agent to SamCERA:
  - a. All campaign contributions made by the Placement Agent to any publicly elected SamCERA Board Member during the prior 24-month period. Additionally, any subsequent campaign contribution made by the Placement Agent to any publicly elected SamCERA Board Member during the time the Placement Agent is receiving compensation in connection with a SamCERA investment shall also be disclosed.
  - b. All gifts, as defined in Government Code Section 82028, given by the Placement Agent to any SamCERA Board Member during the prior 24-month period. Additionally, any subsequent gift made by the Placement Agent to any SamCERA Board Member during the time the Placement Agent is receiving compensation in connection with a SamCERA investment shall also be disclosed.
6. SamCERA reserves the right to deem the failure to disclose the information required by 5(a) and 5(b) as a material breach of the agreement with the External Manager.

**C. SamCERA Investment Staff (“Staff”) are responsible for:**

1. Providing External Managers with a copy of this Policy at the time that discussions are initiated with respect to a prospective investment or engagement.
2. Confirming that the information in section B above has been received within 45 days of the time the execution of the investment contract or Amendment.
3. For new contracts and amendments to contracts existing as of the date of the initial adoption of this Policy, securing the agreement of the External Manager in the final written agreement between SamCERA and the External Manager to provide in the event that there was or is an intentional material omission or

inaccuracy in the Placement Agent Information Disclosure or any other violation of this Policy, SamCERA reserves the right to reimbursement of any management or advisory fees paid by SamCERA from the date of violation to the date of the imposition of the fees.

4. Prohibiting any External Manager or Placement Agent from soliciting new investments from SamCERA for five years after they have committed a material violation of this Policy; provided, however, that SamCERA's Board, by majority vote at a noticed, public meeting, may reduce this prohibition upon a showing of good cause.
5. Providing the Board with Placement Agent information relating to each investment at the time the investment is brought to the Board for its decision.
6. Maintaining Placement Agent Information Disclosures as a public record and reporting to the Board any a material violation of this Policy.

**Adopted December 14, 2010**

**Amended October 25, 2011**

**Amended March 28, 2017**

**DEFINITIONS:**

*The following definitions are excerpted from California Government Code section 7513.8 and are current as of March 28, 2017. Should the legislature subsequently amend the definitions below, the definition of these terms as amended shall supersede the definitions contained in this policy.*

**“External Manager”** means either of the following: (1) a Person who is seeking to be, or is, retained by a board or an Investment Vehicle to manage a portfolio of securities or other assets for compensation; (2) a Person who manages an Investment Fund and who offers or sells, or has offered or sold, an ownership interest in the Investment Fund to a board or an Investment Vehicle. (All code section references are to the Government Code, unless otherwise noted.)

**“Person”** means an individual, corporation, partnership, limited partnership, limited liability company, or association, either domestic or foreign.

**“Investment Vehicle”** means a corporation, partnership, limited partnership, limited liability company, association, or other entity, either domestic or foreign, managed by an External Manager in which a board is the majority investor and that is organized in order to invest with, or retain the investment management services of, other External Managers.

**“Investment Fund”** means a private equity fund, public equity fund, venture capital fund, hedge fund, fixed income fund, real estate fund, infrastructure fund, or similar pooled investment

entity that is, or holds itself out as being, engaged primarily, or proposes to engage primarily, in the business of investing, reinvesting, owning, holding, or trading securities or other assets. Notwithstanding the preceding sentence, an investment company that is registered with the Securities and Exchange Commission pursuant to the Investment Company Act of 1940 (15 U.S.C. Sec. 8a-1 et seq.) and that makes a public offering of its securities is not an Investment Fund.

**“Placement Agent”** means any Person directly or indirectly hired, engaged, or retained by, or serving for the benefit of or on behalf of, an External Manager or an Investment Fund managed by an External Manager, and who acts or has acted for compensation as a finder, solicitor, marketer, consultant, broker or other intermediary in connection with the offer or sale to a board or an Investment Vehicle either of the following: in the case of an External Manager as defined in subpart (1) of the definition of an External Manager, the investment management services of the External Manager; in the case of an External Manager as defined in subpart (2) of the definition of an External Manager, an ownership interest in an Investment Fund managed by the External Manager. Notwithstanding the preceding sentence, an individual who is an employee, officer, director, equityholder, partner, member, or trustee of an External Manager and who spends one-third or more of his or her time, during a calendar year, managing the securities or assets owned, controlled, invested, or held by the External Manager is not a Placement Agent.

**RESOLUTION AMENDING SAMCERA'S  
INVESTMENT POLICY STATEMENT**

RESOLUTION 2020-\_\_\_

**WHEREAS**, pursuant to Article XVI, Section 17, of the California Constitution, the Board of Retirement (the "Board"), has the exclusive authority and fiduciary responsibility for the investment and administration of the assets of the retirement system (the "Fund"), and on July 28, 2020, established an Investment Policy Statement (the "Policy") for the investment of the Fund assets; and

**WHEREAS**, the purpose of the Policy is to assist SamCERA in effectively supervising its investments in order to meet the requirements of the California Constitution, the County Employees Retirement Law of 1937, the Mission and Goals of SamCERA and other requirements, and to encourage effective communication between SamCERA and its investment managers and investment consultants; and

**WHEREAS**, the Board periodically reviews its Policy and amends it as necessary so as to remain up to date to reflect recent actions of the Board; and

**WHEREAS**, in July 2020, the Board amended Section 11.0 "Inflation Hedge Investment Policies" to change the Private Real Assets target allocation to Infrastructure and Natural Resources from a 50%/50% split to a 75%/25% split, respectively; and

**WHEREAS**, in December 2020, the Board is expected to approve changing the Absolute Return benchmark and the absolute return portion of the policy benchmark from LIBOR + 4% to SOFR + 4%. Staff recommends amending Section 6.0 "Asset Allocation & Portfolio Structure" and Section 10.0 "Diversifying Assets Investment Policies" to reflect these changes.

**WHEREAS**, Staff is also proposing the following additional change to the Policy:

Amend Section 2.0 "Management of the Fund" and Section 5.0 "General Investment Policies" to more clearly state that staff is responsible for managing the allocation, including initiating any adjustments to that allocation amount, to existing managers whose investments are held in a separate account or open-end evergreen commingled fund, subject to the allocation ranges set forth in Section 6.0.

For those managers whose investments are held in closed-end (or non-perpetual life) commingled funds (e.g. private equity, private real assets, private credit, value-add real estate),

staff will seek Board approval for any additional allocation to those funds, including re-up commitments.

**WHEREAS**, the Board and desires to make such amendments; Now, therefore, be it

**RESOLVED**, that the SamCERA “Investment Policy Statement” be revised to read as set forth in the attached document.

\* \* \* \* \*

Regularly passed and adopted, by the San Mateo County Employees’ Retirement Association, Board of Retirement, on December 8, 2020.

Ayes, Trustees:

Noes, Trustees:

Absent, Trustees:

Abstain, Trustees:

---

Katherine O’Malley, Board Secretary



**SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**  
**Board of Retirement**

December 8, 2020

Agenda Item 6.5

**TO:** Board of Retirement

**FROM:** Lilibeth Dames, Investment Analyst *Lilibeth Dames*

**SUBJECT:** Presentation of Private Asset Semi-Annual Performance Reports as of June 30, 2020

**Recommendation**

Accept and review Verus' semi-annual private equity and private real assets performance reports as of June 30, 2020.

**Background**

Verus provides a semi-annual private equity and private real asset performance report as of June 30<sup>th</sup> and December 31<sup>st</sup> each year.

**Discussion**

As of June 30, 2020, SamCERA's private equity portfolio had a total market value of \$342.4 million (7.3% of SamCERA's total fund). SamCERA's target allocation for Private Equity is 6.0%.

The private equity portfolio has a 19.39% net IRR since inception. For the six-month period from January 1, 2020 through June 30, 2020, SamCERA did not make any new commitments to private equity. As of June 30<sup>th</sup>, SamCERA had a total of twenty-seven funds with \$457.5 million in committed capital across seventeen private equity managers. SamCERA has subsequently added an additional fund and is in the process of adding another.

As of June 30, 2020, SamCERA's private real assets portfolio had a total market value of \$96.1 million (2.1% of SamCERA's total fund). SamCERA's current target asset allocation to private real assets is 3.0%.

The private real assets portfolio has a -1.52% net IRR since inception. For the six-month period from January 1, 2020 through June 30, 2020, SamCERA committed to one new fund for a total of \$30 million. As of June 30, 2020, there were twelve private asset funds in the portfolio with \$234.8 million in committed capital across ten private real asset managers. SamCERA has subsequently added an additional fund in the private real asset portfolio.

Faraz Shooshani and John Nicolini will review the performance reports with the Board and be available for questions.

**Attachments**

Verus Semi-Annual Private Equity Performance Report for Period Ended 6/30/2020  
Verus Semi-Annual Private Real Assets Performance Report for Period Ended 6/30/2020



**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**



PERIOD ENDING JUNE 30, 2020

Private Equity Review

**San Mateo County Employees' Retirement Association**

# Table of Contents



VERUSINVESTMENTS.COM

SEATTLE 206-622-3700

LOS ANGELES 310-297-1777

SAN FRANCISCO 415-362-3484

---

Market Commentary 3

---

Significant Events / Material  
Exceptions to Policy 13

---

Private Equity Portfolio  
Overview 7

---

Private Equity Portfolio  
Performance 8

---

Private Equity Portfolio  
Diversification 10

- PE Portfolio Diversification by Strategy
- PE Portfolio Diversification by Geography
- PE Portfolio Diversification by Industry
- PE Portfolio Diversification by Vintage Year

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

**DEBT RELATED**

- **HY issuance was down and leveraged loan issuance was up.** In the first half of 2020, US high yield issuance was down 2.1% at \$128 billion<sup>1</sup> compared to 1H 2019. Leverage loan issuance volume reached \$385 billion in the first half of 2020, up 22% from the same time last year.
- **Spreads loosen across the board.** US HY Credit Index loosened by 228 bps or 54.2%<sup>2</sup> in 1H 2020 versus the same period last year. BB and B index loosened by 162 bps and 168 bps, a 55.9%<sup>2</sup> and 34.4%<sup>2</sup> increases versus the same period last year. In the meantime, CCC index increased by 46.2%<sup>2</sup> in the first half of 2020 from 2019 same period.
- **Decline in LBO debt, with interest coverage up significantly.** US total leverage (Debt / EBITDA) for 1H 2020 at 5.1x<sup>3</sup> down 14.2% from the same time last year. Interest coverage (EBITDA / Cash Interest) of first half of 2020 was 3.6x<sup>3</sup>, up 55.7% from same time 2019 as underwriting new deals focused on risk reduction.

**GLOBAL**

- **PE dry powder continued to surge globally.** For the first half of 2020, global total PE dry powder was at \$1.74 trillion<sup>4</sup>, up 16.4% from same time last year. US total PE was up by 21.9% to \$964.5 billion<sup>4</sup>; Europe total PE increased by 12.3% to \$335.2 billion<sup>4</sup>; Asia total PE was up by 8.3% to \$387.7 billion<sup>4</sup>; and the rest of world total PE was up by 11.1% to \$55.0 billion<sup>4</sup>.
- **Investment activity was down.** During the first of 2020, global PE firms invested in \$299.3 billion<sup>6</sup> worth of deals, down 19.0% from the same time prior year and closed on 9,923 transactions<sup>6</sup>, down 19.1% from same time in 2019.

**US BUYOUTS**

- **Dry powder increased.** For the first half of 2020, US buyout dry powder was \$505.1 billion<sup>4</sup>, up by 15.5% from the same time in 2019.
- **Fundraising activity was down significantly.** In 1H 2020, US firms across all buyout strategies raised \$65.6 billion<sup>5</sup>, down by 49.8% from same time prior year. Average fund size decreased 25.1%, from \$1.72 billion in 1H 2019 to \$1.29 billion in 1H 2020.
- **Investment activity was down.** During 1H 2020, US buyout firms invested in \$77.4 billion<sup>6</sup> worth of deals, down 41.1% from the same time last year and closed on 1,210 transactions<sup>6</sup>, down 23.6% versus the same time in 2019.

- **LBO price multiples were down.** As of June 30, 2020, US LBO purchase price multiples (Enterprise Value / EBITDA) were at 10.6x<sup>7</sup>, a 4.7% decrease from the second quarter-end of 2019.
- **Exit activity slowed down.** During 1H 2020, US buyout firms exited 358 companies<sup>12</sup>, representing \$74.6 billion<sup>12</sup> in total transaction value. This represented a 30.4% decrease in the number of exits and a 45.0% decrease in total transaction value compared to the same time last year.

### US VENTURE CAPITAL

- **Dry powder increased.** In the first six months of 2020, US VC dry powder was at \$150.3 billion<sup>4</sup>, up 27.2% from 1H 2019.
- **Fundraising activity slowed down, but average fund size increased.** US VC firms raised \$44.4 billion<sup>5</sup> during the first half of 2020, a 77.6% increase from the same period last year. 193 funds<sup>5</sup> closed in 1H 2020, a 20.6% decrease from the same period last year. The average US VC fund size increased to \$230.1 million<sup>5</sup> by 123.6% versus the same period last year.
- **Investment activity was down, but average check size was up.** US VC firms deployed \$72.7 billion<sup>6</sup> in capital in 1H 2020, a 9.8% increase from 1H 2019 as deal activity skewed from early to late stage. The number of rounds closed at 2,646<sup>6</sup>, a 21.1% decrease from the same time last year. The average investment per deal increased to \$27.5 million<sup>6</sup>, a 39.2% increase from prior year.
- **All stages valuations were up.** Compared to December 31, 2019, the average pre-money valuations increased for both early VC and late VC stages in 1H 2020: up 2.0% at \$30.0 million<sup>8</sup> for early stage VC, and 36.4% at \$120 million<sup>8</sup> for late stage VC.
- **Exit activity decreased with larger transactions.** US VC firms exited 344 companies<sup>6</sup> in the first half of 2020, down by 4.4% from last year. This represented \$49.8 billion<sup>6</sup> in transaction value, up by 5.7% from the same period last year. Largest sectors exited were Technology Services and Health Technology.

### EX US

- **Ex US dry powder grew but less than dry powder in the US.** PE dry powder outside the US grew to \$777.8 billion<sup>4</sup> for 1H 2020, a 10.2% increase versus last year. However, dry powder outside the US was still 19.4% less than dry powder in the US (\$964.5 billion<sup>4</sup>).
  - **Europe buyout and VC dry powders were up.** For 1H 2020, Europe buyout dry power was \$227.8 billion<sup>4</sup>, up by 11.9% from last year. Same time, VC dry powder in Europe grew to \$34.2 billion<sup>4</sup>, a 11.0% increase from prior year.
  - **In Asia, dry powder of both buyout and VC kept increasing, but growth equity decreased.** In the first half of 2020, Asia buyout dry power was \$99.7 billion<sup>4</sup>, up by 16.1% from same time last year. VC dry powder in Asia increased to \$124.1 billion<sup>4</sup>, up by 19.9% from 1H 2019. Growth equity dry powder decreased to \$141.3 billion<sup>4</sup>, down by 5.4% from 2019.

- **Fundraising outside of US was down except Europe.** In 1H 2020, ex-US fundraising was down 8.9% to \$108.2 billion<sup>5</sup> compared to same time prior year. The decrease was led by Asian funds which raised \$35.3 billion<sup>5</sup>, down 36.9% from same time last year. Fundraising in the rest of the world decreased by 18.5%, from 8.1 billion<sup>5</sup> in 1H 2019 to \$6.6 billion<sup>5</sup> in the same time 2020. However, fundraising was up in Europe, up by 21.0% from \$54.8 billion in the first half of 2018 to \$66.3 billion<sup>5</sup> in 1H 2020.
- **Investments activity was down, but with larger deals in Asia.** Both Europe buyout and Asia venture capital firms decreased the number of deals and aggregate deal volume in the first 6 months in 2020. But Asia buyout and venture capital firms decreased the number of deals but increased aggregate deal volume in 1H 2020.
  - **Both Europe buyout and VC activities decreased.** In the first half in 2020, Europe buyout firms transacted on \$43.4 billion<sup>6</sup> in aggregate value, down by 25.0% from 1H 2019. VC investment activity was down from \$19.3 billion in 1H 2019 to \$17.3 billion<sup>6</sup> in 1H 2020, an increase of 10.4%.
  - **Asia buyout and VC activities were down, but average deal size was up slightly.** During 1H 2020, Asia buyout firms closed on \$30.8 billion<sup>6</sup> in aggregate value, up by 4.2% from the same time of last year's \$29.5 billion<sup>6</sup>. VC investment activity was up from \$40.6 billion during 1H 2020 to \$40.9 billion<sup>6</sup>, an increase of 0.9%.
- **Both US and Europe purchase price multiples decreased.** As of June 30, 2020, US median purchase price multiples (Enterprise Value / EBITDA) was 10.6x<sup>1</sup>, a 4.7% decrease from the same time last year. In the meantime. Europe median purchase price multiples dropped 15.3% from to 8.0x<sup>1</sup> from the same time last year.
- **Leverage multiples in Europe moved down.** European LBO leverage multiples (Debt / EBITDA) have averaged 5.8x<sup>10</sup> during 1H 2020, an increase of 3.9% from the same time last year and an 5.0% decrease from the peak (6.1x<sup>11</sup>) in 2007. European LBO Loan volume at \$26.9 billion<sup>11</sup> is down 4.4% versus 1H 2019, a decrease of 75.0% versus the peak of \$107.3 billion<sup>11</sup> in the first half of 2007.
- **Exit activity weaker in Europe, but stronger in Asia.** During 1H 2020, Europe PE firms aggregate exit value amounted to \$32.3 billion<sup>6</sup>, a 41.5% decrease from the same time last year, while Asia PE firms' exits were up 48.6% from to \$101.8<sup>6</sup> billion in the same time.

**Outlook**

- **PE allocations likely to remain stable.** A recent survey of institutional investors conducted on June 30, 2020<sup>12</sup> indicated that 41% intend to increase their allocation for private equity compared to 40% during the same period last year; 49% intend to maintain their allocation for private equity compared to 47% during the same period last year; 11% intend to commit less capital to private equity compared to 13% during the same period last year.
- **Institutional investors most interested in investing in North America and like small- to mid-market buyouts.** Based on the survey conducted on June 30, 2020<sup>12</sup>, institutional investors view North America as the most attractive location to invest in the current economic climate with 80% choosing it as their preferred developed market investment destination. This compares favorably versus Western Europe (49%) and Asia (11%). China (42%) and India (38%) are the top two desired countries in the emerging markets for investors. In the same survey, 53% of institutional investors also cited the venture capital strategy as presenting the best opportunities in the current financial climate. Small to mid-market buyout strategy was mentioned next with 83% of institutional investors believing it presented the best opportunities.

**Notes**

1. *Leveraged Loan Monthly Thomson Reuters LPC*
2. *Guggenheim High-Yield Bank Loan Outlook*
3. *LCD's Leveraged Buyout Review*
4. *Preqin Dry powder by Geography (Preqin Website) Dry powder includes Buyout, Distressed PE, Growth, Mezzanine, Co-investments, Balanced, and Venture Strategies.*
5. *Preqin Private Equity Historical Fundraising Statistics*
6. *Preqin Pro Buyout and Venture Deals and Exits*
7. *US LBO Review*
8. *PitchBook-NVCA Venture Monitor*
9. *PitchBook's VC Valuations*
10. *LCD European Leveraged Buyout Review*
11. *European Leveraged Lending Review*
  - a. *Ex US Multiples were estimated utilizing a number of sources including Preqin Private Equity-Backed Buyout Deals and Exits Factsheet, LCD's Leveraged*
  - b. *Buyout Review, Pitchbook Europe M&A and Leveraged Loan Monthly Thomson Reuters LPC.*
12. *Preqin Investor Update: Alternative Assets*

Investment Type	Policy Target	Policy Range	Market Value %	Market Value \$(000)	Unfunded Commitment \$(000)	Market Value + Unfunded \$(000)
<b>SamCERA - Total Plan</b>			<b>100.0%</b>	<b>4,671,765</b>		
Buyout (60% +/- 20%)	3.6%	2.4%-4.8%	3.2%	147,583	101,128	248,711
Venture Capital (20%, 0%-30%)	1.2%	0.0%-1.8%	3.3%	156,133	8,501	164,634
Debt-Related/Special Situations (20% +/- 10%)	1.2%	0.6%-1.8%	0.8%	38,725	43,354	82,079
<b>Total Private Equity*</b>	<b>6.0%</b>	<b>4%-8%</b>	<b>7.3%</b>	<b>342,440</b>	<b>152,983</b>	<b>495,424</b>

\* The Private Equity Policy Target of 7.0% was reduced to 6.0% effective 10/1/2018.

### Portfolio Summary

- As of June 30, 2020, the Private Equity Portfolio had a total market value of \$342.4M, with \$147.6M in Buyout, \$156.1M in Venture Capital, and \$38.7M in Debt-Related/Special Situations. Total market value is the current reported value of investments, excluding the remaining amount of unfunded commitments.
- SamCERA has contributed \$344.6M toward its Private Equity commitments. Unfunded commitments total \$153.0M.
- The portfolio exposure at 7.3% is above the new 6% policy target, but within range. All sub-asset classes are within their policy range, except for Venture Capital which is above its policy range due to the growth of values of unrealized investments.

### Portfolio Activity

- Most recently, SamCERA committed \$30.0M to CD&R XI, L.P., and is proceeding with a \$15.0M commitment to Canvas Ventures III, L.P.



# PE Performance

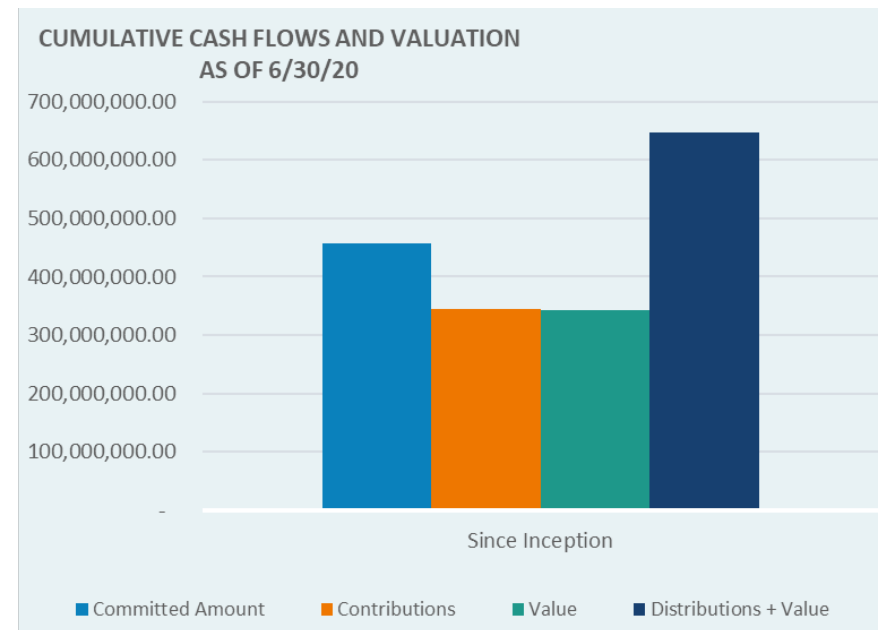
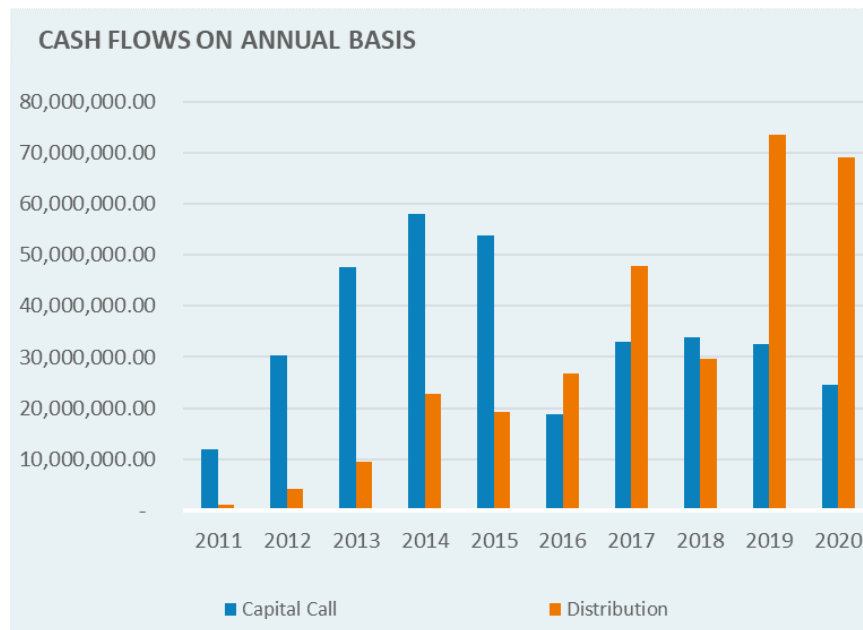
Period Ending: June 30, 2020

## Performance

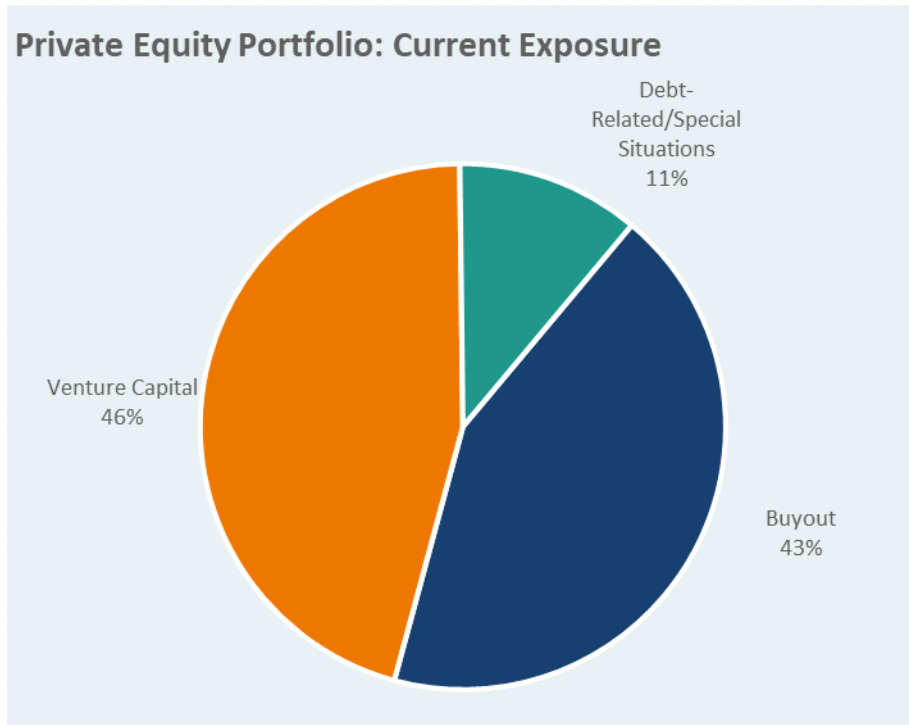
- The Private Equity portfolio’s performance, as measured by net IRR, is 19.39%, 423bps above the same cash flow invested in Russell 3000 Total Return Index of 15.15%. Capital weighted average investment age of the portfolio is 5.3 years.
- The portfolio is currently valued at \$342.4M. Together with \$303.9M in realized distributions, the Total Value at \$646.4M is approximately \$301.8M above \$344.6M total capital contributions, resulting in a total value multiple of 1.88x and a distribution multiple of 0.88x.
- Distributions surpassed contributions with a ratio of 2.8:1 in the first half of 2020 compared to 2.3:1 in 2019, 0.9:1 in 2018, and 1.4:1 in 2017 and 2016.

## Attribution of returns:

- Buyouts up \$100.6M / +49.8% versus cost (Great Hill V & VI, Sycamore, ABRY VII, Warburg Pincus XI and Cevian II leading), with 76.8% of called capital realized and distributed;
  - Venture Capital up \$197.49M / +355.0% versus cost (Emergence Capital III, General Catalyst VI, NEA 14, and Third Rock III leading), with 174.4% of called capital realized and distributed; and
  - Debt-related/Special Situations up \$3.63M / +4.2% versus cost (ABRY Advanced Securities II and Regiment Capital Special Situations V leading), with 59.7% of called capital realized and distributed.
- Within Private Equity, the current allocation of market value exposure is 43.1% to Buyout, 45.6% to Venture Capital, and 11.3% to Debt-Related/Special Situations.



Investment Type	Commitment	Reported Value	Current Exposure as % of Private Equity
Buyout	279,001,040	147,583,068	43.1%
Venture Capital	64,000,000	156,132,578	45.6%
Debt-Related/Special Situations	114,500,000	38,724,762	11.3%
<b>Total Private Equity</b>	<b>457,501,040</b>	<b>342,440,410</b>	<b>100.0%</b>

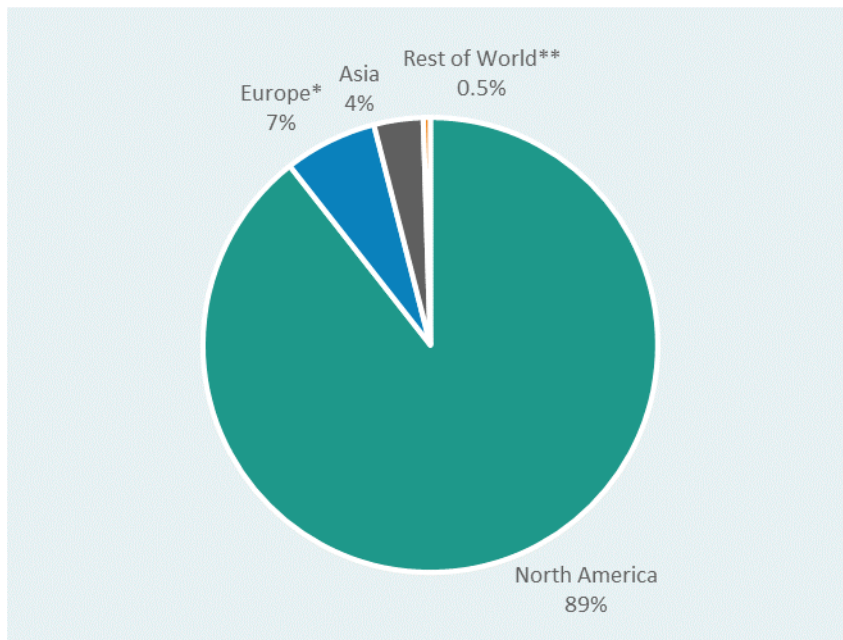


# Geography

## Portfolio Diversification

Period Ending: June 30, 2020

<b>Geography</b>	<b>Current Exposure</b>
North America	289,094,801
Europe*	21,205,237
Asia	11,410,728
Rest of World**	1,643,932
<b>Total Private Equity</b>	<b>323,354,698</b>



Based on the value of portfolio companies as of June 30, 2020, if provided by the partnerships. Differences between reported value and the total portfolio valuation is due to temporary cash funds, fees, other expenses, and holdings with undisclosed geography breakdown.

\* Europe includes 100% market value from Cevian II.

