Notice of Public Meeting

The Board of Retirement

of the San Mateo County Employees' Retirement Association will meet on

Tuesday, August 24, 2021, at 10:00 A.M.

In accordance with the Governor's Executive Order N-29-20 (3) and Executive Order N-08-21 (42), 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/97403715426
- To join the meeting via telephone, dial: (669) 900-9128, and enter Meeting ID: 974 0371 5426

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 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**
   - 1.1 Administration of the Oath of Office
   - 1.2 Announcement of Appointment of Board Committees

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 July 27, 2021

4. Approval of the Consent Agenda*

- 4.1 Disability Retirements (1)
  - Cal'Landrea Glenn
- 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 Acceptance of Semi-Annual Compliance Certification Statements for Period Ended June 30, 2021
- 4.11 Report on Securities Lending Program
- 4.12 Report on Preliminary Financial Statements for the Fiscal Year Ended June 30, 2021
- 4.13 Report on Budget-to-Actual for the Fiscal Year Ended June 30, 2021
- 4.14 Reaffirm Policy and Procedures for Correcting Inaccuracies in Member Records
- 4.15 Reaffirm Policy for Felony Forfeiture

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 July 31, 2021
- 6.2 Report on SamCERA's Risk Dashboard as of June 30, 2021
- 6.3 Report on Quarterly Investment Performance Report for Period Ended June 30, 2021
- 6.4 Report on Fixed Income Manager Annual Reviews
- 6.5 Approval of Proposed Alternative Investment *to be heard in Closed Session, Confidential Under Gov. Code §54956.81 and §6254.26, see item C2)*

7. Board & Management Support

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 6.5)*

9. Report on Actions Taken in Closed Session

10. Adjournment in Memory of the Following Deceased Members:

Ellsworth, Patricia	July 19, 2021	Public Health
Crist-Whitzel, Janet	July 12, 2021	Mental Health
Gunning, Helen	July 20, 2021	Hospital
Jackson, Willie	July 13, 2021	Vocational Rehab
Perry, Inez	July 30, 2021	Mental Health
Martin, David	August 2, 2021	District Attorney's Office
Moerman, Matthew	August 15, 2021	Sheriff's
Newton, James	August 15, 2021	Public Works

Scott Hood, Chief Executive Officer

Posted: August 18, 2021

(* 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. *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.

August 24, 2021 Agenda Item 1.1

TO: Board of Retirement

FROM: Scott Hood, Chief Executive Officer

SUBJECT: Administration of the Oath of Office to Trustees

In this agenda item, the Trustee Oath of Office will be given to **Elaine Orr**, newly appointed to the Board and **Susan Lee**, reelected to the Board.

August 24, 2021 Agenda Item 1.2

TO: Board of Retirement

FROM: Scott Hood, Chief Executive Officer

SUBJECT: Announcement of Appointment of Board Committees

Committee Appointments

The Board Chair, Robert Raw, appoints the following committee assignments for FY 2021-2022 as follows:

- Audit Committee: Sandie Arnott, Al David. Paul Hackleman and Katherine O'Malley, Chair
- Investment Committee: Mark Battey, Alma Salas and Kurt Hoefer, Chair
- Ad-hoc CEO Review Committee: Sandie Arnott, Katherine O'Malley and Al David, Chair

Background

The Board Chair is authorized by the Regulations of the Board of Retirement to appoint all committees.

> **"2.1 Election of Chair:** At the first regular meeting in July, the Board of Retirement shall elect one of its members chair for a term of one year or until his or her successor is duly elected and qualified. The Chair shall preside at all meetings of the Board, **shall appoint all committees** *(emphasis added)* and shall perform all duties incidental to that office."

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

JULY 27, 2021 – REGULAR BOARD MEETING MINUTES

2107.1 **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, Al David, Katherine O'Malley, Robert Raw and Alma Salas (for Paul Hackleman).
Absent: Ben Bowler, Paul Hackleman, Kurt Hoefer, and Susan Lee.
Alternates: None.
Staff: Michael Coultrip, Lili Dames, Scott Hood, Elizabeth LeNguyen, JulieAnne Nagal, Doris Ng, Paul Okada, Gladys Smith, and Anne Trujillo.
Consultants and speakers: Joe Abdou, Margaret Jadallah, and John Nicolini (Verus).

2107.1.1 **Administration of the Oath of Office:** Ms. Arnott administered the Oath of Office to re-elected Trustees, Katherine O'Malley (Second Member) and Robert Raw (Seventh Member). Mr. Hood informed the Board that Mark Battey had already been administered the Oath of Office by County Officials.

2107.1.2 **Election of Board Members:** Mr. Hood informed the Board that the Ad Hoc Nominating Committee met and recommended the following slate of officers for the 2021-2022 term: Robert Raw, Chair; Katherine O'Malley, Vice Chair; and Mark Battey, Secretary. There were no other nominations made.

Action: Ms. Arnott moved to approve the recommended slate of officer positions for the 2021-2022 term. The motion was seconded by Mr. Battey and carried with a vote of 6-0, with trustees Arnott, Battey, David, O'Malley, Raw, and Salas all in favor; none opposed.

The remainder of the meeting was chaired by Mr. Raw.

2107.1.3 **Announcement of Appointment of Board Committees:** Mr. Raw announced that he will provide the Board Committees for FY 21-22 at the August Board meeting.

2107.2.1 **Oral Communications from the Board:** None.

2107.2.2 **Oral Communications from the Public:** Mr. Raw asked if there was any public comment from those individuals participating on the telephone or via Zoom. There were no public comments. Ms. Trujillo reported there were no written comments received ahead of the meeting.

2107.3.1 **Approval of Regular Board Meeting Minutes from May 25, 2021:** Mr. Raw asked if there were any changes or corrections, or objections, to the meeting minutes from the Board meeting held on May 25, 2021.

Action: Mr. David moved to approve the minutes from the Board meeting on May 25, 2021. The motion was seconded by Ms. Salas and carried with a vote of 6-0, with trustees Arnott, Battey, David, O'Malley, Raw, and Salas all in favor; none opposed.

2107.4.0 **Approval of the Consent Agenda:** Mr. Raw asked if there were any items to be removed for discussion from the Consent Agenda. No items were removed.

Action: Ms. Arnott moved to approve the items on the Consent Agenda. The motion was seconded by Ms. Salas and carried with a vote of 6-0, with trustees Arnott, Battey, David, O'Malley, Raw, and Salas all in favor; none opposed.

2107.4.1 **Disability Retirements:**

a) The Board found that **Esmirna Atijera** (1) is permanently incapacitated from the performance of her usual and customary duties as a Senior Accountant, (2) found that her disability was the result of an injury arising out of and in the course of her employment and (3) granted her application for a service-connected disability retirement.

2107.4.2 **Survivor Death Benefits:** None.

2107.4.3 **Service Retirements:**

Name	Effective Retirement Date	Department
Benda, Jennifer	May 29, 2021	Probation
Bouja, Alexander	May 22, 2021	Deferred - Sheriff's Office
Calderon, Luna	April 27, 2021	Deferred - Mental Health
Caldwell, Lisa	May 22, 2021	Public Safety Communications
Del Carlo, Michael	April 24, 2021	Deferred - Sheriff's Office
Furtado, Josefina	April 24, 2021	District Attorney's Office
Gabriel, Ramona	May 27, 2021	Probation
Garibaldi, Michael	May 29, 2021	Agriculture/Weights & Measures
Gaza, Benedicta	May 29, 2021	Human Services Agency
Janolino, Helen	May 1, 2021	Human Services Agency
Kunkel, Paul	May 2, 2021	Sheriff's Office
McDonald, Kenneth	May 15, 2021	Deferred - Probation
Milano, Deno	May 7, 2021	Environmental Health
Moffatt, Barbara	May 1, 2021	Deferred - Probation
Moore, Tina	May 11, 2021	Probation
Mullin, Amy	May 24, 2021	QDRO
Murphy, Cindy	May 2, 2021	San Mateo County Health
Nitao, Marna	May 14, 2021	Probation
Patricio, Jack	May 29, 2021	Probation
Reeves, Keith	May 2, 2021	San Mateo County Health
Robinson, Stephen	April 28, 2021	Deferred - Sheriff's Office
Skivers, Eric	May 29, 2021	Probation
Tourel, Gilles	May 1, 2021	Public Works
Udui-Mitchell, Michaela	May 15, 2021	Behavioral Health
Wilson, Robert	April 17, 2021	Information Services

2107.4.4 **Continuances:**

Survivor's Name	Beneficiary of:
Bolster, Sheila	Bolster, Walter
Cruz, Victoria	Arthur, Richard
Davis, Robert	Costello, Bertha
Duterte, Benjamina	Duterte, Ildefonso
Fernandez, Henry	Fernandez, Gloria
Garvey, Lawrence	Garvey, Christina
Van Pelt, James	Van Pelt, Delia

2107.4.5 **Deferred Retirements:**

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

Name	Retirement Plan Type
Bautista, Ronnie	G5, Vested - Auto Defer - Code 31700
Chuan, Jennie	G4, Vested - Reciprocity
Fournier, Caitlyn	G7, Non-vested - Reciprocity
Frank, Nathanael	G7, Non-vested - Reciprocity
Mrizek, Lori	G7, Vested - Auto Defer - Code 31700
Quezada, Robert	G7, Vested
Taylor, Leah	G5, Vested - Auto Defer - Code 31700
Vanderschaaf, Joshua	G4, Vested - Reciprocity
Wong, Sandy S	G4, Vested - Reciprocity

2107.4.6 **Member Account Refunds:**

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

Name	Retirement Plan Type
Bridgeman, Michael (FBO: Johnson, Katherine)	G7, Non-vested
Elmore-Reeder, Chantilli	G4, Vested
Gomez, Ramon	G7, Vested
Gregorio, Melvin	G4, Non-vested
Griswold, Marcus	G7, Non-vested
Hing-Lewis, Janna	G5, Vested
Kahn, Hannah	P4, Vested
Miller, Abbie (FBO: Miller, Mary)	G4, Vested
Miller, Abbie (FBO: Miller, Peter)	G4, Vested
Miller, Abbie (FBO: Miller, William)	G4, Vested
Palla, Piroska	G7, Non-vested
Rodriguez, Gladys	G7, Non-vested
Santiago, Abigail	G7, Non-vested

2107.4.7 **Member Account Rollovers:**

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

Name	Retirement Plan Type
Cattich, Pamela (FBO: Barrett Hutcherson)	G4, Vested
Chiu, Diana	G7, Non-vested
Kahn, Hannah	P4, Vested
Lecaros, Angelica	G7, Vested
Wood, Ashley	G7, Non-vested

2107.4.8 **Member Account Redeposits:** None.

2107.4.9 **Acceptance of Trustees' Reports of Educational Activities:** None.

2107.4.10 **Report on Gov Code Section 7514.7 Annual Disclosure for 2020:** The Board accepted the report on California Government Code Section 7514.7 covering calendar year 2020.

2107.4.11 **Acceptance of Semi-Annual Compliance Certification Statements for Period Ended June 30, 2021:** The Board accepted the semi-annual Compliance Certification Statements for SamCERA's non-alternative investment managers and investment consultant, as of June 30, 2021.

2107.4.12 **Approval of Questions for Annual Review of Milliman, Inc.:** The Board approved the evaluation questions in the "Questions for Annual Actuarial Consultant Evaluation".

2107.4.13 **Reaffirmation of Code of Conduct:** The Board reaffirmed its Code of Conduct in substantially the same form as the policy approved in 2018 with minor modifications for readability.

2107.5.1 **Consideration of Agenda Items, if any, Removed from the Consent Agenda:** None.

2107.6.1 **Report on Preliminary Monthly Portfolio Performance Report for the Period Ended June 30, 2021:** Mr. Coultrip reported that SamCERA's net preliminary return for June was 0.8% bringing the preliminary trailing twelve month return ending June 2021 to 24.2% net, which is above SamCERA's Plan Benchmark return of 22.1% and above SamCERA's Actuarial Assumed Earnings Rate of 6.5%. This item was informational and for discussion only, no action was taken.

2107.6.2 **Presentation of Private Asset Semi-Annual Performance Reports as of December 31, 2020:** Ms. Dames reported that as of December 31, 2020, SamCERA's private equity portfolio had a total market value of $384 million (6.9% of SamCERA's total fund). She also reported that as of fiscal year end, SamCERA's private real assets portfolio had a total market value of $114.1 million (2.1% of SamCERA's total fund). Mr. Nicolini further discussed the private equity and private real asset performance reports and answered questions from the Board. This item was informational and for discussion only, no action was taken.

2107.6.3 **Report on Core Equity and Low Volatility Equity Manager Annual Reviews:** Ms. Ng reviewed meeting notes from the May 13th annual review of SamCERA's core equity manager, D.E. Shaw, and low volatility equity managers, Acadian and PanAgora. Each meeting consisted of a firm/organizational update, investment process review, performance review and attribution, and current positioning/market outlook. There were no major concerns identified during the reviews. This item was informational and for discussion only, no action was taken.

2107.6.4 **Report on International Equity Manager Annual Reviews:** Ms. Ng reported that staff met virtually with international equity managers, Baillie Gifford and Mondrian on June 3rd. Each meeting consisted of a firm/organizational update, investment process review, performance review and attribution, and current positioning/market outlook. She reported there were no significant concerns identified during the review. This item was informational and for discussion only, no action was taken.

2107.6.5 **Report on Fixed Income Manager Annual Reviews:** Ms. Ng reviewed the meeting notes from the annual review of SamCERA's core bond managers, FIAM, NISA Investment Advisors and DoubleLine LP held virtually on June 24th. She also reviewed the meetings notes of reviews held on July 1st with opportunistic credit manager, Franklin Templeton, and core bond manager, Western Asset Management. Each meeting consisted of a firm/organizational update, investment process review, performance review and attribution, and current positioning/market outlook. She reported there were no significant concerns identified during the review. This item was informational and for discussion only, no action was taken.

2107.6.6 **Approval of Proposed Alternative Investment (to be heard in Closed Session, Confidential Under Gov. Code §54956.81 and §6254.26, see item C2):** The Board met in Closed Session at 10:53 a.m. and reconvened in Open Session at 11:10 a.m. See Closed Session report under C2.