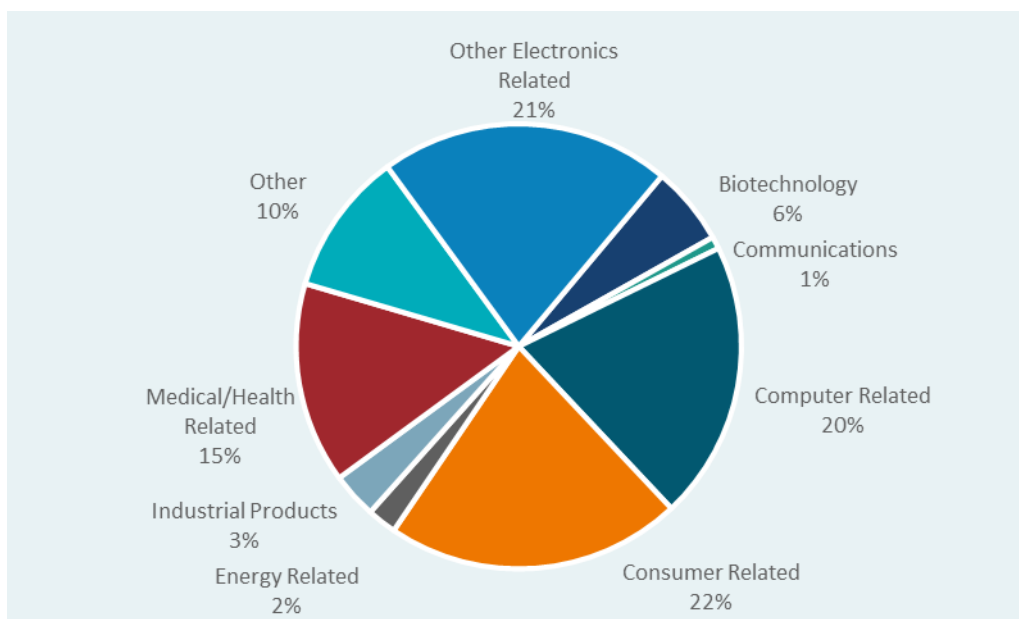
\*\* Rest of World includes Kenya, United Arab Emirates, Turkey, and Brazil.

# Industry Portfolio Diversification

Period Ending: June 30, 2020

Industry	Current Exposure
Biotechnology	17,661,918
Communications	2,750,204
Computer Related	62,398,609
Consumer Related	66,292,546
Energy Related	6,582,829
Industrial Products	10,196,142
Medical/Health Related	45,057,014
Other	32,051,647
Other Electronics Related	65,210,684
<b>Total Private Equity</b>	<b>308,201,593</b>

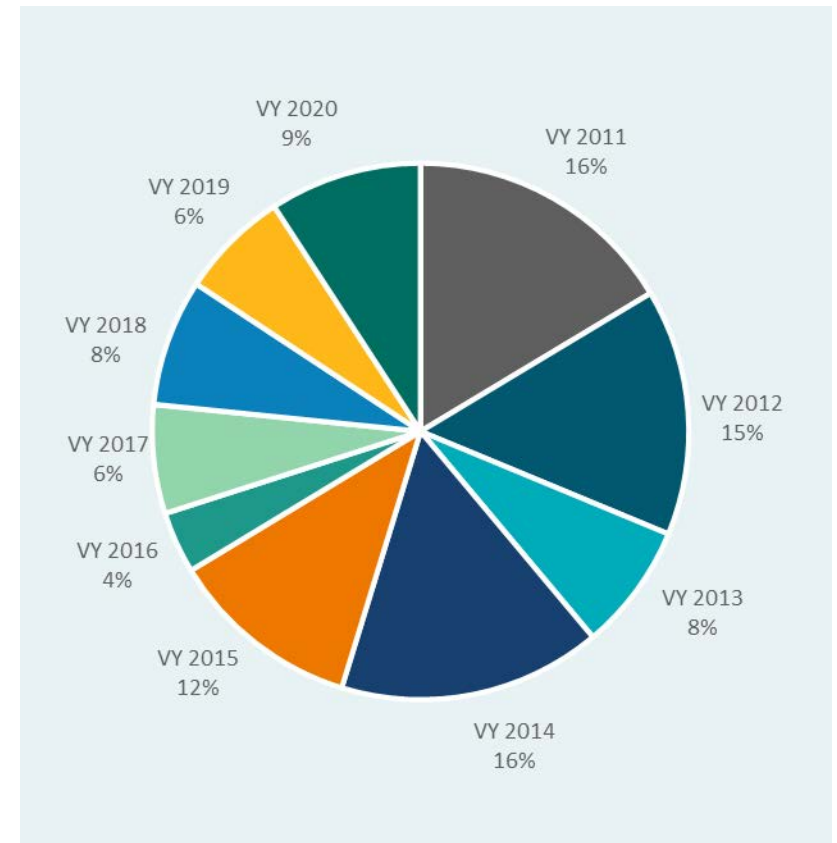
Based on the value of portfolio companies as of June 30, 2020, if provided by the partnerships. Differences between reported value and the total portfolio valuation is due to temporary cash funds, fees, other expenses, and holdings with undisclosed geography breakdown.



# Vintage Year Portfolio Diversification

Period Ending: June 30, 2020

Vintage Year	Commitment as of 6/30/2020	% of Portfolio Commitment	Reported Value as of 6/30/2020
2011	75,000,000	16.39%	25,632,912
2012	68,000,000	14.86%	143,766,489
2013	35,000,000	7.65%	30,958,765
2014	72,500,000	15.85%	59,026,420
2015	53,000,000	11.58%	38,657,889
2016	17,000,000	3.72%	9,076,069
2017	30,000,000	6.56%	22,513,091
2018	35,000,000	7.65%	3,163,288
2019	30,000,000	6.56%	9,645,487
2020	42,001,040	9.18%	0
<b>Total Private Equity</b>	<b>457,501,040</b>	<b>100%</b>	<b>342,440,410</b>



- As of June 30, 2020, the Private Equity Portfolio exposure is 7.3%, greater than of the plans 6.0% policy target, but within its 4-8% target range.
  - Compared to December 31, 2019, portfolio exposure is up 0.9%, driven by Venture Capital's strong performance relative to the Public Markets recovery from March lows.
  - Venture Capital remains above its new policy target, as a result of significant increase in two select portfolio companies.



**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**



**PERIOD ENDING: JUNE 30, 2020**

Real Assets Review

**San Mateo County Employees' Retirement Association**

# Table of Contents



VERUSINVESTMENTS.COM

SEATTLE 206-622-3700

LOS ANGELES 310-297-1777

SAN FRANCISCO 415-362-3484

---

Real Asset Outlook 3

---

Real Assets Program Update 21

---

Real Assets Portfolio Performance 16

---

Real Assets Portfolio Diversification 18

- RA Portfolio Diversification by Strategy
  - RA Portfolio Diversification by Geography
  - RA Portfolio Diversification by Vintage Year
- 

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



# Real Asset Outlook

# Outlook summary

Strategy	Current Environment	Potential Risks	Outlook/Implementation	View
<b>Private Real Estate</b>	Negative impacts from the economic slowdown caused by Covid-19 will likely take several quarters to play out in the appraisal process for existing assets. Transaction activity has come to a halt, making pricing comparisons difficult. Retail/hotel/resort/casinos will likely feel the greatest impact. Income declines are more likely than prior downturns.	<ul style="list-style-type: none"> <li>— The duration of the economic slowdown will impact the degree of negative real estate performance. Core real estate returns tend to have high correlation to overall GDP growth.</li> <li>— A sharp rise in interest rates could lead to increased cap rates, hurting values.</li> </ul>	Our outlook remains neutral; however we are taking a barbell approach. The lag effect of the appraisals process will create a period of several quarters where valuations are not reflective of perceived value. Redemption requests are typically met with gates or redemption restrictions. We recommend rebalancing redemptions in core real estate where possible and deploying capital in non-core strategies with fresh capital.	<b>Neutral</b>
<b>REITs</b>	REITs responded sharply downward in March when the severity of coronavirus forecasts filtered in. REITs were down almost 40% YTD at their nadir with some sectors such as hotels and casinos down over 70%. A sharp recovery occurred, but not all the way back. Through mid April REITs were down ~25%, but well off their lows.	<ul style="list-style-type: none"> <li>— REITs have higher leverage than core real estate and have higher exposures to non-core sectors such as hotels, self-storage, for rent residential and senior/student housing.</li> <li>— Rising interest rates can have a negative effect on REITs and all yield-sensitive assets over short periods.</li> <li>— REITs are sensitive to economic decline and general equity market volatility.</li> </ul>	We remain neutral on REITs. Although the recent decline in performance has increased discounts to NAV, the underlying NAVs have not yet adjusted. REITs can provide liquid exposure to real estate with the following caveats: high sensitivity to equity market volatility over shorter holding periods, higher leverage and higher exposures to non-core sectors such as hotels, self-storage, for-rent residential, etc.	<b>Neutral</b>
<b>Commodities</b>	Commodities futures have had lackluster performance over the last decade. An upward sloping futures curve for most of the last decade has created a headwind for the asset class. In 1Q, an oversupply of energy, coronavirus demand destruction, and declining inflation concerns has exacerbated performance issues.	<ul style="list-style-type: none"> <li>— Oversupply issues, especially across the energy complex could have a lasting impact.</li> <li>— Depending on the depth of the recession, demand for energy and industrial metals could be reduced for an extended period.</li> <li>— Inflationary pressures remaining low would continue to be a headwind.</li> </ul>	Commodities will likely face both supply and demand issues over the intermediate timeframe. Contango remains steep across the complexes and lower rates will keep collateral returns low. Inflation driven by excess demand is unlikely in the intermediate horizon and any inflation led by excess monetary supply is unlikely to have a direct benefit to commodities.	<b>Negative</b>

# Outlook summary (continued)

Strategy	Current Environment	Potential Risks	Outlook/Implementation	View
TIPS	Declining nominal interest rates have led to positive total returns, however declining inflation has caused TIPS to underperform nominal bonds. Breakeven rates, while volatile, are down across the board.	<ul style="list-style-type: none"> <li>— Decreasing inflation expectations or rising nominal interest rates would be a headwind to TIPS.</li> <li>— Continued low rates create a high cost of carry.</li> </ul>	Low current yields and modest inflation expectations have led to other real assets offering higher total return potential than TIPS.	<b>Negative</b>
Infrastructure	Infrastructure assets have not been spared during the broad market sell-off in 2020. Coming into the year, we were especially bearish on transportation infrastructure assets (airports, toll roads, ports, etc.) due to valuations and significant GDP risk. We anticipate that Covid-19-related impacts on travel will generate more interesting deals for client capital. Power and energy-related infrastructure has also been hit hard by the economic fallout though we are cautious about taking significant commodity-price risk. Finally, the telecom/data space remains an attractive segment for infrastructure capital and we anticipate putting more money to work in this area going forward.	<ul style="list-style-type: none"> <li>— Regulatory changes are creating investment challenges in parts of Europe as low interest rates are putting downward pressure on the allowed returns by investors. We are cautious on utilities where returns are set by governmental bodies.</li> <li>— Transportation assets are particularly vulnerable in the current environment. We may see interesting opportunities emerge from over-levered infrastructure funds, but we'd be a patient buyer.</li> </ul>	The asset class offers a compelling return profile that aligns well with long duration pools of capital. We favor private infrastructure funds that have capabilities to improve operations and manage complex deal structures..	<b>Positive</b>
Oil & Gas	The oil & gas industry entered 2020 on shaky legs following several years of weak commodity prices. The dual impact of Covid-related demand destruction and the disintegration of OPEC+ supply controls sent oil markets into a tailspin. For independent drillers, current prices are far too low for them to operate profitably. We expect a large number of bankruptcies across the energy industry vertical and a challenging time ahead raising capital once prices stabilize.	<ul style="list-style-type: none"> <li>— Slowing demand for oil, mostly driven by slowing economic growth, is a key concern for the industry. Longer-term, oil demand is expected to decline as non-carbon sources of power outcompete hydrocarbons.</li> <li>— Access to capital within oil &amp; gas presents a challenge for an industry that requires large capital expenditures to grow.</li> <li>— Geopolitics and the tension between OPEC and non-OPEC producers presents an additional risk for investors.</li> </ul>	We had been cautious about energy going into 2020 but industry fundamentals deteriorated far more than we would have predicted. There is too much uncertainty around oil/gas demand, access to capital, and geopolitics for us to gain comfort. We recognize that someone will likely make money from the devastation occurring in upstream energy, but we aren't willing to place bets just yet.	<b>Negative</b>

# Outlook summary (continued)

Strategy	Current Environment	Potential Risks	Outlook/Implementation	View
<b>Renewables</b>	Operating renewable energy assets remain expensive with yields in the mid-single digits. New development projects will slow down in 2020 but will likely see a rebound shortly after as solar and wind farms are now the cheapest form of new build electricity generation for over two-thirds of the global population, and countries shift their energy sources to meet pledges to become carbon neutral.	<ul style="list-style-type: none"> <li>As corporations shore up capital to preserve liquidity, capital expenditure dedicated to developing and purchasing renewable energy assets may shrink. There is also a potential for government subsidies and tax incentives to be reduced as governments are forced to dedicate resources to the current crisis as opposed to the long-term impact of climate change.</li> </ul>	While we believe the development of solar and wind farms is an attractive investment, it is difficult to find scalable opportunities that warrant deploying capital into a dedicated renewable energy fund. Infrastructure funds with a track record of successful development projects within broader portfolios are the most effective way to gain exposure to the sector.	<b>Neutral</b>
<b>Mining</b>	The mining industry has not suffered quite like the oil & gas market, but it has been a weak sector for several years. Unlike oil, we see growing demand for industrial metals like copper, nickel, zinc and steel inputs as electrification takes market share from carbon-based power generation.	<ul style="list-style-type: none"> <li>Global GDP growth and the economy in China are the two biggest risks in the sector. China represents a disproportionately large buyer of industrial metals, so its economy and industrial output have a large impact on metal prices.</li> </ul>	Longer-term, we believe the demand outlook looks favorable for several industrial metals. There will be near-term headwinds from Covid-19 but as the global economy recovers, we expect a tightening of supply/demand for mining commodities.	<b>Positive</b>
<b>Midstream Energy / MLPs</b>	Coming into 2020, midstream companies were trading at levels that indicated the market was skeptical about company cashflows and future earnings. Falling oil prices from the impact of Covid-19 and news that OPEC & Russia would no longer cooperate to balance the supply side of the market compounded negative sentiment. With so much uncertainty now present in the energy market, we would avoid companies exposed directly or indirectly to oil price movement.	<ul style="list-style-type: none"> <li>Falling oil/gas prices could curtail drilling programs and reduce production volumes which would hurt MLP cash flows.</li> <li>Regulatory risk is low for most of the midstream space though there are pockets of risk in states like Colorado and New York where regulations could greatly impact drillers and pipeline owners.</li> </ul>	We have shifted our outlook to negative for midstream energy given the challenges that emerged in 2020. Though prices for listed midstream stocks have plummeted, we are seeing a wave of distribution cuts that will reset the sectors income yield and depending on the duration of the oil price downturn, could see a spike in bankruptcies.	<b>Negative</b>

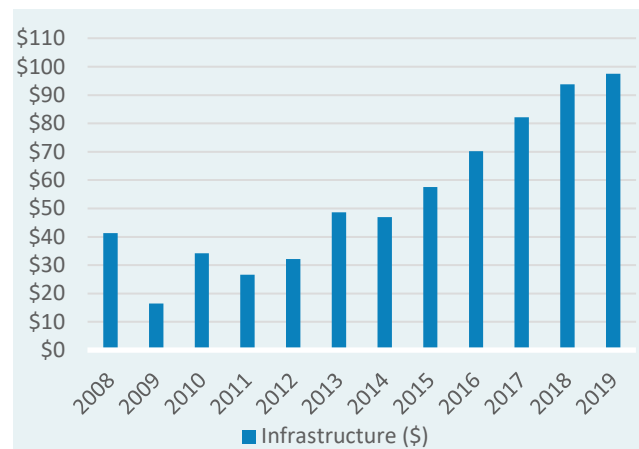
# Outlook summary (continued)

Strategy	Current Environment	Potential Risks	Outlook/Implementation	View
Timberland	Timber markets in North America continue to face challenges from excess inventory, low interest rates and unfavorable transaction market. Stumpage and lumber prices are facing near-term headwinds from Covid-19 as home building softens exports to Asia have stalled. Our outlook on timber has been negative for several years due to the headwinds the asset class has faced. Despite broadly negative sentiment towards the timber industry, we struggle to make a case for returns to reach higher than mid-single digits.	<ul style="list-style-type: none"> <li>— Coming off trade war headwinds, the timber market hit another bump when Covid-19 stalled exports to Asia and home building activity declined. An already oversupplied timber market will take time to work through excess inventory.</li> <li>— Timber markets outside the U.S. face varying degrees of currency and political risk which in many cases has resulted in disappointing returns for investors. With few exceptions, returns do not justify the additional risk.</li> </ul>	For most investors, high single-digit expected returns for timberland in the U.S. is too low for the illiquidity and risk assumed within the asset class. Fundraising has been slow for several years which has resulted in a slow transaction market and less competition but finding attractive deals remains elusive.	Negative
Agriculture	Farmland prices in the Midwest leveled off after 2014 but remain too expensive for the income and return potential. We are interested in opportunities where we can control more of the value-chain associated with food production.	<ul style="list-style-type: none"> <li>— Similar to timber markets, we have concerns around valuations and the risk/return proposition for farmland investments.</li> <li>— The income potential within farmland is more attractive than timber and the global growth in food is a more compelling macro trend than pulp and paper but we remain bearish on the sector, in general.</li> </ul>	Currently we find the asset class to be broadly expensive. Selectively looking at agriculture business investments where crop and land are a component of a broader value-add investment strategy.	Negative

# Infrastructure

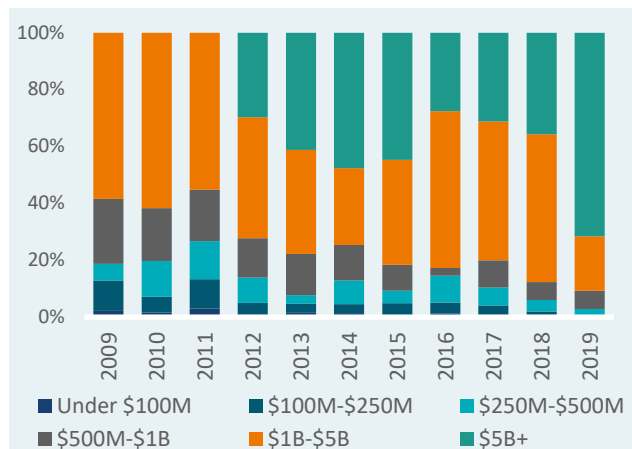
- Fundraising within Infrastructure reached a record high of \$98 billion in 2019, according to Preqin. In addition, large infrastructure funds are capturing a greater share of the overall market, with around 70% of the capital raised in 2019 committed to infrastructure funds that were targeting at least \$5B in assets.
- In 2019, we saw a surge in deal activity for telecom and energy (ex. renewables). We've been bullish on the telecom theme given the tailwinds around data usage growth globally. Social distancing measures have heightened our collective use of data as we learn to work remotely and conduct meetings via videoconferencing. The growth in energy transactions, led by several midstream take-privates, has likely not worked quite as well. The collapse in oil prices has devastated oil/gas producers which will flow through to the pipeline owners as volumes fall from production declines.

FUNDRAISING IN INFRASTRUCTURE



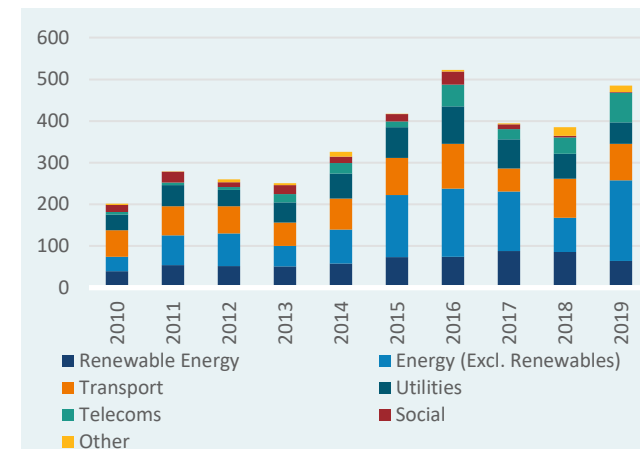
Source: Preqin

INFRASTRUCTURE FUNDRAISING BY FUND SIZE



Source: Pitchbook

INFRASTRUCTURE DEALS BY SECTOR

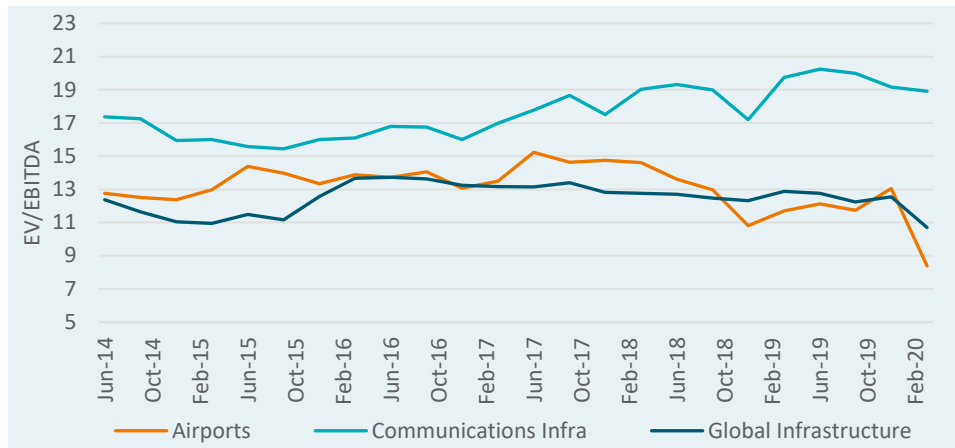


Source: Preqin

# Infrastructure (cont.)

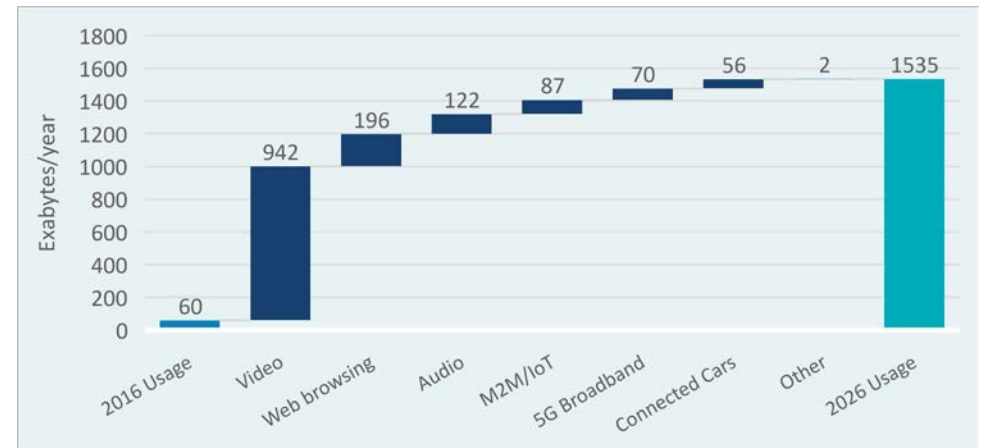
- Transportation infrastructure (i.e. ports, toll roads, airports) is experiencing a material decline in revenue due to travel restrictions and slowing global trade. Airport passenger traffic fell as much as 50-90% during March as the full impact of social distancing orders took effect. Cargo volumes were down 30% at the Port of Los Angeles, the largest port in the U.S. In contrast, communications infrastructure has either seen little-to-no impact or has benefited from a surge in data usage. Verizon reported traffic across its networks increased 20% from pre-coronavirus levels as video streaming, gaming and web traffic surged.
- Valuations within sectors most impacted by Covid-19 fell sharply during the first quarter, reflecting the near-term business impact and higher risk premiums. Listed airports, for example, fell from an average EV/EBITDA multiple of 13.0x to 8.0x in March 2020. Having been bearish on the transportation sector for a couple years, the disruption to infrastructure assets could present an interesting entry point for new capital.
- Communication infrastructure trades at a considerable premium, 19.0x vs. 10.5x for infrastructure broadly, which is a reflection of the stability of their earnings and future growth potential. The macro tailwinds within mobile data usage and video streaming are compelling, though valuations, at least within public markets, appear to be pricing in much of the future growth opportunity.

INFRASTRUCTURE VALUATIONS – EV/EBITDA



Source: Bloomberg; Dow Jones Brookfield Infrastructure; S&P Global Infrastructure

GROWTH IN GLOBAL MOBILE DATA TRAFFIC (EXABYTES PER YEAR)

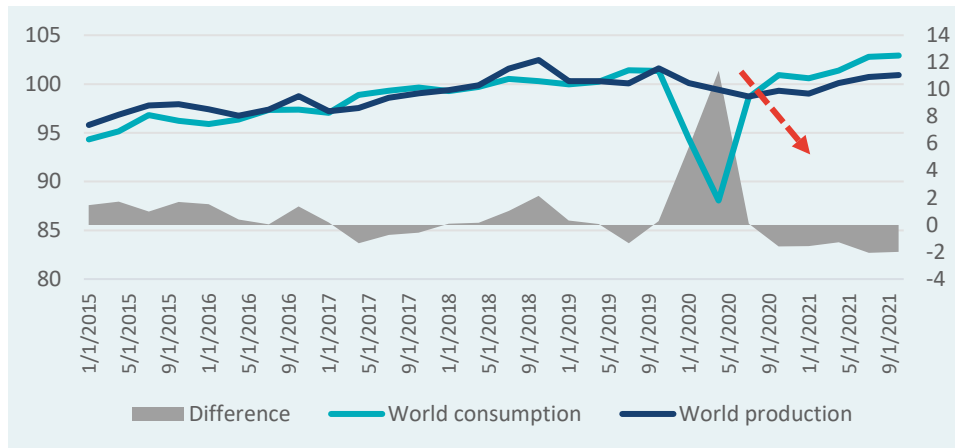


Source: Altman Vilandrie 2018

# Energy – Oil/Gas

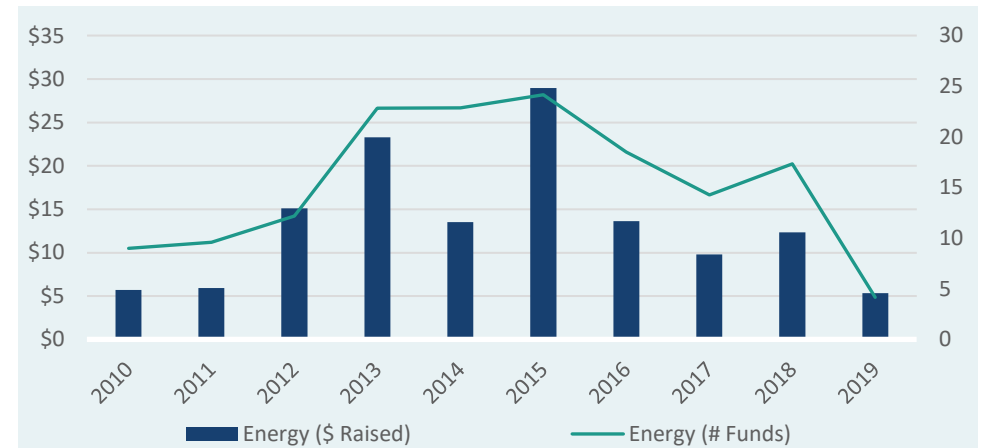
- The oil/gas industry would seem to be cursed as weather, geopolitics, human pandemics and investor antipathy have collectively hit the sector when it was already severely wounded. News of a breakdown in the alliance between OPEC and Russia on supply management will likely result in another round of bankruptcies and capital destruction for North American Oil & Gas companies. Forecasts for oil demand are still being adjusted downward but are projected to decline 5-10% in 2020. An already oversupplied market will take time to recover from the steep decline in demand but for U.S. drillers, time is in short supply.
- We do not see private capital stepping in to provide much needed debt and equity infusions as they did in 2015/'16. Fundraising, both in equity and credit strategies, to support the energy industry has been anemic. Absent a sharp recovery in oil prices over the next 6 months, we believe a substantial wave of restructurings will occur and U.S. shale production will fall sharply as small and financially weak operators are taken out of the market.
- For now, we would recommend investors avoid putting new capital into the sector. We are more comfortable potentially missing out on a market bottom than risking additional capital that in our view is likely to become impaired.

**WORLD CONSUMPTION/PRODUCTION OF LIQUID FUELS PER DAY**



Source: EIA

**FUNDRAISING IN OIL/GAS**



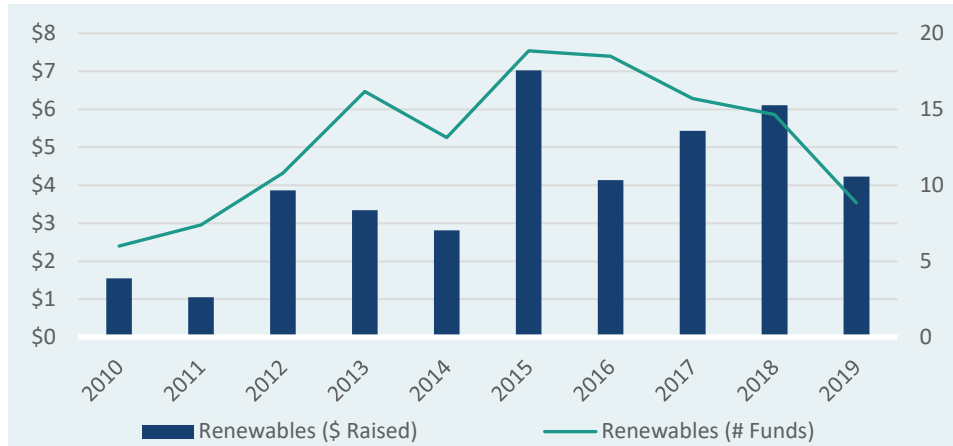
Source: Preqin



# Energy – Renewables

- Dedicated renewable energy fundraising moderated in 2019 to just over \$4 billion. However, this figure does not include energy funds that invest in both conventional energy sources along with renewable sources, or infrastructure funds that target renewable energy investments as a portion of their strategy. Taken as a whole, investment in the sector has been on a consistent upward trend, with only more room to grow as countries and corporations aim to become carbon neutral. According to Bloomberg<sup>1</sup>, over \$10 trillion of investment in new renewable energy generation assets is needed by 2050 in order to meet demand.
- The sector has held up strongly through the Covid-19 crisis due to stable demand for electricity and the relative ease of operations for solar and wind farms. New development projects will likely slow in the short term as financing dries up and permitting processes come to a halt, but existing assets will be largely unaffected.
- Despite a strong outlook for demand, there are challenges to deploying capital in the space. Investments in operating assets are not compelling as returns remain in the mid-single digits, and it is difficult to find scalable development opportunities. We currently believe the best way to gain exposure is through broader infrastructure funds that include investments in the sector as a component of a diversified portfolio.