2107.8.1 **Chief Executive Officer's Report:** Mr. Hood reported that the SamCERA office reopened on June 15th with partial staff operating on a weekly rotation and remaining staff would return after the Labor Day Holiday. Mr. Hood shared an update on the vacant Fourth Member seat. He previewed a few items on the August agenda including the financial and budget report and review of the Records Retention Policy, as well as two administrative policies: Policy and Procedure for Corrections of Inaccuracies Relating to Member Contributions, Withdrawals and the Payment of Benefits, and Felony Forfeiture Policy.

2107.8.2 **Assistant Executive Officer's Report:** Ms. Smith reported that Brown Armstrong had completed their interim audit and stated there were no issues or concerns. Ms. Trujillo informed Board members about upcoming educational opportunities.

2107.8.3 **Chief Investment Officer's Report:** Mr. Coultrip reported the employer prepayment contribution was received. He also reported staff will hold opportunistic credit reviews virtually on: July 29th with PIMCO at 8:00 a.m. and Beach Point at 10:00 a.m., August 5th with White Oak at 8:00 a.m., and August 10th with Blackrock at 1:00 p.m.

2107.8.4 **Chief Legal Counsel's Report:** Mr. Okada reported that the Governor's June 11, 2021, Executive Order extended the prior Executive Order which had suspended certain Brown Act requirements related to teleconferencing/videoconferencing. This extension allows Board meetings to continue virtually through September 30th. He also added that the Governor's Office will provide local agencies with reasonable notice with any changes and that staff will update the Board as more information becomes available.

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 6.5):** Mr. Okada reported that the Board approved the recommendation for a "re-up" commitment to Angelo Gordon Credit Solutions Fund II, LP in the amount of $30 million. The motion was approved by a vote of 6-0, with trustees Arnott, Battey, David, O'Malley, Raw, and Salas all in favor; none opposed. No other reportable action was taken.

2107.10 **Adjournment:** Mr. Raw adjourned the meeting at 11:17 a.m. in memory of the deceased members listed below.

Franklin-Shakoor, Ernestine	April 17, 2021	Hospital
Harrington, Hertha	May 17, 2021	Probation
Arthur, Richard	May 22, 2021	Human Services Agency
Coppock, Charles	May 22, 2021	Courts
Catalano, Teresa	May 23, 2021	Human Services Agency
Avery, Bernice	May 31, 2021	Chope Hospital
Ndegwa, Tom	May 31, 2021	Environmental Health
Lewis, Jeffrey	June 10, 2021	Aging & Adult Services
Cook, Randall	June 11, 2021	Medical Center
Minudri, Regina	June 18, 2021	Library
Hollomon, Carl	June 21, 2021	Child Support Services
Hatfield, Mary	June 26, 2021	Nursing
Littlewood, Charlotte	June 26, 2021	Probation

Fischer, Brian	June 27, 2021	Probation
Caulkins, Margaret	June 28, 2021	Public Health
Gatto, Catherine	July 3, 2021	Hospital
Greenberg, Gloria	July 7, 2021	Mental Health
Pitlock, Gregory	July 12, 2021	Sheriff's

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Robert Raw
Board Chair

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

August 24, 2021 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

a) The Board finds that **Cal'Landrea Glenn** (1) is permanently incapacitated from the performance of her usual and customary duties as an Assessor/Recorder Technician II, (2) find that her disability was the result of an injury arising out of and in the course of her employment and (3) grant her application for a service-connected disability retirement.

4.2 Survivor Death Benefits

None.

4.3 Service Retirements

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

Name	Effective Retirement Date	Department
Ancheta, Brandon	June 11, 2021	San Mateo County Health
Axelson, Pamela	June 26, 2021	Deferred - Probation
Barth, Greg	June 11, 2021	Public Works
Coffman, Susan	July 1, 2021	Human Services Agency
Cooper, Noyd	June 21, 2021	Deferred - Human Services Agency
Del Rosario, Maria	June 29, 2021	Deferred - San Mateo County Health
Dolidze, Ekaterina	June 5, 2021	Deferred - Sheriff's Office
Garcia, Rudolph	June 30, 2021	Public Works
Hargis, Karene	June 26, 2021	Human Services Agency
Hollister, Irma	June 26, 2021	Public Health
Houser, Susan	June 14, 2021	San Mateo County Health
Hwang, Hui	July 1, 2021	Deferred – Superior Court
Mandal, Sudhir	June 19, 2021	Controller's Office
Morris, Sherri	July 1, 2021	Deferred – Superior Court
Pacumio, Alfredo	June 13, 2021	San Mateo County Health

Reed, Susann	June 16, 2021	Behavioral Health
Sanchez, John	June 3, 2021	Deferred - Sheriff's Office
Selbach, Lawrence	June 26, 2021	Behavioral Health
Sheldon, Stephen	June 12, 2011	Probation
Singh, Ajay	July 1, 2021	Public Health
Singh, Usha	July 1, 2021	Probation
Tannenwald, Eric	June 11, 2021	Child Support Services
Tavares, Renee	July 1, 2021	Deferred - Public Health
Thompson, Guy	June 2, 2021	Superior Court
White, Melody	June 30, 2021	Deferred - District Attorney's Office

4.4 Continuances

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

Survivor's Name	Beneficiary of:
Ndegwa, Machanga	Ndegwa, Tom
Perroton-Galloway, Suzanne	Stuart, Bette

4.5 Deferred Retirements

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

Name	Retirement Plan Type
Fung, Nga Yew	G4, Vested - Reciprocity
Guest-Brown, Stefaney	G7, Vested
Ncube, Brighton	G7, Non-vested - Reciprocity
Rojo Sousa, Annamaria	G7, Non-vested - Reciprocity
Schanmier, Tami	G7, Vested
Singer, Grae Matan	G4, Non-vested - Reciprocity
Walton, Jon	G5, Vested
Wilkinson, Michael	G7, Vested

4.6 Member Account Refunds

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

Name	Retirement Plan Type
Berkovatz-Isidro, Julie	G7, Non-vested

Kershaw, Karen	G1, Vested
Levett, Rebecca	G7, Non-vested
Rodriguez, Veronica	G7, Vested

4.7 Member Account Rollovers

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

Name	Retirement Plan Type
Chitwood, Amalie	G4, Non-vested
Fricke, Cassandra	G4, Non-vested
Garciano, Reuluz	G4, Non-vested
Kershaw, Karen	G1, Vested

4.8 Member Account Redeposits

None.

4.9 Acceptance of Trustees' Reports of Educational Activities

None.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

August 24, 2021 Agenda Item 4.10

TO: Board of Retirement

FROM: Doris Ng, Investment Analyst

SUBJECT: Semi-Annual Compliance Certification Statements for Period Ended June 30, 2021

Recommendation

Accept the semi-annual Compliance Certification Statements for certain of SamCERA's non-alternative investment managers as of June 30, 2021.

Background

As part of SamCERA's ongoing due diligence process, the Compliance Certification Statement is completed by each of the association's public equity, fixed income, real estate, real asset and cash overlay investment managers and investment consultant on a semi-annual basis.

These statements are used to update SamCERA on any firm-wide compliance issues and to provide strategic-level information regarding such things as derivatives and portfolio positioning. For investment managers whose investments are considered "alternative investment vehicles" per the California Government Section Code §6254.26, the Compliance Certification Statements are not provided in the public board packet and will be sent separately to the Board.

As noted in the staff memo accompanying the semi-annual Compliance Certification Statements which were presented to the Board last month, the fully completed Compliance Certification Statements for BlackRock, PIMCO, and State Street Global Advisors were not received in time to be included in the mailing for the July Board meeting but would be presented to the Board at its August meeting.

Discussion

The attached Compliance Certification Statements report that the following investment managers -- Blackrock, PIMCO and State Street Global Advisors -- are in compliance with SamCERA's Investment Policy as of June 30, 2021. There were no reported significant developments in portfolio construction, investment approach, firm ownership or organizational structure of concern relating to the association's public investments. There were no notable issues regarding industry or regulatory actions that impact SamCERA. The managers were also requested to provide data regarding the characteristics and composition of their portfolios. No prominent issues were identified during the review. Any items that raise concern will be brought to the manager's or investment consultant's attention and will be thoroughly vetted by staff.

Attachments

Compliance Certification Statement Matrix 6-2021

Compliance Certification Statements (4)

A. Domestic Equity: Blackrock
B. International Equity: Blackrock
C. Fixed Income: PIMCO
D. Real Asset: State Street Global Advisors

Compliance Certification Statement Matrix – June 30, 2021

Investment Manager	Mandate	General Compliance Issues	Derivative Instruments	Investment Manager Guidelines	Mandate Specific
Domestic Equity					
BlackRock Russell 1000		No Concern	No Concern	No Concern	Largest single security Apple 5.6% Largest single industry Info Technology 27.8%
International Equity					
Blackrock MSCI ACWI ex US IMI		No Concern	No Concern	No Concern	• 0.6% ADR • 30.61% Emerging Market
Fixed Income					
PIMCO (Diversified Income Fund)		No Concerns	No Concerns	No Concerns	No Concerns
Real Assets					
State Street Global Advisors (Custom Real Asset Account)		• Global Fiduciary Solutions (GFS) to become part of Investment Solutions Group (ISG), headed by Dan Farley, CIO	No Concerns	No Concerns	• 21.14% largest single counterparty • 1.46% single largest security • 1.77% ADR • 1.62% Rule 144A • 25.36% Derivatives

4 Total | **4** Completed | **0** Pending Information | **0** Confidential

BlackRock Russell 1000 Index – June 30, 2021

Compliance Certification Statement
San Mateo County
Employees' Retirement Association

In accordance with SamCERA's Investment Policy Statement, the following compliance worksheet will be completed by each of *SamCERA's* investment managers on a semi-annual basis. These statements must be e-mailed to *SamCERA's* office (Investments@samcera.org) by **Monday, July 12, 2021**.

General Compliance Issues

1. **Have there been any significant portfolio developments, major changes in firm ownership, organizational structure and personnel?**
   ☐ Yes: Please explain. / ☒ No

Ownership
BlackRock, Inc. (together, with its subsidiaries, unless the context otherwise indicates, "BlackRock" or the "Company") is a publicly traded investment management firm, with common stock listed on the New York Stock Exchange, providing a broad range of investment management and technology services to institutional and retail clients worldwide. As at 31 March 2021, there was no person known by BlackRock to own beneficially 10% or more of any class of outstanding voting securities of BlackRock.

Ownership data for 2Q 2021 is not made publicly available yet.

Organizational structure
BlackRock constantly looks for ways to better serve clients, increase efficiency in our organization and develop talent. Periodically we take a fresh look at the firm to determine how we should evolve our organization in anticipation of changing market dynamics and client needs and to position the firm so that we can maximize our fullest potential for BlackRock and our clients. Below details internal organizational changes the firm has implemented over the past quarter.

There have been no material changes to the organizational structure over the last quarter ending as of 31 March 2021.

Changes in GEC Membership
In 2010, BlackRock created the Global Executive Committee to provide oversight of operations and business performance, strategy and planning, talent development and retention, risk management, and external affairs. The following chart shows turnover within the GEC:

Year	Previous GEC Member	Previous Role	Reason for Change	Replacement
2021	Barbara Novick	Vice Chairman	Role changed to Senior Advisor pending retirement	Responsibilities assumed by existing BLK personnel
	Geraldine Buckingham	Head of Asia Pacific	Role changed to Senior Advisor pending retirement	Responsibilities assumed by existing GEC members

Consistent with the goals of fully leveraging the firm's talent and expanding our senior leadership team to ensure a broader, more diverse representation of views, we added the following members to the GEC:

On 1 April 2021, Stephen Cohen was appointed to the GEC from his role as Head of EMEA Indexing and Wealth.

On 7 June 2021, Dalia Blass joined BlackRock and the GEC as Global Head of External Affairs.

Please note that the above does not include role changes of GEC members who remained on the committee.

2. **Have there been any changes in the firm's investment approach**?
   ☐ **Yes: Please explain. /** ☒ **No**

BlackRock is a purpose-driven, global investment manager with diverse clients and strategies. The constant in our philosophy is that it always starts with client needs.

Today, with our scale and global reach, our responsibilities have become even greater. We are more than a trusted advisor; we are an advocate for creating a better landscape for all investors. This includes sounder markets, better retirement systems, helping more people to save more and invest better, and encouraging company behaviors that support long-term value creation.

As a firm, our motivation is simple: **To help more and more people experience financial well-being.**

The breadth of our investment strategies enables us to take a product-agnostic approach to portfolio construction to meet client needs. In addition, our technology platform, Aladdin, is the most comprehensive end-to-end integrated investment operating system in the world, connecting the information, people and technology needed to manage money in real time.

The combination of our capabilities, expertise and a One BlackRock approach gives us a distinct global perspective and voice with clients around the world.

Firm Capabilities
BlackRock provides diversified investment management products and services as well as technology and investment insights to institutional clients, intermediary and individual investors. Investment management services primarily consist of the management of equity, fixed income, multi-asset class, alternative investment and cash management products. BlackRock offers its investment products in a variety of vehicles, including open-end and closed-end mutual funds, iShares® exchange traded funds ("ETFs"), collective investment trusts and separate accounts. Through Aladdin®, we provide industry-leading risk and portfolio construction technology. In addition, we

provide Financial Markets Advisory services for governments, central banks, and financial institutions, as well as whole portfolio solutions through our OCIO platform.

The breadth and depth of investment solutions is designed to deliver better outcomes, returns, convenience, value, and transparency for our clients, and our distinct platform allows us to offer unbiased, holistic offerings. Please refer to the following chart for an overview of BlackRock's products and services.

Source: BlackRock. Assets under management as of 31 March 2021. All figures are represented in USD.
[1]Alternatives AUM may include committed capital, in addition to invested capital, which remains subject to drawdown

3. **Have there have been any industry or regulatory disciplinary actions taken against the firm?**
   ☐ Yes: Please explain. / ☒ No

As a global investment manager, BlackRock, Inc., and its various subsidiaries including BlackRock Institutional Trust Company, N.A ("BTC") may be subject to regulatory oversight in numerous jurisdictions including examinations and various requests for information. BTC's regulators routinely provide it with comment letters at the conclusion of these examinations in which they request that BTC correct or modify certain of its practices. In all such instances, BTC has addressed, or is working to address, these requests to ensure that it continues to operate in compliance with applicable laws, statutes and regulations.

BTC also receives subpoenas or requests for information in connection with regulatory inquiries and/or investigations by its various regulators, some of which are ongoing. None of these matters has had or is expected to have any adverse impact on BTC's ability to manage its clients' assets. Please refer to BlackRock's Form ADV and SEC disclosures for additional information on regulatory matters concerning BTC or BlackRock as a whole. The recent fines related to BlackRock, Inc. or BTC's investment advisory responsibilities are set forth below. These matters do not include fines paid to non-US regulators relating to the late filing of issuer-specific holdings reports.

In past years, BlackRock has acquired organizations that provide investment-related services, including, but not limited to, State Street Research & Management Company, Merrill Lynch Investment Managers, the fund of funds business of Quellos Group, LLC, and Barclays Global

Investors. This response does not address any regulatory matters that arose out of conduct within the acquired organizations prior to their acquisition by BlackRock. It also does not address regulatory matters unrelated to BlackRock or BTC's investment management responsibilities.

4. **Has the firm's insurance coverage been sustained?**
   ☒ **Yes /** ☐ **No: Please explain.**

BlackRock maintains the following types of global insurance coverage:

Type
Investment Advisers Professional Liability (aka Errors & Omissions Liability)
Fidelity Bond (aka Crime or Financial Institution Bond)

Although we do not disclose the insurer information and level of coverage, BlackRock only places insurance with insurers rated "Excellent" by AM Best and maintains coverage at levels that are commercially reasonable and consistent with industry peers.

Investment Management Fees

1. Is *SamCERA*'s investment management fee schedule less favorable than those charged other institutional clients who hold an account investment substantially similar to ours?
   ☐ **Yes: Please explain. /** ☒ **No**

Derivative Investments

1. Are derivatives used in the management of the investment strategy?
   ☒ **Yes: Please ANSWER the remaining questions in this section.**
   ☐ **No: Please SKIP the remaining questions in this section.**

2. If the firm entered into a non-exchange traded derivative, was the general nature and associated risks of the counter-party fully evaluated?
   ☐ **Yes /** ☐ **No: Please explain. N/A**

3. For non-exchange traded derivative transactions, were the counter-parties broker/dealers?
   ☐ **Yes /** ☐ **No N/A**

   If **Yes**:
   a) Do the counter-parties have investment grade debt? ☐ **Yes/** ☐ **No**
   b) Are the counter-parties registered with the SEC and do they have net capital to protect against potential adverse market circumstances? ☐ **Yes/** ☐ **No: Please explain.**

4. For non-exchange traded derivative transactions, were the counter-parties financial institutions (banks)?
   ☐ **Yes /** ☐ **No N/A**

   If **Yes:**

a) Do the counter-parties have investment grade debt? ☐ **Yes/** ☐ **No**

b) Do the counter-parties have total assets in excess of $1 billion, and significant net capital to protect against potential adverse market circumstances?
☐ **Yes/** ☐ **No: Please explain.**

5. Is individual counter-party exposure well diversified? ☐ **Yes/** ☐ **No: Please explain. N/A**
   a) What is the largest exposure to a single counter-party within the portfolio?
   b) Please specify the name of the counter-party and the amount of exposure.
   c) Have there been any changes to the investment manager's list of approved counter-parties over the past six months?

6. Specify the security pricing sources used when developing portfolio market value exposures for non-exchange traded derivative positions.

BlackRock's Global Valuation methodologies Committee provides oversight of the valuation of investments for the Funds and certain Accounts. Assets of funds and Accounts are valued in accordance with Financial Accounting Standards Board Accounting Standards Codification ("ASC") 820-10, Fair Value Measurements and Disclosures. ASC 820-10 establishes a fair valuation hierarchy to increase consistency and comparability in fair value measurements and related disclosures. The fair value hierarchy prioritizes inputs to valuation techniques used to measure fair value into three broad levels: Level I, Level II, Level III. Inputs may be based on independent market data ("observable inputs") or they may be internally developed ("unobservable inputs"). See additional details about valuation procedures and external pricing agents/sources in "16 Things You Should Know" attached.

7. Provide a statement regarding the liquidity of the derivative investments. Provide a general statement discussing the legal and regulatory risks associated with the portfolio manager's investments in derivatives.

As stated above, we typically use equity index futures in our strategies for the purpose of efficient portfolio management. Futures are not used for speculative or leveraged positions in the portfolio and we keep cash to fully cover all outstanding futures positions.
Exchange traded futures are employed to equitize dividend accruals as well as to manage day-to-day cash flows generated from clients trades, dividends, interest received and other activity associated with securities in the portfolio. Specifically, futures contracts are purchased to provide immediate market exposure proportionate to cash accruals and investable cash within the portfolio. While we seek to remain fully

8. State if the legal and regulatory risk associated with portfolio derivative investments have changed over the past six months. ☐ **Yes: Please explain. /** ☒ **No**

Domestic Equity Portfolios (Large, Mid & Small)

1. Please state the percentage of the portfolio held in each of the following types of securities

Common Stock	*100%*

Preferred Stock	*%*
Convertible Securities	*%*
Cash & Equivalents	*%*

2. Specify the large, mid and small capitalization exposure of the portfolios? Please specify percentages.

Large-Cap	*66.6%*
Mid-Cap	*32.9%*
Small-Cap	*0.5%*

3. Specify the percentage of the portfolio that is invested in American Depository Receipts (ADR's). Also, specify the percentage of the portfolio invested in ADR securities that are 144A securities. If greater than 10%, explain why.

N/A

4. What is the largest percentage of the portfolio represented by a single security? Please specify the security and percentage amount. If any securities were above 5% at the time of purchase, please list and explain why.

   Apple 5.6%

   Microsoft 5.1%

5. What is the largest percentage of the portfolio represented by a single industry? Specify the name of the industry, percentage amount and size relative to benchmark. Please specify all industries above 15%.

   Information Technology, 27.8%

Signed by: Rajeev Ghia
Dated: 7/16/2021
Name of Firm: BlackRock

BlackRock MSCI ACWI ex US IMI Index – June 30, 2021

Compliance Certification Statement
San Mateo County
Employees' Retirement Association

In accordance with SamCERA's Investment Policy Statement, the following compliance worksheet will be completed by each of *SamCERA's* investment managers on a semi-annual basis. These statements must be e-mailed to *SamCERA's* office (Investments@samcera.org) by **Monday, July 12, 2021**.

General Compliance Issues

1. **Have there been any significant portfolio developments, major changes in firm ownership, organizational structure and personnel?**
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Ownership
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Please note that the above does not include role changes of GEC members who remained on the committee.

2. Have there been any changes in the firm's investment approach?

☐ Yes: Please explain. / ☒ No

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Today, with our scale and global reach, our responsibilities have become even greater. We are more than a trusted advisor; we are an advocate for creating a better landscape for all investors. This includes sounder markets, better retirement systems, helping more people to save more and invest better, and encouraging company behaviors that support long-term value creation.

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3. Have there have been any industry or regulatory disciplinary actions taken against the firm? ☐ Yes: Please explain. / ☒ No

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4. **Has the firm's insurance coverage been sustained?**
   ☒ **Yes** / ☐ **No: Please explain.**

BlackRock maintains the following types of global insurance coverage:

Type
Investment Advisers Professional Liability (aka Errors & Omissions Liability)
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Although we do not disclose the insurer information and level of coverage, BlackRock only places insurance with insurers rated "Excellent" by AM Best and maintains coverage at levels that are commercially reasonable and consistent with industry peers.

Investment Management Fees

1. Is *SamCERA*'s investment management fee schedule less favorable than those charged other institutional clients who hold an account investment substantially similar to ours?
   ☐ **Yes: Please explain.** / ☒ **No**

Derivative Investments

1. Are derivatives used in the management of the investment strategy?
   ☒ **Yes: Please ANSWER the remaining questions in this section.**
   ☐ **No: Please SKIP the remaining questions in this section.**

We typically use exchange traded equity index futures in our strategies for the purposes of efficient portfolio management. Futures are not used for speculative or leveraged positions in the portfolio and we keep cash to fully cover all outstanding futures positions.

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2. If the firm entered into a non-exchange traded derivative, was the general nature and associated risks of the counter-party fully evaluated?
   ☐ **Yes** / ☐ **No: Please explain. N/A**

3. For non-exchange traded derivative transactions, were the counter-parties broker/dealers?
   ☐ **Yes** / ☐ **No N/A**

If **Yes**:

a) Do the counter-parties have investment grade debt? ☐ **Yes/** ☐ **No**

b) Are the counter-parties registered with the SEC and do they have net capital to protect against potential adverse market circumstances? ☐ **Yes/** ☐ **No: Please explain.**

4. For non-exchange traded derivative transactions, were the counter-parties financial institutions (banks)?

☐ **Yes /** ☐ **No**

If **Yes:**

a) Do the counter-parties have investment grade debt? ☐ **Yes/** ☐ **No**

b) Do the counter-parties have total assets in excess of $1 billion, and significant net capital to protect against potential adverse market circumstances?
☐ **Yes/** ☐ **No: Please explain.**

5. Is individual counter-party exposure well diversified? ☒ **Yes/** ☐ **No: Please explain.**

a) What is the largest exposure to a single counter-party within the portfolio?

b) Please specify the name of the counter-party and the amount of exposure.

c) Have there been any changes to the investment manager's list of approved counter-parties over the past six months?

6. Specify the security pricing sources used when developing portfolio market value exposures for non-exchange traded derivative positions.

BlackRock's Global Valuation methodologies Committee provides oversight of the valuation of investments for the Funds and certain Accounts. Assets of funds and Accounts are valued in accordance with Financial Accounting Standards Board Accounting Standards Codification ("ASC") 820-10, Fair Value Measurements and Disclosures. ASC 820-10 establishes a fair valuation hierarchy to increase consistency and comparability in fair value measurements and related disclosures. The fair value hierarchy prioritizes inputs to valuation techniques used to measure fair value into three broad levels: Level I, Level II, Level III. Inputs may be based on independent market data ("observable inputs") or they may be internally developed ("unobservable inputs"). See additional details about valuation procedures and external pricing agents/sources in "16 Things You Should Know" attached.

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8. State if the legal and regulatory risk associated with portfolio derivative investments have changed over the past <u>six</u> months. ☐ **Yes: Please explain. /** ☒ **No**

International Equity Portfolios

1. Specify the percentage of the portfolio held in each of the following types of securities:

Foreign Ordinary Shares	97.8%
ADR's	0.6%
Cash & Equivalents (Foreign)	1.6%
Cash & Equivalents (Domestic)	

2. Specify the large, mid and small capitalization exposure of the portfolios.

Large-Cap	*61.6%*
Mid-Cap	*31.2%*
Small-Cap	*7.2%*

3. What percentage of the portfolio is invested in emerging and/or frontier markets?

IMACWIXU	Weight
Developed	69.39%
Emerging	30.61%

Signed by: Rajeev Ghia
Dated: 7/16/2021
Name of Firm: BlackRock

PIMCO Diversified Income Fund – June 30, 2021

Compliance Certification Statement
San Mateo County
Employees' Retirement Association

In accordance with SamCERA's Investment Policy Statement, the following compliance worksheet will be completed by each of *SamCERA's* investment managers on a semi-annual basis. These statements must be e-mailed to *SamCERA's* office (Investments@samcera.org) by **Monday, July 12, 2021**.

General Compliance Issues

1. Have there been any significant portfolio developments, major changes in firm ownership, organizational structure and personnel?
   ☐ **Yes: Please explain. /** ☐ **No**

   Please refer to the attached Quarterly Firm Report.

2. Have there been any changes in the firm's investment approach?
   ☐ **Yes: Please explain. /** ☐**No**

   Please refer to the attached Fund Prospectus and/or Statement of Additional Information.

3. Have there have been any industry or regulatory disciplinary actions taken against the firm?
   ☐ **Yes: Please explain. /** ☐**No**

   Please reference the attached compliance letter.

4. Has the firm's insurance coverage been sustained?
   ☐ **Yes /** ☐ **No: Please explain.**

   Please reference the attached compliance letter.

Investment Management Fees

1. Is *SamCERA*'s investment management fee schedule higher than those charged other institutional clients who hold an account investment substantially similar to ours?
   ☐ **Yes: Please explain. /** ☐ **No**

   Please refer to the attached Fund Prospectus and/or Statement of Additional Information.

Derivative Investments

1. Are derivatives used in the management of the investment strategy?
   ☐ **Yes: Please ANSWER the remaining questions in this section.**
   ☐ **No: Please SKIP the remaining questions in this section.**

   Please refer to the attached Fund Prospectus and/or Statement of Additional Information.

2. If the firm entered into a non-exchange traded derivative, was the general nature and associated risks of the counter-party fully evaluated?
   ☐ **Yes /** ☐ **No: Please explain.**

   Please refer to the attached Diversified Income Fund Annual Report.

3. For non-exchange traded derivative transactions, were the counter-parties broker/dealers?
   ☐ **Yes /** ☐ **No**

   Please refer to the attached Diversified Income Fund Annual Report.

   If **Yes**:
   a) Do the counter-parties have investment grade debt? ☐ **Yes/** ☐ **No**
   b) Are the counter-parties registered with the SEC and do they have net capital to protect against potential adverse market circumstances? ☐ **Yes/** ☐ **No: Please explain.**

4. For non-exchange traded derivative transactions, were the counter-parties financial institutions (banks)?
   ☐ **Yes /** ☐ **No**

   Please refer to the attached Diversified Income Fund Annual Report.

   If **Yes:**
   a) Do the counter-parties have investment grade debt? ☐ **Yes/** ☐ **No**
   b) Do the counter-parties have total assets in excess of $1 billion, and significant net capital to protect against potential adverse market circumstances?
      ☐ **Yes/** ☐ **No: Please explain.**

5. Is individual counter-party exposure well diversified? ☐ **Yes/** ☐ **No: Please explain.**
   a) What is the largest exposure to a single counter-party within the portfolio?
   b) Please specify the name of the counter-party and the amount of exposure.
   c) Have there been any changes to the investment manager's list of approved counter-parties over the past <u>six</u> months?

   Please refer to the attached Diversified Income Fund Annual Report.