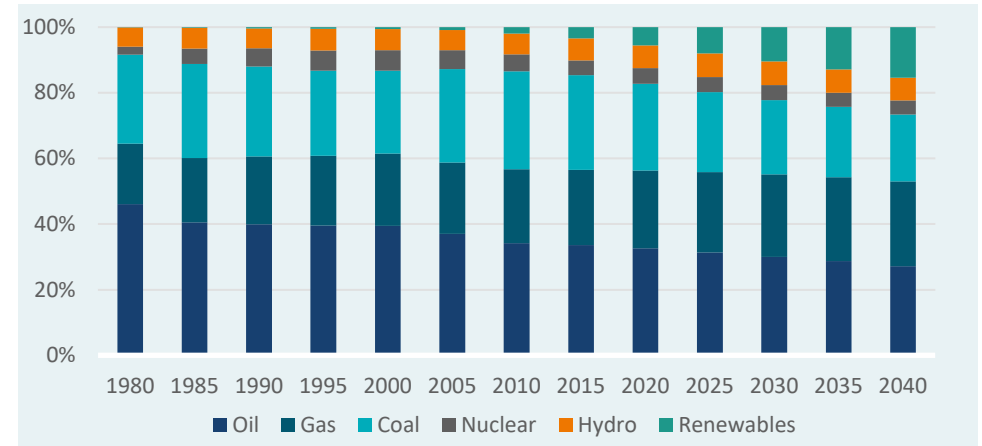
## FUNDRAISING IN RENEWABLES



Source: Preqin

1. Bloomberg New Energy Finance, New Energy Outlook 2019.

## GLOBAL ENERGY SOURCES

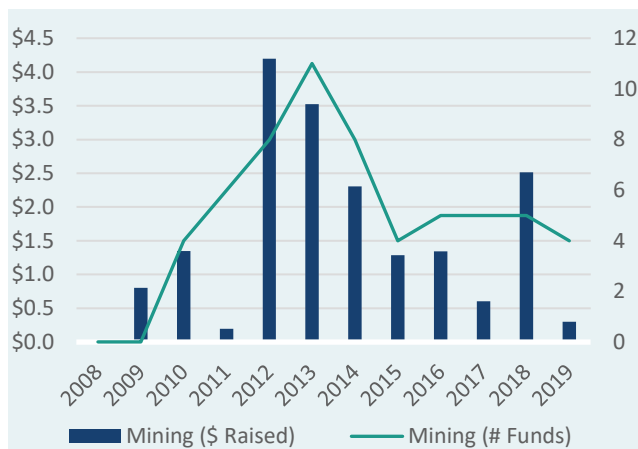


Source: BP

# Metals and mining

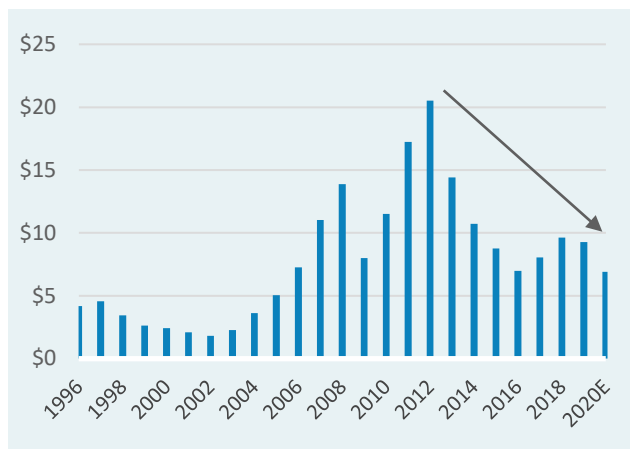
- Fundraising in the private equity mining segment has been lumpy and quite modest since the GFC. 2019 saw a significant decrease after a notable uptick in fundraising in 2018. The landscape for fundraising in mining will be one to watch as more institutions implement strong ESG programs that will undoubtedly impact mining GPs. We could see a scenario where fundraising improves if investors see the benefit of funding the extraction of materials that contribute to our shift away from fossil fuels.
- After a modest recovery from a cyclical low in 2016, mining exploration budgets are expected to decrease by 29% in 2020 due to limited access to financing and lockdown measures in place in many countries mining companies operate. Despite short term challenges, macro trends of increasing demand for industrial metals remain in place. Our overall outlook within mining is positive with a notable challenge in finding enough investment opportunities that meet our underwriting criteria.
- On the investment side, we have participated in the mining sector by backing teams with expertise in financing mining projects which delivers a high income return with some upside associated with a structured equity security. We are more bullish on base/industrial metals which longer-term will benefit from a shift away from fossil fuels. We are less bullish on bulk and energy-related commodities.

**FUNDRAISING IN MINING**



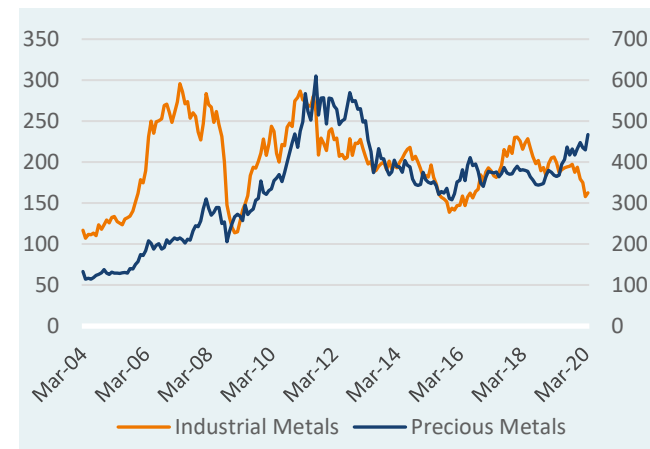
Source: Preqin

**CAPITAL EXPENDITURE IN MINING (\$B)**



Source: S&P Global Market Intelligence

**METAL PRICES**

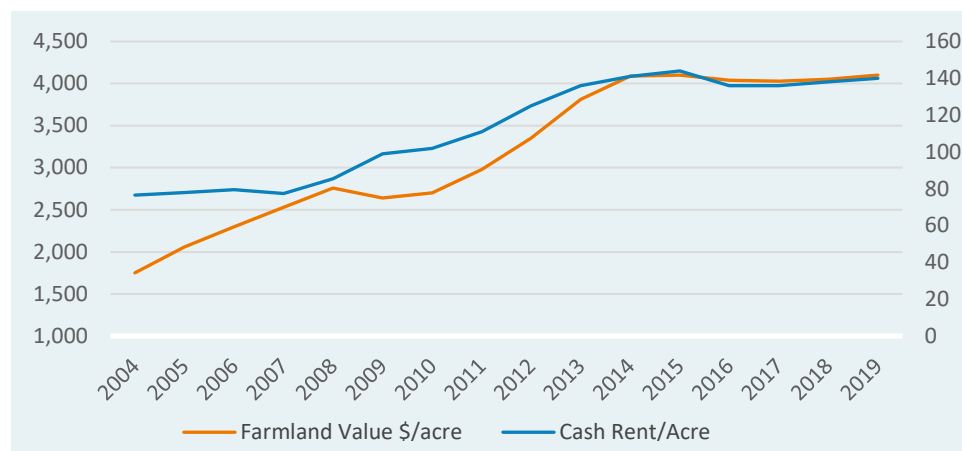


Source: Bloomberg

# Agriculture

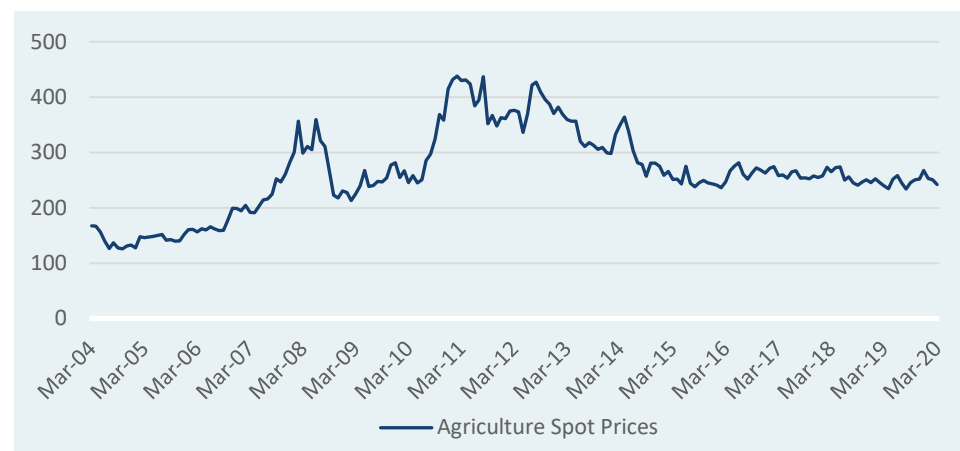
- Farmland values nationally have remained largely flat since 2014, despite a challenging commodity price environment over the last 5 years. That has put pressure on investment returns as income yields have been flat-to-down and capital appreciation has not materialized. For new investors, the investment return potential looks disappointing as rental yields remain stubbornly low (3-4% on average) and land values appear expensive.
- In the row crop segment, rental yields hover around 3% which is insufficient in our opinion for most institutional investors. Permanent crops offer the potential of higher income yields but also carry greater risk and operational expertise. There are additional ways to add value through crop selection, improving crop yields and selling land for higher-and-better-use cases. In addition, managers can control a greater share of the food production value-chain which carries higher returns but also higher operational risk.
- We tend to favor agriculture strategies that both own land for crop production and control the operating verticals that bring food to the consumer. Strategies that can capture more value through processing, storage and marketing, offer the potential of higher returns.

**U.S. NATIONAL FARMLAND VALUES VS CASH RENTS**



Source: USDA

**BLOOMBERG AGRICULTURE PRICES**

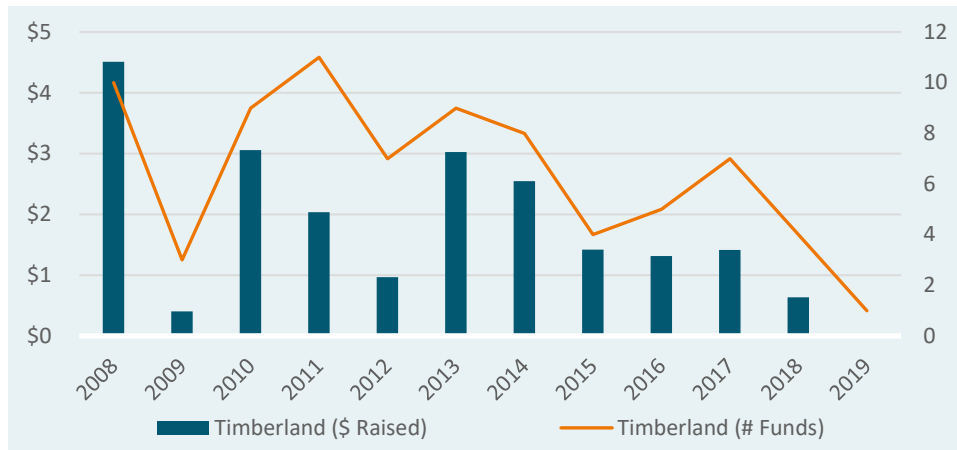


Source: Bloomberg, as of 3/31/20

# Timberland

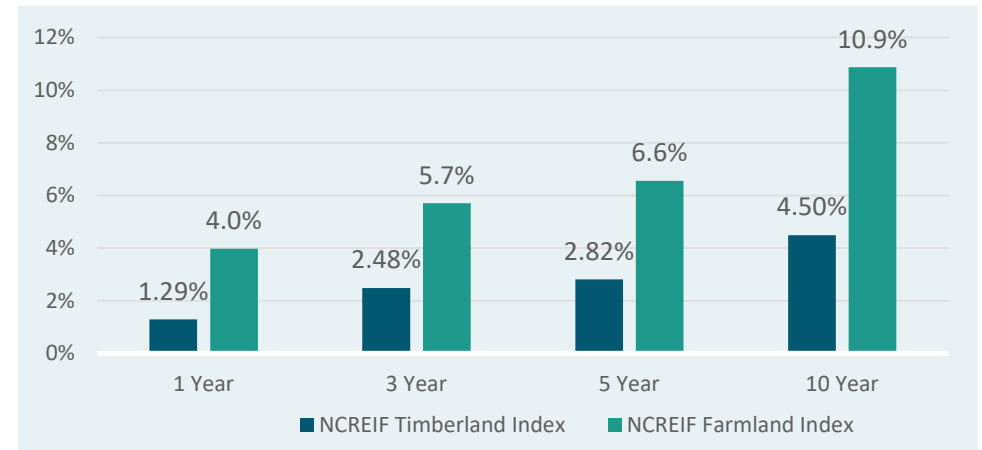
- Fundraising has continued to be a challenge within the timber industry with Preqin having 1 timber fund raised in 2019. Despite a lack of capital being raised by TIMOs, the investment opportunity within timber has not materially improved.
- One other effect of the fundraising trend in timberland is the cluster of “zombie” funds raised in the pre-GFC period that are finding liquidity a challenge. The mismatch in buyers and sellers in other markets could present a buying opportunity but a reluctance on the part of selling timber managers to realize a loss has kept prices elevated and thus expected returns low.
- The past 10 years have been lackluster for timber investors, achieving a trailing average return of 4.5%, according to the NCREIF Timberland Index. Many TIMO funds have fared worse than the index due to leverage and/or less favorable geographic exposures within their portfolio. The 10-year returns prior to the GFC were more than double the returns experienced after, so investors may ask, which returns we are likely to see in the decade ahead. We believe the asset class was undergoing a unique shift in the 90s and early 2000s that drove high double-digit returns that aren’t repeatable in today’s market.

## FUNDRAISING IN TIMBERLAND



Source: Pitchbook/Preqin

## TIMBERLAND TRAILING PERFORMANCE

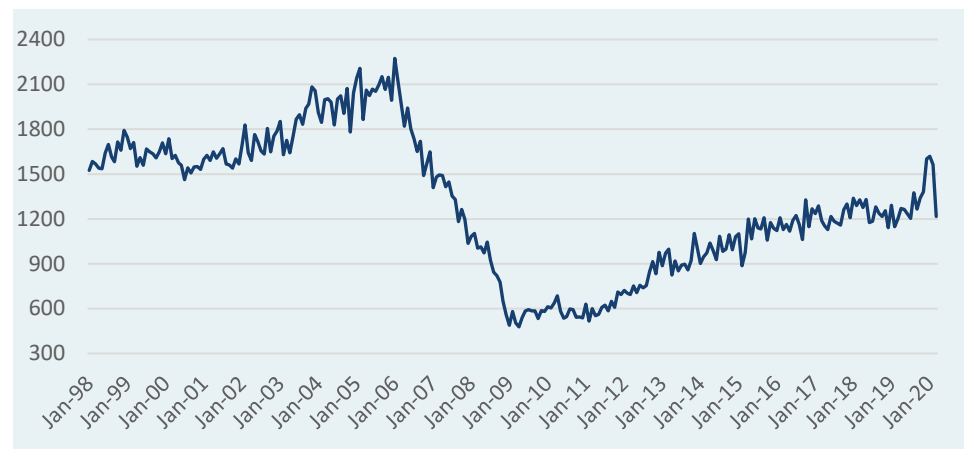


Source: NCREIF (as of 3/31/20)

# Timberland (continued)

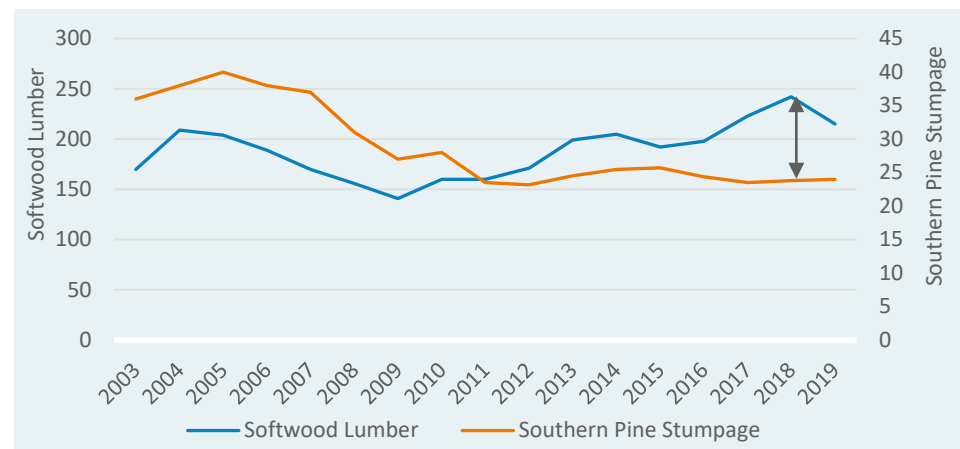
- Housing starts have experienced a slow rebound since the GFC as millennials delayed buying and urban living trends reduced demand for single family homes. There was a surge in housing starts in 2019 but the impact of Covid-19 caused a sharp reversal in the first quarter of 2020.
- As the chart on the bottom right indicates, one of the challenges that timber investors have faced is that the price they received for their trees (southern pine stumpage) began to decline during the GFC and largely never recovered. With housing construction turning around in 2015/16, lumber prices began to respond but the prices that timberland owners received did not. Two critical issues have kept stumpage prices depressed, excess supply of trees in the region and a lack of mill density that has created bottle necks in lumber production.
- The impact of Covid-19 is likely to be a short-term headwind for lumber prices and the timber industry as a whole. That said, given the lack of highly leveraged players in the timber market, we don't expect a stressed buying opportunity to emerge.

**U.S. HOUSING STARTS**



Source: St. Louis Fed, as of 3/1/20

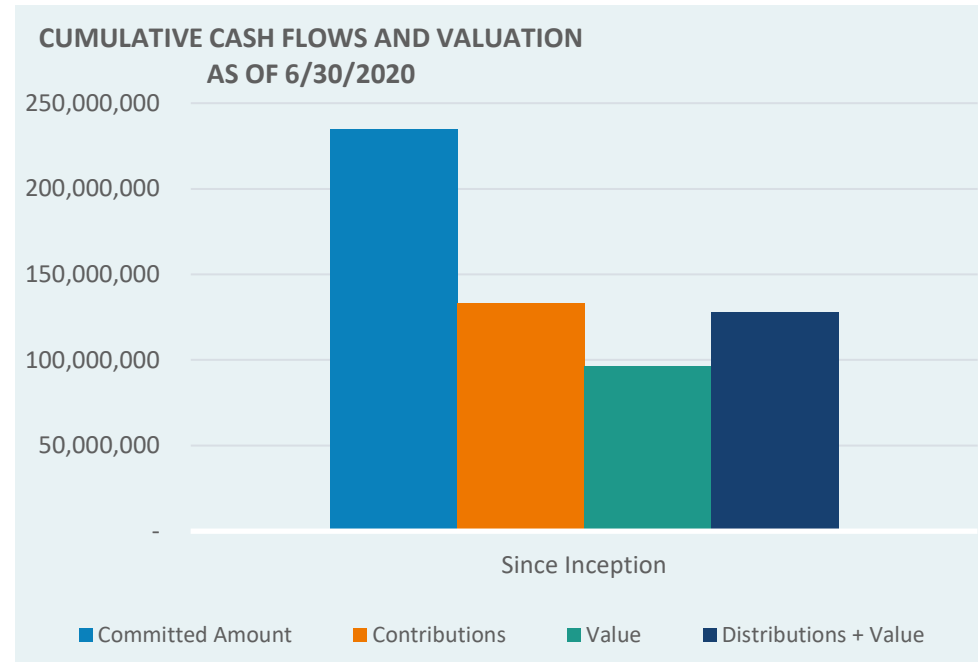
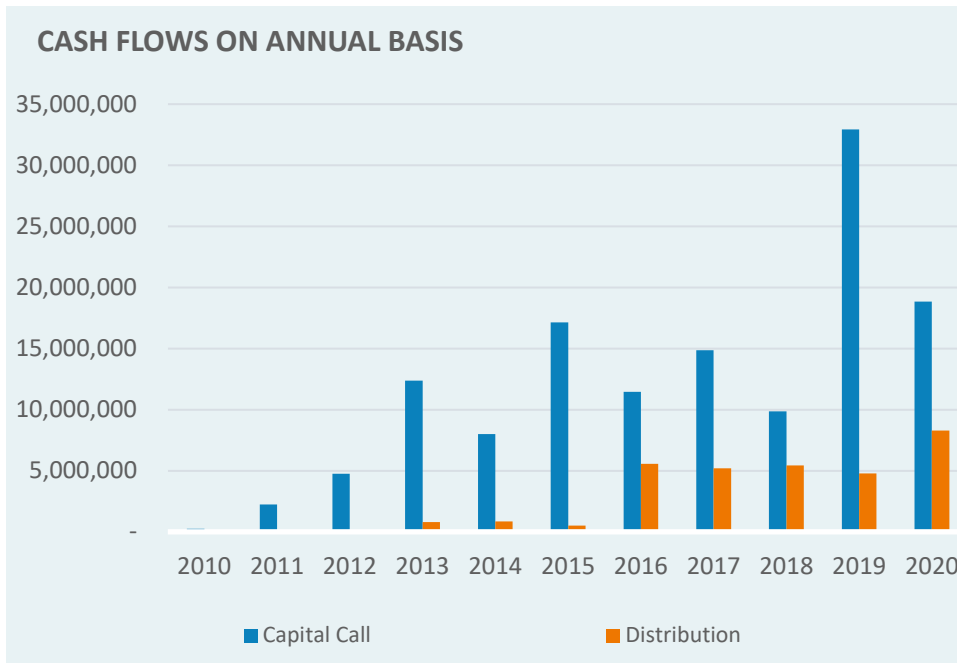
**SOUTHERN PINE STUMPAGE VS SOFTWOOD LUMBER PRICES**



# Real Asset Performance

## Performance

- The portfolio is currently valued at \$96.1 million. Together with \$31.5 million in realized distributions, the Total Value at \$127.6 million is approximately \$5.2 million below \$132.8 million total capital contributions, resulting in a total value multiple of 0.96x and a net IRR of -1.52%. If we exclude the investment in Sheridan, the portfolio IRR would be +6.10%. Capital weighted average investment age of the portfolio is 3.2 years.
- Within Private Real Assets, the current allocation of market value exposure is 15.2% to Agriculture, 11.3% to Energy, 27.2% to Mining, and 46.3% to Infrastructure. The Portfolio is expected to be diversified over a period of 3 to 5 years.



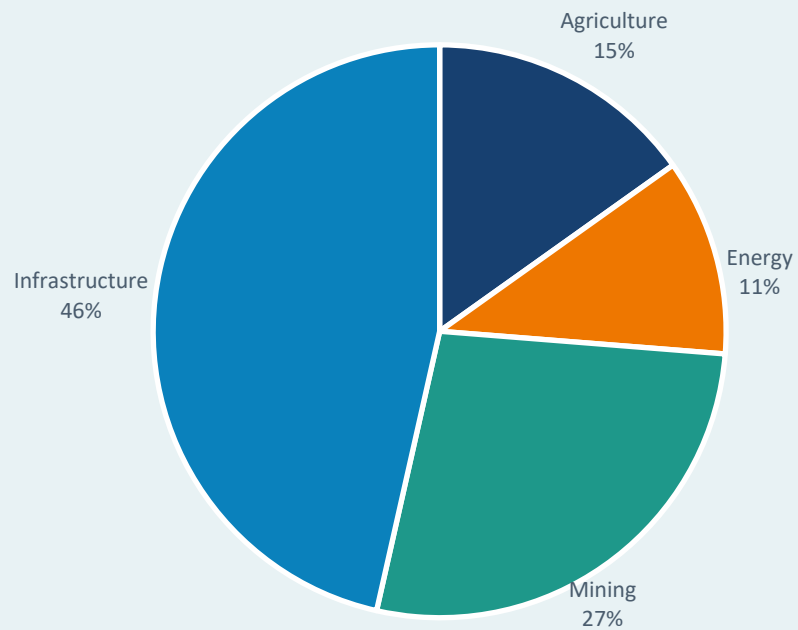
# Strategy

## Portfolio Diversification

Period Ending: June 30, 2020

Investment Type	Commitment	Current Exposure	Current Exposure as % of Portfolio
Agriculture	15,000,000	14,586,536	15.2%
Energy	49,800,000	10,865,564	11.3%
Mining	55,000,000	26,175,927	27.2%
Infrastructure	115,000,000	44,464,590	46.3%
<b>Total Portfolio</b>	<b>234,800,000</b>	<b>96,092,617</b>	<b>100.0%</b>

REAL ASSETS PORTFOLIO: CURRENT EXPOSURE



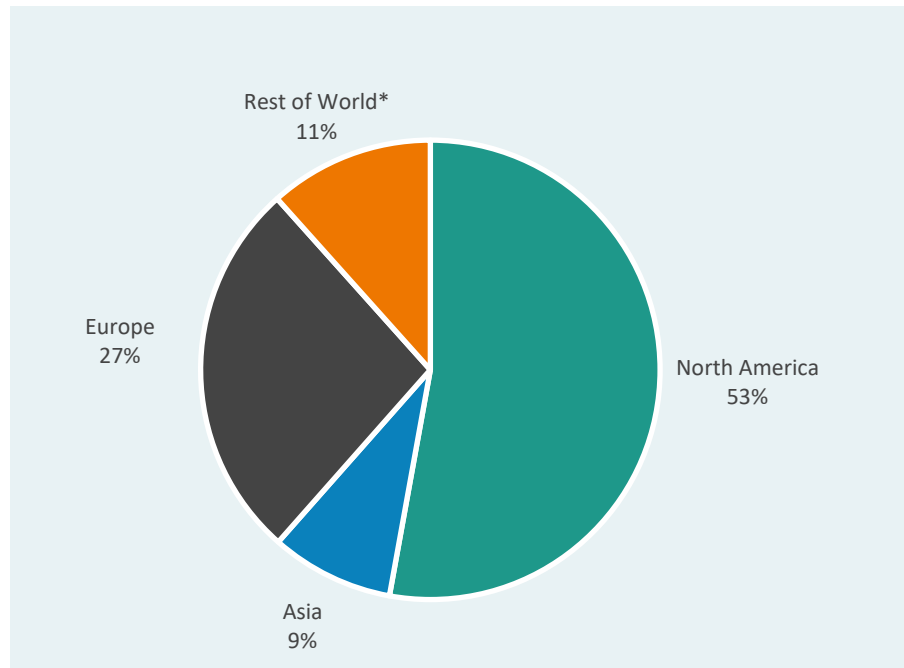


# Geography

## Portfolio Diversification

Period Ending: June 30, 2020

Geography	Reported Fair Value
North America	50,788,320
Asia	8,324,034
Europe	25,813,717
Rest of World*	11,166,545
<b>Total Portfolio</b>	<b>96,092,617</b>



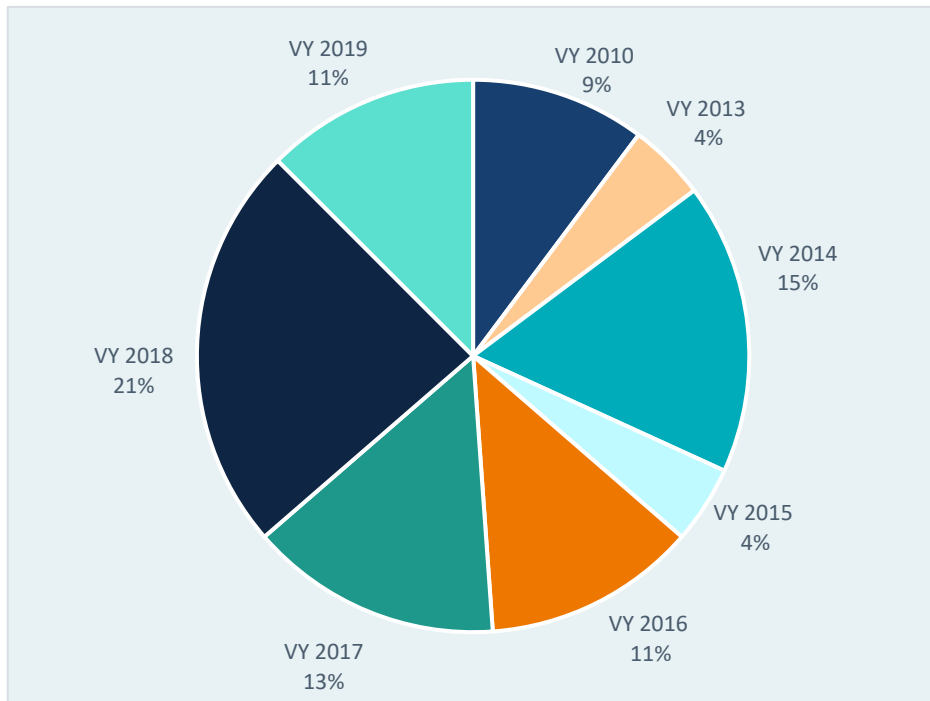
Based on invested capital as of June 30, 2020, if provided by the partnerships. The portfolio is expected to be US-biased given the mandate to hedge domestic inflation.

\* Rest of World includes Australia, Chile, Senegal, DRC, and Burkina Faso.

# Vintage Year Portfolio Diversification

Period Ending: June 30, 2020

Vintage Year	Commitment as of 6/30/2020	% of Portfolio Commitment	Reported Value as of 6/30/2020
2010	20,000,000	8.5%	0
2013	10,000,000	4.3%	2,734,423
2014	35,000,000	14.9%	25,225,921
2015	10,000,000	4.3%	12,771,048
2016	25,000,000	10.6%	10,680,892
2017	29,800,000	12.7%	13,681,384
2018	50,000,000	21.3%	21,012,650
2019	25,000,000	10.6%	9,986,299
2020	30,000,000	12.8%	0
<b>Total Portfolio</b>	<b>234,800,000</b>	<b>100%</b>	<b>96,092,617</b>



The portfolio is increasingly diversified by vintage year with larger capital commitments expected over the next 2-3 years.


- SamCERA committed \$25.0 million to EQT Infrastructure V, a re-up with an existing GP relationship for SamCERA within the infrastructure portfolio.
- Several GPs within SamCERA’s portfolio are coming back to market in 2021 so we will be revisiting those opportunities for potential re-ups. We are also working on a sustainable real asset strategy that could be an interesting investment opportunity with the additional benefit of being ESG-friendly.
- As the shift away from commodity-oriented sectors continues, we will look opportunistically for strategies in the space, but we expect infrastructure to occupy a larger share of real asset portfolios going forward.

**SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**  
**Board of Retirement**

December 8, 2020

Agenda Item 6.6

**TO:** Board of Retirement

**FROM:** Doris Ng, Investment Analyst 

**SUBJECT:** Report on Investment Consultant Annual Review

**Recommendation**

Review the information below summarizing Verus' annual performance evaluation and comment accordingly during the agenda item.

**Background**

The annual evaluation of SamCERA's investment consultant has three parts:

1. A survey completed by trustees and staff
2. Responses to an annual questionnaire completed by consultant
3. A discussion at the Board meeting to present the findings of the survey and questionnaire responses

The survey was provided online, and results were collected from five trustees and three staff members. There was a total of 19 questions in the survey with each question scored on a range of 1 to 5, with 5 being the highest rating (High). Questions were asked about the general consulting team, the private equity consulting team, and the real assets consulting team. In addition, the survey prompted the Board to provide strategic and educational topics that they would like Jeff MacLean from Verus to cover in 2021.

**Discussion**

Please refer to the summary of the survey scores below. For each question, the responses are broken out and grouped by trustee and staff scores. The minimum, maximum, and average scores are presented for each question as well. Both the Board and staff generally marked the components of the evaluation as above average/high, with the Board marking the general consulting team's effectiveness of strategic and "big picture" advice, analytical sophistication and conveying of information during board meetings a bit higher than staff.

In addition, the Board and Staff provided the following strategic and educational topics they would like Jeff MacLean from Verus to cover with the Board in year 2021:

1. "More about working with a mature fund"
2. "Covid-19 impacts on our current investments and what we should know for future investments."

**SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**  
**Board of Retirement**

2020 Survey Question	Trustees			Staff		
	Min	Avg	Max	Min	Avg	Max
<b>General Consulting</b>						
How would you rate the general consulting team's ability to effectively convey concise and useful information during Board meetings?	5	5.0	5	4	4.0	4
How would you rate the general consulting team's responsiveness to questions and requests?	4	4.4	5	4	4.3	5
How would you rate the general consulting team's analytical sophistication?	5	5.0	5	4	4.0	4
How would you rate the effectiveness of the general consulting team's ability to lead strategic initiatives/projects and provide strategic advice (e.g. Asset-Liability Studies, Asset Allocation Reviews, Risk Management)?	5	5.0	5	4	4.0	4
How would you rate the effectiveness of the general consulting team's ability to assist and guide the Board on "big-picture" total Fund investment policy and structure on an on-going basis?	4	4.8	5	4	4.0	4
How would you rate the quality and/or clarity of the general consulting team's reports (e.g. Monthly Capital Markets Updates, Quarterly Performance Reports, Manager Review Notes, New Manager Investment Recommendations, etc.)?	4	4.8	5	4	4.7	5
How would you rate the effectiveness of the general consulting team's educational presentations (e.g. Investment Leverage, Liquidity Analysis, Plan Maturity, etc.)?	4	4.8	5	4	4.7	5
How would you rate the general consulting team's knowledge of institutional investment practices?	5	5.0	5	4	4.7	5
<b>Private Equity</b>						
How would you rate the private equity consulting team's ability to effectively convey concise and useful information during Board meetings?	4	4.8	5	4	4.7	5
How would you rate the quality and/or clarity of the private equity program's reports (e.g. Semi-Annual Private Equity Performance Reports, Private Equity Investment Recommendations, Educational Presentations)?	4	4.8	5	4	4.7	5
How would you rate the private equity consulting team's analytical sophistication?	4	4.6	5	4	4.7	5
How would you rate the overall effectiveness of the firm's private equity program?	4	4.8	5	4	4.7	5
<b>Real Assets</b>						
How would you rate the real asset consulting team's ability to effectively convey concise and useful information during Board meetings?	4	4.6	5	4	4.3	5
How would you rate the quality and/or clarity of the real asset program's reports (e.g. Semi-Annual Private Real Asset Performance Reports, Real Asset Investment Recommendations, Educational Presentations)?	4	4.6	5	4	4.7	5
How would you rate the real asset consulting team's analytical sophistication?	4	4.4	5	4	4.7	5
How would you rate the overall effectiveness of the firm's real assets program?	3	4.4	5	4	4.0	4

**Attachment**

Verus Annual Review Questionnaire



**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**

2020 Annual Review Questionnaire

**San Mateo County Employees' Retirement Association**

**VERUSINVESTMENTS.COM**  
**SEATTLE 206-622-3700**  
**LOS ANGELES 310-297-1777**  
**SAN FRANCISCO 415-362-3484**  
**PITTSBURGH 412-784-6678**

**Ms. Margaret Jadallah**  
Managing Director and Senior Consultant

**Mr. Joseph Abdou, CFA**  
Consultant

# Table of Contents



---

Organizational Update	PAGE 1
Performance	PAGE 12
Investment Consulting Philosophy	PAGE 15
Outlook	PAGE 20
Conclusion	PAGE 26

---

Organizational Update

1) Provide an update on Verus' organization, with particular emphasis on

(a) changes to your structure

We do not anticipate significant changes in the next twelve months. We have added 14 new employee shareholders and increased the shareholdings of current owners. In May 2020, we established a regional office in Pittsburgh, PA, which is being manned by senior consultants Mark Brubaker, CFA, and Ted Hermann. Both individuals joined Verus in May 2020 and were senior consultants at Wilshire Associates. Mr. Brubaker was a senior consultant and head of OCIO, and Mr. Hermann was head of institutional business development. We added two other senior consultants since our last review - Stuart Odell in the San Francisco office and John Teramana in the LA office.

The history of our firm has been a steady movement towards broadening the breadth of ownership among our key employees, with the number of shareholders increasing from seven in 2006 to 29 today. We will continue to use equity ownership as a means for attracting and retaining talent and, more importantly, for aligning the interests of our employees with those of our clients.

(b) growth of assets/accounts under consultation

Since our last due diligence submission in 2019, we have added five new accounts under consultation. Following are updated AUA numbers:

(c) breakdown by client type, and

Client Type		
	Number of clients	Assets (\$M)
Corporate	21	\$10,512
Public	21	\$364,238
Not-for-profit	45	\$40,913
Taft-Hartley	62	\$20,432
Private Wealth	6	\$1,842
Total	155	\$437,937

(d) clients gained or lost in the past year

Verus gained 5 clients and lost 1 client from December 2019 through November 2020 as shown in the tables below. Client confidentiality policies prohibit us from disclosing the names of non-governmental clients.

Client gained	Assets (\$000)	Date hired
Taft-Hartley Client	\$155,632	12/1/19
Taft-Hartley Client	\$128,000	12/31/19
Houston Police Officers Pension System (Project)	\$5,500,000	3/1/20



Client gained	Assets (\$000)	Date hired
Taft-Hartley Client	\$55,000	6/30/20
Not-for-Profit Client	\$1,500,000	7/6/20

Following is a list of clients that were lost during the same period:

Year	Client Type	Assets \$M	Reason
2020	Stanislaus County ERA	\$2,183,922	Chose another provider in RFP process for the general consulting mandate. We continue to serve as StanCERA's private markets consultant.

- 2) Please provide a breakdown of the number of clients (and \$AUM) for the past 5 years by the type of service provided (i.e., general consulting, special consulting, OCIO, or other). If any clients have increased or narrowed scope of services, please explain.

	2016*	2017**	2018	2019	2020
Non-Discretionary (\$M)	\$333,083	\$403,395	\$439,032	\$427,313	\$433,895
Number	142	148	150	145	148
Discretionary (i.e., OCIO) (\$M)	\$22,016	\$3,177	\$3,536	\$3,487	\$4,044
Number	5	7	10	11	15

\* The Verus merger with Strategic Investment Solutions, which closed on 12/31/2015, combined the non-discretionary client base and AUA of both firms.

\*\* The loss of discretionary AUM is attributable to the sale of the Strategic Partnership Program, a segment of our discretionary business, to Goldman Sachs Asset Management.

- 3) What services does your firm offer in addition to pension fund investment consulting?

Verus offers the full range of consulting services to pension plans in the DB and DC arenas. Most of our business is in non-discretionary investment consulting as shown in the table in Question 2 above, and our AUA for public pension plans is significant. Three specialty services offered by Verus, which are backed by dedicated resources, specialists and research teams, are not offered by some of our competitors, and are distinguishing capabilities of our firm. These include:

- Private markets consulting
- Risk advisory and monitoring
- Outsourced CIO discretionary services

- 4) How does your firm manage these services, such as discretionary management (OCIO), to avoid conflicts of interest with its consulting business?

While Verus' OCIO business may present perceived and potential conflicts to our non-discretionary clients, we believe through the application of appropriate policies, they can be managed. Below, we list what we believe to be two key potential or perceived conflicts and how we manage them.

A potential conflict exists because OCIO services generate higher fees than general consulting services. The OCIO model involves a substantial change in scope of services that materially affects how

a Board conducts business. The decision to employ an OCIO provider is fundamentally a governance decision, one that is outside the scope of our advice to clients. Therefore, we would never recommend to a client to change from one form of service to another. This view is codified as firm policy.

Additionally, it may be perceived that our OCIO relationships could receive preference over our traditional non-discretionary clients with regards to capacity-constrained investment opportunities. OCIO clients, by the nature of the model, are nimbler than traditional non-discretionary clients and can act faster on investment opportunities than Trustees governing a non-discretionary investment program. Our opinion is that such opportunities rarely occur. Furthermore, this potential conflict exists even within consulting firms that do not have OCIO services as their clients maintain different meeting cycles and investment policies. That said, we have implemented an allocation procedure for limited capacity opportunities to ensure all clients are treated fairly. Following is our process for allocating capacity:

### **Approval Process**

Verus maintains a formal process for review and approval of external investment managers and their investment opportunities related to traditional asset classes and alternative asset classes. Only approved external managers and their particular investment opportunities may be recommended by Verus Consultants or utilized by Verus Portfolio Managers for non-discretionary and discretionary client's respectively. Verus has expanded its roster of approved managers in recent years, with a particular focus on ensuring that all client external managers have been fully vetted using our approval process.

External investment managers are approved by the Verus Investment Committee (IC) for traditional asset classes or the Alternatives Investment Committee (AIC) for alternative asset classes. Detailed information regarding operational due diligence and investment due diligence with recommendations for consideration is provided to the IC and the AIC by the manager research team and due diligence professionals within Verus.

### **Capacity Allocation**

We follow a multi-step process for allocating capacity in oversubscribed funds:

1. Verus informs the external investment manager (typically a general partner) that Verus does not allocate fund capacity between Verus clients and confirms that the GP has its own processes and procedures for allocating limited investment opportunities (typically an investment committee).
2. Verus determines from the external investment manager any limitations on client types it is accepting (public or corporate pensions, endowments/foundations, or other); size of client legal limitations; and the investor due diligence processes.
3. The approved external manager/product is disseminated to Verus consultants and portfolio managers for clients whose investment policies permit the type of investment presented. The information provided includes, among other items: (a) the fund/GP name, size (target and cap), (b) a brief description (c) fundraising update including amounts closed to date, planned closing dates, and open date for current available allocation (d) target date to inform external investment manager with indications of interest and levels.

4. Client feedback is solicited and based on such feedback clients interest levels/ranges, together with client profiles, size, key steps of investment process, and other pertinent issues such as specific FOIA requirements is summarized internally for presentation to the external investment manager.
5. If the total desire/claimed capacity is within the total amount of capacity, the Verus consultants and portfolio managers are informed that the claims are within capacity and that these claims for capacity will be presented to the external investment manager for consideration.

5) What percentage of your firm's income comes from pension fund investment consulting (provide breakdown between general, discretionary/OCIO and specialty)?

% of Total Revenue	
Non-Discretionary	85%
Discretionary	15%

6. Describe your plans for managing the future growth of your firm. Do you have limitations on the number of clients you intend to accept?

With respect to client loads, the assignment of new client responsibilities is determined primarily by the fit of the client with the consultant and the consultant’s capacity to take on new relationships. Firm leadership manages consultant workload and maintains excess capacity for new relationships. We do not set limits on consultants’ books of business but assess capacity individually. On average, consultants maintain about seven to ten client relationships. Consultants servicing large, sophisticated clients with complex portfolios and monthly meetings tend to have fewer relationships. Lastly, Verus has added three senior generalist consultants over the past year who have ample capacity for growth.

What is the number of clients for the lead and secondary general consultant?

Margaret Jadallah has five clients as lead consultant, and Joseph Abdou has one client as lead consultant and four clients as secondary consultant.

Provide the number of clients for the specialty consultants, Faraz Shooshani and John Nicolini, for the past 5 years. Describe your policies for controlling the workload of the investment consultants (and in particular Faraz Shooshani)?

During the past five years, Faraz Shooshani has served as private markets consultant to seven clients, five of which are currently active. He has recently taken a lead general consulting role for one client where he was already private markets consultant. John Nicolini serves as lead and/or real assets consultant to five clients. Verus added another analyst to the real assets team since SamCERA’s last review. Marc Gesell, who is a generalist consultant with a risk specialty, serves as co-consultant or secondary to six clients.

Firm leadership is primarily responsible for managing consultants’ workloads. Although we do not set limits on a consultant’s book of business, workload is managed by factors that include (1) a consultant’s seniority and level of experience, (2) the complexity of services required by his or her client accounts, and (3) overall capacity for new relationships. The current client-to-consultant ratio is 6-to-1. Verus’ firm infrastructure supports the firm’s consultants and consulting clients with resources across all asset classes. Faraz Shooshani heads the firm’s private markets consulting practice and has a

team of eight assisting him with research resources across the private market spectrum (venture, buyout, debt-related, real assets, private credit). The private markets team also has dedicated reporting analysts to assist in performance reporting. John Nicolini has a senior real estate analyst and a newer real assets analyst supporting him.

7. Please specify the individuals (up to five) who you feel are key to the success of your firm.

The success of the firm in general and client relationships in particular depends on the efforts of every participant working as a team to achieve the firm’s strategic goals. In this context, every employee is important and has a role to play in engendering success. From a client’s perspective, the lead consultant would be the key to a successful relationship, coordinating and deploying resources and serving as the face of our firm to its organization. The firm’s 7-person Management Committee is primarily responsible for setting strategic goals and the future direction of the firm. In view of this high level role, we are naming its members as key to the firm’s success. It is worth noting that Mark Brubaker, CFA, Managing Director, Senior Consultant, and head of our newly established Pittsburgh Office, joined the Committee in May 2020.

Jeffrey MacLean	(CEO)
Shelly Heier, CFA, CAIA	(President)
Ian Toner, CFA	(CIO)
Kraig McCoy, CFA	(CFO & COO)
Scott Whalen, CFA, CAIA	Executive Managing Director
Faraz Shooshani	Managing Director and Senior Private Markets Consultant
Mark Brubaker, CFA	Managing Director and Senior Consultant

8. Please specify the individuals (up to five) who you feel are key to the success of Verus’ account relationship with SamCERA.

Margaret Jadallah -	Lead consultant
Faraz Shooshani -	Private markets consultant
John Nicolini, CFA -	Real assets consultant
Joe Abdou, CFA -	Backup Consultant
Marc Gesell, CFA -	Risk specialist/Backup Consultant

9. Has your firm been involved in any regulatory or litigation events in the past year?

No.

10. Summarize the coverage for errors and omissions, professional liability, fiduciary insurance or fidelity bonds held by your firm (i.e., amounts and respective carriers) and e-mail the certificates of insurance to [investments@samcera.org](mailto:investments@samcera.org).

Type of Insurance	Coverage Amount	Description of Insurance	Company	Rating
E & O (Investment Advisor Professional Liability)	\$10m (\$500k deductible)	Insurances against losses caused by breaches of fiduciary responsibilities; protects those that give advice, educated recommendations when doing something they should not have	Allianz Underwriters Insurance Company	A+ by A.M Best

SAMCERA 2020 ANNUAL REVIEW QUESTIONNAIRE

Type of Insurance	Coverage Amount	Description of Insurance	Company	Rating
		done (error), or neglecting something they should have done (omission).		
D & O (Investment Advisor Management Liability)	\$10m (\$500k deductible)	Provides insurance for negligent acts, omissions or misleading statements by directors and officers of company that result in lawsuits against the company. It reimburses the company when they indemnify Officers and Directors or to reimburse company for claim paid.	Allianz Underwriters Insurance Company	A+ by A.M Best
Cyber Policy	\$2m (100k deductible)	Network and information security liability, regulatory defense, multimedia content liability, breach response, crisis management, cyber extortion, business interruption, digital asset restoration, funds transfer fraud.	Coalition Insurance Solutions	A+ by A.M. Best
Employment Practices Liability	\$7.5m (100k deductible)	Covers against claims by workers that their legal rights as employees of the company have been violated.	Allianz Underwriters Insurance Company	A+ by A.M Best
Financial Institution / Crime Bond	\$1m (\$50k deductible)	Protects against loss from employee, trade, loan, or partner dishonesty, forgery, counterfeit, or loss of property.	Chubb-Federal Insurance Company	A++ by A.M Best
ERISA Fidelity Bond	10% plan assets or \$500k (\$1m if plan holds employer securities per ERISA 407(d)(1))	Protects against loss from theft or fraud	Hartford Insurance Company	A+ by A.M. Best
Commercial General Liability	\$1m per occurrence	Protects from financial loss if liable for property damage or personal and advertising injury caused by our services, business operations, or employees	Travelers	A++ by A.M. Best

11) Update all personnel changes to the Verus team. Indicate the turnover of professional staff (senior management and key professionals) over the past two years.

Employee gained	Title	Date hired	Reason
Vanessa Larson	Accounting Specialist	7/28/20	Replaced retired employee
Michael Parnell	Project Manager	6/16/20	Replacement

## SAMCERA 2020 ANNUAL REVIEW QUESTIONNAIRE

Employee gained	Title	Date hired	Reason
Pete Madrid	Senior Consulting Associate	6/10/20	Joined LA Office
Mark Brubaker, CFA	Managing Director   Senior Consultant	5/18/20	Joined Pittsburgh Office
Ted Hermann	Senior Consultant   Business Development	5/11/20	Joined Pittsburgh Office
Kin Lam	Associate Director   Private Markets	3/9/20	Joined Pvt Mkts Group
Stuart Odell	Managing Director   Senior Consultant	2/25/20	Joined SF Office
John Teramana, CAIA	Senior Consultant	12/3/19	Joined LA Office

Employees Lost	Title	Date lost	Reason
Andrew Akers	Portfolio Manager	5/8/20	Voluntary Quit
Frank Luplow	Project Manager	6/3/20	Voluntary Quit
Barry Dennis	Managing Director	6/30/20	Retired
Suzie Stonecipher-Sollars	Senior Staff Accountant	7/10/20	Retired
Misty Watson	Senior Public Markets Research Analyst	8/21/20	Voluntary Quit
Max Giolitti	Chief Risk Officer	9/30/20	Voluntary Quit

Year	Turnover % (Key Professionals & Senior Staff)
2019	1%
2020	3.4%

Note that there have been no changes specific to SamCERA's assigned consulting team since our last review.

12) Describe any new potential services/improvements to your existing services being considered.

We are not recommending any services/improvements to SamCERA at this time. Should SamCERA determine that holdings-based risk advisory services or building a direct hedge fund program are of interest, these are core competencies of Verus' that we can discuss at a future time. We are, of course, open to any improvements that can be made to our working relationship.

13) Describe the relative strength and longevity of your back-office (performance and risk analytics) staff. Please provide a list of the Support Personnel for general consulting and specialty consulting services.

Verus' 13-person Performance Analytics Group is dedicated to data calculation, reconciliation, and performance evaluation. The group is supervised by Mr. Justin Hatley, Director of Performance Analytics, who reports to the President of the firm. Mr. Hatley has 16 years of experience. SamCERA's performance analyst, Augienette Castillo, has 23 years of investment experience and has been with Verus for five years.

The risk advisory team, led by the chief investment officer, Ian Toner, provides risk analytics, monitoring and education, and delivers end-to-end services to help clients develop a comprehensive framework for risk management that analyzes and communicates risk in every aspect of their investment program. Mr. Toner has over 30 years of industry experience and sits on the Verus investment committee and management committee. Risk Director Danny Sullivan, FRM, CAIA, began his career with Verus in 2011 and Vance Creekpaum, ASA, was an actuarial analyst for 4 years prior to joining Verus in 2016.

- 14) **What are the current technologies utilized in supporting the back-office processes? What performance measurement system do you use? Also what risk systems do you utilize in producing ex-post and ex-ante risk reports for clients? Please summarize your maintenance and upgrade policy/plan.**

**Performance measurement resources**

Our main tool for performance measurement and reporting is Investment Metrics, a leading provider of investment performance reporting and analytics software solutions for institutional investment consultants, asset owners, asset managers, OCIOs, and private wealth advisors. The Investment Metrics universe for comparative performance reporting represents roughly \$3.4 trillion in assets under advisement with over 6,000 institutional plans and 3,000 investment managers. The universe aggregates data submitted by institutional investment consulting organizations using institutional and custodial statements for separate accounts, and investment managers for privately-held or commingled funds. The databases contain at least twenty-five years of performance data on each of the major asset classes. The database is updated monthly.

Following is the composition of this performance measurement database:

Plan Type	Number of Observations	Total Market Value
All Plans	2,037	\$3.4 Trillion
All DB Plans	974	\$2.7 Trillion
Corporate DB Plans	291	\$592.9 Billion
Public DB Plans	296	\$1.9 Trillion
Taft-Hartley DB Plans	265	\$176.5 Billion
Endowments & Foundations	581	\$463.0 Billion

The Investment Metrics platform is distinguished by how it drives greater operational efficiencies in data aggregation, performance calculation, real-time analysis into client, manager and market movement, and timely, automated production of performance reports.

Investment Metrics is continually maintaining its system and upgrading its platform to respond to clients' needs. A Consultant's Collaborative of Investment Metrics clients meets periodically to discuss initiatives that would help guide the platform's improvements and development. This is mutually beneficial in that it saves Investment Metrics time tapping each client individually to learn about needs; instead they receive the information from the Collaborative. The Collaborative streamlines and consolidates client requests to enable Investment Metrics to focus on the most critical improvements and respond more quickly. Verus is an active participant in the Consultant Collaborative.

We supplement this platform with the following tools that we use for alternative investments, style analysis, risk analysis, and other types of portfolio analytics:

eVestment Alliance	Public markets database
MPI Stylus	Returns-based style analysis, regression analysis
MSCI BarraOne	Risk analysis
Morningstar Direct	Mutual fund information, analytics, index information
Aksia	Hedge fund database
Solovis	Private markets analytics and performance platform
Preqin	Private markets database
Thomson Reuter Cambridge Associates	Private markets database
Thomson One VentureXpert	Private equity database
Private Informant	Private equity database
Preqin	Private equity database

**Risk monitoring and analysis**

We evaluate risk/return characteristics of the total portfolio using our proprietary risk allocation system, which interacts with MSCI BarraOne, and the Risk modules built into the Investment Metrics platform. Our standard performance reporting delivers deep returns-based risk analytics, which includes ex-post risk metrics at the total fund, asset class composite, and individual manager level, such as standard deviation, tracking error, up-side/down-side capture, alpha, beta, r-squared, information ratio, and Sharpe ratio. In addition, we can offer a full suite of ex-ante, holdings-based risk analytics through our Risk Team. During 2020, Verus will be reviewing third party ESG-related risk modules and may expand our tool set in this area.

- 15) **What are your mission critical systems? Has your firm experienced any problems with these systems in the past eighteen months? When were these systems implemented and when were they last upgraded? Do you anticipate any changes to these systems in the next eighteen months?**

Technology is an integral part of our consulting practice. We have an in-house IT group composed of three technology specialists who assist our consulting staff in monitoring, testing and evaluating the tools of our trade. We have spent, on average, 10% of revenue on systems and technology in the last three years and anticipate technology investments to stay roughly between 9-12% of revenue over the next three years. We evaluate all IT systems on an annual basis for feature deficiency. We use automated software to apply operating system security patches as soon as they are available from the manufacturer, and continuously upgrade all internal IT systems to insure we maintain long-term support availability with our various vendors and partners. During the past 12 months we successfully migrated our data center to a new location with improved physical security and environmental controls. In addition to improving our physical server presence, we will be moving several systems to Microsoft Cloud solutions to mitigate our physical on-site disaster footprint.

Our technology infrastructure is a Linux and Windows-based network that allows for secure centralized management of all firewalls, switches and IPS devices as well as endpoint protection. It includes built-in fail over clustering as well as redundant data replication to safeguard data sets as well as the overall infrastructure that personnel utilize to accomplish necessary business tasks.



- Infrastructure Items
- Redundant Internet Service Providers
- Centrally managed Cisco Firewalls
- Intrusion Prevention System at all points of entry
- Centrally-managed Network Switches
- Centrally-managed Video Security Cameras
- Application and Management Servers
- Linux and Windows based operating system (OS)
- Virtual environment with built in clustering for fail over redundancy
- Fully replicated data sets for additional fail over redundancy
- Fully encrypted cloud-based storage for additional layer of redundancy
- Network Attached Storage (NAS)

We currently employ the following software and databases in aid of our consulting practice:

Investment Metrics	Performance measurement platform
Portfolio Risk Dashboard	Internally developed risk management system
Asset allocation modeling tools	Proprietary stochastic model, scenario, stress test and risk factor evaluation tools
eVestment Alliance	Public markets database
MPI Stylus	Returns-based style analysis, regression analysis
MSCI BarraOne	Risk analysis
Morningstar Direct	Mutual fund information, analytics, index information
Aksia	Hedge funds database
Solovis	Private markets analytics and performance
Preqin	Private markets database
Cambridge Associates	Private markets database
Thomson One VentureXpert	Private equity database
Private Informant	Private equity database
Preqin	Private equity database
Winklevoss Technologies ProVal	Liability simulation software

We maintain a secured web portal that allows retrieval of our performance reports and research documents. The portal includes access to daily market value information (if the client’s custodian bank participates) and the ability for clients to run some basic on-the-fly reporting such as performance-to-date at the total fund or individual manager level. This portal will also provide an archive of reports and presentations.

With respect to leveraging information resources across the firm and with our clients, Verus employs several key technologies to drive communication capabilities which include but are not limited to the following:

Microsoft Teams	Integrated directly into Office 365 applications, Teams allows for a robust platform which includes many communications features for a team. The Teams platform runs as an “always on” application on Verus employees’ computers and allows for connectivity across multiple hardware device platforms. Committee work and many departments utilize Teams for more efficient collaboration on work products, reducing the use of email.
-----------------	---

Skype for Business	Utilized largely for its capabilities which include recording meetings, the sharing of co-worker’s screens and ability to annotate PowerPoint for real-time collaboration among Verus employees. The Skype for Business technologies also include whiteboarding, polling, and built in Instant Messaging for fast and efficient instant collaboration capabilities across all offices. This technology is also largely utilized for its ability to support HD quality video/audio feeds for fast and efficient communications amongst teams and co-workers.
Email	Industry standard email housed in the Office 365 platform is utilized for many day to day communications between Verus Investment employees as well as for outside company communications.
SharePoint	Various internal company SharePoint portals are utilized for the collection and distribution of company related content, including finalized marketing and research materials.
VPN	Verus has incorporated key security technology that allows for both point-to-point VPN connectivity between all offices and further allows for client VPN connectivity to all offices. The Virtual Private Network protocols allow for an always available secure communications between all offices. This also allows approved employees to securely connect to any/all offices via a secure communications channel.
VOIP	Voice over IP has been implemented through all Verus Investments offices to allow for instant and seamless voice communications via 3-digit dial and directory lookup. Although offices are geographically dispersed the integrated VOIP technology allows internal phone calls to route and handle as though all offices act as a single office.
CRM	Microsoft Dynamics CRM is utilized as a robust tool for managing client, prospect and manager communications amongst other available tooling. Verus Investments utilizes CRM Online which is a secure cloud-based offering where all backend processes are managed by Microsoft. This also allows for greater flexibility for remote availability and support of multiple hardware devices such as different mobile devices and tablets.
Conference Rooms	Each Verus office has multiple conference rooms of varying sizes that support video conferencing, audio conferencing, Skype, Zoom.us as well as GoToMeeting. Each conference room is outfitted with large format HDTVs, high quality external microphones as well as VOIP enabled conference phones.

**Has your firm experienced any problems with these systems in the past eighteen months?**

Outside of normal maintenance and sporadic and minimal vendor outages, no significant problems have occurred in the last 18 months. Having already been used to Teams, Skype and Zoom meetings, we have had no significant issues conducting meetings during the past 9 months of COVID’s shelter-in-place.

**When were these systems implemented and when were they last upgraded?**

Microsoft's Office 365 is the technology driving most of our communication resources. We implemented O365 in the spring of 2014, since then Microsoft has upgraded these systems on a consistent and reliable basis.

Our internal database system was implemented in the summer of 2013 and has been upgraded to stay current with the vendors long term support release.

Our server infrastructure has gone through a complete overhaul that was completed in the fall of 2015. All internal systems are hosted and run on a virtual machine and clustered system with local and offsite redundancy. The specific hardware stack is built upon Dell's VRTX framework.

Do you anticipate any changes to these systems in the next eighteen months?

We review and update our systems on a regular basis. Our next upgrade will be taking place at the end of November when we will be transitioning to a New Dynamics 365 unified interface for our CRM

16) Provide an overview of your firm's business continuity plan.

Verus maintains a Business Continuity and Disaster Recovery Plan (BCDR). Forensic review is conducted annually by the compliance department. Third-party audits of the plan were completed in 2014 and 2018. IT security testing is done continuously, with outside third-party penetration testing provided on a regular basis. The plan provides for alternative work sites, geographic and service provider diversity, remote access to critical systems, secure laptops with VPN access, and data retention enforcement for data recovery. We conduct DR/BCP testing exercises regularly to ensure validity, viability, and timely execution. The BDCR has been live-tested successfully during a massive power outage in Seattle and, like many businesses right now, Verus employees are all working remotely due to COVID-19 and shelter-in-place using many elements of the BDCR.

## Performance

17) Detail your perspective of SamCERA's performance expectations, as spelled out in the contract and SamCERA's Investment Policy Statement, and how your firm is doing relative to those expectations.

We believe that we are meeting SamCERA's performance expectations as spelled out in the Verus contract and SamCERA's IPS. Since our last review, we confirm that we have provided all of the services described in our contract with participation from SamCERA's broad consulting team as described in the Verus contract. We also believe that we are meeting performance expectations for SamCERA as spelled out in the IPS on a risk-adjusted basis. Consistent with SamCERA's IPS, we are assisting the Plan in prudently managing assets in a manner that is consistent with funding the actuarial liability. SamCERA has actively worked towards reducing volatility in the portfolio with the goal of mitigating downside risk and increasing diversification which has resulted in moderate changes to asset allocation and further diversification within asset classes. We will be conducting an annual asset allocation review during the first quarter of 2021 and will reassess risk/reward objectives again at that time.

While the SamCERA portfolio has underperformed its policy index over the one-year period since our last review (-0.2% v. 1.6% as of 6/30/20), we are comfortable with the structure of the portfolio and most of its asset classes and believe they are aligned with the Plan's Enterprise Risk Tolerance. Since our last review, SamCERA has made modest changes to its international equity, real assets and absolute return structures.

- 18) Discuss the domestic equity, international equity, fixed income, alternatives, and real estate markets and SamCERA's relative success or failure in the current market.

#### U.S. EQUITIES

- U.S. equities reached a new high in September before pulling back later in the month. U.S. and emerging markets have recovered most losses year-to-date, while international developed equities remain more negative. Global equities are now positive for 2020 despite an earnings recession and considerable economic uncertainty.
- According to FactSet, S&P 500 Q3 earnings are expected to be down -20.5%. However, earnings in Q2 beat expectations by 12.5% (-31.6% YoY vs. -44.1%). Another large positive surprise in Q3 would be welcome news to investors. The Cboe VIX Index moderated in June from heightened levels and remained generally rangebound during the third quarter. The VIX ended the month of September at 26, higher than the long-term average of 19.
- U.S. growth stocks beat value stocks in the third quarter, continuing an incredible run of market leadership (Russell 1000 Growth +13.2%, Russell 1000 Value +5.6%), while large cap stocks outperformed small cap stocks (Russell 1000 +9.5%, Russell 2000 +4.9%).

#### U.S. FIXED INCOME

- Global interest rate levels remained extremely depressed relative to long-term averages in Q3, and the 10-year U.S. Treasury yield traded in a relatively narrow range between 0.50%-0.75%.
- The Federal Reserve maintained an accommodative tone, and most members of the Federal Open Market Committee remained of the view that short rates are likely to stay near-zero through 2023, and eventually move toward 2.50% over the longer-term. The Fed repeated that while it has the power to lend, it does not hold the power to spend, and additional fiscal support will likely be required from Congress.
- The U.S. Fed made an adjustment to its policy approach related to its inflation target. Instead of targeting stable prices, defined as 2% annual growth in personal consumption expenditures (PCE), the Fed will now implement an average inflation targeting approach aimed at achieving "inflation moderately above 2% for some time so that inflation averages 2% over time and longer-term inflation expectations remain well anchored at 2%."

#### INTERNATIONAL MARKETS

- International equities continued to recover through Q3, though the MSCI EAFE Index (+4.8%) materially lagged the MSCI Emerging Markets Index (+9.6%) and the S&P 500 Index (+8.9%). Dollar weakness coinciding with the risk recovery through the summer was a major theme and dampened the underperformance of international developed equities relative to U.S. equities in U.S. dollar terms. The three largest currency exposures embedded in the MSCI EAFE Index—the euro (32%), the yen (26%), and the pound sterling (13%)— appreciated +4.4%, +2.2%, and +4.6% relative to the greenback over the course of the quarter.
- In the second quarter, MSCI EAFE Index revenues dropped nearly -20%, and earnings dropped nearly -60%, pushing certain valuation metrics including price/earnings ratios to historic highs.

Moving into Q3 earnings season, analysts are anticipating a historic turnaround in corporate profits, which could help bring valuations back to more normal levels.

- Emerging market equities outperformed during the quarter (MSCI Emerging Markets +9.6%) followed by domestic equities (S&P 500 +8.9%) and international developed (MSCI EAFE +4.8%).

### U.S. REAL ESTATE

- Negative impacts from the economic slowdown caused by Covid-19 will likely take several quarters to play out in the appraisal process for existing assets. Transaction activity has come to a halt, making pricing comparisons difficult. Retail/hotel/resort/casinos will likely feel the greatest impact. Income declines are more likely than prior downturns

### PRIVATE EQUITY

- PE has pulled back to a significant degree this year. Through 1H2020, deal volume and value stood at roughly a quarter of 2019 tallies, representing a strong deceleration after back-to-back record-breaking years. The median PE deal size slumped even as the average notched a new high, indicating that larger deals were still closing even in an environment fraught with uncertainty. Contrary to previous years our outlook at the large end of the market moves to neutral as the credit markets remain open for larger deals coupled with their ability to provide flexible capital in this environment
- Exits by buyout fund managers have fallen due to the degree of uncertainty spanning global economies and markets. Sponsor-to sponsor sales have even reversed their growth in proportion of exit volume, indicating a general retrenchment as fund managers look to avoid incurring any discounts to expected valuations in sales processes. Instead, portfolio managers seem set to extend holding times in hopes of a calmer environment to come. Based on previous crises, we expect a decline in both capital calls and distributions from buyout funds, with the decline in distributions more severe, likely leading to negative net cash flows for the coming quarters.
- The COVID-19 pandemic caused many portfolio companies to experience unforeseen demand shocks as new direct lending opportunities temporarily dried up and a wave of distressed and special situations funds came to market hoping to capitalize on market turmoil. Distressed debt funds tend to invest in existing debt facilities: either in “distressed for-control,” hoping to buy the debt of a company and convert it into equity, or in more liquid securities trading at steep discounts to par, such as high yield bonds and leveraged loans. Special situations funds, on the other hand, tend to originate loans to companies that are considered too bespoke and/or risky for other lenders. In the current crisis, special situations funds are targeting investments where a company requires bridge or rescue financing to stay afloat through the pandemic. Despite an oversupply of dry powder and swift recovery in asset prices, the magnitude of the pandemic’s economic shocks will continue to create distressed investment opportunities well into next year.