6. Specify the security pricing sources used when developing portfolio market value exposures for limited allocation derivatives.

   Please refer to the attached PIMCO Pricing Policy.

7. Provide a statement regarding the liquidity of the derivative investments. Provide a general statement discussing the legal and regulatory risks associated with the portfolio manager's investments in derivatives.

   Please refer to the attached PIMCO Pricing Policy.

8. Provide a statement regarding the liquidity of the derivative investments. Provide a general statement discussing the legal and regulatory risks associated with the portfolio manager's investments in derivatives.

   Please refer to the attached PIMCO's Use of Derivatives.

9. State if the legal and regulatory risk associated with portfolio derivative investments have changed over the past six months. ☐ **Yes: Please explain. /** ☐ **No**

Investment Manager Guidelines

1. Are portfolio holdings well-diversified, and made in liquid securities?
   ☐ **Yes /** ☐ **No: Please explain**.

   Please refer to the attached Bond Statistics Report.

2. Has the firm engaged in short selling, use of leverage or margin and/or investments in commodities? ☐ **Yes: Please explain. /** ☐ **No**

   The Fund is permitted to engage in short sales as allowed by the Fund's Prospectus and Statement of Additional Information, which are attached for reference.

Fixed Income Portfolios

1. State the percentage of the portfolio held in each of the following types of securities

Treasury	%
Agency	%
Inflation-Linked	%
Mortgage-Backed	%
Asset-Backed	%
Investment-Grade Credit	%
High-Yield Credit	%
Bank Loan	%

Non-US	%
EM Government	%
EM Local Currency	%
EM Corporate	%
Cash & Equivalents	%
Total	%

2. Excluding U. S. Government and Agency bond holdings, did any individual bond issue represent more than 5% of the market value of the portfolio? ☐ **Yes /** ☐ **No**

   Please reference the attached Bond Statistics Report.

   a) If **Yes**, please specify the bond issue and percentage amount.

3. What percentage of the portfolio is held in Rule 144A securities?

   Please reference the attached compliance letter.

4. At the time of purchase, was there any single industry which represented more than 15% of the market value of the account. ☐ **Yes /** ☐ **No**

   Please reference the attached Holdings Report.

   a) If **Yes,** please specify the name of the industry, percentage amount and size relative to benchmark.

5. What proportion of total AUM do the assets in this product make-up of the firm? What size does SamCERA's account comprise of total product assets?

   As of 3/31/2021, the Fund represented 0.24% of the Firm assets.
   As of 3/31/2021, SamCERA's investment represented 2.56% of Fund assets.

Signed by:

Dated:
7/12/2021

Name of Firm:
PIMCO

State Street Global Advisors Custom Real Asset Account – June 30, 2021

Compliance Certification Statement
San Mateo County
Employees' Retirement Association

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General Compliance Issues

1. **Have there been any significant portfolio developments, major changes in firm ownership, organizational structure and personnel?**
☒ Yes: Please explain. / ☐ No

*Please refer to **Appendix A** for Q1 2021 and Q2 2021 Organizational Changes Memo*

2. **Have there been any changes in the firm's investment approach?**
☐ Yes: Please explain. / ☒ No

3. **Have there have been any industry or regulatory disciplinary actions taken against the firm? ☐ Yes: Please explain. / ☐ No**

*Please refer to **Appendix B** for SSGA Regulatory and Litigation Memo. As with any similarly regulated financial institution, State Street Global Advisors is likely to be responding to multiple inquiries, both formal and informal, from various regulators at any given time. In the normal course, various regulators also conduct periodic reviews, exams and audits of State Street Global Advisors. Our policy is that such communications are confidential.*

4. **Have there been any investment guideline breaches during the prior 6 months?**
☐ Yes: Please explain. / ☒ No

5. **Have proxy ballots been voted in accordance with the best economic interest of *SamCERA*?**
☒ Yes / ☐ No: Please explain.

Members of the Stewardship team evaluate the proxy solicitation to determine how to vote based on facts and circumstances, and consistent with SSGA's Proxy Voting Guidelines, that seeks to maximize the value of our client accounts.

6. **Has the firm's insurance coverage been sustained?**
☒ Yes / ☐ No: Please explain.

Investment Management Fees

1. **Is *SamCERA*'s investment management fee schedule higher than those charged other institutional clients who hold an account investment substantially similar to ours?**
   ☐ **Yes: Please explain.** / ☒ **No**

Derivative Investments

1. **Are derivatives used in the management of the investment strategy?**
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2. **If the firm entered into a non-exchange traded derivative, was the general nature and associated risks of the counter-party fully evaluated?**
   ☒ **Yes** / ☐ **No: Please explain.**

3. **For non-exchange traded derivative transactions, were the counter-parties broker/dealers?**
   ☒ **Yes** / ☐ **No**

   Combination of Financial Institutions (i.e.banks) and broker dealers. Broker dealers are typically subsidiaries of banks.

   If **Yes**:
   a) Do the counter-parties have investment grade debt? ☒ **Yes**/ ☐ **No**
   b) Are the counter-parties registered with the SEC and do they have net capital to protect against potential adverse market circumstances? ☐ **Yes**/ ☒ **No: Please explain.**

      Brokers are typically registered with the SEC while banks are registered with multiple regulatory agencies including the OCC. Net Capital is a broker dealer related term. Broker dealers on our panel meet the minimum net capital requirements as proscribed by the respective regulatory governing agency.

4. **For non-exchange traded derivative transactions, were the counter-parties financial institutions (banks)?**
   ☒ **Yes** / ☐ **No**

   Banks or broker dealers as noted above.

   If **Yes:**
   a) Do the counter-parties have investment grade debt? ☒ **Yes**/ ☐ **No**
   b) Do the counter-parties have total assets in excess of $1 billion, and significant net capital to protect against potential adverse market circumstances?
      ☒ **Yes**/ ☐ **No: Please explain.**

Our counterparty panel is comprised of a combination of financial institutions (banks) and broker dealers. These counterparties meet the criteria referenced above in terms of balance sheet size. In response to the question on "significant net capital", our counterparty panel is well capitalized.

5. **Is individual counter-party exposure well diversified? ☒ Yes/ ☐ No: Please explain.**

   As of 6/30/2021, exposure was spread across 8 counterparties.

   a) **What is the largest exposure to a single counter-party within the portfolio?**

      ~21.14%

   b) **Please specify the name of the counter-party and the amount of exposure.**

      Societe Generale, ~$83.4 million

   c) **Have there been any changes to the investment manager's list of approved counter-parties over the past <u>six</u> months?**

      No

6. **Specify the security pricing sources used when developing portfolio market value exposures for non-exchange traded derivative positions.**

   The swap positions are based on a commodity index (Bloomberg Commodity Roll Select TR Index). The Index levels are quoted on Bloomberg

7. **Provide a statement regarding the liquidity of the derivative investments. Provide a general statement discussing the legal and regulatory risks associated with the portfolio manager's investments in derivatives.**

   The swap positions are based on a commodity index (Bloomberg Commodity Roll Select TR Index). The Index is comprised of a diversified basket of liquid (listed) commodity futures contracts. Please refer to ***Appendix C*** *for Commodity Index SDD.*

8. **State if the legal and regulatory risk associated with portfolio derivative investments have changed over the past <u>six</u> months. ☐ Yes: Please explain. / ☒ No**

Real Asset Portfolio

1. **Specify the percentage of the portfolio held in each of the following types of securities.**

Foreign Ordinary Shares	*0.09%*
ADR's	*1.77%*
Common Stock	*47.62%*
MIP Limited Partnership	*0.00%*
Derivatives: Futures/ Options	*25.36%*
Cash & Equivalents (Domestic)	*0.09%*
Cash & Equivalents (Foreign)	*0.06%*
Other (please specify)	*25.02%*

Source: State Street Global Advisors, as of 30th June 2021

2. **Specify the large, mid and small capitalization exposure of the portfolios.**

S&P Global LargeMidCap Natural Resources Index NL Fund (ZVB5)

Large-Cap	*76.65%*
Mid-Cap	*19.81%*
Small-Cap	*3.55%*

Source: State Street Global Advisors, as of 30th June 2021

S&P Global Infrastructure Index NL CTF (ZVPY)

Large-Cap	*67.94%*
Mid-Cap	*28.40%*
Small-Cap	*3.66%*

Source: State Street Global Advisors, as of 30th June 2021

Bloomberg Roll Select Commodity Indx SM NL FD (ZVME)

Large-Cap	*N/A - Swaps%*
Mid-Cap	*N/A - Swaps %*
Small-Cap	*N/A - Swaps %*

Source: State Street Global Advisors, as of 30th June 2021

3. **What percentage of the portfolio is held in Rule 144A securities?**

1.62%

4. **What is the largest percentage of the portfolio represented by a single security? Please specify the security and percentage amount. If any securities were above 5% at the time of purchase, please list and explain why.**

Exxon Mobil Corp Common Stock USD– 1.46%

5. **What is the largest percentage of the portfolio represented by a single issuer? Please specify the security and percentage amount. If any exposure to a single issuer was above 15% at time of purchase, please list and explain why.**

Exxon Mobil Corp Common Stock USD– 1.46%

6. **What proportion of total AUM do the assets in this product make-up of the firm? What size does SamCERA's account comprise of total product assets?**

Part I

Real Asset Strategy AUM (06/30/2021*) : $7.3B (0.19%)*

Underlying Funds

- *S&P Global LargeMidCap Natural Resources Index NL Fund (ZVB5) : $1,261,186,912 (0.03%)*
- *Bloomberg Roll Select Commodity Indx SM NL FD (ZVME) : $394,413,875 (0.01%)*
- *S&P Global Infrastructure Index NL CTF (ZVPY) : $1,025,849,227 (0.03%)*
- *U.S. TIPS Indx NL Fund (CMTP) : $2,138,968,791 (0.05%)*

SSGA Firm AUM (06/30/2021) *: $3,897 Billion**

** This figure is presented as of June 30, 2021 and includes approximately $63.59 billion of assets with respect to SPDR products for which State Street Global Advisors Funds Distributors, LLC (SSGA FD) acts solely as the marketing agent. SSGA FD and State Street Global Advisors are affiliated.*

Part II

SMCERA AUM (06/30/2021) *: $ 360,643,196 (4.94%)*
Real Asset Strategy AUM (06/30/2021*) : $7.3B*

Signed by: Jaclyn Collier, Managing Director
Dated: July 19, 2021
Name of Firm: State Street Global Advisors Trust Company

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

August 24, 2021 Agenda Item 4.11

TO: Board of Retirement

FROM: Lilibeth Dames, Investment Analyst *Lilibeth Dames*

SUBJECT: Report on SamCERA's Securities Lending Program

Recommendation
Review the report on SamCERA's Securities Lending Program as of June 30, 2021.

Background
SamCERA commenced its securities lending program on July 1, 2007. The program was implemented by SamCERA's then custodian, State Street Bank & Trust, and then by The Northern Trust Company, effective July 1, 2014.

Discussion
In the fourteen years since inception, the securities lending program has earned $7.1 million for SamCERA. During the fiscal year ended June 30, 2021, the program earned $50,275. This is a 43% increase from last fiscal year's earnings of $35,079. The majority of the earnings are mostly attributable to a few specific securities.

Securities lending utilization (on-loan amount divided by lendable assets) on June 30, 2021 was 1.1%, which was the same utilization rate as of June 30, 2020.

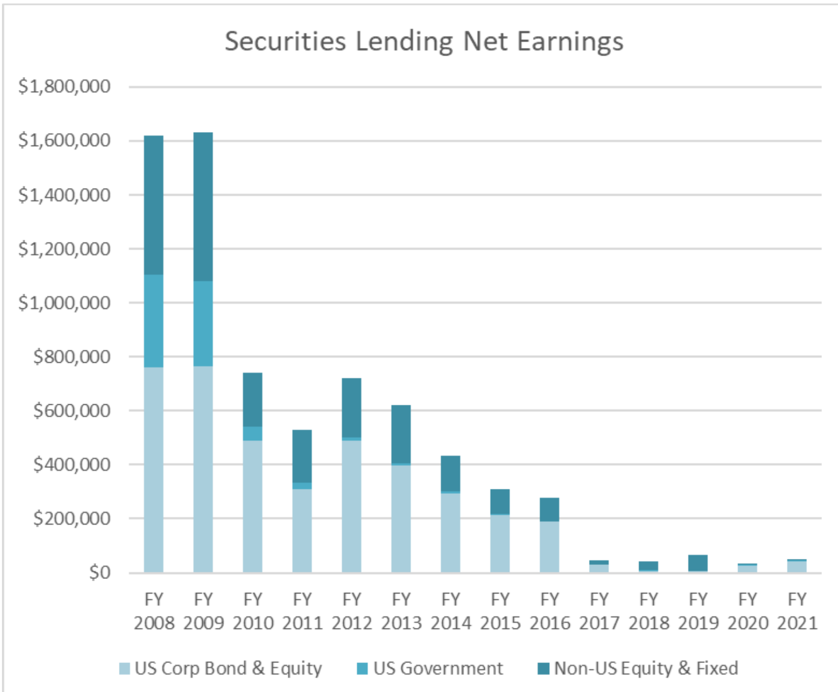
There were no violations of provisions and no borrower or lending agent incurred default losses during the fiscal year.

Attachment
Securities Lending Report for Fiscal Year Ended June 30, 2021

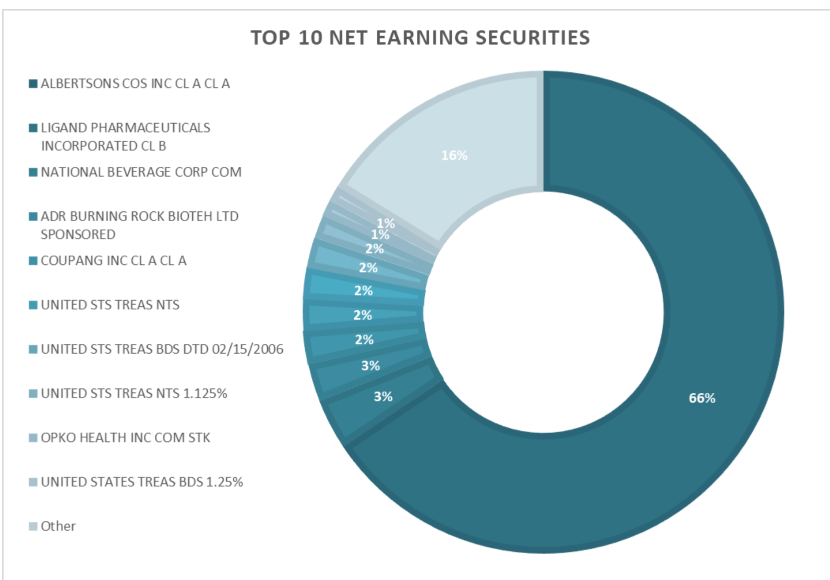
SamCERA Securities Lending Report as of June 30, 2021

Earnings

SamCERA's securities lending program earned $50,275 for the fiscal year ending June 30, 2021. This is a 43% increase over last year's fiscal year earnings of $35,079. As of June 30, 2021, the program has earned $7.1 million since its inception on July 1, 2007.