In the current market, the SamCERA portfolio has responded as would be expected given the market environment since the start of the global pandemic. Across the equity markets, growth strategies have outperformed value strategies significantly on an absolute basis. Within US equity, SamCERA’s low volatility approaches in US large cap have suffered as sectors that have outperformed during COVID are underweight in these portfolios. International equity as a whole has done well since our last review. However, SamCERA terminated its emerging markets manager that had been underperforming

due to a structural underweight in China and altered its structure to have ACWI ex-US mandates across the board. We believe that the fixed income portfolio is performing in line with expectations. An initial credit and liquidity shock at the beginning of COVID followed by massive stimulus has made for dynamic fixed income markets this year. SamCERA's defensive core bond component has led in absolute returns and has had an outsized positive impact at the total portfolio level as well. Higher yielding credit in the public and private markets, which plays an offensive role in the portfolio, detracted prior to stimulus taking hold but has rebounded since that time. We believe that alternatives have been a mixed bag since our last review. Private equity continues to do well, while absolute return was a work in progress this past year. Real estate remained a solid contributor over the past year.

### Investment Consulting Philosophy

19) Describe your investment consulting philosophy, including (a) what are your firm's consulting specialties, strengths and limitations (b) your assessment of the value added by your investment philosophy and (c) what sets your services apart from other pension consultants' services?

Our investment advice follows a consistent and research-driven approach that is governed by the following principles:

- Enterprise objectives and risk tolerance guide all decisions.
- Asset allocation and risk exposures drive portfolio results.
- Economic factors and valuations drive long-term asset class returns. This is the rationale behind the tremendous resources that we invest in scenario analyses, macroeconomic research, capital market valuations, and risk and trend analysis.
- Risk and diversification must be viewed through multiple lenses. We view strategic allocation beyond mean variance analysis, and account for the many facets of portfolio risk in our asset allocation modeling.
- Fees and costs impact on long-term performance and must be minimized and justified.
- We act as a true extension of our clients' staff and an advocate for their interests.

We serve as an ERISA §3(21) fiduciary to our non-discretionary clients and an ERISA §3(38) fiduciary to our discretionary clients. We view our role as an extension of our client's staff in the service of the Board or Investment Committee. With respect to investment managers, brokers and other third-party providers, we act as an advocate on behalf of our clients ensuring that providers perform in accordance with guidelines and charge competitive fees.

Risk-based services permeate our entire service offering, an approach that differentiates us from the rest of the industry. Our professional teams have decades of experience applying risk management techniques to create thoughtful, targeted, and customized results. We believe that risk management is a culture, not a system. We, therefore, emphasize education, improved communication, enterprise risk

tolerance, policy development; and seek a level of commitment from all parties to enhance the traditional returns seeking approach with a risk-aware mindset.

Lastly, we believe that among independently-owned, generalist consulting firms, Verus has an especially experienced and tenured private markets team which has been in place since 1994. Current Verus clients who incorporate private markets into their retainer relationships work closely and directly with senior professionals on the private markets team.

As far as limitations, Verus is 100% focused on consulting. For clients who are looking for a variety of services under one roof (e.g., actuarial, recordkeeping), larger, multi-service firms are a better solution.

- 20) Describe and explain your firm's brokerage relationships, money management activities, fee relationships and soft dollar relationships. Include the amount of income derived in the last calendar year from investment managers.

Verus does not have any brokerage arrangement and does not accept soft dollars.

- 21) Provide your assessment of the risks associated with SamCERA's portfolio and describe your firm's risk management capabilities and the tools employed in risk assessment.

The most important risk to pension funds is unfunded liability. The plan's number one priority is to ensure future obligations are met. The two levers that can be pulled to reduce the unfunded liability are: increasing contributions and changing the risk/return profile of the investment portfolio. Comprehensive risk management and a careful determination of an appropriate risk level is especially important in the current low return environment. Chasing returns can result in a risk level that is beyond a Plan's enterprise risk tolerance.

SamCERA's portfolio is structured in alignment with its risk tolerance and considers important factors such as the MOU (County's overfunding) and the financial strength of San Mateo County which enables the Plan to have 6.5% actuarial expected return and a relatively conservative strategic asset allocation compared with many peers. We view the biggest risk in the SamCERA portfolio as peer risk or the risk of being different from peers. Verus is comfortable with this difference and believes that the portfolio is prudently structured, well diversified and well positioned for the future. Moreover, Verus believes that SamCERA would not capitulate and abandon a well-conceived plan at an inopportune time.

Verus has a risk advisory team that is dedicated to research and delivery of risk advisory services and portfolio analytics. The Risk Advisory Group is composed of professionals who dedicate 100% of their time to risk analysis and monitoring activities. We use MSCI BarraOne software as the backbone of our risk platform and deliver risk analysis through Verus' proprietary Risk Dashboards. This is combined with tools that we have developed to accurately load daily holdings into BarraOne, and efficiently pull risk analytics out of BarraOne for our reporting. The risk team has also developed tools for trend line analysis and daily portfolio risk monitoring. We also use RiskManager, FINCAD, and MPI Stylus Pro. Portfolio construction is driven by our Risk Allocation system, which interacts with MSCI BarraOne, to construct index-based portfolios and download risk data to evaluate the risk and return characteristics of various asset allocation decisions. We can also employ R scripts to power risk-based rebalancing and optimization algorithms.

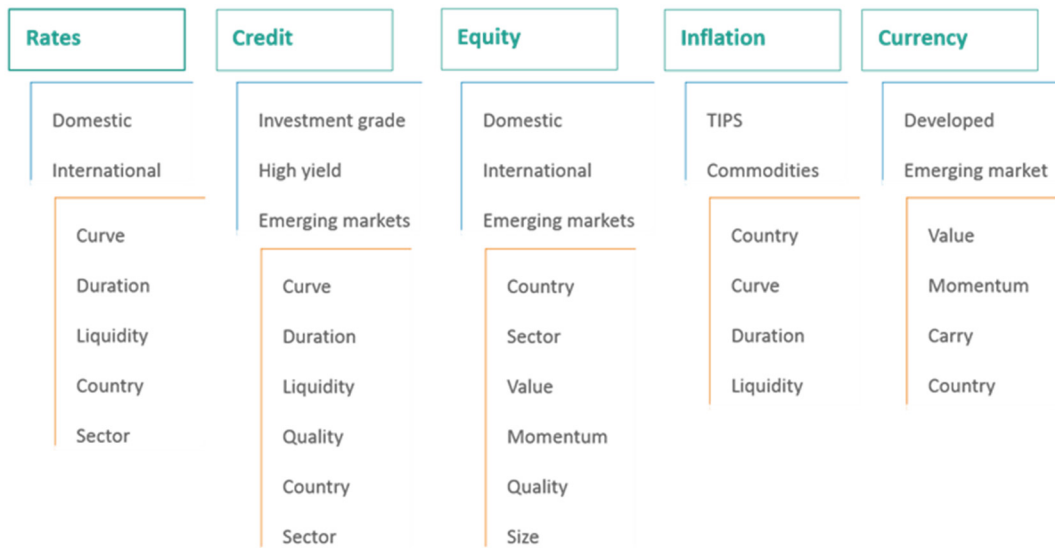
Verus' Risk Advisory Service has the capability to consolidate all underlying positions and quantify where concentrated risks lie in the portfolio. Our risk advisory service pulls data from custodians and

loads it into MSCI BarraOne’s risk system. We work directly with MSCI to monitor and direct the implementation and ongoing maintenance of data in the risk system, and provide monthly Risk Dashboard reports, if desired by the client. At this time, SamCERA has opted for index-based analysis which is a cost effective means of disaggregating risk across the portfolio.

**Risk assessment in portfolio construction**

Risk factor evaluation is an integral part of our asset allocation methodology to incorporate the impact of absolute and relative risk in portfolio construction. Risk factor evaluation tools allow us to gain deeper insight into portfolio risks. We examine the asset allocation structure relative to five prominent risk factors found in most all asset classes – equity risk, interest rate risk, credit risk, inflation risk, and currency risk – and attribute anticipated volatility, active risk, value at risk, and scenario profit and loss.

Risk premia encompass *primary*, *secondary*, and *tertiary* factors that need to be managed



**Risk advisory services**

Verus’ Portfolio Risk Dashboard was designed to communicate risk metrics simply and meaningfully. The dashboard provides clients with a thoughtful risk monitoring framework for oversight of the following:

- Risk allocation – Allocations by risk buckets and asset class analysis
- Risk diversification – Diversification risk factors, geographic, economic sensitivity and ex-ante returns
- Active risk budgeting – What and where are the active risks?
- Primary risk factor analysis – Attributes of rates, credit, equity, inflation and currency risk buckets
- Performance review – Did the portfolio meet the objectives?
- Performance attribution – Positive and negative contributions to absolute and relative returns



Specific to SamCERA, the portfolio's total fund risk is aligned with that of its policy benchmark and less than the average public pension plan. Equity beta is also less than that of the average public fund peer because of the Plan's US large cap low volatility exposure. Credit risk is about average compared to other public plans. Interest rate risk has been reduced with the unwinding of Risk Parity. SamCERA has hedged half of its currency exposure which creates some peer risk but has reduced currency risk which is typically the second largest source of risk in portfolios. Stress testing of the portfolio shows that, under most negative scenarios, the SamCERA portfolio should lose less than other public fund peers. In summary, SamCERA's portfolio is diversified and conservative by design, and risk exposures are aligned with its goals and objectives.

22) **What are your recommendation(s) regarding categories of managers appropriate to implement SamCERA's Investment Policy Statement?**

We believe the categories of managers currently in the portfolio, both public and private, are appropriate and capable of implementing objectives and expectations outlined in SamCERA's Investment Policy Statement. SamCERA has added categories of managers as appropriate as market conditions have evolved.

We do not have any recommendations at this moment. Following an asset allocation review during the first quarter of 2021, we may recommend modest change. Given the very low yield environment, we will examine asset mixes that seek to enhance returns while maintaining diversification.

23) **Please provide your philosophy around incorporating ESG issues in the management of the pension plan. Do any of your clients currently incorporate ESG issues in their investment process? If so, how?**

In recognition of the growing client and prospect demand for ESG mandates, Verus has committed resources to following and evaluating these mandates. Verus currently consults to several clients that incorporate ESG, SRI and/or labor-friendly goals within their investment programs. To assist these clients, Verus utilizes an integrated approach to following ESG strategies which encompasses designated consultants and consulting associates, and research professionals. Using an integrated approach harnesses the maximum resources available to build expertise in this area. In addition, an integrated approach broadens the firm's proactive outreach and individual networks to create a more robust pipeline of ESG strategies to consider in our due diligence process. All of the firm's resources are employed in ESG strategy identification and monitoring. Thus, we tap into our manager research group and our performance analytics group in addition to the focused ESG resources.

Verus helps clients accomplish their ESG objectives through the following process:

1. Strategic planning: clarification of ESG beliefs, values and objectives through discussion with and/or survey of committee/board members and staff with goal of building consensus view
2. ESG policy development
  - a. clarification of roles and responsibilities related to ESG implementation
  - b. ESG benchmarking
  - c. ESG implementation approach (i.e., specific asset classes vs. total portfolio level; funding sources, exposure limits, etc.)

- d. ESG risk tolerance (i.e., tracking error vs. traditional market benchmarks, risk of shortfall vs. objectives, etc.)
3. Identification and implementation of ESG managers and strategies (will focus on highly rated strategies via MSCI ratings) appropriate for client given their objectives
4. Negotiation and establishment of ESG manager guidelines
5. Performance and risk measurement/monitoring of ESG exposures
6. Ad hoc activities which may incorporate the unique objectives and risk tolerance of clients implementing ESG

Verus' role is as facilitator, educator and resource to clients to enable them to identify and establish their strategic objectives and approach to ESG investing. Additionally, Verus will assist clients in defining specific ESG metrics that are relevant with their respective implementation of ESG investing. Verus supports clients in implementing their respective ESG objectives in several key areas as follow.

1. Positive/negative screening
2. Themed investing (e.g., climate change (reduced carbon footprint), diversity (pay/opportunity equality), etc.)
3. Impact investing

Verus subscribes to the MSCI ESG Ratings, which is considered a best practices standard for rating ESG mandates. We can employ these ratings in our ESG mandate selection and monitoring activities on clients' behalf. Verus can identify ESG strategies across both public and private markets and multiple asset classes given the tools we regularly employ. In 2020, expansion of our ESG capabilities has been a top research priority at Verus. All of our approved strategies are being assigned an ESG rating this year, based on an assessment of ESG integration into the investment strategy, alongside an investment rating.

24) **Please discuss any enhancements currently under research or contemplation, such as in the areas of asset liability studies or risk management.**

The following research were conducted in 2019-2020:

Research description	Title of paper	Date published
A description of Verus' value-added approach to manager evaluation based on criteria that go beyond the Ps (people, philosophy, process, etc.) to uncover manager attributes that lead to better client outcomes.	Principles Based Manager Assessment: AEIOU > P P P P P	August 2020
Evaluating gender and diversity of investment manager firms beyond ownership	Broadening Diversity Consideration	July 2020
A framework for analyzing impact of illiquid asset programs on overall portfolio	Strategic Liquidity	April 2020
Framework for assessing candidacy of a manager for inclusion in client portfolios	Risk in Manager Selection	December 2019
Cashflow matching strategy	Pension Cashflow Matching	December 2019

Research description	Title of paper	Date published
Impact of benchmark selection on tracking error and tools to determine appropriate benchmark indexes	Why Benchmarks Matter	November 2019
A global approach to investing in bonds	Go Global in Fixed Income	August 2019
A methodology for LDI glide path creation	LDI Glide Path Creation	June 2019
Overview of liability-driven investing	A Practical Understanding of LDI	May 2019
Useful guidelines for developing private markets commitment strategies, maintaining allocations over the long-term, and monitoring liquidity risk	Private Markets Commitment Pacing and Cash Flow Modeling	January 2019

**2021 Research Agenda.** We are currently in the process of setting our research agenda for 2021. A series of TOIs (topics of interest papers) on risk management is a likely addition to the 2020 research agenda. Further research into LDI is another research topic that may be prioritized for the coming year. Verus’ actuary is continuing to expand scenario testing on the liability side which can be incorporated into future asset-liability studies. ESG is another topic for future research in the coming year.

25) Given SamCERA’s current plan governance structure, do you recommend any changes in the way the Board/staff/consultant work together in managing and overseeing the plan assets?

We do not recommend any changes to the current governance structure.

#### Outlook

26) What is Verus’ outlook for the capital markets? Provide your firm’s Capital Market Assumptions.

Following are our current 10-year return and risk assumptions for 33 asset classes. Note that we will be updating our capital market assumptions this month for use in asset allocation studies the coming year.

# SAMCERA 2020 ANNUAL REVIEW QUESTIONNAIRE

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

Following are our current correlation assumptions:

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

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

**Include an explanation of how Verus arrives at its Capital Market Assumptions.**

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

Asset	Return Methodology	Volatility Methodology <sup>1</sup>
Inflation	25% weight to the University of Michigan Survey 5-10 year ahead inflation expectation and the Survey of Professional Forecasters (Fed Survey), and the remaining 50% to the market's expectation for inflation as observed through the 10-year TIPS breakeven rate	
Cash	Real yield estimate + inflation forecast	Long-term volatility
Bonds	Nominal bonds: current yield; Real bonds: real yield + inflation forecast	Long-term volatility
International Bonds	Current yield	Long-term volatility
Credit	Current option-adjusted spread + U.S. 10-year Treasury – effective default rate	Long-term volatility
International Credit	Current option-adjusted spread + foreign 10-year Treasury – effective default rate	Long-term volatility
Private Credit	Bank loan forecast + 1.75% private credit premium <sup>2</sup>	Long-term volatility
Equity	Current yield + real earnings growth (historical average) + inflation on earnings (inflation forecast) + expected P/E change	Long-term volatility
Intl Developed Equity	Current yield + real earnings growth (historical average) + inflation on earnings (intl. inflation forecast) + expected P/E change	Long-term volatility
Private Equity	US large cap domestic equity forecast * 1.85 beta adjustment	1.2 * Long-term volatility of U.S. small cap
Commodities	Collateral return (cash) + spot return (inflation forecast) + roll return (assumed to be zero)	Long-term volatility
Hedge Funds	Return coming from traditional betas + 15-year historical idiosyncratic return	Long-term volatility
Core Real Estate	Cap rate + real income growth – capex + inflation forecast	65% of REIT volatility
REITs	Core real estate	Long-term volatility
Value-Add Real Estate	Core real estate + 2%	Volatility to produce Sharpe Ratio (g) equal to core real estate
Opportunistic Real Estate	Core real estate + 4%	Volatility to produce Sharpe Ratio (g) equal to core real estate

Asset	Return Methodology	Volatility Methodology <sup>1</sup>
Infrastructure	Current yield + real income growth + inflation on earnings (inflation forecast)	Long-term volatility
Risk Parity	Expected Sharpe Ratio * target volatility + cash rate	Target volatility

27) What is Verus’ outlook with regards to trends, challenges, and opportunities in the investment consulting industry? Please include in your response the trend of consolidation among consulting firms.

Consolidation remains a prominent theme in the consulting industry. We have seen major merger and acquisition deals take place in recent years (e.g., GSAM-Rocaton, Mercer’s acquisition of Pavilion and Summit Strategies Group, Aon’s acquisition of Townsend Group, Meketa-PCA, Aksia’s purchase of TorreyCove and announced purchase of Alignium in September ). Verus views this trend with a skeptical eye as further evidence of growing homogenization and, at its worst, commoditization of certain consulting services as large firms try to reap the benefits of scale. It allows Verus to differentiate ourselves even more clearly from larger firms with our long-standing approach of customizing client services and deliverables, and tailoring portfolio construction according to each client’s unique enterprise objectives and appetite for risk. This past year, Verus opportunistically expanded to the East Coast with the establishment of a Pittsburgh office staffed by senior ex-Wilshire professionals. We will continue to look for these types of growth opportunities in the future.

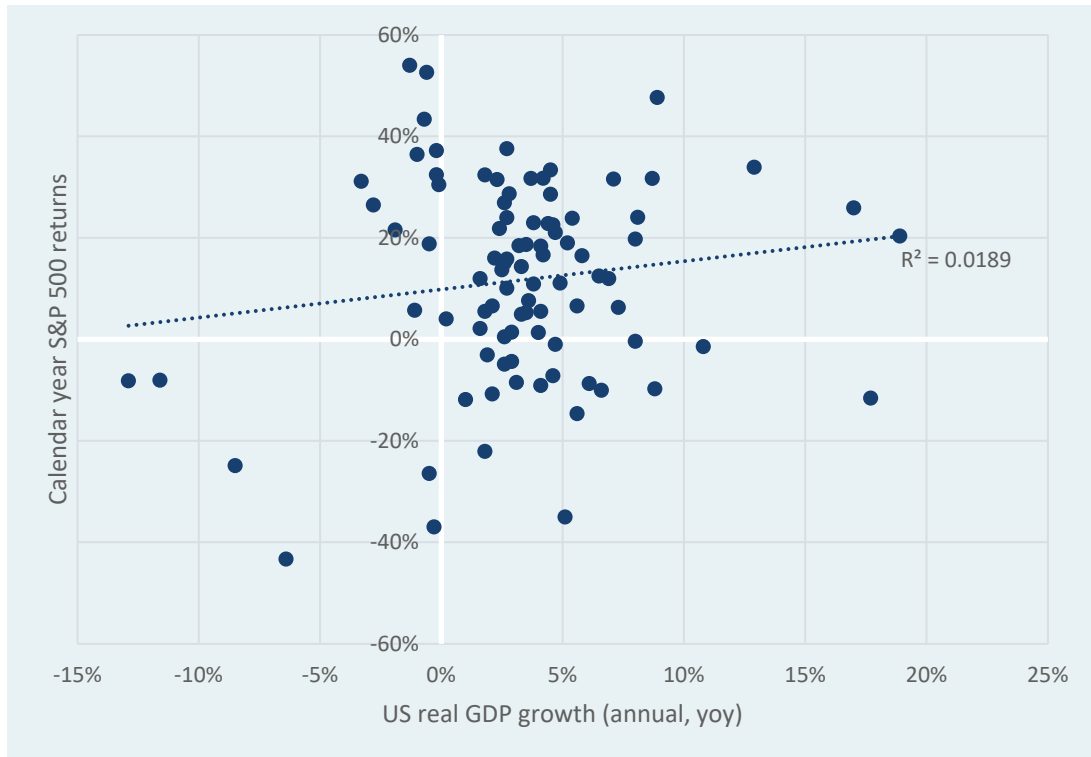
The growth of OCIO managed assets is another theme in the industry, which has increased by more than 20% worldwide to \$1.74 trillion according to P&I’s 2018 money manager survey. Acquisition of OCIO businesses (e.g., Mercer’s acquisition of Summit’s OCIO business) have deepened the concentration of managed outsourced assets among the largest firms, with the top 25 managing about 89% of assets worldwide. Verus has a modest OCIO business that accounts for a small percent of our total assets under advisement and firm revenue. Stated another way, non-discretionary investment consulting is our core business and critical to our firm’s success. Our investment process and philosophy for OCIO are drawn from the same research-driven approach that we use for traditional consulting. The only difference is governance, a decision that resides within our clients’ trustees.

As the consulting industry continues to mature and its pioneers contemplate retirement, succession planning has become a real issue and has driven the transfer of ownership interests to younger generations within the firm or to a competing organization. Verus completed the transition of ownership from founder Bill Wurts in 2013 to the younger generation of consultants and has pursued a policy of expanding ownership among its active employees. We expect this process to continue as the firm gradually reduces Jeff MacLean’s majority interest by increasing shareholdings of minority owners and offering ownership to more employees across the firm. Finally, to prepare the next generation of consultants, we actively promote a mentoring and apprenticeship program within the firm.

Emerging and diverse manager programs continue to attract attention. Verus remains committed to expanding the universe of alpha-generating managers by taking a serious look at institutional quality emerging and diverse managers. The integration of emerging and diverse managers into our overall manager research process for public and private markets has been an important initiative for 2020 and will continue into 2021. We are happy to provide further detail if this is a topic of interest to SamCERA.

28) Given the Covid environment, what portfolio changes (if any) are Verus considering or recommending to clients?

The COVID-19 pandemic precipitated an unprecedented global economic shutdown, and resulted in a 33.9% drawdown in the S&P 500 Index between February and March of this year. However, as we close at all-time-high levels today, November 13<sup>th</sup>, we remind ourselves that market performance does not always rhyme with economic performance, and markets often perform well in years of GDP contraction.



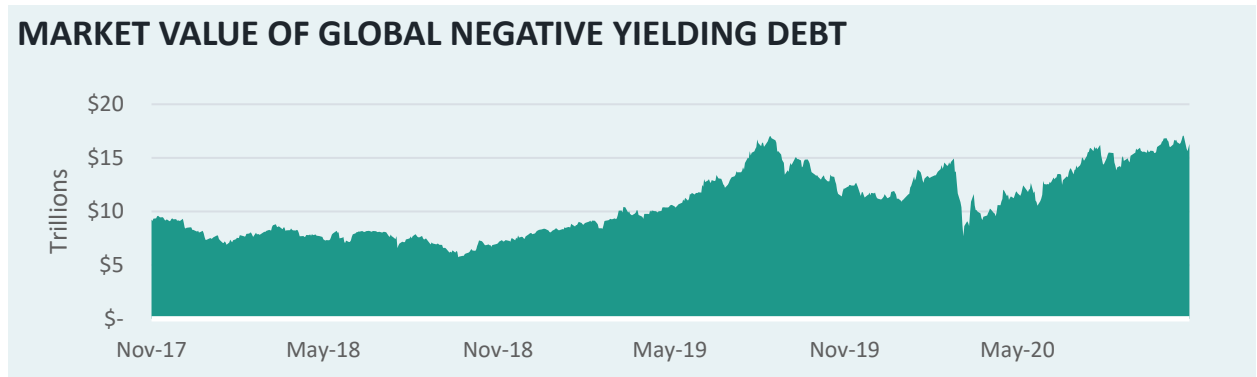
Today’s risk asset optimism appears supported by vaccine hopes, a more clarified political environment which is likely to result in gridlock in Washington, an expectation for further fiscal and monetary accommodation, and a slow-and-steady improvement in labor market conditions.

Still, much uncertainty remains hanging over the outlook. Will the recent slowdowns in European COVID-19 case growth hold? How bad will things get in the emerging third COVID-19 wave in the United States? Will the policy response to faster case growth be more fine-tuned (targeting specific sectors) or more draconian (sweeping lockdowns)? Due to the extremely wide distribution of potential market paths from where we find ourselves today, Verus believes a more neutral stance relative to policy is appropriate. Within the equity bucket, we remain underweight international developed equities relative to U.S. and emerging market equities. Within the credit bucket, we remain overweight high-yield credit, and underweight bank loans.

29) With the expectation of lower interest rates for longer, what is Verus’ outlook on the future role of fixed income?

No doubt the role of fixed income in multi-asset portfolios has been discussed at length over the last several years as global yields have plunged to record low levels. Today, the U.S. dollar market value of negative-yielding debt is approximately \$16.3 trillion, and just a week ago, that value hit a

fresh record high of \$17.1 trillion. As nominal yields have continued to fall and breakeven inflation rates have begun to rise, real yields have moved deeper into negative territory, boosting the performance of long-duration assets (tech stocks) and assets which have become relatively less costly to buy (gold, which doesn't offer a yield).



At Verus, we on balance believe that interest rates are more likely to remain lower for longer than higher for longer, though we do expect there to be some turbulence along the way, and view as very real the possibility that the 10-year yield breaks higher over the next year, to somewhere in between 1-2%. At present, it seems that the Fed is unwilling to cut the fed funds range into negative territory, and if further stimulus or vaccine progress can boost optimism around longer-term growth, we could once again see expanding term premia and a steeper yield curve, which would reframe the conversation.

Still, despite lower-than-average yield levels, we do not believe that the role of fixed income in the portfolio (as an equity hedge and income provider) is going away, but we do believe that it is shifting in nature and will require a different mindset. Stay tuned for a forthcoming Topic of Interest white paper which discusses the changing role of fixed income in portfolios. This is a subject that Verus is studying closely, and one we expect to be of high importance in the coming year.

30) **What portfolio changes (if any) are Verus considering or recommending to clients related to the expectation of lower interest rates for longer?**

As we've mentioned above, we believe that a more neutral positioning relative to policy is prudent at this juncture. Yields do appear more likely to be lower for longer, and the role of fixed income does appear impaired in many ways. Investors may be justified in beginning conversations regarding other assets which fulfill one of the core roles of fixed income: 1) Providing liquidity and maintaining value during times of market stress, and 2) Inverse performance, meaning assets which appreciate in value when equity and other risk assets are falling in value. We are doubtful that in today's environment there are many (or any) assets which provide both of these qualities.

On the other hand, the Fed has demonstrated a willingness to backstop many fixed income markets, which may reduce the likelihoods of some of the worst-case outcomes occurring. Given that view, we recommend clients lean into high-yield (and core-plus) fixed income relative to bank



loans and core fixed income in order to pick up some additional carry over the short- to intermediate-term.

- 31) **What other issues or concerns have been brought up by your other clients in regards to products, markets, risk management, education and governance?**

Clients have been concerned about the effects of the election, in particular volatility shocks that could result from its results. This is a normal occurrence for any election year, but this year peaked more interest and discussion than usual. The uncertainty around post-election uncertainty, and lawsuits trying to overturn results are new to investors and may cause ongoing concern. Thus far, the markets have been functioning normally since the announcement of a new President, and volatility as implied by VIX has moderated from its pre-election elevation.

Governance trends are generally aligned with SamCERA's governance structure whereby the Board focuses more of its effort on setting policy and risk objectives and monitoring to ensure that investment policies and procedures are properly adhered to. Day-to-day portfolio decisions, including manager due diligence and recommendations, are increasingly being outsourced to Staff and consultant.

#### Conclusion

- 32) **Is there any information that would be timely per SamCERA's Investment Policy Statement or relative to this review?**

We have little to add that is not addressed in the body of the questionnaire.

- 33) **Are your clients making significant changes in their asset mixes? Please describe these changes. Do you see any trends in asset allocation?**

Verus' has a diverse client base of institutional, long-term investors. As such, clients maintain their asset mixes for an extended period of time with incremental changes. Portfolios are built to achieve specific goals, yet all are diversified in order to weather various market environments. Our responses to questions 28-30 address what we believe will be near-term trends in asset allocation.

- 34) **What market opportunities should SamCERA be considering?**

SamCERA has been implementing appropriate recommended market opportunities as they have been presented.

- 35) **Please provide a preliminary recommendation of what your work plan for the next 12 months should look like given SamCERA's current plan structure and long-term policy targets.**

We are going to develop the 2021 work plan in December 2020. Verus expects to review potential changes to currency hedging and a review of asset allocation in early 2021 which may lead to incremental asset class changes and follow on manager searches.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

December 8, 2020

Agenda Item 7.1

**TO:** Board of Retirement

**FROM:** Gladys Smith, Assistant Executive Officer



**SUBJECT:** Annual Review of Independent Auditor, Brown Armstrong

**Recommendation**

Accept the annual performance report of Brown Armstrong Accountancy Corporation.

**Background**

Each year an evaluation is conducted of SamCERA's independent auditor. The evaluation consists of three parts: (1) A survey completed by trustees, staff and the auditor; (2) the auditor's responses to approved questions; and (3) a discussion at the Board meeting to present the results of the responses.

**Discussion**

This year's annual survey was completed by six Board members and three staff members. Once again, Brown Armstrong received above average to high ratings overall from both the Board and staff for the services they provided to SamCERA.

Ashley Casey, via phone, will highlight areas in Brown Armstrong's attached survey responses and will be available to respond to any questions or comments regarding her firm's audit services.

**Attachment**

Brown Armstrong Questionnaire Response

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

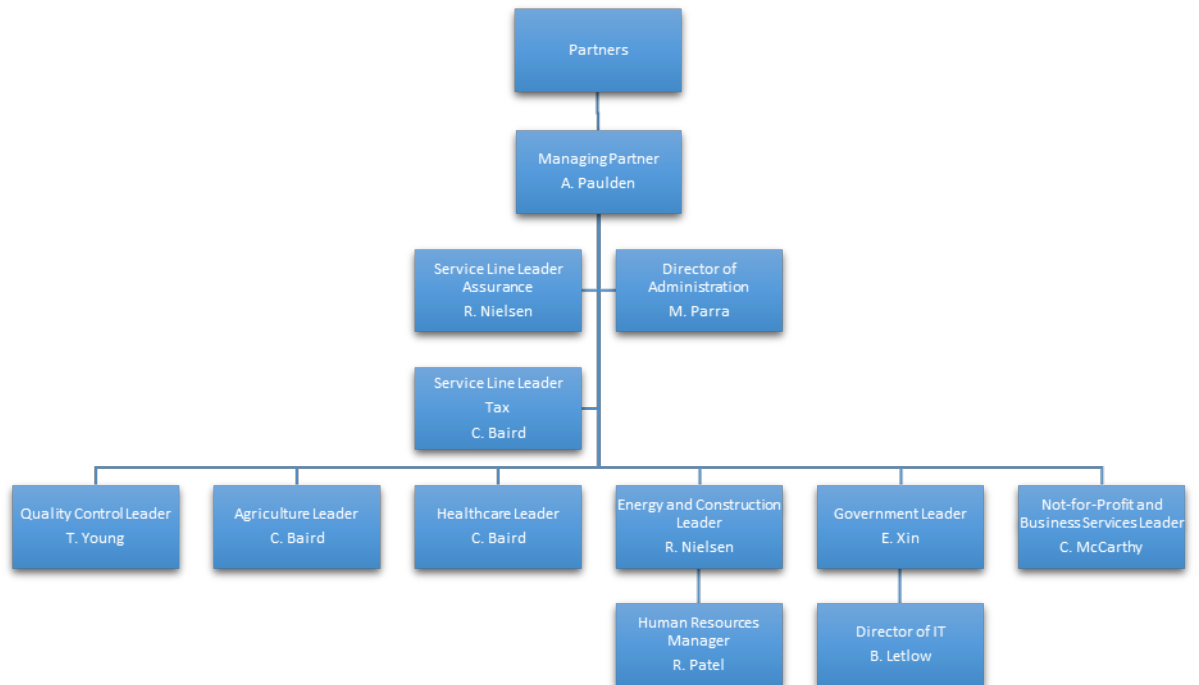
### Questions for Annual Auditor Consultant Evaluation

Please provide information about the following events and activities and whether they occurred during Fiscal Year 2019-20.

#### Organizational Update

- 1) Provide an update on your firm's organization, with particular emphasis on changes to your management structure over the past twelve months. All significant changes should be accompanied by an explanation. An updated organizational chart should accompany this response.

See organizational chart below. During the year, one shareholder-in-training was added to the Partner group as of January 2020, two shareholders-in-training were promoted to partners, and Diane White retired in December 2019 and Chris M. Thornburgh departed July 2019 choosing to peruse other opportunities.



- 2) Update all significant personnel changes or expected changes to the "SamCERA Team."

No significant personnel changes to SamCERA are expected.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
**Board of Retirement**

- 3) Has your firm or any of its employees been involved in regulatory or litigation actions related to your business in the past twelve months?

No

- 4) Has a peer review been performed on any of your firm's audit products? If yes, discuss the review and the findings. Any material findings or recommendations must be accompanied by an explanation.

No peer review has been performed or required. Latest peer review was performed in the fiscal year ending 2019 and will not be performed again until 2022.

- 5) Are any of your operations outsourced? If the answer is yes, provide details regarding the firm(s) with which your firm has contracted.

The only outsourcing we do is for Information Technology consultant. They will be utilized if your company falls under high risk for significant changes during the year.

- 6) Please describe how your firm monitors and manages cyber security risks as they relate to confidential SamCERA data/information.

Our policy is that all confidential information is exchanged via secured, encrypted communications (see <https://support.citrix.com/article/CTX208317> for more details on our file transfer service). Internally our client data is stored on servers in a locked server room with a discrete alarm system. Servers are kept updated and patched against security vulnerabilities and reside behind a network firewall with an Intrusion Protection System. Data on employee computers is protected by a full disk encryption system that will lock attackers out after a few incorrect password guesses (see <https://www.checkpoint.com/products/full-disk-encryption/> for more information about our endpoint encryption product). Employee passwords must comply with industry standard complexity requirements and change quarterly. Additionally, we do quarterly security training for all employees to keep them up to date on the most recent attack vectors and exploits.

Has your firm experienced any problems with cyber security in the past 18 months? No

What is your cyber security breach policy? Currently we are in the process of establishing a cyber security breach policy.

What procedures do you have in place for a cyber security breach?  
We will be following this outline of procedures:

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
**Board of Retirement**

- Make an initial assessment.
- Communicate the incident.
- Contain the damage and minimize the risk.
- Identify the type and severity of the compromise.
- Protect evidence.
- Notify external agencies, if appropriate.
- Recover systems.
- Compile and organize incident documentation.
- Assess incident damage and cost.
- Review the response and update policies

**Client Update**

- 7) What is your firm's philosophy and current policy regarding new business?

We engage only new clients that have the highest ethical standards, and only after we are certain we can provide high quality, timely service.

- 8) Please list all clients gained or lost in the past eighteen months.

Over the past eighteen months, we have gained a total of 350 clients and lost 289. Of the 289 lose, 68 were agreed upon when Chris M. Thornburgh departed.

**Outlook Beyond Fiscal Year 2019-20**

- 9) What issues are other clients concerned with regarding products, services, education and governance that your staff has not addressed with SamCERA?

Our other clients are concerned with obtaining training and implementation guidance relating to new and proposed accounting standards. See our recommendation at #13 in attending our future continuing education.

- 10) Should SamCERA be made aware of significant changes that your clients are making?

Nothing SamCERA hasn't already implemented or considered.

- 11) Relative to your expertise, what trends are occurring in the retirement industry that SamCERA should be tracking?

None noted.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
**Board of Retirement**

**Conclusion**

- 12) How can SamCERA better assist you in accomplishing the goals it has established for your firm?

We have a very good relationship with SamCERA and continued feedback will be helpful in accomplishing the goals established.

- 13) How can we better utilize your firm's capabilities?

We provide continuing education for our clients and our staff about new Governmental Accounting Standards established. SamCERA could take advantage of the resources and training for a reduced cost of attending we provide to all clients. We typically have our continuing education scheduled in January and May/June. We will provide more information once the agendas have been established.

- 14) Is there any information that would be timely pursuant to SamCERA's annual review?

None noted.

- 15) What audit related changes should SamCERA consider that were not mentioned in your audit or audit presentation?

Upcoming GASB statement No's 84-94, 96, and 97 may or may not have a significant effect on SamCERA. We usually provide an update on the current GASB's and their applicability during our entrance meeting with management or the Audit Committee when an entrance meeting is requested by the Audit Committee.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

December 8, 2020

Agenda Item 7.2

**TO:** Board of Retirement  
**FROM:** Scott Hood, Chief Executive Officer  
**SUBJECT:** 2021 Board-Staff Retreat Topics



**Recommendation**

Provide direction for staff regarding the topics and schedule for the March 23, 2021, Board-Staff Retreat.

**Background**

The annual Board retreat is scheduled for March 23, 2021. The Board assists on setting the topics to be addressed at the retreat and provides input regarding the proposed presenters. This agenda item gives trustees its first opportunity to discuss retreat topics. We will bring this back to Board again prior to finalizing the agenda.

**Discussion**

Last year's retreat was scheduled for one day but was cancelled due to the Covid-19 Pandemic and the beginning of the SamCERA's remote operations. While SamCERA is still operating remotely, we are better positioned to administer a Board retreat with guest speakers through Zoom. The Board already approved a start time of 8:30 a.m. for March 23<sup>rd</sup> and we are proposing this one day retreat to occur in addition to the regular Board meeting. The retreat portion would have 4 major topics and time for discussion between topics.

Some suggested topics are included in the following list:



- High level-look at the economy
- Deep Dive into the portfolio
- Further discussion on Plan Maturity
- Impact of Covid-19 on portfolio/asset class/relative value
- Discussion of Risk Assessment Report Under ASOP 51
- Other Actuarial Topics

**SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**  
**Board of Retirement**

December 8, 2020

Agenda Item 7.3

**TO:** Board of Retirement

**FROM:** Scott Hood, Chief Executive Officer   
Brenda B. Carlson, Chief Legal Counsel 

**SUBJECT:** Legislative Update

**Recommendation**

Accept report of 2020 Legislation and provide direction to staff.

**Background**

Newly Chaptered AB 2101 contains numerous technical changes to Government Code provisions applicable to the Teachers' Retirement Law (administered by STRS), the Public Employees' Retirement Law (administered by CalPERS) and the County Employees Retirement Law (CERL). Below is a summary of the CERL amendments that are of more substance. The legislation will become effective January 1, 2021.

**Discussion**

The first change is the addition of section 31454.7, an express Legislative affirmation of the ruling of *Mijares v. Orange County Employees' Retirement System* (2019) 32 Cal.App.5th 316, which holds that the Retirement Board can set contributions for employers even if the employer no longer has active members in order to ensure sustainability of the fund.

Next, is an amendment regarding the purchase of service credit. Currently, members do not get service credit when they are on unpaid leave; however, they are authorized to purchase certain unpaid leave time upon returning to a paid status. Section 31646 currently allows members to purchase service credit for unpaid leave due to illness by paying the member contributions that would have been during that period, together with the interest that the contributions would have accrued. Newly amended Section 31646 authorizes the purchase of unpaid leave for approved parental leave for a time period of up to 12 consecutive months, if the member returns to employment at the end of the approved leave for a period of time at least equal to that leave. The member would have to pay all contributions (employee and employer) that would have been paid as well as the accrued interest. This provision is operative for SamCERA only if the Board of Supervisors votes to make the provisions applicable to San Mateo County and would only apply to parental leave that commences after the adoption by the Board of Supervisors.



Thirdly, currently sections 31662.2 and 31670 provide that the Board approves all regular service retirements of members. As that is not practical, the CERL systems have staff retire members and then list these regular retirements on the consent agenda for Board ratification. The amendment authorizes the Board to delegate this approval to the CEO and/or other personnel to exercise this Board power. The CEO would report the retirements at the next public meeting of the Board. To make the delegation effective for SamCERA, staff would bring a resolution to the Board for its approval.

Also, in relation to processing retirements, sections 31672 et seq. currently provide that members must submit their application for retirement no earlier than 60 days before the effective date of their retirement. The amendment allows the Board to set its own deadline to accept retirement applications which can be longer or shorter than 60 days. If the Board were to change the submission deadline to something other than 60 days, staff would need to present a resolution or regulation change to the Board for its adoption.

Finally, for the rare occurrence when a member is fired, then retires and then has that firing overturned through an appeal process, newly added section 31680.10 provides that the member be reinstated from retirement as if there were no intervening period of retirement. The member would have to repay SamCERA for the benefits they received and pay contributions for any period for which back salary is awarded and would receive service credit for that period. This section automatically applies to SamCERA, no action is needed.

At the meeting, staff will discuss its recommendation as to the sections which require action to make them effective for SamCERA and receive direction from the Board.

## **Attachment**

Assembly Bill 2101

## Assembly Bill No. 2101

### CHAPTER 275

An act to amend Sections 22106.2, 22119.5, 22144.3, 22156.1, 22170.5, 22501, 22509, 22711, 22714, 22717, 22718, 24204, 25025, 26113, 26801, 26803, 26804, 26808, 26810, and 27204 of, to add Sections 23011 and 26303.7 to, and to repeal Section 22151 of, the Education Code, and to amend Sections 20230, 20731, 22772, 22960.95, 22970.85, 31465, 31627.1, 31627.2, 31631.5, 31641.45, 31646, 31662.2, 31670, 31672, 31672.1, 31672.2, 31672.3, 31706, 31760.1, 31760.2, 31765, 31765.1, 31776.3, 31781.1, 31781.2, 31785, 31785.1, 31786, 31786.1, 31787, 31787.5, 31855.3, and 75088.3 of, to add Sections 31454.7 and 31680.10 to, to repeal Sections 31649.5, 31649.6, 31650, and 31651 of, and to repeal and add Section 31649 of, the Government Code, relating to public employees' retirement, and making an appropriation therefor.

[Approved by Governor September 29, 2020. Filed with  
Secretary of State September 29, 2020.]

#### LEGISLATIVE COUNSEL'S DIGEST

AB 2101, Committee on Public Employment and Retirement. Public employees' retirement.

(1) Existing law, the Teachers' Retirement Law, establishes the State Teachers' Retirement System (STRS) and creates the Defined Benefit Program of the State Teachers' Retirement Plan, which provides a defined benefit to members of the program, based on final compensation, credited service, and age at retirement, subject to certain variations. STRS is administered by the Teachers' Retirement Board. The Defined Benefit Program is funded by employer and employee contributions, as well as investment returns and state appropriations, which are deposited or credited to the Teachers' Retirement Fund.

Existing law authorizes a member to elect continued defined benefit coverage in STRS when taking a position that provides a defined benefit in another public retirement system, and requires the election to be made in writing and to be filed with STRS and the other public retirement system.

This bill would remove the requirement that the election be filed with the other public retirement system, and would instead require the employer to retain a copy of the election form.

(2) Existing law defines creditable service for purposes of STRS to include, among other things, the work of audiometrists performed for a prekindergarten through grade 12 employer in a position requiring Commission on Teacher Credentialing certification qualifications, for a community college employer by a faculty member, or for a charter school employer, as provided. Existing law grants the Teachers' Retirement Board

final authority for determining creditable service to cover any activities not specified.

This bill would instead include as creditable service activities performed for an employer by an audiometrist who holds a certificate of registration issued by the State Department of Health Care Services.

(3) Existing law creates the Teachers' Retirement Fund, which is continuously appropriated for specified purposes, and into which employee contributions are deposited. Existing law requires employees to make contributions to the system based on their creditable compensation, as defined. Existing law defines "leave of absence" for purposes of the Teachers' Retirement Law as a period of leave to which a member is entitled that is expressly authorized or required pursuant to specified provisions. Among other things, these provisions provide for leaves of absence for military service, service as an elected member of the Legislature, and service on certain boards and commissions, subject to specified requirements.

This bill would define "leave of absence" to also mean an employer-approved compensated leave taken on or after January 1, 2016, that is otherwise excluded from the definition of leave of absence described above. The bill would require that remuneration that is paid for an employer-approved compensated leave be creditable compensation, as specified. Based on the increase in creditable compensation, the bill would increase employee contributions into continuously appropriated Teachers' Retirement Fund, thereby making an appropriation.

(4) Existing law grants a member of STRS service credit at retirement for accumulated and unused sick leave days, as specified. Existing law defines sick leave days for these purposes to mean the number of days of accumulated and unused leave of absence for illness or injury, and defines basic sick leave to mean the equivalent of one day's paid leave of absence per pay period due to illness or injury. Existing law also grants a member service credit during the time the member is serving as an elected officer of an employee organization and is on a compensated leave of absence.

This bill would instead define sick leave to be the number of days of accumulated and unused leave of absence for illness or injury granted by each employer, and would define basic sick leave to mean the days of paid leave of absence due to illness or injury granted by each employer, not to exceed 12 days per school year. The bill would specify that a member is prohibited from receiving service credit for accumulated, unused sick leave that the member receives service credit for in another public retirement system. The bill would grant a member who is an elected officer of an employee organization on a compensated leave of absence STRS benefits that the member would have received had the member not been on a compensated leave of absence.

(5) Existing law authorizes an employer, for purposes of STRS, to offer an additional 2 years of service credit to specified members if the member elects to retire in a defined period. Existing law requires a member to forfeit the additional 2 years of service credit if the retired member takes any job within the school district, community college district, or county office of

education that granted the member the service credit less than 5 years after receiving the additional credit.

This bill would require a member to forfeit the additional 2 years of service credit if the member takes any job within the school district, community college district, or county office of education as an employee, an independent contractor, or an employee of a third party.

(6) Existing law establishes the Defined Benefit Supplement Program in STRS for the purpose of providing supplemental benefits to members whose earnings are in excess of specified amounts. Existing law establishes the Cash Balance Benefit Program, administered by the Teachers' Retirement Board, as a separate benefit program within the State Teachers' Retirement Plan in order to provide a retirement plan for persons employed to perform creditable service for less than 50% of full-time service. Existing law requires a termination benefit under the Defined Benefit Supplement Program and Cash Balance Benefit Program to be payable 6 months after the member terminates employment.

This bill would instead require the termination benefit to be payable 180 calendar days after the member terminates employment. The bill would make additional administrative changes to the Cash Balance Benefit Program to conform with the administration of the defined benefit program.

(7) Existing law authorizes the Teachers' Retirement Board to assess penalties and interest if an employer fails to make a payment of contributions to STRS.

The bill would require penalties and interest overpaid to STRS to be considered additional contributions, to be deposited in the Teachers' Retirement Fund, and to be treated in the same manner as other contributions paid to STRS.

(8) The Public Employees' Retirement Law (PERL) establishes the Public Employees' Retirement System (PERS) for the purpose of providing pension benefits to state employees and employees of contracting agencies. Existing law requires administration of PERS by the Board of Administration of PERS. Existing law creates the Public Employees' Retirement Fund as a trust fund to be expended only for purposes related to the system and its administration, as specified, and provides that the fund is continuously appropriated for these purposes. Existing law, the California Public Employees' Pension Reform Act of 2013 (PEPRA), on and after January 1, 2013, generally requires a public retirement system, as defined, to modify its plan or plans to comply with the act, as specified.

Under existing law, data filed with the board by any member, retired member, beneficiary, or annuitant is confidential. Existing law prohibits system officials and employees from divulging the data except pursuant to specified parties and entities.

This bill would make various technical and clarifying changes to these provisions, including specifying that data filed on behalf of any member, retired member, beneficiary, or annuitant is also confidential and that data may be divulged to other retirement systems that provide reciprocal benefits to members of PERS.

Existing law authorizes a member of PERS, who is credited with less than a certain number of years of service and who enters employment as a member of another public retirement system supported by state funds, within 6 months of leaving state service, to elect to leave their accumulated contributions on deposit in the retirement fund. Existing law specifies that a member's failure to make an election to withdraw accumulated contributions is deemed an election to leave the member's accumulated contributions on deposit in the retirement fund. Existing law provides that a member may revoke their election to allow accumulated contributions to remain in the retirement system, except under specified circumstances. Existing law requires a member who is permanently separated from all PERS covered service, who meets specified conditions, and who attains 70 years of age, to be provided with an election to withdraw contributions, or, if vested, an election to either apply for service retirement or to withdraw contributions.

This bill would instead require a member permanently separated under the circumstances described above to attain 71 ½ years of age before being provided with those election options. This bill would also correct an obsolete cross reference.

(9) The PERL contains the State Peace Officers' and Firefighters' Defined Contribution Plan as a separate supplemental plan for certain peace officers and firefighters, and is administered by the board of PERS. Existing law establishes the State Peace Officers' and Firefighters' Defined Contribution Plan Fund as a trust fund, with moneys in the fund continuously appropriated to the board for purposes of administering the plan.

Under PERL, a participant, nonparticipant, spouse, or beneficiary is not permitted to elect a distribution under the plan that does not satisfy specified requirements of federal law related to being a qualified pension trust plan. Existing law requires the beginning date of distributions that reflect the entire interest of the participant, for a lump-sum distribution, to be made not later than April 1 of the calendar year following the later of the calendar year in which the participant attains 70 ½ or the calendar year in which the participant terminates all employment subject to plan coverage. Existing law also requires, for a distribution to the participant in the form of installment payments or an annuity, that payment begin not later than April 1 of the calendar year following the later of the calendar year in which the participant attains 70 ½ years of age or the calendar year in which the participant terminates all employment subject to plan coverage. Existing law also requires, if a benefit is payable on account of the participant's death, and the beneficiary is the participant's spouse, the distributions to commence on or before the later of either December 31 of the calendar year immediately following the calendar year in which the participant dies, or December 31 of the calendar year in which the participant would have attained 70 ½ years of age.

This bill would raise the age for required distributions, in the circumstances described above, from 70 ½ years of age to 72 years of age.

(10) Existing law establishes the Supplemental Contributions Program as a defined contribution plan to supplement the benefits provided under PERL. Existing law establishes the Supplemental Contributions Program Fund as a special trust fund, with moneys in the fund continuously appropriated to the board of PERS, for purposes of the program. Under existing law, a participant, nonparticipant, spouse, or beneficiary is not permitted to elect a distribution under the plan that does not satisfy federal requirements related to being a qualified pension trust plan. Existing law requires the beginning date of distributions that reflect the entire interest of the participant, for a lump-sum distribution to the participant, to be made not later than April 1 of the calendar year following the later of the calendar year in which the participant attains 70½ years of age or the calendar year in which the participant terminates all employment. Existing law requires the beginning date of distributions, if provided in periodic payments, to begin not later than April 1 of the calendar year following the later of the calendar year in which the participant attains 70½ years of age or the calendar year in which the participant terminates all employment subject to plan coverage. Existing law also requires, if a benefit is payable on account of the participant's death, and the beneficiary is the participant's spouse, that distributions commence on or before the later of either December 31 of the calendar year immediately following the calendar year in which the participant dies or December 31 of the calendar year in which the participant would have attained 70½ years of age.

This bill would raise the age for required distributions, in the circumstances described above, from 70½ years of age to 72 years of age.

(11) The Judges' Retirement Law prescribes retirement benefits for judges, as defined, who were first elected or appointed to judicial office before November 9, 1994. Existing law also establishes the Extended Service Incentive Program to provide enhanced retirement benefits for those judges who continue in service beyond retirement age, as specified, and directs the board of administration of PERS to implement the program. Existing law prescribes that the required beginning date of distributions that reflect the entire interest of the judge, for a lump-sum distribution, be made not later than April 1 of the calendar year following the later of the calendar year in which the judge attains 70½ years of age or the calendar year in which the judge terminates employment. Existing law also requires, if a benefit is payable on account of the judge's death, and the beneficiary is the judge's spouse, that distributions commence on or before the later of December 31 of the calendar year immediately following the calendar year in which the judge dies or December 31 of the calendar year in which the judge would have attained 70½ years of age.

This bill would raise the age for required distributions, in the circumstances described above, from 70½ years of age to 72 years of age.

(12) The County Employees Retirement Law of 1937 (CERL) authorizes counties to establish retirement systems pursuant to its provisions for the purpose of providing pension and death benefits to county and district employees.

This bill would correct several erroneous and obsolete cross-references within CERL.

(13) The California Constitution commits plenary authority for administration of public employee retirement systems, and for the provision of actuarial services for the systems, to their boards of administration. CERL prescribes actuarial requirements for CERL systems and, upon the basis of the investigation, valuation, and recommendation of the actuary, the retirement board is required to recommend to the county board of supervisors the changes in rates of interest, in rates of member contributions, and in county and district appropriations that are necessary. A similar process is prescribed for districts within the system, but that are not governed by the board of supervisors.

This bill would make a statement of legislative affirmation regarding a ruling in a specified court case upholding a retirement board's plenary authority to recommend adjustments to county and district contributions necessary to ensure the appropriate funding of the retirement system.

(14) CERL authorizes a member who returns to active service following an uncompensated leave of absence on account of illness to receive service credit for the period of the absence upon payment of the contributions that the member would have paid during that period, together with the interest that the contributions would have accrued.

This bill would similarly authorize a member who returns to active service following an uncompensated leave of absence on account of approved parental leave to receive service credit for the period upon payment of contributions and interest. The bill would prohibit service credit to be received for such a period of absence from exceeding 12 consecutive months and would prescribe requirements for payments. This provision would be operative in a county only if the board of supervisors elect to make it so, as specified, and would apply to parental leave that begins after the election.

(15) CERL authorizes a member who resigns or obtains a leave of absence to enter, and who does enter, the Armed Forces of the United States on a voluntary or involuntary basis, under prescribed circumstances, to obtain service credit for the period during which the member was out of county service.

This bill would recast these provisions and would generally require that CERL comply with the federal Uniformed Services Employment and Reemployment Rights Act of 1994, as it may be amended. The bill would also authorize a member who does not qualify for reemployment benefits due to the length of military service and who returns to county or district employment within one year of being honorably discharged from the Armed Forces of the United States, to receive credit for service for all or any part of the member's military service upon making specified payments.

(16) CERL requires boards of retirement to provide for the retirement of members who meet age and service requirements.

This bill would authorize a system administrator or other personnel to exercise a board's power to retire members as described above. The bill

would require that service retirements be reported to the board at its next public meeting after the retirement.

(17) CERL prescribes requirements for calculating the effective date of retirement under different membership conditions, generally providing that the date not be more than 60 days after the date of filing.

This bill would prescribe general requirements regarding the effective date of retirement to prohibit it from beginning earlier than the date the application is filed with the board or more than 60 days after the date of filing or more than a number of days that has been approved by the board.

(18) CERL and other existing laws prescribe requirements for reinstatement after retirement and for service without reinstatement. CERL prescribes different requirements, to be elected by a county, regarding member status in a retirement system upon reemployment, including how the rate of contributions and retirement allowance are to be calculated upon a subsequent retirement.

This bill would require that people who have retired under CERL following an involuntary termination of employment who are subsequently reinstated to that employment pursuant to a final administrative or judicial proceeding, as specified, be reinstated from retirement as if there were no intervening period of retirement. The bill would require the person to repay an allowance paid to the person to the retirement system from which they retired in accordance with the retirement system's repayment policy and that contributions be made for any period for which salary is awarded in the administrative or judicial proceedings in the amount that would have been contributed had the member's employment not been terminated. The bill would require that the person receive service credit for the period for which salary is awarded. The retirement system would be granted discretion regarding the timing of repayment.

(19) CERL prescribes requirements regarding notification of members who have left service and elected to leave accumulated contributions in the retirement fund or have been deemed to have elected deferred retirement, as specified. Existing law requires the retirement system to start paying the member an unmodified retirement allowance in the year in which the member attains 70½ years of age, if the member can be located but does not make proper application for a deferred retirement allowance, as specified. Existing law prescribes alternate requirements if a member cannot be located. CERL establishes the Deferred Retirement Option Program, which a county or district may elect to offer and which provides an additional benefit on retirement to participating members.

This bill would require that members who have left service, as described above, in addition to notification regarding retirement allowances, also be notified regarding their eligibility for a one-time distribution of accumulated contributions and interest. The bill would revise the age at which the retirement system is required to provide the above-described notice, as well as when the retirement system must start payment of an unmodified retirement allowance, to 72 years of age. The bill would further require the retirement system at that time to make a one-time distribution of accumulated



contributions if the member is ineligible for a deferred retirement allowance, as specified. The bill would change the age threshold from 70½ years of age to 72 years of age with regard to requirements that apply when members cannot be located and with reference to when distributions are to be made to members who are participating in a Deferred Retirement Option Program.

(20) CERL establishes various rights to benefits that accrue to children of members and their surviving spouses under specified circumstances. In these instances, generally, these benefits will accrue provided that the children are under 18 years of age and unmarried and they continue until every child dies, marries, or attains age 18. Existing law authorizes the continuance of the benefits, in specified instances, to children through the age of 21 if the children remain unmarried and are regularly enrolled as full-time students in an accredited school, as specified.

This bill would revise the above-described standard applicable to children through the age of 21 to instead be up to the 22nd birthdays of the children. The bill would make a related change with regard to a provision that provides an alternative to survivorship benefits under federal social security benefits.

Appropriation: yes.

*The people of the State of California do enact as follows:*

SECTION 1. Section 22106.2 of the Education Code is amended to read:

22106.2. “Base days” means the number of days of creditable service the employer requires the member’s class of employees to perform in a school year during the member’s most recent year of creditable service to earn one year of service credit. Base days shall not include school and legal holidays and shall not be less than the minimum standard specified in Section 22138.5. For those standards identified in Section 22138.5 that are expressed only in terms of hours, the number of hours shall be divided by six to determine the number of base days. The number of base days shall not be less than 175.

SEC. 2. Section 22119.5 of the Education Code is amended to read:

22119.5. (a) “Creditable service” means any of the activities described in subdivision (b) performed for any of the following employers:

(1) A prekindergarten through grade 12 employer in a position with certification qualifications authorized by the Commission on Teacher Credentialing pursuant to Section 44001.

(2) A community college employer by a faculty member, as defined in Section 87003, in an academic position, as defined in subdivision (b) of Section 87001, or by an educational administrator, as defined in subdivision (b) of Section 87002, subject to the appropriate minimum standards adopted by the Board of Governors of the California Community Colleges pursuant to Section 87356, or pursuant to a contract between a community college district and the United States Department of Defense to provide vocational training.

(3) A charter school employer under the provisions of an approved charter for the operation of a charter school for which the charter school is eligible to receive state apportionment.

(b) The types of activities are any of the following:

(1) The work of teachers, instructors, district interns, and academic employees employed in the instructional program for pupils, including special programs such as adult education, regional occupation programs, child care centers, and prekindergarten programs pursuant to Section 22161.

(2) Education or vocational counseling, guidance, and placement services.

(3) The work of employees who plan courses of study to be used in California public schools, or research connected with the evaluation or efficiency of the instructional program.

(4) The selection, collection, preparation, classification, demonstration, or evaluation of instructional materials of any course of study for use in the development of the instructional program in California public schools, or other services related to California public school curriculum.

(5) The examination, selection, in-service training, mentoring, or assignment of teachers, principals, or other similar personnel involved in the instructional program.

(6) The work of nurses, physicians, speech therapists, psychologists, audiologists, and other California public school health professionals.

(7) Services as a California public school librarian.

(8) Activities connected with the enforcement of the laws relating to compulsory education, coordination of child welfare activities involving the school and the home, and the school adjustment of pupils.

(9) The work of employees who are responsible for the supervision of persons or administration of the duties described in this subdivision.

(c) "Creditable service" also means any of the activities described in subdivision (b) when they are performed for an employer by:

(1) Superintendents of California public schools, and presidents and chancellors of community college employers.

(2) Consulting teachers employed by an employer to participate in the California Peer Assistance and Review Program for Teachers pursuant to Article 4.5 (commencing with Section 44500) of Chapter 3 of Part 25 of Division 3 of Title 2.

(3) Audiometrists who hold a certificate of registration issued by the State Department of Health Care Services.

(d) "Creditable service" also means the performance of California public school activities related to, and an outgrowth of, the instructional and guidance program of the California public school when performed for the same employer for which the member is performing any of the activities described in subdivision (b) or (c).

(e) The board shall have final authority for determining creditable service to cover any activities not already specified.

SEC. 3. Section 22144.3 of the Education Code is amended to read:

22144.3. (a) "Leave of absence" means a period of leave to which a member is entitled that is expressly authorized or required by Chapter 4

(commencing with Section 44800) of Part 25 of Division 3 of Title 2, or Chapter 1 (commencing with Section 87000) or Chapter 3 (commencing with Section 87400) of Part 51 of Division 7 of Title 3.

(b) “Leave of absence” also means employer-approved compensated leave that is excluded under subdivision (a) that was or is taken on or after January 1, 2016.

(c) Remuneration that is paid for an employer-approved compensated leave is creditable compensation pursuant to Sections 22119.2 and 22119.3.

SEC. 4. Section 22151 of the Education Code is repealed.

SEC. 5. Section 22156.1 of the Education Code is amended to read:

22156.1. “Present value,” for purposes of Section 22718, means the amount of money needed on the effective date of retirement to reimburse the system for the actuarially determined cost of the portion of a member’s retirement allowance attributable to unused excess sick leave days. The present value on the effective date of retirement shall equal the number of unused excess sick leave days divided by the number of base days, as defined in Section 22106.2, multiplied by the prior year’s compensation earnable multiplied by the present value factor.

SEC. 6. Section 22170.5 of the Education Code is amended to read:

22170.5. (a) “Sick leave days” means the number of days of accumulated and unused leave of absence for illness or injury granted by each employer.

(b) “Basic sick leave day” means the days of paid leave of absence due to illness or injury granted by each employer that are not excess sick leave days.

(c) “Excess sick leave days” means the day or total number of days of paid leave of absence due to illness or injury granted by each employer in excess of 12 days per school year.

(d) For those standards identified in Section 22138.5 that are expressed only in terms of hours, the number of hours shall be divided by six to determine the number of days pursuant to this section.

SEC. 7. Section 22501 of the Education Code is amended to read:

22501. (a) Any person who is not already a member of the Defined Benefit Program and who is employed by a school district or county office of education to perform creditable service on a full-time basis shall become a member as of the first day of employment, unless excluded from membership pursuant to Section 22601.

(b) Creditable service in more than one position shall not be aggregated for the purpose of determining mandatory membership under this section.

(c) This section shall be deemed to have become operative on July 1, 1996.

SEC. 8. Section 22509 of the Education Code is amended to read:

22509. (a) Within 10 working days of the date of hire of an employee who has the right to make an election pursuant to Section 22508 or 22508.5, the employer shall inform the employee of the right to make an election and shall make available to the employee written information provided by each retirement system concerning the benefits provided under that retirement system to assist the employee in making an election.

(b) Any election made pursuant to subdivision (a) of Section 22508 or subdivision (a) of Section 22508.5 shall be made in writing on a properly executed form prescribed by the system within 60 calendar days from the date of hire in the position requiring membership in the other public retirement system and shall be received at the system's headquarters office within 60 calendar days after the date of the employee's signature. The employer shall retain a copy of the employee's signed election form and submit the original signed election form to the system's headquarters office.

(c) Any election made pursuant to subdivision (c) of Section 22508 or subdivision (b) of Section 22508.5 shall be filed with the office of the Public Employees' Retirement System.

(d) Any election made pursuant to Section 22508 or Section 22508.5 shall become effective as of the first day of employment in the position that qualified the employee to make an election.