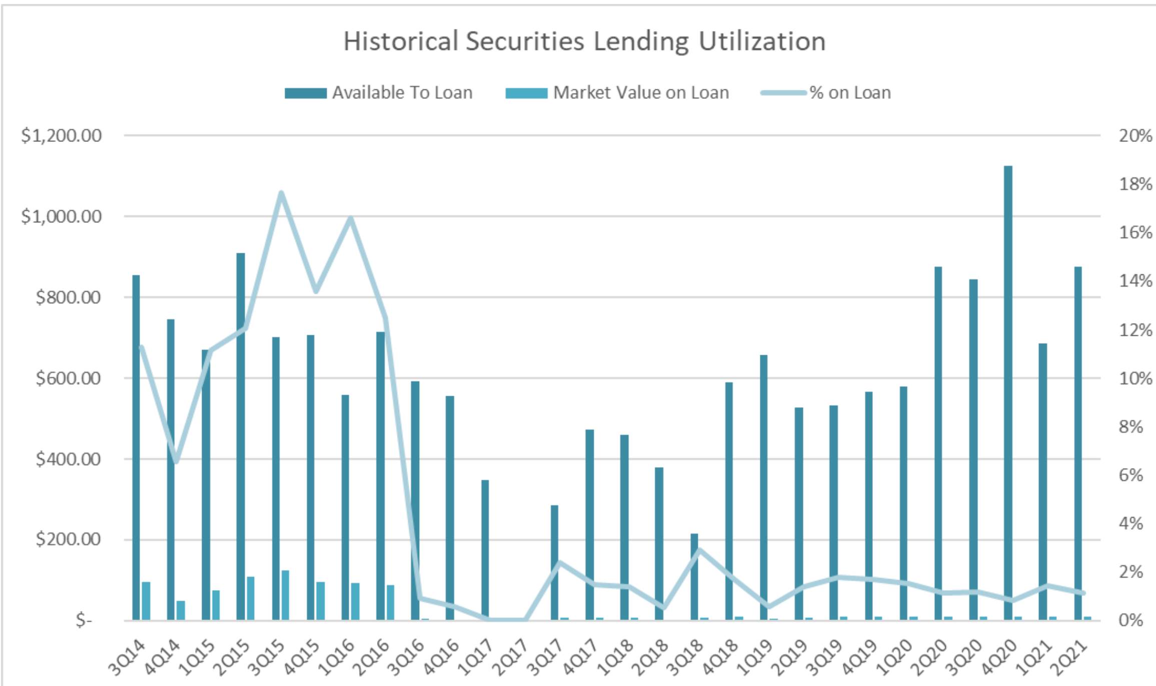


Fiscal year earnings were mainly attributable to a few specific securities, one US security in particular. The security also had the lowest rebate rate of the fiscal year (-7.29%).



Utilization

Utilization (securities on-loan amount divided by lendable assets) has ranged from 0% to 20% during the seven years that SamCERA has used Northern Trust as its securities lending provider. For fiscal year ended June 30, 2021, securities lending utilization was 1.1%, which was the same utilization rate as the previous year. SamCERA had six separate accounts that had securities on loan as of June 30, 2021, the same number of accounts as of June 30, 2020.



Decreasing demand spreads and the conservative nature of the NILAP fund still has had a downward impact on both utilization and earning levels this fiscal year compared to previous years.

Collateral

Securities are loaned versus collateral that may include cash, U.S. government securities and irrevocable letters of credit. U.S. securities are loaned versus collateral valued at 102% of the market value of the securities plus any accrued interest. Non-U.S. securities are loaned versus collateral valued at 105% of the market value of the securities plus any accrued interest. Non-cash collateral cannot be pledged or sold unless the borrower defaults.

All securities loans can be terminated on demand by either the lender or the borrower, although the average term of SamCERA's loans was approximately 41 days as of June 30, 2021. Cash open collateral is invested in a short-term investment pool, the NILAP fund, which had an interest sensitivity of 21 days at fiscal year-end.

There were no violations of legal or contractual provisions, and no borrower or lending agent default losses were known to SamCERA's custodian, Northern Trust.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

August 24, 2021 Agenda Item 4.12

TO: Board of Retirement

FROM: Tat-Ling Chow, Finance Officer
Chezelle Milan, Senior Accountant
Lilibeth Dames, Investment Analyst Lilibeth Dames

SUBJECT: Preliminary Financial Statements for the Fiscal Year Ended June 30, 2021

Recommendation
Accept the Preliminary Financial Statements for the Fiscal Year Ended June 30, 2021.

Background
The preliminary financial statements provide information on SamCERA's financial position as of June 30, 2021, and its operating results for the fiscal year ended June 30, 2021.

The *Statement of Fiduciary Net Position* (balance sheet) provides a snapshot of the account balance as of June 30, 2021. This Statement indicates the amount of fiduciary net position (total assets minus total liabilities) available to pay future pension benefits. Over time, increases and decreases in net position may serve as a useful indicator of whether the financial health of Retirement Fund is improving or declining. Other factors, such as market conditions, should also be considered in measuring SamCERA's overall financial health.

The *Statement of Changes in Fiduciary Net Position* (income statement) reports additions to, and deductions from, SamCERA's fiduciary net position for the fiscal year ended June 30, 2021. "Additions" consist of contributions from plan sponsors and members, investment income net of investment expenses, securities lending income net of related expenses, and other additions. "Deductions" include member benefits, member refunds as well as administrative, information technology, and other expenses.

Summary
SamCERA's financial position improved over the fiscal year just ended. Its net position increased by $1.2 billion, or 24%, $5.95 billion, fueled mainly by contributions and investment income.

Statement of Fiduciary Net Position

The following table shows SamCERA's preliminary Statement of Fiduciary Net Position as of June 30, 2021. Its assets and liabilities as of June 30, 2021, were compared to those as of June 30, 2020, to reflect changes over the fiscal year. Significant changes are discussed on the following pages.

Statement of Fiduciary Net Position+A5:H35

	Preliminary	Actual	Increase (Decrease)	
	June 30, 2021	June 30, 2020	Amount	Percentage
ASSETS:				
Cash and Cash Equivalents	$ 153,199,767	$ 107,989,686	$ 45,210,081	42%
Cash Management Overlay	64,054,219	54,095,321	9,958,898	18%
Securities Lending Cash Collateral	4,574,275	2,423,778	2,150,497	89%
Subtotal - Cash and Other Cash Related Activities	221,828,261	164,508,785	57,319,476	35%
Receivables				
Contributions	15,060,101	12,376,867	2,683,234	22%
Due from Broker for Investment Transactions	48,257,671	78,103,219	(29,845,548)	-38%
Investment Income	7,838,202	5,390,580	2,447,622	45%
Securities Lending Income	3,029	2,752	277	10%
Other Receivable	83,607	86,859	(3,252)	-4%
Subtotal - Receivables	71,242,610	95,960,277	(24,717,667)	-26%
Investments at Fair Value				
Fixed Income	1,544,768,802	1,434,811,710	109,957,092	8%
Public Equity	2,411,436,689	1,866,264,297	545,172,392	29%
Alternatives	840,198,362	593,379,227	246,819,135	42%
Inflation Hedge	933,205,126	704,360,824	228,844,302	32%
Subtotal - Investment at Fair Value	5,729,608,979	4,598,816,058	1,130,792,921	25%
Capital Assets	8,205,073	8,108,286	96,787	1%
Less Accumulated Depreciation	(3,737,459)	(2,898,888)	(838,571)	29%
Subtotal - Capital Assets, Net	4,467,614	5,209,398	(741,784)	-14%
TOTAL ASSETS	**6,027,147,464**	**4,864,494,518**	**1,162,652,946**	**24%**
LIABILITIES:				
Investment Management Fees Payable	3,151,269	2,035,363	1,115,906	55%
Due to Broker for Investments Purchased	66,319,257	78,241,899	(11,922,642)	-15%
Securities Lending Cash Collateral - Due to Borrowers	4,574,275	2,423,778	2,150,497	89%
Other	1,790,398	1,291,165	499,233	39%
TOTAL LIABILITIES	**75,835,199**	**83,992,205**	**(8,157,006)**	-10%
NET POSITION RESTRICTED FOR PENSIONS	**$ 5,951,312,265**	**$ 4,780,502,313**	**$ 1,170,809,952**	**24%**

Assets. SamCERA's total assets increased by $1.2 billion, or 24%, due primarily to the following:

- *Cash and cash equivalents* increased by $45.2 million. There was a larger amount of cash held for liquidity purposes as the total portfolio grew because of market appreciation.

- *Cash management overlay* increased by $10.0 million. The foreign currency balance in international equity accounts increased in proportion to the growth in the portfolios due to strong market conditions. Additional cash was needed to maintain an appropriate level of currency hedge and provide enough cash collateral as a buffer for potential volatility in foreign exchange rates.

- *Securities lending cash collateral* increased by $2.2 million. Although the fair value of securities on loan and the required collateral in return was about the same as last fiscal year, borrowers opted to put more cash in lieu of non-cash as collateral this fiscal year. In securities lending transactions, borrowers are required to transfer cash or other securities as collateral valued at 102% for U.S. securities and 105% for non-U.S. securities plus accrued interest.

- *Investments at fair value* increased by $1.1 billion, due primarily to the following:

  - Fixed Income increased by $110.0 million. Considering the strength of the equity markets, new capital of $75 million was added to fixed income assets. Additionally, opportunistic funds performed very well during the fiscal year, a key driver for the remaining increase in fair value.

  - Public Equity increased by $545.2 million, due predominantly to market appreciation. As international and U.S. equity markets continued to strengthen throughout the fiscal year, investments in the international equity portfolio appreciated by nearly $275 million and the U.S. equity portfolio by nearly $250 million.

  - Alternatives increased by 246.8 million. As part of the effort to rebalance the investment portfolio commenced last fiscal year, $100 million was allocated to various hedge funds. The remaining increase was largely from market appreciation.

  - Inflation Hedge increased by $228.8 million*,* partly from additional contributions to public real assets and partly from appreciation in real estate and real asset (public and private) funds.

- Receivables overall decreased by $24.7 million. In mid-June of 2020, a significant stock distribution from a private equity fund was sold. The proceeds from the sale did not arrive until July 2, 2020.

Liabilities. SamCERA's total liabilities decreased by $8.2 million, or 10%. Significant changes are discussed below.

- *Due to broker for investments purchased* decreased by $11.9 million, primarily due to the timing difference between trade and settlement date.

- *Securities lending cash collateral due to borrowers* increased by $2.2 million. This increase in liability was triggered by and in parallel with the increase in securities lending cash collateral discussed earlier.

Statement of Changes in Fiduciary Net Position

SamCERA's preliminary Statement of Changes in Fiduciary Net Position (income statement) for the fiscal year ended June 30, 2021, is presented below. Additions to and deductions from the Retirement Fund for the fiscal year were compared to those of the prior fiscal year.

Statement of Changes in Fiduciary Net Position

	Preliminary	Actual	Increase (Decrease)	
	2021	2020	Amount	Percentage
ADDITIONS:				
Contributions				
Employer Contribution	$225,302,472	$198,582,998	$ 26,719,474	13%
Employee Contribution	73,966,484	70,630,765	3,335,719	5%
Employer Supplemental Contribution	39,700,000	-	39,700,000	N/A
Subtotal - Contributions	338,968,956	269,213,763	69,755,193	26%
Investment Income				
Interest and Dividends	85,256,401	76,762,516	8,493,885	11%
Net Appreciation in fair value of investments	1,080,006,413	5,173,433	1,074,832,980	20776%
Less: Investment Expense	(62,910,232)	(39,581,080)	(23,329,152)	59%
Subtotal - Net Investment Income	1,102,352,582	42,354,869	1,059,997,713	2503%
Securities Lending Income				
Earnings	12,916	35,620	(22,704)	-64%
Rebate	51,515	16,474	35,041	213%
Fees	(14,156)	(14,741)	585	-4%
Subtotal - Securities Lending Income	50,275	37,353	12,922	35%
Total Additions	**1,441,371,813**	**311,605,985**	**1,129,765,828**	363%
DEDUCTIONS:				
Benefits				
Service Retirement Benefits	229,730,555	212,632,929	17,097,626	8%
Disability Retirement Benefits	28,342,469	27,601,908	740,561	3%
Servivor, Death and Other Benefits	1,282,749	1,790,029	(507,280)	-28%
Subtotal - Benefits	259,355,773	242,024,866	17,330,907	7%
Member Refunds	2,796,160	3,796,276	(1,000,116)	-26%
Administrative Expenses	7,059,702	6,371,363	688,339	11%
Information Technology Expenses	1,350,226	2,021,102	(670,876)	-33%
Total Deductions	**270,561,861**	**254,213,607**	**16,348,254**	**6%**
Net Income	**1,170,809,952**	**57,392,378**	**1,113,417,574**	**1940%**
NET POSITION RESTRICTED FOR PENSIONS:				
Beginning of year	4,780,502,313	4,723,109,935	57,392,378	1%
End of Year	**5,951,312,265**	**4,780,502,313**	**1,170,809,952**	**24%**

Additions. Total additions to the Retirement Fund were $1.4 billion, $1.1 billion or 363% higher than last fiscal year. Significant changes are discussed in the following page.

- Employer contribution increased by $26.7 million, partly from the increase in required contribution (from 33.67% last fiscal year to 37.86% this fiscal year) and partly from the overall increase in payroll.