SEC. 9. Section 22711 of the Education Code is amended to read:

22711. (a) An elected officer of an employee organization that is on a compensated leave of absence pursuant to Section 44987 or 87768.5 shall be entitled to the service credit, compensation earnable, interest, and additional earnings credits under this part that they otherwise would have been due had the member not been on the compensated leave of absence, if all of the following conditions are met:

(1) The member was employed and performed creditable service subject to coverage under this Defined Benefit Program in the month prior to commencement of the leave of absence.

(2) The member makes contributions to the Teachers' Retirement Fund in the amount that the member would have contributed had the member performed creditable service during the period the member served as an elected officer of the employee organization.

(3) The member's employer contributes to the Teachers' Retirement Fund at a rate adopted by the board as a plan amendment with respect to the Defined Benefit Program an amount based upon the creditable compensation that would have been paid to the member had the member performed creditable service during the period the member served as an elected officer of the employee organization.

(b) The maximum service credit a member may receive pursuant to this section shall not exceed 12 years.

SEC. 10. Section 22714 of the Education Code is amended to read:

22714. (a) Whenever the governing board of a school district or a community college district or a county office of education, by formal action, determines pursuant to Section 44929 or 87488 that, because of impending curtailment of, or changes in, the manner of performing services, the best interests of the district or county office of education would be served by encouraging certificated employees or academic employees to retire for service and that the retirement will result in a net savings to the district or county office of education, an additional two years of service credit shall be granted under this part to a member of the Defined Benefit Program if all of the following conditions exist:

(1) The member is credited with five or more years of service credit and retires for service under Chapter 27 (commencing with Section 24201) during a period of not more than 120 days or less than 60 days, commencing no sooner than the effective date of the formal action of the employer that shall specify the period.

(2) The documentation required by this section is received by the system no later than 30 calendar days after the last day of the window period established in paragraph (1).

(3) (A) The employer transfers to the retirement fund an amount determined by the Teachers' Retirement Board to equal the actuarial equivalent of the difference between the allowance the member receives after receipt of service credit pursuant to this section and the amount the member would have received without the service credit and an amount determined by the Teachers' Retirement Board to equal the actuarial equivalent of the difference between the purchasing power protection supplemental payment the member receives after receipt of service credit pursuant to this section and the amount the member would have received without the service credit. The payment for purchasing power shall be deposited in the Supplemental Benefit Maintenance Account established by Section 22400 and shall be subject to Section 24415. The transfer to the retirement fund shall be made in a manner and a time period, not to exceed eight years, that is acceptable to the Teachers' Retirement Board. The employer shall transfer the required amount for all eligible employees who retire pursuant to this section.

(B) Regular interest shall be charged on the unpaid balance if the employer makes the transfer to the retirement fund in installments.

(4) The employer transmits to the retirement fund the administrative costs incurred by the system in implementing this section, as determined by the Teachers' Retirement Board.

(5) The employer has considered the availability of teachers or academic employees to fill the positions that would be vacated pursuant to this section.

(b) (1) The school district shall demonstrate and certify to the county superintendent that the formal action taken would result in a net savings to the district.

(2) The county superintendent shall certify to the Teachers' Retirement Board that the result specified in paragraph (1) can be demonstrated. The certification shall include, but not be limited to, the information specified in subdivision (c) of Section 14502.1.

(3) The school district shall reimburse the county superintendent for all costs to the county superintendent that result from the certification.

(c) (1) The county office of education shall demonstrate and certify to the Superintendent of Public Instruction that the formal action taken would result in a net savings to the county office of education.

(2) The Superintendent of Public Instruction shall certify to the Teachers' Retirement Board that the result specified in paragraph (1) can be demonstrated. The certification shall include, but not be limited to, the information specified in subdivision (c) of Section 14502.1.

(3) The Superintendent of Public Instruction may request reimbursement from the county office of education for all administrative costs that result from the certification.

(d) (1) The community college district shall demonstrate and certify to the chancellor's office that the formal action taken would result in a net savings to the district.

(2) The chancellor shall certify to the Teachers' Retirement Board that the result specified in paragraph (1) can be demonstrated. The certification shall include, but not be limited to, the information specified in subdivision (c) of Section 84040.5.

(3) The chancellor may request reimbursement from the community college district for all administrative costs that result from the certification.

(e) The opportunity to be granted service credit pursuant to this section shall be available to all members employed by the school district, community college district, or county office of education who meet the conditions set forth in this section.

(f) The amount of service credit shall be two years.

(g) Any member of the Defined Benefit Program who retires under this part for service under Chapter 27 (commencing with Section 24201) with service credit granted under this section and who subsequently reinstates shall forfeit the service credit granted under this section.

(h) Any member of the Defined Benefit Program who retires under this part for service under Chapter 27 (commencing with Section 24201) with service credit granted under this section and who takes any job as an employee, independent contractor, or as an employee of a third party with the school district, community college district, or county office of education that granted the member the service credit less than five years after receiving the credit shall forfeit the ongoing benefit the member receives from the additional service credit granted under this section.

(i) This section does not apply to any member otherwise eligible if the member receives any unemployment insurance payments arising out of employment with an employer subject to this part within one year following the effective date of the formal action under subdivision (a), or if the member is not otherwise eligible to retire for service.

SEC. 11. Section 22717 of the Education Code is amended to read:

22717. (a) Upon certification by the employer or employers, a member shall be granted credit at service retirement for each day of accumulated and unused sick leave days for which full salary is allowed and to which the member was entitled on the member's final day of employment with the employer or employers subject to coverage by the Defined Benefit Program during the last school term in which the member earned creditable compensation pursuant to Section 22119.2 or 22119.3. The system shall accept certification from each employer with which the member has accumulated sick leave days for that period, provided this leave has not been transferred to another employer.

(b) The amount of service credit to be granted shall be determined by dividing the number of accumulated, unused sick leave days by the number of base days, as defined in Section 22106.2.

(c) For members who are last employed with the state in a position in which there are no contracted base service days, the amount of service credit to be granted shall be 0.004 years of service for each day of unused sick leave certified to the board by the employer. The certification shall report only those days of unused sick leave that were accrued by the member during the normal course of the member's employment subject to coverage by the Defined Benefit Program.

(d) When the member has made application for service retirement under this part, the employer shall certify to the board, within 30 days following the effective date of the member's service retirement or the date the application for retirement is received by the system's headquarters office, whichever is later, the number of days of accumulated and unused sick leave days that the member was entitled to on the final day of employment. The board may assess a penalty on delinquent reports.

(e) The member shall not receive credit for accumulated unused sick leave days if the member receives service credit in another public retirement system for the same unused sick leave days.

(f) This section shall be applicable to any person who retires on or after January 1, 1999.

SEC. 12. Section 22718 of the Education Code is amended to read:

22718. (a) The Teachers' Retirement Board shall bill school employers for service credit granted for unused excess sick leave under this part, subject to the following provisions:

(1) (A) In addition to the certification of unused basic sick leave days, the employer shall also certify the number of unused excess sick leave days.

(B) Excess sick leave days granted by an employer other than the member's last employer shall be deemed to be granted by the last employer and shall be included in the certification if the member was eligible to use those excess sick leave days while the member was employed by the last employer. If, during the last year a member is employed to perform creditable service subject to coverage by the Defined Benefit Program, that member is employed by more than one employer, unused excess sick leave days shall be certified and paid for by the employer for the period in which the member was eligible to use those excess sick leave days.

(2) The employer shall be billed only for the present value of the unused excess sick leave days and any subsequent adjustments to the billing shall be billed or returned, as appropriate, to the employer.

(3) (A) The employer shall remit the amount billed to the system with the certification required by Section 22717 within 30 days after the effective date of the member's retirement or within 30 days after the date the system has notified the employer that a certification must be made, whichever is later.

(B) If payment is not received within 30 calendar days, the present value shall be recalculated to include regular interest from the due date to the date full payment is received.

(C) If the system has billed the employer for an additional amount, the employer shall remit the additional amount within 30 calendar days after the date of the billing. If payment is not received for the additional amount within 30 calendar days, the present value shall be recalculated to include regular interest from the due date to the date full payment is received.

(b) If a school employer fails to pay a bill charged according to subdivision (a), the Teachers' Retirement Board may request the Superintendent of Public Instruction or the Chancellor of the California Community Colleges, as appropriate, to reduce state apportionments to the school employer by an amount equal to the amount billed. The Superintendent or chancellor shall make the reduction, and if requested by the board, direct the Controller to reduce the amount transferred from the General Fund to Section A or Section B, as appropriate, of the State School Fund by an equal amount, which shall instead be transferred to the Teachers' Retirement Fund.

SEC. 13. Section 23011 is added to the Education Code, to read:

23011. Penalties and interest due to the system pursuant to Section 23003, 23006, or 23008 are additional required contributions that, when received, shall be deposited to the Teachers' Retirement Fund and treated in the same manner as other contributions.

SEC. 14. Section 24204 of the Education Code is amended to read:

24204. (a) A service retirement allowance under this part shall become effective upon any date designated by the member, provided all of the following conditions are met:

(1) An application for service retirement allowance is filed on a form provided by the system, which is executed no earlier than six months before the effective date of retirement allowance.

(2) The effective date is later than the last day the member earned creditable compensation pursuant to Section 22119.2 or 22119.3.

(3) The effective date is no earlier than one day after the date on which the retirement allowance was terminated under Section 24208.

(4) The effective date is no earlier than one year following the date on which the retirement allowance was terminated under subdivision (a) of Section 24117.

(5) The effective date is no earlier than the date upon and continuously after which the member is determined to the satisfaction of the board to have been mentally incompetent.

(6) The effective date is no earlier than one day after the date upon which the member completes payment of a service credit purchase pursuant to Section 22801, 22820, or 22826, or payment of a redeposit of contributions pursuant to Section 23200, except as provided in Section 22801 or 22829.

(b) A member who files an application for service retirement may change or cancel their retirement application if all of the following are met:



(1) The form provided by the system is received in the system's headquarters office no later than 30 days from the date the member's initial benefit payment for the member's most recent retirement under the Defined Benefit Program is paid by the system.

(2) The member returns the total gross distribution amount of all payments for any canceled retirement benefit, including a lump-sum payment being changed to an annuity, to the system's headquarters office no later than 45 days from the date of the member's initial benefit payment. The member shall be liable for any adverse tax consequences that may result from these actions.

(c) The retirement date of a member who files an application for retirement pursuant to Section 24201 on or after January 1, 2012, shall be no earlier than January 1, 2012.

(d) Nothing in this section shall be construed to allow a member to receive more than one type of retirement or disability allowance for the same period of time by virtue of the member's own membership.

SEC. 15. Section 25025 of the Education Code is amended to read:

25025. (a) A termination benefit under the Defined Benefit Supplement Program shall be payable after 180 calendar days have elapsed following the date the member terminated employment as specified in Section 25024.

(b) Except as provided in subdivision (c), the application for the termination benefit shall be automatically canceled if the member performs creditable service within 180 calendar days following the date of termination of employment.

(c) Subdivision (b) does not apply if the member has reached that age at which the Internal Revenue Code of 1986 requires a distribution of benefits. A member who has reached this age shall receive a distribution commencing on the earlier of the date that the member has met the conditions of subdivision (a) or the conditions of subdivision (h) of Section 24600.

SEC. 16. Section 26113 of the Education Code is amended to read:

26113. (a) "Creditable service" means any of the activities described in subdivision (b) performed for any of the following employers:

(1) A prekindergarten through grade 12 employer in a position with certification qualifications authorized by the Commission on Teacher Credentialing pursuant to Section 44001.

(2) A community college employer by a faculty member, as defined in Section 87003, in an academic position, as defined in subdivision (b) of Section 87001, or by an educational administrator, as defined in subdivision (b) of Section 87002, subject to the appropriate minimum standards adopted by the Board of Governors of the California Community Colleges pursuant to Section 87356, or pursuant to a contract between a community college district and the United States Department of Defense to provide vocational training.

(3) A charter school employer under the provisions of an approved charter for the operation of a charter school for which the charter school is eligible to receive state apportionment.

(b) The types of activities are any of the following:

(1) The work of teachers, instructors, district interns, and academic employees employed in the instructional program for pupils, including special programs such as adult education, regional occupational programs, child care centers, and prekindergarten programs pursuant to Section 22161.

(2) Education or vocational counseling, guidance, and placement services.

(3) The work of employees who plan courses of study to be used in California public schools, or research connected with the evaluation or efficiency of the instructional program.

(4) The selection, collection, preparation, classification, demonstration, or evaluation of instructional materials of any course of study for use in the development of the instructional program in California public schools, or other services related to California public school curriculum.

(5) The examination, selection, in-service training, mentoring, or assignment of teachers, principals, or other similar personnel involved in the instructional program.

(6) The work of nurses, physicians, speech therapists, psychologists, audiologists, and other California public school health professionals.

(7) Services as a California public school librarian.

(8) Activities connected with the enforcement of the laws relating to compulsory education, coordination of child welfare activities involving the school and the home, and the school adjustment of pupils.

(9) The work of employees who are responsible for the supervision of persons or administration of the duties described in this subdivision.

(10) Trustee service as described in Section 26403.

(c) “Creditable service” also means any of the activities described in subdivision (b) when they are performed for an employer by:

(1) Superintendents of California public schools, and presidents and chancellors of community college employers.

(2) Consulting teachers employed by an employer to participate in the California Peer Assistance and Review Program for Teachers pursuant to Article 4.5 (commencing with Section 44500) of Chapter 3 of Part 25 of Division 3 of Title 2.

(3) Audiometrists who hold a certificate of registration issued by the State Department of Health Care Services.

(d) “Creditable service” also means the performance of California public school activities related to, and an outgrowth of, the instructional and guidance program of the California public school when performed for the same employer for which the member is performing any of the activities described in subdivision (b) or (c).

(e) The board shall have final authority for determining creditable service to cover activities not already specified.

SEC. 17. Section 26303.7 is added to the Education Code, to read:

26303.7. Penalties and interest due to the system pursuant to Section 26301 or 26303 are additional required contributions that, when received, shall be deposited to the Teachers’ Retirement Fund and treated in the same manner as other contributions.

SEC. 18. Section 26801 of the Education Code is amended to read:

26801. Except as provided under Section 26802, a participant's retirement date shall not be earlier than either the date on which the participant attains 55 years of age or the first day of the month in which an application is received at the system's headquarters office, whichever is later.

SEC. 19. Section 26803 of the Education Code is amended to read:

26803. (a) All creditable service subject to coverage by the Cash Balance Benefit Program and all service with the participant's last employer or employers that is creditable under the Defined Benefit Program shall be terminated prior to the retirement date.

(b) All employers with which the participant is employed to perform creditable service subject to coverage by the plan shall certify in a format prescribed by the system that the participant's employment has been terminated unless the employment was terminated 12 months or more prior to the participant's retirement date.

SEC. 20. Section 26804 of the Education Code is amended to read:

26804. Application for a retirement benefit under this part shall be made on a form prescribed by the system. A participant who files an application for a retirement benefit may change or cancel the retirement application if all of the following are met:

(a) The form provided by the system is received in the system's headquarters office no later than 30 days from the date of the member's initial benefit payment.

(b) The participant returns the total gross distribution amount for any canceled retirement benefit, including a lump-sum payment being changed to an annuity, to the system's headquarters office no later than 45 days from the date of the participant's initial benefit payment. The participant shall be liable for any adverse tax consequences that may result from these actions.

SEC. 21. Section 26808 of the Education Code is amended to read:

26808. (a) The annuity elected under this chapter shall be determined as a value actuarially equivalent to the sum of the employee account and the employer account as of the retirement date. The annuity shall be calculated using the age of the participant and, if the participant elected a joint and survivor option, the age of the beneficiary on the retirement date.

(b) In the case of a participant who previously received an annuity that was terminated pursuant to Section 26810, the portion of the annuity derived from the amounts credited to the employee account and employer account as of the date the participant terminates the annuity shall be calculated using the actuarial assumptions in effect on the previous retirement date using the age of the participant and, if the participant elected a joint and survivor option, the age of the beneficiary on the current retirement date.

SEC. 22. Section 26810 of the Education Code is amended to read:

26810. (a) A participant who is employed to perform creditable service subject to coverage by the Cash Balance Benefit Program while receiving an annuity under the program may terminate the annuity upon written request to the system, effective upon a date designated by the participant, and make

contributions to the program based on salary paid by the employer for the employment, subject to the following conditions:

(1) The request for termination of the annuity is filed on a form prescribed by the system, and the form is executed no earlier than six months before the effective date of the termination.

(2) The effective date of the termination of the annuity shall be no earlier than the first day of the month in which the request for termination is received in the system's headquarters office.

(b) A participant who files a request for termination of the annuity may cancel or change the termination upon written request to the system. The request for cancellation or change must be on a form provided by the system and shall be received in the system's headquarters office no later than the last day of the month in which the request for termination to be canceled or changed is effective.

(c) Upon termination of the annuity, the employee and employer account of the participant shall be credited with respective balances that reflect the actuarial equivalent of the participant's retirement benefit as of the date the participant terminates the annuity and the Annuitant Reserve shall be reduced by the amount of the credits.

(d) Upon election of a subsequent annuity, the credits in the participant's employee account and employer account shall be transferred to the Annuitant Reserve.

SEC. 23. Section 27204 of the Education Code is amended to read:

27204. (a) The termination benefit under this part shall not be payable before 180 calendar days have elapsed following the date of termination of employment.

(b) Except as provided in subdivision (c), the application for the termination benefit shall be automatically canceled if the participant performs creditable service within 180 calendar days following the date of termination of employment.

(c) Subdivision (b) does not apply if the participant has reached that age at which the Internal Revenue Code of 1986 requires a distribution of benefits. A participant who has reached this age shall receive a distribution commencing on the earlier of the date that the participant has met the conditions of subdivision (a) or the conditions of subdivision (c) of Section 26004.

SEC. 24. Section 20230 of the Government Code is amended to read:

20230. (a) Data filed with the board by or on behalf of any member, retired member, beneficiary, or annuitant is confidential, and an individual record shall not be divulged by any official or employee having access to it to any person other than the following:

(1) The member, retired member, beneficiary, or annuitant to whom the information relates; their authorized representative; or upon written authorization by the member, retired member, beneficiary, or annuitant to whom the information relates.

(2) A contracting agency, county office of education, school district, community college district, the California State University, or the university,

if the member, retired member, beneficiary, or annuitant is or was employed by that entity. A contracting agency, county office of education, school district, community college district, the California State University, or the university may also be provided with records that relate to the beneficiary of a member or retired member who is or was employed by the entity.

(3) Any state department or agency.

(4) Any other California public retirement system that either by statute or agreement provides reciprocal benefits to members of the system.

(b) The information shall be used by the board for the sole purpose of carrying into effect the provisions of this part and Part 5 (commencing with Section 22750). Any information that is requested to which this section applies shall be treated as confidential and shall be used solely for retirement purposes, including, but not limited to, the administration and funding of retirement and health benefits, and related reporting and notice obligations.

(c) The gross amount of any benefit or any refund of a PERS contribution due to a member, retired member, or beneficiary under this part is not confidential and may be released upon request to the board.

(d) The board may seek reimbursement for reasonable administrative expenses incurred when providing information. Unless otherwise required by law, pursuant to a court order of competent jurisdiction, or except as provided by this section, a member's, retired member's, beneficiary's, or annuitant's address, home telephone number, or other personal information shall not be released.

(e) For purposes of this section:

(1) "Annuitant" has the meaning provided in Section 22760.

(2) "Authorized representative" includes a spouse or a beneficiary if a contrary appointment has not been made and when, in the opinion of the board, the member, retired member, beneficiary, or annuitant is prevented from appointing an authorized representative because of mental or physical incapacity or death.

SEC. 25. Section 20731 of the Government Code is amended to read:

20731. (a) Notwithstanding any other provision of this part, a member who is credited with less than the years of service specified in Article 1 (commencing with Section 21060) of Chapter 12 who enters employment as a member of a public retirement system supported, in whole or in part, by state funds, including the University of California Retirement System, or as a member of a county retirement system, within six months of leaving state service, shall have the right to elect to leave accumulated contributions on deposit in the retirement fund. Failure to make an election to withdraw accumulated contributions shall be deemed an election to leave accumulated contributions on deposit in the retirement fund. This section shall also apply to a member who is subject to Section 21076 or 21076.5.

(b) (1) An election to allow accumulated contributions to remain in the retirement fund may be revoked by the member at any time, except any of the following:

(A) While the member is employed in state service in a position in which the member is not excluded from membership with respect to that service.

(B) While the member is in service as a member of a public retirement system supported, in whole or in part, by state funds, including the University of California Retirement System.

(C) While the member is in service, entered within six months after discontinuing state service, as a member of a county retirement system.

(2) All accumulated contributions in a member's account up to the time of revocation shall be distributed in accordance with an election pursuant to Section 20735.

(3) A member who is permanently separated from all service covered by the system, who is not subject to paragraph (1), and who attains 71 ½ years of age shall be provided with an election to withdraw contributions or, if vested, an election to either apply for service retirement or to withdraw contributions. Failure to apply for service retirement or to make an election to withdraw contributions within 90 days shall be deemed an election to withdraw contributions. If the person fails to either apply for service retirement or elect to withdraw contributions, or cannot, with reasonable diligence, be located, the accumulated contributions shall be distributed in accordance with Section 21500.

(c) A member whose membership continues under this section is subject to the same age and disability requirements as apply to other members for service or for disability retirement. After the qualification of the member for retirement by reason of age, which shall be the lowest age applicable to any membership category in which the member has credited service, or disability, the member shall be entitled to receive a retirement allowance based upon the amount of the member's accumulated contributions and service standing to the member's credit at the time of retirement and on the employer contributions held for the member and calculated in the same manner as for other members, except that the provisions in this part for minimum service and disability retirement allowances shall not apply to the member, unless the member meets the minimum service requirements. If a basic death benefit becomes payable under Article 1 (commencing with Section 21490), Article 2 (commencing with Section 21530), and Article 5 (commencing with Section 21620) of Chapter 14 because of death before retirement of a member, the average annual compensation earnable in the year preceding the date of termination of that service, rather than in the year preceding death, shall be used in computing the benefit under Articles 1, 2, and 5 of Chapter 14.

The provisions of this section, as it read prior to June 21, 1971, shall continue with respect to a member whose membership continued under this section on that date.

SEC. 26. Section 22772 of the Government Code is amended to read:  
22772. (a) "Employee" means:

(1) An officer or employee of the state or of any agency, department, authority, or instrumentality of the state, including the University of California.

(2) An employee who is employed by a contracting agency and participates in a publicly funded retirement system provided by the contracting agency, or an officer or official of a contracting agency.

(3) An annuitant receiving a retirement allowance pursuant to Section 21232 who is employed by a contracting agency.

(4) A teaching associate, lecturer, coach, or interpreter employed by the California State University who is appointed to work in an academic year classification for at least six weighted teaching units for one semester, or for at least six weighted teaching units for two or more consecutive quarter terms. This paragraph does not apply to a state member employed by the California State University, unless provided for in a memorandum of understanding reached pursuant to Chapter 12 (commencing with Section 3560) of Division 4 of Title 1 or authorized by the Trustees of the California State University for employees excluded from collective bargaining.

(5) All employees in job classes specified in subdivision (a) of Section 14876.

(6) An individual not described in paragraphs (1) to (5), inclusive, who is both of the following:

(A) A “full-time employee” of the state or a contracting agency within the meaning of Section 4980H of Title 26 of the United States Code and applicable United States Treasury Department regulations and interpretive guidance.

(B) Designated in writing as an employee for purposes of this section by the state or the contracting agency, as applicable.

(b) Except as otherwise provided by this part, “employee” does not include any of the following:

(1) A person employed on an intermittent, irregular, or less than half-time basis, or an employee similarly situated.

(2) A National Guard member described in Section 20380.5.

SEC. 27. Section 22960.95 of the Government Code is amended to read:

22960.95. Notwithstanding any other provision of this part, a participant, nonparticipant spouse, or beneficiary shall not be permitted to elect a distribution under this part that does not satisfy the requirements of Section 401(a)(9) of Title 26 of the United States Code, including the incidental death benefit requirements of Section 401(a)(9)G and the regulations thereunder. The required beginning date of distributions that reflect the entire interest of the participant shall be as follows:

(a) In the case of a lump-sum distribution to the participant, the lump-sum payment shall be made not later than April 1 of the calendar year following the later of the calendar year in which the participant attains the age of 72 years or the calendar year in which the participant terminates all employment for the employer.

(b) In the case of a distribution to the participant in the form of installment payments or an annuity, payment shall begin not later than April 1 of the calendar year following the later of the calendar year in which the participant attains the age of 72 years or the calendar year in which the participant terminates all employment subject to coverage by the plan.

(c) In the case of a benefit payable on account of the participant's death, distributions shall be paid no later than December 31 of the calendar year in which the fifth anniversary of the participant's date of death occurs unless the beneficiary is the participant's spouse in which case distributions must commence on or before the later of either:

(1) December 31 of the calendar year immediately following the calendar year in which the participant dies.

(2) December 31 of the calendar year in which the participant would have attained the age of 72 years.

SEC. 28. Section 22970.85 of the Government Code is amended to read:

22970.85. Notwithstanding any other provision of this part, a participant or beneficiary shall not be permitted to elect a distribution under this part that does not satisfy the requirements of paragraph (9) of subsection (a) Section 401 of Title 26 of the United States Code, including the incidental death benefit requirements of subparagraph (G) of paragraph (9) of subsection (a) of Section 401 and the regulations thereunder. The required beginning date of distributions that reflect the entire interest of the participant shall be as follows:

(a) In the case of a lump sum distribution to the participant, the lump sum payment shall be made not later than April 1 of the calendar year following the later of the calendar year in which the participant attains the age of 72 years or the calendar year in which the participant terminates employment.

(b) In the case of a distribution to the participant in the form of periodic payments, payment shall begin not later than April 1 of the calendar year following the later of the calendar year in which the participant attains the age of 72 years or the calendar year in which the participant terminates employment.

(c) In the case of a benefit payable on account of the participant's death after distributions to the participant have commenced in the form of periodic payments, the remainder of the participant's account shall be distributed at least as rapidly as if the participant had not died.

(d) In the case of a benefit payable on account of the participant's death before distributions to the participant have commenced, distributions shall be paid no later than December 31 of the calendar year in which the fifth anniversary of the participant's date of death occurs unless the benefit is paid over a period not extending beyond the life expectancy of the beneficiary and distributions commence not later than December 31 of the calendar year immediately following the calendar year in which the participant died, or in the event that the beneficiary is the participant's spouse, distributions must commence on or before the later of either:

(1) December 31 of the calendar year immediately following the calendar year in which the participant dies.

(2) December 31 of the calendar year in which the participant would have attained the age of 72 years.

SEC. 29. Section 31454.7 is added to the Government Code, to read:



31454.7. The Legislature affirms the ruling of *Mijares v. Orange County Employees' Retirement System* (2019) 32 Cal.App.5th 316, with respect to a board's plenary authority to recommend adjustments to county and district contributions as necessary to ensure the appropriate funding of the system, and with respect to the mandate of Section 31454 that the county and districts adjust the rates of contributions of members and appropriations in accordance with the board's recommendations. Under all circumstances, the county and districts shall each remain liable to the retirement system for their respective share of any unfunded actuarial liability of the system, as determined by the board.

SEC. 30. Section 31465 of the Government Code is amended to read:

31465. "Additional contributions" means contributions made by members in addition to normal contributions under Section 31627.

SEC. 31. Section 31627.1 of the Government Code is amended to read:

31627.1. A member who has additional contributions under Section 31627 may, within 30 days prior to retirement, elect in writing to have all or any part of the member's accumulated additional contributions returned to the member. The portion returned shall not be included in the calculation of the member's annuity.

SEC. 32. Section 31627.2 of the Government Code is amended to read:

31627.2. In any county in which the provisions of Section 31676.1 apply, any member who has additional contributions under Section 31627 may elect in writing to have all or any part of the member's accumulated additional contributions returned to the member. The portion returned shall not be included in the calculation of the member's annuity. The board may order payment in whole or in part withheld for a period not to exceed 90 days after receipt of such written election.

SEC. 33. Section 31631.5 of the Government Code is amended to read:

31631.5. (a) (1) Notwithstanding any other provision of this chapter, a board of supervisors or the governing body of a district may require that members pay 50 percent of the normal cost of benefits. However, that contribution shall be no more than 14 percent above the applicable normal rate of contribution of members established pursuant to this article for local general members, no more than 33 percent above the applicable normal rate of contribution of members established pursuant to Article 6.8 (commencing with Section 31639) for local police officers, local firefighters, county peace officers, and no more than 37 percent above the applicable normal rate of contribution of members established pursuant to Article 6.8 (commencing with Section 31639) for all local safety members other than police officers, firefighters, and county peace officers.

(2) Before implementing any change pursuant to this subdivision for any represented employees, the public employer shall complete the good faith bargaining process as required by law, including any impasse procedures requiring mediation and factfinding. This subdivision shall become operative on January 1, 2018. This subdivision shall not apply to any bargaining unit when the members of that unit are paying at least 50 percent of the normal cost of their pension benefit or are subject to an agreement reached pursuant

to paragraph (1). Applicable normal rate of contribution of members means the statutorily authorized rate applicable to the member group as the statutes read on December 31, 2012.

(b) Nothing in this section shall modify a board of supervisors' or the governing body of a district's authority under law as it existed on December 31, 2012, including any restrictions on that authority, to change the amount of member contributions.

SEC. 34. Section 31641.45 of the Government Code is amended to read:

31641.45. Whenever a member is entitled to redeposit funds previously withdrawn from a retirement system and thereby becomes eligible to receive a pension or retirement allowance for the service for which the member was granted public service credit as authorized in Section 31641.1, regardless of whether or not the member elects to exercise such entitlement, the member shall be refunded the amount deposited by the member in accordance with Section 31641.2 plus interest which has been credited to such amount and shall receive no credit in the system for such service.

This section applies only to a member who would be eligible to receive the benefit of Section 31835 or 20638 on making the redeposit.

SEC. 35. Section 31646 of the Government Code is amended to read:

31646. (a) A member who returns to active service following an uncompensated leave of absence on account of illness may receive service credit for the period of the absence upon the payment of the contributions that the member would have paid during that period, together with the interest that the contributions would have earned had they been on deposit, if the member was not absent. The contributions may be paid in a lump sum or may be paid on a monthly basis for a period of not more than the length of the period for which service credit is claimed. Credit shall not be received for any period of such an absence in excess of 12 consecutive months.

(b) (1) A member who returns to active service following an uncompensated leave of absence on account of parental leave may receive service credit for the period of the absence upon the payment of the contributions that the member and the employer would have paid during that period, together with the interest that the contributions would have earned had they been on deposit, if the member was not absent. For purposes of this subdivision, parental leave is defined as any time, up to one year, during which a member is granted an approved maternity or paternity leave and returns to employment at the end of the approved leave for a period of time at least equal to that leave. The contributions may be paid in a lump sum or may be paid on a monthly basis for a period of not more than the length of the period for which service credit is claimed. Credit shall not be received for any period of such an absence in excess of 12 consecutive months.

(2) This subdivision shall not be operative until the board of supervisors, by resolution adopted by majority vote, makes the provisions applicable to that county and applies it to parental leave that commences after the adoption by the board of supervisors.

SEC. 36. Section 31649 of the Government Code is repealed.

SEC. 37. Section 31649 is added to the Government Code, to read:

31649. (a) This chapter shall comply with the Uniformed Services Employment and Reemployment Rights Act of 1994 (USERRA) Chapter 43 (commencing with Section 4301) of Title 38 of the United States Code, as amended from time to time. Any member who was absent from county or district employment for military service and is eligible for reemployment benefits pursuant to USERRA, may, as provided in USERRA, make contributions and receive service credit for the time absent.

(b) Any member who does not qualify for reemployment benefits under subdivision (a) due to the length of the military service, and who returns to county or district employment within one year of being honorably discharged from the Armed Forces of the United States, shall receive credit for service for all or any part of the member's military service, if, before retirement from the county or district, the member contributes what they would have paid to the fund for that period based on the member's compensation earnable, as defined by Section 31461, or pensionable compensation, as defined in Section 7522.34, whichever is applicable, at the time of the beginning of the absence together with applicable interest on that amount.

(c) Nothing in this section shall affect any arrangement to pay contributions pursuant to Section 31653.

SEC. 38. Section 31649.5 of the Government Code is repealed.

SEC. 39. Section 31649.6 of the Government Code is repealed.

SEC. 40. Section 31650 of the Government Code is repealed.

SEC. 41. Section 31651 of the Government Code is repealed.

SEC. 42. Section 31662.2 of the Government Code is amended to read:

31662.2. (a) Retirement of a safety member in a county subject to the provisions of Section 31676.1, or of Section 31695.1, if applicable, who has met the requirements for age and service shall be made by the board pursuant to this article or pursuant to the California Public Employees' Pension Reform Act of 2013, whichever is applicable.

(b) The board may authorize the system administrator or other personnel to exercise the board's power and perform its duty to retire members under this section. The system administrator or other personnel shall report service retirements to the board at the next public meeting of the board after the retirement.

SEC. 43. Section 31670 of the Government Code is amended to read:

31670. (a) Retirement of a member who has met the requirements for age and service shall be made by the board pursuant to this article or pursuant to the California Public Employees' Pension Reform Act of 2013, whichever is applicable.

(b) The board may authorize the system administrator or other personnel to exercise the board's power and perform its duty to retire members under this section. The system administrator or other personnel shall report service retirements to the board at the next public meeting of the board after the retirement.

SEC. 44. Section 31672 of the Government Code is amended to read:

31672. (a) A member who has reached 70 years of age or a member who has completed 10 years of service and who has reached 55 years of age, or a member who has completed 30 years of service regardless of age, may be retired upon filing with the board a written application, setting forth the date upon which the member desires the member's retirement to become effective. Fifty-five years of age in the preceding sentence may be reduced to 50 years of age in a county by resolution of the board of supervisors. The effective retirement date shall not be either of the following:

- (1) Earlier than the date the application is filed with the board.
- (2) More than 60 days after the date of filing the application or more than a number of days that has been approved by the board.

(b) This section shall not apply to any member who is subject to the provisions of the California Public Employees' Pension Reform Act of 2013 (Article 4 (commencing with Section 7522) of Chapter 21 of Division 7 of Title 1) for all or any portion of that member's membership in the county retirement system.

SEC. 45. Section 31672.1 of the Government Code is amended to read:

31672.1. (a) An employee who has reached 55 years of age has held a position in the county service for 10 years, and on the date of retirement is employed in a temporary, seasonal, intermittent, or part-time position in which the employee has received credit for five full years of service, may be retired upon filing with the board a written application, setting forth the date upon which the employee desires the employee's retirement to become effective. Fifty-five years of age in the preceding sentence may be reduced to 50 years of age in any county by resolution of the board of supervisors if such reduction has also been made under Section 31672. The effective retirement date shall not be either of the following:

- (1) Earlier than the date the application is filed with the board.
- (2) More than 60 days after the date of filing the application or more than a number of days that has been approved by the board.

(b) This section shall not apply to a member who is subject to the provisions of the California Public Employees' Pension Reform Act of 2013 for all or any portion of their membership in the county retirement system.

SEC. 46. Section 31672.2 of the Government Code is amended to read:

31672.2. (a) An elective officer who filed a declaration with the board to become a member, pursuant to Section 31553, who has served two complete consecutive terms in an elective office, and who has reached the minimum age for retirement provided in Section 31672, may be retired upon filing with the board a written application setting forth the date upon which the member desires the member's retirement to become effective. The effective retirement date shall not be either of the following:

- (1) Earlier than the date the application is filed with the board.
- (2) More than 60 days after the date of filing the application or more than a number of days that has been approved by the board.

(b) This section shall become operative only in any county of the 16th class, as defined by Section 28020 and 28037, as amended by Chapter 1204

of the Statutes of 1971, and on the first day of the calendar month after the board of supervisors adopts a resolution making it operative in the county.

(c) This section shall not apply to an elective officer who is subject to the provisions of the California Public Employees' Pension Reform Act of 2013 for all or any portion of the elective officer's membership in the county retirement system.

SEC. 47. Section 31672.3 of the Government Code is amended to read:

31672.3. A member of a county retirement system who is subject to the California Public Employees' Pension Reform Act of 2013 (Article 4 (commencing with Section 7522) of Chapter 21 of Division 7 of Title 1) for all or a portion of the member's membership in the county retirement system who has completed five years of service and has reached the minimum retirement age applicable to that member under the act, or has reached 70 years of age, may be retired upon filing with the board a written application, setting forth the date upon which the member desires the member's retirement to become effective. The effective retirement date shall not be either of the following:

- (1) Earlier than the date the application is filed with the board.
- (2) More than 60 days after the date of filing the application or more than a number of days that has been approved by the board.

SEC. 48. Section 31680.10 is added to the Government Code, to read:

31680.10. (a) A person who has been retired under this chapter for service following an involuntary termination of their employment, and who is subsequently reinstated to that employment pursuant to an administrative or judicial proceeding that is final and not subject to appeal, shall be reinstated from retirement as if there were no intervening period of retirement. Except as provided in subdivision (b), the requirements of Sections 31680.4, 31680.5, and 31680.7 shall not apply to that reinstatement.

(b) The allowance received by the person during retirement shall be repaid by the person to the retirement system from which they retired in accordance with the retirement system's repayment policy.

(1) Member contributions shall be made for any period for which salary is awarded in the administrative or judicial proceedings in the amount that would have been contributed had the member's employment not been terminated, and the person shall receive credit for the period for which salary is awarded. If the person fails to repay the allowance received during retirement, then the person's contributions and allowance upon retirement subsequent to reinstatement shall be calculated under Sections 31680.5 or 31680.7, as applicable.

(2) The retirement system shall have discretion regarding the timing of repayment of employer contributions for the period described in paragraph (1).

(c) As used in this section, "administrative proceeding" means the process for appeal of an involuntary termination established by county or district ordinance or charter.

(d) This section shall only apply to persons reinstated to employment by final action as described in subdivision (a), on or after the effective date of this section, pursuant to an administrative or judicial proceeding.

SEC. 49. Section 31706 of the Government Code is amended to read:

31706. Any member who has left county service and has elected to leave accumulated contributions in the retirement fund, or who is deemed to have elected a deferred retirement pursuant to subdivision (b) of Section 31700, and who has attained 70 years of age but has not yet applied for a deferred retirement allowance, and who is not a reciprocal member of a retirement system established pursuant to this chapter or the Public Employees' Retirement Law, shall be notified in writing by the treasurer, or other entity authorized by the board, that the member is eligible to apply for, and shall begin receiving, either a deferred retirement allowance by April 1 of the year following the year in which the member attains 72 years of age or a one-time distribution of all accumulated contributions and interest. The notification shall be made at the time the deferred member attains 70 years of age and shall be sent by certified mail to the member's last known address, or to the member's last known employer, as shown by the records of the retirement system. If the member can be located but does not make proper application for a deferred retirement allowance with retirement to be effective by April 1 of the year following the year in which the member attains 72 years of age, the retirement system shall commence paying either an unmodified allowance to the member, if the member was eligible to begin receiving a deferred retirement allowance under the provisions of 31485.22, or a one-time distribution of all accumulated contributions and interest if the member is otherwise ineligible for a deferred retirement allowance. If the member cannot be located by April 1 of the year following the year in which the member attains 72 years of age, all of the member's accumulated contributions and interest thereon shall be deposited in, and become a part of, the current pension reserve fund of the retirement system. The board may at any time after transfer of proceeds to the reserve fund upon receipt of proper information satisfactory to it, redeposit the proceeds to the credit of the claimant, to be administered in the manner provided under this law. This section shall not apply to a member while the member is actively employed past mandatory retirement age in a retirement system established under the provisions of this chapter or the Public Employees' Retirement Law.

SEC. 50. Section 31760.1 of the Government Code is amended to read:

31760.1. Upon the death of any member after retirement for service or non-service-connected disability from a retirement system established in a county subject to the provisions of Section 31676.1, 60 percent of the member's retirement allowance, if not modified in accordance with one of the optional settlements specified in this article, shall be continued throughout life to the member's surviving spouse. If there is no surviving spouse entitled to an allowance hereunder or if the surviving spouse dies before every natural or adopted child of the deceased member attains the age of 18 years, then the allowance which the surviving spouse would have

received had the surviving spouse lived, shall be paid to the surviving spouse's natural or adopted child or children under that age collectively, to continue until every child dies or attains that age; provided, that no child shall receive any allowance after marrying or attaining the age of 18 years. No allowance, however, shall be paid under this section to a surviving spouse unless the surviving spouse was married to the member at least one year prior to the date of the member's retirement. The right of a child or children of a deceased member to receive an allowance under this section, in the absence of an eligible surviving spouse, shall not be dependent on whether the child or children were nominated by the deceased member as the beneficiary of any benefits payable upon or by reason of the member's death, and shall be superior to and shall supersede the rights and claims of any other beneficiary so nominated.

Notwithstanding any other provisions of this section, the benefits otherwise payable to the children of the member shall be paid to those children up to the 22nd birthdays of the children if the children remain unmarried and are regularly enrolled as full-time students in an accredited school as determined by the board.

If at the death of any retired member there is no surviving spouse or minor children eligible for the 60-percent continuance provided in this section, and the total retirement allowance income received by the member during the member's lifetime did not equal or exceed the member's accumulated normal contributions, the member's designated beneficiary shall be paid an amount equal to the excess of the member's accumulated normal contributions over the member's total retirement allowance income.

The superseding rights pursuant to this section shall not affect benefits payable to a named beneficiary as provided under Section 31789, 31789.01, 31789.1, 31789.12, 31789.13, 31789.2, 31789.3, 31789.5, or 31790.

SEC. 51. Section 31760.2 of the Government Code is amended to read:

31760.2. (a) Notwithstanding Section 31481 or 31760.1, upon the death of any member after retirement for service or non-service-connected disability from a retirement system established in a county pursuant to this chapter, 60 percent of the member's retirement allowance, if not modified in accordance with one of the optional settlements specified in this article, shall be continued to the member's surviving spouse for life. If there is no surviving spouse entitled to an allowance under this section or if the surviving spouse dies before every child of the deceased member attains the age of 18 years, then the allowance that the surviving spouse would have received had the surviving spouse lived, shall be paid to the surviving spouse's child or children under that age collectively, to continue until each child dies or attains that age. However, no child may receive any allowance after marrying or attaining the age of 18 years.

(b) No allowance may be paid under this section to a surviving spouse unless the surviving spouse was married to the member at least two years prior to the date of death and has attained the age of 55 years on or prior to the date of death.

(c) Notwithstanding any other provisions of this section, the benefits otherwise payable to the children of the member shall be paid to the children up to the 22nd birthdays of the children if the children remain unmarried and are regularly enrolled as full-time students in an accredited school, as determined by the board.

(d) If at the death of any retired member there is no surviving spouse or minor children eligible for the 60-percent continuance provided in this section and the total retirement allowance income received by the retired member during the member's lifetime did not equal or exceed the member's accumulated normal contributions, the retired member's designated beneficiary shall be paid an amount equal to the excess of the member's accumulated normal contributions over the member's total retirement allowance income.

(e) No allowance may be paid pursuant to this section to any person who is entitled to an allowance pursuant to Section 31760.1.

(f) The superseding rights pursuant to this section do not affect benefits payable to a named beneficiary as provided under Section 31789, 31789.01, 31789.1, 31789.12, 31789.13, 31789.2, 31789.3, 31789.5, or 31790.

(g) This section is not applicable in any county until the board of retirement, by resolution adopted by a majority vote, makes this section applicable in the county. The board's resolution may designate a date, which may be prior or subsequent to the date of the resolution, as of which the resolution and this section shall be operative in the county.

SEC. 52. Section 31765 of the Government Code is amended to read:

31765. Upon the death of a member who was eligible to retire, in circumstances in which a death benefit is payable under Article 12, if the deceased member has designated as beneficiary the member's spouse who survives the member by not less than 30 days, such surviving spouse may elect, at any time before acceptance of any benefits from the retirement system, to receive, in lieu of the death benefit otherwise payable under Article 12, the same retirement allowance as that to which such spouse would have been entitled had such member retired on the day of the member's death and selected Optional Settlement 3. Such surviving spouse may elect in writing, before the first payment of any allowance is made, to receive in a lump sum payment all or any part of the member's accumulated additional contributions. The sum so paid shall not be included in the calculation of the annuity of the surviving spouse.

If, at the death of such spouse, the spouse is survived by one or more unmarried children of such member, under the age of 18, such retirement allowance shall continue to such child or children, collectively, until every child dies, marries, or attains age 18. If such spouse dies, either before or after the death of such member without either making such election or receiving any portion of the death benefit, and no part of the death benefit has been paid to any person, prior to the payment of any benefits, the legally appointed guardian of such children shall make the election herein provided for on behalf of such surviving children as in the guardian's judgment may



appear to be in their interest and advantage and the election so made shall be binding and conclusive upon all parties in interest.

Notwithstanding any other provisions of this section, the benefits otherwise payable to the children of the member shall be paid to those children up to the 22nd birthdays of the children if the children remain unmarried and are regularly enrolled as full-time students in an accredited school as determined by the board.

SEC. 53. Section 31765.1 of the Government Code is amended to read:

31765.1. Upon the death of any member of a retirement system established in a county subject to the provisions of Section 31676.1 or Section 31695.1, eligible for retirement pursuant to Article 7.5, 8, or 8.7 who leaves a spouse designated as beneficiary, such surviving spouse may, in lieu of the death benefit provided for in Article 12, elect to receive a retirement allowance equal to 60 percent of the amount to which the member would have been entitled had the member retired on the date of the member's death with a retirement allowance not modified in accordance with one of the optional settlements specified in Article 11. Such surviving spouse may elect in writing, before the first payment of any allowance is made, to receive in a lump sum payment all or any part of the member's accumulated additional contributions. The sum so paid shall not be included in the calculations of the annuity of the surviving spouse.

If, at the death of such spouse, the spouse is survived by one or more unmarried children of such member, under the age of 18, such retirement allowance shall continue to such child or children, collectively, until every child dies, marries, or attains age 18. If such spouse dies, either before or after the death of such member without either making such election or receiving any portion of the death benefit, and no part of the death benefit has been paid to any person, prior to the payment of any benefits, the legally appointed guardian of such children shall make the election herein provided for on behalf of such surviving children as in the guardian's judgment may appear to be in their interest and advantage and the election so made shall be binding and conclusive upon all parties in interest.

Notwithstanding any other provisions of this section, the benefits otherwise payable to the children of the member shall be paid to those children up to the 22nd birthdays of the children if the children remain unmarried and are regularly enrolled as full-time students in an accredited school as determined by the board.

SEC. 54. Section 31776.3 of the Government Code is amended to read:

31776.3. (a) Unless the implementing ordinance otherwise provides, the balance in the participant's program account shall be distributed to the participant in a single lump-sum payment at the time of retirement. If requested by the participant, the payment may be immediately deposited into a qualified tax-deferred account established by the participant.

(b) The implementing ordinance may provide one or more of the following optional forms of distribution for a participant's account:

(1) Substantially level installment payments over 240 months starting with the date that the member leaves DROP. The balance in the participant's

account during the installment payout period shall be credited with interest at the same rate, if any, as is being credited to program accounts for currently active members. A cost-of-living adjustment may not be made to the monthly amount being paid pursuant to this paragraph.

(2) An annuity in a form established by the board and subject to the applicable provisions of the Internal Revenue Code that shall be the actuarial equivalent of the balance in the participant's program account on the retirement date. The "actuarial equivalent" under this paragraph shall be determined on the same basis as is used for determining optional settlements at retirement for a member's monthly retirement allowance.

(c) Notwithstanding any other provision of this article, a participant, nonparticipant spouse, or beneficiary may not be permitted to elect a distribution under this article that does not satisfy the requirements of Section 401(a)(9) of Title 26 of the United States Code, including the incidental death benefit requirements of Section 401(a)(9)(G) and the regulations thereunder.

(d) The required beginning date of distributions that reflect the entire interest of the participant shall be as follows:

(1) In the case of a lump-sum distribution to the participant, the lump-sum payment shall be made, at the participant's option, not later than April 1 of the calendar year following the later of the calendar year in which the participant attains 72 years of age, or an age determined by the Internal Revenue Service, or the calendar year in which the participant terminates all employment for the employer.

(2) In the case of a distribution to the participant in the form of installment payments or an annuity, payment shall begin, at the participant's option, not later than April 1 of the calendar year following the later of the calendar year in which the participant attains 72 years of age, or an age determined by the Internal Revenue Service, or the calendar year in which the participant terminates all employment subject to coverage by the plan.

(3) In the case of a benefit payable on account of the participant's death, distribution shall be paid at the option of the beneficiary, no later than December 31 of the calendar year in which the first anniversary of the participant's date of death occurs unless the beneficiary is the participant's spouse in which case distributions shall commence on or before the later of either of the following:

(A) December 31 of the calendar year immediately following the calendar year in which the participant dies.

(B) December 31 of the calendar year in which the participant would have attained 72 years of age or an age determined by the Internal Revenue Service.

SEC. 55. Section 31781.1 of the Government Code is amended to read:

31781.1. (a) If a member of a retirement system established in a county subject to the provisions of Section 31676.1 would have been entitled to retirement in the event of a non-service-connected disability, but dies as the result of an injury or illness prior to retirement, the surviving spouse of the member shall have the right to elect, by written notice filed with the board,

to receive and be paid in lieu of the death benefit provided in Sections 31780 and 31781, an “optional death allowance.”

(b) The allowance shall consist of a monthly payment equal to 60 percent of the monthly retirement allowance to which the deceased member would have been entitled if the member had retired by reason of non-service-connected disability as of the date of the member’s death.

(c) If the surviving spouse elects to receive the “optional death allowance” the payments due for this allowance shall be retroactive to the date of the deceased member’s death, and shall continue throughout the life of the spouse.

(d) If the surviving spouse elects to receive the “optional death allowance,” and thereafter dies leaving an unmarried surviving child or unmarried children of the deceased member under the age of 18 years, the “optional death allowance” shall thereafter be paid to those surviving children collectively until each child dies, marries, or reaches the age of 18 years. The right of any child to the allowance shall cease upon the child’s death or marriage, or upon reaching the age of 18 years, and the entire amount of the allowance shall thereafter be paid collectively to each of the other qualified children.

(e) If the deceased member leaves no surviving spouse but leaves an unmarried child or children under the age of 18 years, the legally appointed guardian of the child or children shall make the election provided in this section on behalf of the surviving child or children that, in the guardian’s judgment, is in the best interests of the surviving child or children. The election made shall be binding and conclusive upon all parties in interest.

(f) The rights and privileges conferred by this section upon the surviving spouse and each child of the deceased member are not dependent upon whether any of these persons have been nominated by the deceased member as the beneficiary of any death benefits and shall supersede the rights and claims of any other beneficiary so nominated.

(g) Notwithstanding any other provisions of this section, the benefits otherwise payable to each child of the member shall be paid to each child up to the 22nd birthday of the child if the child remains unmarried and is regularly enrolled as a full-time student in an accredited school as determined by the board.

(h) For purposes of this section, “child” means a natural or adopted child of the deceased member, or a stepchild living or domiciled with the deceased member at the time of the member’s death.

SEC. 56. Section 31781.2 of the Government Code is amended to read:

31781.2. In lieu of accepting in cash the death benefit payable under Section 31781 or 31781.01, the surviving spouse of a member who dies prior to reaching the minimum retirement age and who at the date of the member’s death has 10 or more years of service to the member’s credit, shall have the option to leave the amount of the death benefit on deposit in the retirement system until the earliest date when the deceased member could have retired had the member lived, and at that time receive the

retirement allowance provided for in Section 31765, 31765.1, or 31765.11, whichever is applicable.

If, at the death of the spouse, the spouse is survived by one or more unmarried children of the member, under the age of 18 years, the retirement allowance shall continue to the child or children, collectively, until every child dies, marries, or attains the age of 18 years. If the spouse dies, either before or after the death of the member, without either making the election or receiving any portion of the death benefit, and no part of the death benefit had been paid to any person, prior to the payment of any benefits, the legally appointed guardian of the children shall make the election herein provided for on behalf of the surviving children as, in guardian's judgment, may appear to be in their interest and advantage, and the election so made shall be binding and conclusive upon all parties in interest.

Notwithstanding any other provisions of this section, the benefits otherwise payable to the children of the member shall be paid to those children up to the 22nd birthdays of the children if the children remain unmarried and are regularly enrolled as full-time students in an accredited school as determined by the board.

SEC. 57. Section 31785 of the Government Code is amended to read:

31785. Upon the death of any safety member, after retirement for service or non-service-connected disability from a retirement system established in a county subject to the provisions of Section 31676.1 or 31695.1, 60 percent of the member's retirement allowance if not modified in accordance with one of the optional settlements specified in Article 11 (commencing with Section 31760), shall be continued throughout life to the member's surviving spouse. If there is no surviving spouse entitled to an allowance hereunder or if the surviving spouse dies before every child of the deceased safety member attains the age of 18 years, then the allowance which the surviving spouse would have received had the surviving spouse lived, shall be paid to the surviving spouse's child or children under that age, collectively, to continue until every child dies or attains that age; provided, that no child shall receive any allowance after marrying or attaining the age of 18 years. No allowance, however, shall be paid under this section to a surviving spouse unless the surviving spouse was married to the safety member at least one year prior to the date of the member's retirement.

Any qualified surviving spouse or children of a member of a pension system established pursuant to either Chapter 4 (commencing with Section 31900) or Chapter 5 (commencing with Section 32200), who shall have been retired on or before December 31, 1951, shall be paid a retirement allowance pursuant to the provisions of this section. In cases where the death of a member occurred prior to January 1, 1952, the payment of the retirement allowance to the qualified surviving spouse or children shall be made effective on January 1, 1952.

Notwithstanding any other provisions of this section, the benefits otherwise payable to the children of the member shall be paid to those children up to the 22nd birthdays of the children if the children remain

unmarried and are regularly enrolled as full-time students in an accredited school as determined by the board.

The superseding rights pursuant to this section shall not affect benefits payable to a named beneficiary as provided under Section 31789, 31789.01, 31789.1, 31789.12, 31789.13, 31789.2, 31789.3, 31789.5, or 31790.

SEC. 58. Section 31785.1 of the Government Code is amended to read:

31785.1. (a) Notwithstanding Section 31481 or 31785, upon the death of any safety member, after retirement for service or non-service-connected disability from a retirement system established in a county pursuant to this chapter, 60 percent of the safety member's retirement allowance if not modified in accordance with one of the optional settlements specified in Article 11 (commencing with Section 31760), shall be continued to the member's surviving spouse for life. If there is no surviving spouse entitled to an allowance under this section or if the surviving spouse dies before every child of the deceased safety member attains the age of 18 years, then the allowance that the surviving spouse would have received had the surviving spouse lived, shall be paid to the surviving spouse's child or children under that age, collectively, to continue until each child dies or attains that age. However, no child may receive any allowance after marrying or attaining the age of 18 years.

(b) No allowance may be paid under this section to a surviving spouse unless the surviving spouse was married to the safety member at least two years prior to the date of death and has attained the age of 55 years on or prior to the date of death.

(c) Notwithstanding any other provisions of this section, the benefits otherwise payable to the children of the member shall be paid to the children up to the 22nd birthdays of the children if the children remain unmarried and are regularly enrolled as full-time students in an accredited school as determined by the board.

(d) No allowance may be paid pursuant to this section to any person who is entitled to an allowance pursuant to Section 31785.

(e) The superseding rights pursuant to this section do not affect benefits payable to a named beneficiary as provided under Section 31789, 31789.01, 31789.1, 31789.12, 31789.13, 31789.2, 31789.3, 31789.5, or 31790.

(f) This section is not applicable in any county until the board of retirement, by resolution adopted by a majority vote, makes this section applicable in the county. The board's resolution may designate a date, which may be prior or subsequent to the date of the resolution, as of which the resolution and this section shall be operative in the county.

SEC. 59. Section 31786 of the Government Code is amended to read:

31786. Upon the death of any member after retirement for service-connected disability, the member's retirement allowance as it was at the member's death if not modified in accordance with one of the optional settlements specified in Article 11 (commencing with Section 31760), shall be continued throughout life to the member's surviving spouse. If there is no surviving spouse entitled to an allowance hereunder or if the surviving spouse dies before every child of such deceased member attains the age of

18 years, then the allowance which the surviving spouse would have received had the surviving spouse lived, shall be paid to the surviving spouse's child or children under said age, collectively, to continue until every such child dies or attains said age; provided, that no child shall receive any allowance after marrying or attaining the age of 18 years. No allowance, however, shall be paid under this section to a surviving spouse unless the surviving spouse was married to the member prior to the date of the member's retirement.

Notwithstanding any other provisions of this section, the benefits otherwise payable to the children of the member shall be paid to those children up to the 22nd birthdays of the children if the children remain unmarried and are regularly enrolled as full-time students in an accredited school as determined by the board.

SEC. 60. Section 31786.1 of the Government Code is amended to read:

31786.1. (a) Notwithstanding Section 31481 or 31786, upon the death of any member after retirement for service-connected disability, the member's retirement allowance as it was at the member's death if not modified in accordance with one of the optional settlements specified in Article 11 (commencing with Section 31760), shall be continued to the member's surviving spouse for life. If there is no surviving spouse entitled to an allowance under this section or if the surviving spouse dies before every child of the deceased member attains the age of 18 years, then the allowance that the surviving spouse would have received had the surviving spouse lived, shall be paid to the surviving spouse's child or children under that age, collectively, to continue until each child dies or attains that age. However, no child may receive any allowance after marrying or attaining the age of 18 years.

(b) No allowance may be paid under this section to a surviving spouse unless the surviving spouse was married to the member at least two years prior to the date of death and has attained the age of 55 years on or prior to the date of death.

(c) Notwithstanding any other provisions of this section, the benefits otherwise payable to the children of the member shall be paid to the children up to the 22nd birthdays of the children if the children remain unmarried and are regularly enrolled as full-time students in an accredited school as determined by the board.

(d) No allowance may be paid pursuant to this section to any person who is entitled to an allowance pursuant to Section 31786.

(e) The superseding rights pursuant to this section do not affect benefits payable to a named beneficiary as provided under Section 31789, 31789.01, 31789.1, 31789.12, 31789.13, 31789.2, 31789.3, 31789.5, or 31790.

(f) This section is not applicable in any county until the board of retirement, by resolution adopted by a majority vote, makes this section applicable in the county. The board's resolution may designate a date, which may be prior or subsequent to the date of the resolution, as of which the resolution and this section shall be operative in the county.

SEC. 61. Section 31787 of the Government Code is amended to read:

31787. (a) If a member would have been entitled to retirement in the event of a service-connected disability, but dies prior to retirement as the result of injury or disease arising out of and in the course of the member's employment, the surviving spouse of the member shall have the right to elect, by written notice filed with the board, to receive and be paid in lieu of the death benefit provided for in Sections 31780 and 31781, an optional death allowance.

(b) The optional death allowance shall consist of a monthly payment equal to the monthly retirement allowance to which the deceased member would have been entitled if the member had retired by reason of a service-connected disability as of the date of the member's death.

(c) If the surviving spouse elects to receive the optional death allowance, the payments due for this allowance shall be retroactive to the date of the deceased member's death, and shall continue throughout the life of the spouse.

(d) If the surviving spouse elects to receive the optional death allowance, and thereafter dies leaving an unmarried surviving child or unmarried children of the deceased member under the age of 18 years, the optional death allowance shall thereafter be paid to those surviving children collectively until each child dies, marries, or reaches the age of 18 years. The right of any child to the allowance shall cease upon the child's death or marriage, or upon reaching the age of 18 years, and the entire amount of the allowance shall thereafter be paid collectively to each of the other qualified children.

(e) If the deceased member leaves no surviving spouse but leaves an unmarried child or children under the age of 18 years, the legally appointed guardian of the child or children shall make the election provided in this section on behalf of the surviving child or children that, in the guardian's judgment, is in the best interests of the surviving child or children. The election made shall be binding and conclusive upon all parties in interest.

(f) The rights and privileges conferred by this section upon the surviving spouse and each child of the deceased member are not dependent upon whether any of those persons have been nominated by the deceased member as the beneficiary of any death benefits and shall supersede the rights and claims of any other beneficiary so nominated.

(g) Notwithstanding any other provision of this section, the benefits otherwise payable to each child of the member shall be paid to each child up to the 22nd birthday of the child if the child remains unmarried and is regularly enrolled as a full-time student in an accredited school as determined by the board.

(h) For purposes of this section, "child" means a natural or adopted child of the deceased member, or a stepchild living or domiciled with the deceased member at the time of the member's death.

SEC. 62. Section 31787.5 of the Government Code is amended to read:

31787.5. (a) A surviving spouse of a member who is killed in the performance of duty or who dies as the result of an accident or an injury caused by external violence or physical force, incurred in the performance

of the member's duty, now or hereafter entitled to receive a death allowance under Section 31787, shall be paid an additional amount for each of the member's children during the lifetime of the child, or until the child marries or reaches the age of 18 years, as follows, subject to the limitation in subdivision (b):

- (1) For one child, 25 percent of the allowance provided in Section 31787.
- (2) For two children, 40 percent of the allowance provided in Section 31787.
- (3) For three or more children, 50 percent of the allowance provided in Section 31787.

(b) If a benefit payable under this section, when added to a benefit payable under Section 31787, exceeds the maximum benefit payable by a tax-qualified pension plan under the Internal Revenue Code (26 U.S.C.A. Sec. 401 et. seq.), the benefit payable under this section shall be reduced to the amount required to meet that benefit limit.

(c) If the surviving spouse does not have legal custody of the member's children, the allowance provided by this section shall be payable to the person to whom custody of the children has been awarded by a court of competent jurisdiction for each child during the lifetime of the child, or until the child marries or reaches the age of 18 years.

(d) The allowance provided by this section shall be payable to the surviving spouses of members whose duties consist of active law enforcement or active fire suppression or any other class or group of members as the retirement board shall fix. The allowance provided by this section is not payable to the surviving spouses of members described in Section 31469.2.

(e) Any child whose eligibility for an allowance pursuant to this section commenced on or after October 1, 1965, shall lose that eligibility effective on the date of the child's adoption.

(f) This section shall become operative in any county, which has adopted the provisions of this chapter but which has not previously adopted the provisions of this section on October 1, 1965. Each surviving spouse of a member or other person having legal custody of a member's child or children who is paid an additional amount for each of the member's children because of the amendments to this section enacted at the 1965 or 1967 Regular Session shall receive those payments as they accrue from and after October 1 of the year during which this section was amended to provide for the payment to the member's child or children of that allowance, but the surviving spouse or other person shall not be given a claim for any increase in those benefits for a time prior to that date.

(g) Notwithstanding any other provisions of this section, the benefits otherwise payable to the children of the member shall be paid to those children up to the 22nd birthdays of the children if the children remain unmarried and are regularly enrolled as full-time students in an accredited school as determined by the board.

SEC. 63. Section 31855.3 of the Government Code is amended to read:



31855.3. As used in this article “child” means a member’s child who, when the member dies, is both dependent on the member and unmarried, as well as any of the following:

- (a) Under 18 years of age.
- (b) Any age, totally disabled, and became totally disabled before reaching 18 years of age.
- (c) Age 18 years or over, but under 22 years of age, and enrolled as a full-time student in an accredited school, as determined by the board.

SEC. 64. Section 75088.3 of the Government Code is amended to read:

75088.3. The required beginning date of distributions that reflect the entire interest of the judge shall be as follows:

(a) In the case of a lump-sum distribution to the judge, the lump-sum payment shall be made not later than April 1 of the calendar year following the later of the calendar year in which the judge attains the age of 72 years or the calendar year in which the judge terminates employment.

(b) In the case of a program payment payable on account of the judge’s death, the distribution shall be made no later than December 31 of the calendar year in which the fifth anniversary of the judge’s date of death occurs unless the beneficiary is the judge’s spouse in which case distributions shall commence on or before the later of either:

- (1) December 31 of the calendar year immediately following the calendar year in which the judge dies.
- (2) December 31 of the calendar year in which the judge would have attained the age of 72 years.