- Employee contribution increased by $3.3 million, partly from the increase in required contribution (from 12.11% last fiscal year to 12.46% this fiscal year) and partly from the overall increase in pensionable income of 1.2%.

- Supplemental contribution from the County was $39.7 million (versus $0 last fiscal year). This amount was intended to catch up missing contribution of $29.7 million slated for fiscal year 2019-20 and scheduled contribution of $10 million for fiscal year 2020-21. Under a Memorandum of Understanding between the County and SamCERA, the County can make supplemental contributions at its discretion to accelerate the payoff of its unfunded liability.

- Interest and dividends increased by $8.5 million. The increase was spread across the entire portfolio because of positive returns from investments.

- Net appreciation in fair value of investments was $1.1 billion higher than last fiscal year. The robust strength in equity markets created a net increase in fair value of $125 million in fixed income assets, $650 million in public equity, $150 million in alternatives as well as $150 million in inflation hedge assets. The return from the entire portfolio this year was 24.3%, significantly higher than the -0.2% the previous year.

- Investment expenses increased by $23.3 million. Robust returns from investments accelerated the growth in the overall value of assets under management, reflecting strong performances achieved by many of SamCERA's investment managers and causing a proportional increase in both management and performance fees.

Deductions. Total deductions from the Retirement Fund were $270.6 million, $16.3 million or 6% higher than last fiscal year. Significant changes are explained below:

- Benefits were $17.3 million, or 7%, higher than last fiscal year. The increase was due mainly to the annual cost of living adjustment and a modest increase in the number of retirees receiving pension benefits.

- Administrative expenses went up by $0.7 million compared to a year ago, primarily due to scheduled increases in salaries, benefits, and rental for leased facilities.

- Information technology expenses went down by $0.7 million compared to a year ago. To support post-implementation services, a total of $0.6 million was used in the previous fiscal year to acquire warranty for the latest system upgrade and service hours for the years to come.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

August 24, 2021 Agenda Item 4.13

TO: Board of Retirement

FROM: Tat-Ling Chow, Finance Officer Chow Tat Ling
Tariq Ali, Chief Technology Officer
Chezelle Milan, Senior Accountant
Lilibeth Dames, Investment Analyst Lilibeth Dames

SUBJECT: Preliminary Report on Budget-to-Actual for the Fiscal Year Ended June 30, 2021

Recommendation
Accept the Preliminary Report on Budget-to-Actual for the fiscal year ended June 30, 2021.

Background
SamCERA's budget consists of the following three budget units:

1. Administrative Budget – covers personnel expenses (salaries and benefits) and administrative overhead (services and supplies). The administrative budget cannot exceed the mandated limit of 0.21% of the accrued actuarial liability of the retirement fund (Government Code §31580.2(a)).

2. Technology Budget – covers expenses for computer software, computer hardware, and computer technology consulting services in support of these computer products and is not subject to the mandated limit of 0.21% discussed above (Government Code §31580.2(b)).

3. Professional Services Budget – covers costs for actuarial consulting services, custodial services, investment management, investment consulting services, and outside legal services. (Government Code §31596.1).

Discussion
The actual-to-budget comparison in the following sections indicated that SamCERA's actual spending during fiscal year 2020-21 was mostly on track except for investment management fees, which were much higher than anticipated due to robust growth in assets under management.

Administrative Budget. About 98% of the administrative budget (or $7.1 million) was used during fiscal year 2020-21. This was a good indicator that expenses were overall in line with projections and under control. The following table summarizes all administrative expenses with explanations as to why the actual results of certain items significantly differ from the projected outcomes.

	Budget FY 20-21	Actual FY 20-21	% of Budget Used	(Over)/Under Budget
Salaries and Benefits				
Salaries	$ 3,705,944	$ 3,774,552	102%	$ (68,608)
Benefits	1,842,223	1,880,428	102%	(38,205)
Total Salaries and Benefits	5,548,167	5,654,980	102%	(106,813)
Services and Supplies				
Board Expenses	8,000	6,100	76%	1,900
Insurance	72,050	86,075	119%	(14,025)
Medical Record and Hearing Services	75,000	46,719	62%	28,281
Member Education	63,750	56,198	88%	7,552
Education and Conference	98,914	20,399	21%	78,515
Transportation and Lodging	90,910	33,836	37%	57,074
Property and Equipment	24,082	18,899	78%	5,183
General Office Supplies	37,127	24,551	66%	12,576
Postage and Printing	25,000	14,358	57%	10,642
Leased Facilities	655,272	646,337	99%	8,935
County Services	349,711	389,581	111%	(39,870)
Audit Services	60,000	48,617	81%	11,383
Other Administration	125,000	13,052	10%	111,948
Total Services and Supplies	1,684,816	1,404,722	83%	280,094
Total	$ 7,232,983	$ 7,059,702	98%	$ 173,281

Salaries and Benefits – Total expenses were $5.7 million, slightly above the budget by 2%. The key factors are explained below.

- Salaries – The Chief Legal Counsel position was double filled for six weeks to ensure a successful transition between the past and present incumbents. In addition, the cash-out of terminal pay and accrued holiday time was slightly higher than anticipated.

- Benefits – The projected pension contributions slightly fell short of the actual.

Services and Supplies – Total expenses were $1.4 million, moderately below budget by 17%. The following are the areas in which the actual expenses were significantly different from estimated:

- *Insurance.* The premium for a one-year fiduciary liability insurance policy surged by nearly 20%, way above projections.

- *Medical Record and Hearing Services.* The actual level of services was moderately below budget. Only a handful of members applying for disability were recommended to take independent medical evaluation. In addition, only one formal hearing was held for a disability case.

- *Member Education*. The surplus was primarily from "no show" registrants. Specific educational courses are consistently offered to help members enhance their financial knowledge in retirement planning. Departments are required to pay a pre-determined amount for failure of the member to show up after enrollment.

- *Education and Conference* and *Transportation and Lodging*. Training, conferences, and related traveling and lodging expenses were significantly below projections. Despite anticipated reopening of businesses in the second half of the fiscal year, on-site training and conferences were hindered by the rising cases of virus variants.

- *General Office Supplies*. The usage of general office supplies was modestly below expectation as staff continued to work remotely almost the entire fiscal year until mid-June of 2021.

- *Postage and Printing*. The actual spending in mailing and printing was far below budget. Except for January 2021, mailing of monthly pension benefit statements was suspended since the pandemic outbreak. Additionally, communications with members were mostly conveyed through digital devices while staff were telecommuting.

- *County Services*. The budget overrun was mainly triggered by sharing "indirect costs" as determined by the County's Cost Allocation Plan. The cost sharing requirement was introduced in late August of 2020 and not included in the adopted budget for fiscal year 2020-21. To support its operation, SamCERA employs services from various County departments such as Election, Human Resources, Health System, and Information Services.

- *Audit Services*. Because of the pandemic, both audits (final audit of fiscal year 2019-20 in August 2020 and interim audit of fiscal year 2020-21 in June 2021) were conducted remotely, causing a modest decline in billable amounts. Under the contract with Brown Armstrong Accountancy Corporation, SamCERA agrees to reimburse travel and lodging expenses incurred by auditors while conducting fieldwork on-site.

- *Other Administration*. This budget item was mainly for legal services concerning disability and taxation. The need for such services was much less than anticipated.

Technology Budget. About 59% of the budget was used during the fiscal year. Below is a summary of all technology expenses along with explanations for the significant variances.

	Budget FY 20-21	Actual FY 20-21		% of Budget Used	Under Budget
Computer Equipment and Software	$ 30,000	$ 13,333		44%	$ 16,667
IT Infrastructure - Software License Maintenance	529,500	426,728		81%	102,772
IT Infrastructure - Maintenance Tools & Equipment	300,000	116,426	(a)	39%	183,574
IT Infrastructure - Contract IT Services	306,000	171,601	(b)	56%	134,399
IT Infrastructure - Imaging	50,000	-		0%	50,000
Technology Research and Development	10,000	-		0%	10,000
Total	$ 1,225,500	$ 728,088		59%	$ 497,412

(a) A server of $57,765 and a computer of $8,669 were capitalized and reported under fixed assets on financial reports for the fiscal year ended June 30, 2021.

(b) The mobile application (a work-in-progress) of $150,000 was capitalized and reported under fixed assets on financial reports for the fiscal year ended June 30, 2021.

Note: Depreciation expense of $838,572 is a noncash expense and therefore not included in the adopted budget. This amount is reported on the income statement of the reporting period.

- *Computer Equipment and Software*. Actual spending was far below budget as the need for acquisition or replacement of computer equipment fell short of expectations.
- *IT Infrastructure – Software License Maintenance*. The overall maintenance of the pension administration software was over-estimated by approximately 20%.
- *IT Infrastructure – Maintenance Tools & Equipment*. Actual spending was much less than anticipated. To create a robust business environment in face of emerging needs, funds were set aside to replace existing servers, laptops, and equipment. With priorities shifted to time-sensitive projects, scheduled upgrades to the wireless microwave, WiFi network, and telephone system were suspended.
- *IT Infrastructure – Contract IT Services*. Actual spending was way below budget. Certain projects, which required outside professional help, were not fully completed due to time constraints. These projects included developing a new mobile application and enhancing the audio and video technologies in the conference and Board rooms.
- *IT Infrastructure – Imaging*. A plan was slated to convert paper documents held by Finance, Investment and Administration teams to digital by fiscal year-end using the County SharePoint software solution. This plan was temporarily put on hold as staff were not available on-site to support the conversion due to telecommuting.
- *Technology Research and Development (R&D)*. The R&D budget was setup to explore new technologies that may help improve operations and member services. Staff did not expend the resources allocated for R&D as priorities were given to time-sensitive projects such as putting a new mobile application in operation.

Professional Services Budget. For the fiscal year ended June 30, 2021, the actual professional service expenses totaled $43.8 million, or 73.6 basis points (or one hundredth of one percent) of the total fund. Overall expenses were above projections. Below is a summary of professional services expenses incurred during the fiscal year.

Investment Management & Other Professional Services

Service	Actual Fee (bps)	Projected Fee FY 20-21	Actual Fee FY 20-21	% of Projected Fee Used
Investment Management	71.9	$ 29,118,571	$ 42,785,612	147%
Other Professional Services	1.7	1,114,000	1,009,444	91%
TOTAL	73.6	$ 30,232,571	$ 43,795,056	145%

- *Investment management fees* are driven by contractual agreements and based on assets under management, the amount of capital committed, and/or investment performance.

Investment Management

Investment	Actual Fee (bps)	Projected Fee FY 20-21	Actual Fee FY 20-21	% of Projected Fee Used
Total Public Equity	19.7	$ 5,823,940	$ 4,759,408	82%
Total Fixed Income	81.6	6,534,500	12,611,613	193%
Total Alternative Assets	179.8	10,750,678	15,110,795	141%
Total Inflation Hedge	108.0	5,778,203	10,074,069	174%
Total Cash Overlay	N/A	231,250	229,727	99%
TOTAL	71.9	$ 29,118,571	$ 42,785,612	147%

The following are the areas where the actual expenses significantly differ from projected.

- *Public Equity*. Total management fees for Public Equity were under budget, due mainly to the overestimation of performance fees for one equity fund.

- *Fixed Income*. Total management fees nearly doubled the projected fees, due primarily to the underestimation of performance fees for three opportunistic credit funds, one fixed income fund, and one private credit funds. The performance of these funds was beyond expectations.

- *Alternative Assets*. Total management fees were considerably higher than anticipated, partly due to a new private equity fund that was added after the budget process and partly due to the underestimation of performance fees for three private equity funds.

- *Inflation Hedge*. Total management fees were significantly higher than estimated, partly due to a new real estate fund that was added after the budget process and partly due to the underestimation of performance fees for three private real asset funds and one real estate fund.

- *Other professional service fees,* based primarily on contractual agreements, were closely in line with budget. The triennial experience study, started in May 2020 and completed in July 2020, was simultaneously conducted by Milliman and Cheiron. While the budget for the entire study was appropriated in fiscal year 2020-21, the services performed through June 30, 2020 were properly recorded as expenses in fiscal year 2019-20. Total fees for the entire study were on budget after taking this circumstance into consideration.

Other Professional Services

Contractor	Service	Actual Fee (bps)	Projected Fee FY 20-21	Actual Fee FY 20-21	% of Projected Fee Used
Milliman Inc.	Actuarial Consulting	0.2	$ 139,000	$ 106,850	77%
Cheiron Inc.	Actuarial Audit Consulting	0.1	90,000	54,683	61%
Verus Investments	Investment Consulting	0.8	535,000	499,211	93%
Northern Trust	Custodian	0.6	350,000	348,700	100%
	TOTAL	1.7	$ 1,114,000	$ 1,009,444	91%

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

August 24, 2021 Agenda Item 4.14

TO: Board of Retirement

FROM: Scott Hood, Chief Executive Officer

SUBJECT: Policy and Procedure for Correcting Inaccuracies Relating to Member Contributions, Withdrawals and the Payment of Benefits

Recommendation
Reaffirm the Board of Retirement's Policy and Procedure for Correcting Inaccuracies Relating to Member Contributions, Withdrawals and the Payment of Benefits.

Background
The Board has 24 policies which it has adopted at various times to govern the Board in its activities and to guide staff's administration of the system. Staff brings these polices to the Board for periodic reaffirmation or amendment on an as needed basis. The policy before the Board today is its Policy and Procedure for Correcting Inaccuracies Relating to Member Contributions, Withdrawals and the Payment of Benefits which is in substantially the same form as the policy reaffirmed in 2018 with minor modifications for readability. A copy of the revised policy which shows the revisions made to the 2018 policy is attached.

Discussion
The Board has a fiduciary obligation to the retirement fund to conserve assets and protect the integrity of the fund for the benefit of the members and beneficiaries of SamCERA.

The "Policy and Procedures for the Correction of Inaccuracies Relating to Member Accounts" reflects the Board's priorities of:

- Collecting member contributions and issuing all disbursements in accordance with the law;
- Correcting inaccuracies as soon as administratively feasible once identified and verified;
- Recovering under-payments of member contributions and over-payments of funds where it is both in accordance with the law and reasonable to do so in the opinion of the Board; and
- Remitting to a member the amount of any over-payment of contributions or under-payment of benefits consistent with this policy and procedures.

The correction procedures differ depending on whether the member is an active member, retiree, and whether the inaccuracy involves a lump sum withdrawal/rollover. The steps also differ if the amount owed is greater or less than $50. Additionally, because unique situations inevitably will arise, the policy grants the Chief Executive Officer authority to make minor adjustments in implementing the policy so that it can be accomplished in a fair and reasonable manner.

Staff recommends that the policy, as modified, be reaffirmed by the Board.

Attachment
Policy and Procedure for Correcting Inaccuracies Relating to Member Contributions, Withdrawals and the Payment of Benefits

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

POLICY AND PROCEDURE FOR THE CORRECTION OF INACCURACIES RELATING TO MEMBER CONTRIBUTIONS, WITHDRAWALS, AND THE PAYMENT OF BENEFITS

I. POLICY OF THE BOARD OF RETIREMENT

Pursuant to the Board of Retirement's ("Board's") fiduciary duty to conserve retirement fund assets and protect the integrity of the fund for the benefit of the members and beneficiaries, it is the policy of the Board:

- To collect member contributions and issue all disbursements in accordance with the law;
- To correct inaccuracies as soon as administratively feasible once identified and verified;
- To recover under-payments of member contributions and over-payments of SamCERA funds where it is both in accordance with the law and reasonable to do so in the opinion of the Board; and
- To remit to a member the amount of any overpayment in contributions or underpayment of benefits consistent with this policy and procedures.

For purposes of this policy, the term Chief Executive Officer ("CEO") means the Chief Executive Officer and the Chief Executive Officer's designee. The term "Member" means member, beneficiary, or survivor.

This Policy is designed for use when calculation and other inaccuracies affect an individual or small number of members. In the event of a system-wide inaccuracy that affects a larger number of members, the Board may direct staff to implement a system-wide correction process that it determines is appropriate under the circumstances.

In the event of any inconsistency between applicable state and federal law or regulation and this Policy, the law or regulation shall take precedence.

II. PROCEDURE FOR RESOLVING CONTRIBUTION INACCURACIES

A. Under-Payment of Member Contributions Discovered While A Member Is Still Active.

1. The CEO shall confirm the amount of contributions that the member should have paid, the period of time that the under-payment occurred, and the total amount of contributions owed.

2. Staff shall promptly notify the employer to correct the inaccuracy on a going-forward basis so that the correct amount of contributions is deducted from the member's bi-weekly pay. The member shall be notified as well.

3. With regard to the collection of under-payments in arrears, the total amount of the under-payment and the applicable interest on that amount shall be collected. The interest shall be assessed at the rate(s) of interest credited to the members' accounts for the period in which the under-payments were occurring and shall be applied to the outstanding amount due until such time as a repayment arrangement is commenced. Thereafter, the rate of interest during the repayment period shall be the assumed actuarial rate of return applicable at the commencement of the repayment. If the under-payment by the member was due to an incorrect pick-up or cost share, or COLA cost share in which the employer paid rather than the member, no interest shall be assessed.

4. If the full amount of the past due contributions and interest equals $50 or less, staff shall send a notice setting forth:

   (a) The total amount of contributions and interest owed; and

   (b) The amount of the additional contributions to be deducted from the member's next payroll.

5. If the full amount of the past due contributions and interest to be collected will exceed $50, staff shall undertake a collection effort that shall commence after sending a notice to the member setting forth:

   (a) The total amount of contributions and interest owed and the rate that interest will continue to accrue should repayment commence;

   (b) The bi-weekly amount of the additional contributions to be deducted from the member's payroll;

   (c) The commencement date of the collection and the number of affected pay periods;

   (d) The member's right to object to the collection of the additional contributions and/or collection method and the deadline for such objection; and

   (e) The fact that repayment will commence if a written objection is not received within 15 days.

6. For those members whom staff has determined are on disability leave and the payments received through their employer are insufficient to allow the correct deduction of member contributions, staff shall send a notice to the member stating that the member:

   (a) Must pay the amount of contributions not correctly deducted while on disability leave;

   (b) Must pay any assessed interest on the unpaid contributions until repayment is made;

   (c) Can pay the amounts owed by check(s) while still on leave; and

   (d) Will have any outstanding amount of contributions and interest owed deducted from their bi-weekly payroll upon return to active status in addition to regular contributions until repayment is completed.

   Staff will send a follow-up letter to the member regarding the required repayment of contributions and interest upon determination that the member has either: returned to active service, applied for service or disability retirement or terminated employment.

7. All methods of repayments should be completed no later than three years from the date of the notice to member of the amount owed unless otherwise extended by the CEO.

8. Notwithstanding paragraphs 5, 6, and 7 above, the full amount of the required contributions and interest must be paid prior to the commencement of any benefit payments to the member unless the member had entered into an approved repayment plan which authorizes the automatic deduction of the repayments from the member's benefit payments.

9. If the member withdraws/rolls over funds, staff shall note the under-payment plus accrued interest amount owing in the member's account and that this amount is to be repaid in addition to any future redeposit made by the member.

B. Under-Payment of Member Contributions Discovered After Member Has Left Active Status.

1. The CEO shall confirm the amount of contributions that the member should have paid, the period of time that the under-payment occurred, and the total amount of the under-payment of contributions by the member.

2. With regard to the collection of under-payments in arrears, the amount of the under-payment and the applicable interest on that amount shall be collected. If the under-payment was due to an incorrect pick-up or cost share, or COLA cost share in which the employer paid rather than the member, no interest shall be assessed.

3. Interest shall be assessed at the rate(s) of interest credited to the member's account for the period in which the under-payments were occurring and shall be applied to the outstanding amount due until such time as a repayment arrangement is commenced. Thereafter, the rate of interest during the repayment period shall be the assumed actuarial rate of return applicable at the commencement of the repayment.

4. If the member withdraws/rolls over funds, staff shall note the under-payment plus accrued interest in the member's account and that this amount must be repaid in addition to any future redeposit made by the member.

5. If the member has left funds on deposit or has already retired, staff shall endeavor to recover under-payments and interest by: (a) a lump sum payment from the member, (b) installment payments from the member, (c) offsets to future benefit payments to the member, or (d) a combination of the foregoing, unless the Board, in its discretion and because of legal or practical considerations, determines that other action is warranted.

6. If the member has left active membership and if the CEO believes that considerations of cost effectiveness make it prudent and reasonable to not pursue recovery of under-payments where the cumulative total amount of member contributions underpaid, not including interest, is $50 or less, then no further action is required.

7. The CEO may, on the advice of legal counsel, compromise the recovery of under-payments when the total amount of under-payment, not including interest, is $5,000 or less. Only the Board may compromise claims in which the total amount of under-payment, not including interest, is greater than $5,000. Among other factors, the likelihood of collection, the cost of collection, the amount of possible recovery, and extreme hardship to the member will be considered by the CEO and/or the Board when determining whether to compromise a claim. Compromising claims may include a different method of repayment than is otherwise provided by this Policy and/or a partial reduction of the amounts underpaid or interest due.

8. The CEO's collection process shall include a notice to the member setting forth:

   (a) The total amount of contributions and interest owed and the fact that interest will continue to accrue on the contributions owed until the repayment is made;

   (b) An agreement to pay the amounts owed with the payment options;

   (c) A statement that, if the member is receiving a monthly payment, a repayment by equal installments for the amount of the contributions and interest will be deducted from benefit payments over the same length of time that the under-payments occurred and will go into effect by default if a written response from the member is not received within 30 days following the date the letter was mailed; and

   (d) The member's right to appeal the collection of the additional contributions and/or collection method and the deadline for such action.

9. If the amount of the under-payment, not including interest, is greater than $5,000, staff will attempt to contact the member by phone to discuss the contents of the letter before the letter is sent out for delivery.

10. The CEO is hereby authorized to pursue all legal remedies to collect under-payments, including making a claim on an estate or trust, if appropriate.

C. Over-Payment of Member Contributions Discovered While Member Is Still Active.

1. The CEO shall confirm the amount of contributions that the member should have paid, the period of time that the over-payment occurred, and the total amount of the over-payment of contributions.

2. Staff shall promptly notify the employer to correct the inaccuracy on a going-forward basis so that the correct amount of contributions is deducted from the member's bi-weekly pay.

3. Staff shall promptly notify the employer that the member is entitled to a lump sum credit equal to the amount of the over-payment plus the interest credited to the member's account on the over-payment. The adjustment reflecting the credit applicable to future deductions shall be made in the

member's pay from their SamCERA participating employer as soon as is reasonably practicable following the confirmation of the over-payment.

4. Staff shall notify the member of the adjustments made to the deductions.

D. Over-payment of Member Contributions Discovered After Member Has Left Active Status.

1. The CEO shall confirm the amount of contributions that the member should have paid, the period of time that the over-payment occurred, and the total amount of the over-payment of contributions.

2. Staff shall ensure that the member receives a lump sum payment equal to the amount of the over-payment plus the interest credited to the member's account on the over-payment. If the member has retired, then the interest credited to the member's account on the over-payment up until the date of retirement shall be calculated, and interest on the overpaid amount accruing after the member's date of retirement shall be calculated using the applicable assumed actuarial rate of return. The payment shall be made as soon as is reasonably practicable following the confirmation of the over-payment and shall be made in a manner that is in compliance with requirements contained in the Internal Revenue Code and applicable Internal Revenue Service regulations.

3. If the member has died prior to payment of the lump sum amount due, the following procedures will be followed:

   (a) If the member has named a designated beneficiary, the payment will be made directly to the designated beneficiary.

   (b) If there is no beneficiary but there is an open estate (*i.e.*, no order for final distribution yet), payment will be made to the estate (through the personal representative). If an estate was not established, distribution will be made in accordance with any applicable and valid Affidavit for Payment of Personal Property on file with SamCERA pursuant to Probate Code Section 13101. In cases where there is no designated beneficiary and the total amount of over-payment is less than $50, staff need not take proactive measures to locate the person(s) entitled to such funds. All claims presented to SamCERA, however, will be considered regardless of size.

III. PROCEDURE FOR RESOLVING BENEFIT PAYMENT INACCURACIES

A. Under-payments to Members Who Withdrew/Rolled Over Funds or Retired.

1. The CEO shall confirm the amount of the under-payment contained in the withdrawal/rollover or monthly benefit.

2. If the member has withdrawn/rolled over an incorrect amount of contributions and interest, staff shall promptly contact the member and remit to the member the amount owed and interest accrued. Interest should be paid at the rate(s) of interest credited to the member's account for the period in which the under-payments were made. The correction shall be on the next Consent Agenda for ratification by the Board.

3. For the under-payment of a monthly benefit, staff promptly shall correct the monthly benefit amount on a going-forward basis and make a lump sum payment of the amount owed in arrears, for up to three years from the date of the discovery of the under-payment, plus the interest that accrued at the applicable assumed actuarial rate of return and staff shall report the correction in the next Consent Agenda for ratification by the Board.

4. If a monthly benefit is no longer being paid, staff shall make a reasonable attempt to pay the amount of the under-payment for up to three years from the date of the discovery of the under-payment, plus interest at the assumed rate of return to the beneficiary, survivor, or estate of the deceased recipient and shall report such action in the next Consent Agenda for ratification by the Board.

B. Over-payments to Members Who Withdrew/Rolled Over Funds or Retired.

1. The CEO shall confirm the amount of the over-payment contained in the withdrawal/rollover or monthly benefit.

2. For withdrawn/rolled over contributions and interest, staff shall contact the member and request payment of the amount of the over-payment plus interest at the rate of the applicable assumed actuarial rate of return from date of withdrawal/rollover to the completion of the repayment. If payment is not made, the collection procedure is set forth in paragraph 5 below.

3. For the over-payment of a monthly benefit, staff shall correct the monthly benefit on a going-forward basis at the earliest practical time after confirming the inaccuracy.

4. For the over-payment of a monthly benefit, staff shall take all reasonable steps to recover the full amount of all past over-payments made within three years from the date of the discovery of the over-payment, interest shall

accrue from the dates of the over-payments until the completion of the repayment at the applicable assumed rate of return. Collection of over-payments that are subject to the provisions of paragraph 12, shall not be limited to three years.

5. Staff shall endeavor to recover over-payments by: (a) a lump sum payment from the member, (b) periodic installment payments from the member, (c) offsetting the amount to be recovered against future benefits, or (d) a combination of these methods; unless the Board, in its discretion and because of legal or practical considerations, determines that another action is warranted, including but not limited to repayment by the employer. The member shall have a right to appeal the collection of the over-payment amount and/or collection method and the deadline for such action.

6. If the CEO believes that considerations of cost effectiveness make it prudent and reasonable to not pursue recovery of over-payments where the cumulative total amount of the over-payment, not including interest, is $50 or less, then no further steps shall be taken.

7. The CEO shall have authority, on the advice of legal counsel, to compromise recovery of over-payments when the total amount of over-payment, not including interest, is $5,000 or less. Only the Board may compromise claims in which the total amount of over-payment, not including interest, is greater than $5,000. Among other things, the likelihood of collection, the cost of collection, the amount of possible recovery and the extreme hardship to the member will be considered by the CEO and/or the Board when determining whether to compromise a claim. Compromising claims may include a different method of repayment than is otherwise provided by this Policy and/or a partial forgiveness of the amounts overpaid.

8. Upon confirmation of an over-payment, staff shall send a letter by certified mail, return receipt requested, or by express delivery service, to the member advising the member of the over-payment and proposing a repayment schedule, as follows:

   (a) The letter will identify the circumstances of the over-payment and the fact that adjustments will be made to all future benefit payments.

   (b) The letter will request payment of the amount overpaid and interest, subject to the provisions of this Policy.

   (c) The letter will include an agreement to repay excess benefits and interest and a consent form for the spouse, survivor, or beneficiary, if applicable.

(d) The agreement to repay excess benefits and interest will provide options including, but not limited to:

Option 1 — equal installments over the same length of time that the over-payments occurred, with interest that accrued during the over-payment period and during the repayment period.

Option 2 — lump sum payment for the full amount overpaid, with accrued interest that accrued during the over-payment period and during the repayment period.

Option 3 — reduction of monthly benefit until the over-payment is paid in full, with interest applied during the over-payment period and during the repayment period.

(e) The letter and agreement to repay excess benefits may provide that Option 3 will go into effect by default if a written response from the member is not received within 30 days following the date the letter was mailed.

(f) The letter shall inform the member of the right to appeal the collection effort and/or collection method and the deadline for such action.

9. If the amount of the over-payment, not including interest, is greater than $5,000, staff will attempt to contact the member by phone to schedule a meeting to discuss the contents of the letter before the letter is sent out for delivery.

10. Staff may pursue all legal remedies to collect over-payments, including making a claim on an estate or trust, if appropriate.

11. Upon the death of the member before full repayment has been made, staff shall endeavor to pursue a claim or claims against the member's estate, survivors, heirs, and/or beneficiaries to recover the unpaid amounts.

12. In cases where the inaccuracy in the calculation of the member's monthly allowance or other benefits was made as a result of either (1) fraudulent reports for compensation made, or caused to be made, by the member for his or her own benefit or (2) the member caused his or her final compensation to be improperly increased or otherwise overstated at the time of retirement and the system applied that overstated amount as the basis for calculating the member's monthly retirement allowance or other

benefits, the correction of this inaccuracy shall be subject to the procedures sets forth in Government Code section 31529.

IV. Chief Executive Officer Implementation Authority

In the implementation of this policy and procedure, the Chief Executive Officer has the authority to make minor adjustments in order that such implementation is accomplished in a fair and reasonable manner consistent with the objectives set forth in Section I. Interest may be waived on inaccuracies caused by systemic constraints or events.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

July 27, 2021 Agenda Item 4.15

TO: Board of Retirement

FROM: Scott Hood, Chief Executive Officer

SUBJECT: Procedure for Felony Forfeitures

Recommendation
Reaffirm the Board of Retirement's "Procedure for Felony Forfeitures."

Background
The Board has 24 policies which it has adopted at various times to govern the Board in its activities and to guide staff's administration of the system. Staff brings these polices to the Board for periodic reaffirmation or amendment on an as needed basis. The policy before the Board today is its Procedure for Felony Forfeitures which is in substantially the same form as the procedure created and approved in August 2018 with minor modifications for readability.

Under the California Public Employees' Pension Reform Act of 2013 (PEPRA), members who have been convicted after January 1, 2013, of a felony, as described below, must forfeit certain accrued rights and benefits in the public retirement system that they are a member of. These accrued rights and benefits are forfeited retroactive to the date of the first commission the crime and the member shall not accrue further benefits. (Govt. Code sections 7522.72 and 7522.74.) A copy of the revised Procedure for Felony Forfeitures which shows the revisions made to the 2018 policy is attached.

Discussion
The Board's procedure provides the member with notice, a right to be heard, and right to appeal staff level decisions prior to any forfeiture action. Input from the member and employer can be given as to whether there should be a forfeiture, and if so, the amount of contributions and benefits impacted by the forfeiture. Several steps allow this continuing input, and includes, if timely requested, the matter being brought to the Board and the Superior Court.

Attachment
Procedure for Felony Forfeitures

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

BOARD OF RETIREMENT PROCEDURE FOR FELONY FORFEITURES

I. PURPOSE

Under the California Public Employees' Pension Reform Act of 2013 (PEPRA), members (also referred to employees herein) who have been convicted on or after January 1, 2013, by a state or federal trial court of any felony under the law for conduct arising out of or in the performance of their official duties, must forfeit all accrued rights and benefits in any public retirement system in which they are a member at the time the felony is committed, retroactive to the first commission date of the crime, and shall not accrue further benefits in that public retirement system, effective on the date of the conviction. (Govt. Code sections 7522.72 and 7522.74.) Following the conviction for any felony, these statutes require the forfeiture of all accrued rights and benefits for conduct:

- Arising out of or in the performance of the member's official duties, <u>or</u>
- In pursuit of the office or appointment, <u>or</u>
- In connection with obtaining salary, disability retirement, service retirement, or other benefits.
- Elected public officers convicted of certain felonies may be subject to a felony forfeiture based on different conduct.

The employee and the prosecuting agency are required by law to notify the employer within 60 days of the felony conviction. The employer is required by law to notify SamCERA within 90 days of an employee's conviction.

II. FELONY FORFEITURE PROCESS

A. Notifying SamCERA of Felony Conviction and Providing Information.

The employer is required by law to notify SamCERA within 90 days of an employee's conviction. (Govt. Code sections 7522.72(f) and 7522.74(f).) In notifying SamCERA of the felony conviction, the employer is required to provide SamCERA with the following information, with a copy sent to the member:

1. Name of member and Social Security number and/or employee ID.

2. Date of conviction which is the date that the member pleads guilty, or when the judge (or jury) decides the case.

3. Date of the earliest of the commission of the felony as reflected in the court proceeding.

4. Name of the court(s) in which the case was heard.

5. Name and contact information for the prosecuting attorney.

6. Description of the felony charges for which the member was convicted.

7. Copy of court documents related to member's conviction/guilty plea.

8. Information relating to whether the felony offense for which the conviction was entered was committed during the conduct or performance of the member's job duties.

B. Review of Information.

Staff will review the charges and determine what additional information, if any, is needed from the employer, the member, and/or the prosecuting agency to make the required determinations. Staff is not limited to the records of the criminal proceeding in gathering the information it believes is appropriate. Staff may request the Board to exercise its subpoena power under Govt. Code section 31535.

C. Notice of Initial Determination.

After staff's initial review, staff will send a Notice of Initial Determination to the member and the employer as to the applicability of the felony forfeiture law to the facts. The Notice will include:

1. A copy of this Procedure.

2. A statement on applicability of the felony forfeiture statutes and, if applicable, a statement of the impact of the forfeiture on the member's benefits and the applicable proposed actions as set forth in below:

3. For those members who are retired:

   (a) The Notice will state that the amount of member contributions to be refunded to the member without interest. If there has been an overpayment, the contribution refund, without interest, will be an offset to the overpayment and the refund amount will only be those the contributions exceed the amount of the overpayment (see Govt. Code section 7522.72(d)(1).) For purposes of this Procedure, "overpayment" includes compounded interest on the principal amount of any such overpayment at SamCERA's actuarial assumed rate(s) of interest in effect during the forfeiture period.

(b) Staff will review the member's account to determine the member's service credits and final average compensation ("FAC") as if the member deferred as of the date of the first commission of the subject felony. Staff will then determine whether the member had sufficient service credit to retire as of the date of first commission of the subject felony.

(i) If the member did not have sufficient service credit to retire as of the date of first commission of the subject felony, the Notice will state that the retirement will be rescinded, and the member placed into a deferred status until the member has sufficient eligible service to qualify for retirement.

(ii) If the member did have sufficient eligible service credit to retire as of the date of first commission of the felony, the Notice will state the recalculated retirement allowance reflecting the changes to service credits, age factor and final average salary.

4. For those members who are active or deferred:

(a) Staff will determine the amount of contributions paid, interest accrued on said contributions, and service credit earned from the date of first commission of the subject felony to the date of conviction.

(b) The Notice will list the amount of service credit and funds to be removed from the member's account and the amount of interest on those contributions to be forfeited.

(c) The Notice will state that for non-forfeited funds remaining in the account, interest will continue to accrue.

(d) The Notice will list the date that the member will be deemed to be a deferred member for all purposes, including but not limited to retirement eligibility. This date will be the date of first commission of the subject felony.

5. The Notice of Initial Determination shall list the deadline to respond which shall be no less than three weeks from the date of the Notice.

D. Response to Initial Determination

Prior to the deadline stated in the Notice of the Initial Determination, both the member and the employer may provide additional input regarding the applicability to the felony forfeiture provisions and/or the impact of the forfeiture as described in the Notice. Such additional information from the member or employer shall be shared by SamCERA with the employer or member, as applicable. After the member and or employer have submitted any additional information or comments, staff's initial determination may be amended or not. Staff will notify the member and the employer if the Initial Determination will be amended or not. Any amended Initial Determination will be sent to the employee and employer for information only. The Initial Determination, as may be amended (or not), and all supporting documents will be given to the Chief Executive Officer for review.

E. Chief Executive Officer Determination

After the review of the materials, the Chief Executive Officer or the Chief Executive Officer's designee, will send a written decision to the member and the employer that will, among other items, state the Chief Executive's Officer's determination on the following:

1. Whether or not the felony conviction arose out of or in the performance of official duties, or in pursuit of the office or appointment, or in connection with obtaining salary, disability retirement, service retirement, or other benefits, or was otherwise subject to forfeiture. If the determination is that the member's account is subject to forfeiture, the Notice will state:

2. The date of first commission of the subject felony and date of conviction.

3. The amount of service credit, contributions, and interest to be forfeited by the active, retired, or deferred member.

4. For a retired member, the amount of any overpayments, the monthly adjustment going forward and the manner and time in which SamCERA will recover any overpaid benefits due from the member and the effective date of the changes.

5. Any additional proposed actions to be taken as set forth in Section C (3) and (4) above.

6. Ability to challenge the Chief Executive Officer's determination by bringing the matter to the Board of Retirement and the deadline to submit that written challenge.

F. Challenging the Chief Executive Officer's Determination

The member may challenge the Chief Executive Officer's decision by submitting a written challenge no later than 30 days from the date of written notice of the Chief Executive Officer's Notice of Determination.

1. If the Chief Executive Officer's decision is not timely challenged, it will be deemed final and binding.

2. A timely challenge will be heard by the Board of Retirement. Notice of the date and time of the hearing by the Board of Retirement will be provided to the member along with any instructions regarding the submission of documents and other evidence as necessary.

3. The matter will be placed on the Board of Retirement's regular public agenda for its review, findings and decision. In making its determination, the Board may appoint a hearing officer to make findings and recommendations in accordance with Govt. Code section 31533.

G. Appeal of the Action of the Board.

If the member is dissatisfied with the Board's action, the member may obtain judicial review by filing a petition for a writ of mandate in accordance with the Code of Civil Procedure within 90 days of the date of the written notice of the Board's action. If a petition for writ of mandate is not timely filed, the Board's action shall be deemed final and binding.

III. ACTIONS TAKEN AFTER A DECISION TO FORFEIT IS FINAL

SamCERA will notify the Court and District Attorney at least three business days prior to the release of the forfeited funds to the member. (Govt. Code sections 7522.72(d)(2) and 7522.74(d)(2).)

The corresponding employer contributions will stay in the employer's advance reserve account and will be taken into consideration at the end of the fiscal year as part of the reconciliation process used for employer contributions.

If there is a reversal of the conviction by an appellate court decision, the member has the option to redeposit the contributions from the forfeited period. (Govt. Code sections 7522.72(h) and 7522.74(h).)

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

August 24, 2021 Agenda Item 6.1

TO: Board of Retirement

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

SUBJECT: Preliminary Monthly Portfolio Performance Report for the Period Ended July 31, 2021

Recommendation

Accept the preliminary performance report dated July 31, 2021.

Background

The preliminary monthly portfolio performance report for July will not be available in time for the Board mailing. The report will be distributed to the Board ahead of the August Board meeting.

Discussion

Equity performance was mixed during the month. In the U.S., large-cap equity markets continued their drive higher while U.S. small-cap and emerging markets were down. The U.S. equity market (measured by the S&P 500 Index) was up 2.4%, while small-capitalization stocks were down 3.6% on the month. Developed international equity (as measured by MSCI EAFE) was up 0.8% while emerging markets were down 6.7%. Emerging markets performance was impacted by Delta variant concerns and the Chinese regulatory crackdown on various companies/sectors.

Economic data was mostly positive as the economic recovery continued to gain momentum. The first estimate of real GDP grew at an annual rate of 6.5% in the second quarter, which while high by historical norms, was below expectations. Manufacturing was moderately positive during the month, but weaker than previous months. Consumer confidence and the U.S. labor market also showed strength, with 943,000 new jobs added in July.

The general U.S. fixed income market was higher by 1.1% as interest rates fell. The 10-year U.S. Treasury yield was lower by 25 basis points during the month and ended at 1.22% by month-end. High Yield returns were up 0.4%, and the Bloomberg Commodity Index rose by 1.8%.

Attachment

Verus Capital Market Update

Verus

PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS

JULY 2021

Capital Markets Update

Market commentary

U.S. ECONOMICS

— U.S. GDP rose at an annualized quarterly rate of 6.5% in Q2 (+12.2% YoY), bringing it past the high-water mark set before the pandemic. The overall increase was bolstered by the consumer, as personal expenditures rose 11.8%, and the personal savings rate dipped from 20.8% to 10.9%. This indicates Americans are likely spending cash saved during the pandemic.

— The July jobs report surprised to the upside and added 943,000 non-farm payrolls, exceeding economists' forecasts by roughly 73,000. Average hourly earnings also increased by 0.4% for the month, up 4% year-over-year as inflationary pressures continue to be a concern.

— The headline unemployment rate dropped to 5.4% in July and the labor force participation rate ticked up to 61.7%. The U.S. Job market remains a key barometer on economic recovery as the fed monitors whether "substantial further progress" in the labor market might warrant changes to monetary policy.

U.S. EQUITIES

— The S&P 500 (+2.4%) outperformed the NASDAQ (+1.9%) with tailwinds from real estate, and healthcare. Almost half of the relative outperformance can be explained by the S&P 500 having a large relative underweight to Amazon stock which posted a lackluster return of -3.3% for the month.

— In July, the S&P 500 posted seven new daily highs. The index has managed to post at least one new daily high in every month since November of 2020.

— All 11 S&P 500 major GICS sectors have reported positive earnings growth year-over-year, led by the sectors hit hardest by the pandemic such as industrials and energy.

U.S. FIXED INCOME

— The Federal Open Market Committee held the fed funds range at 0.00% - 0.25%, as expected. Chairman Jerome Powell reiterated that the economic recovery has been strong, but that "substantial further progress" is needed before the Fed will begin to tighten policy.

— The long end of the curve flattened and the yield on the 30-year Treasury fell 17 basis points. This move came as a surprise for many because positive labor market data tends to place upward pressure on interest rates. Uncertainty surrounding the increased spread of the Delta variant might have played a role in the move.

— As yields dropped, longer duration bond indexes outperformed most risk assets over the month (BBgBarc US Treasury Long +3.6%).

INTERNATIONAL MARKETS

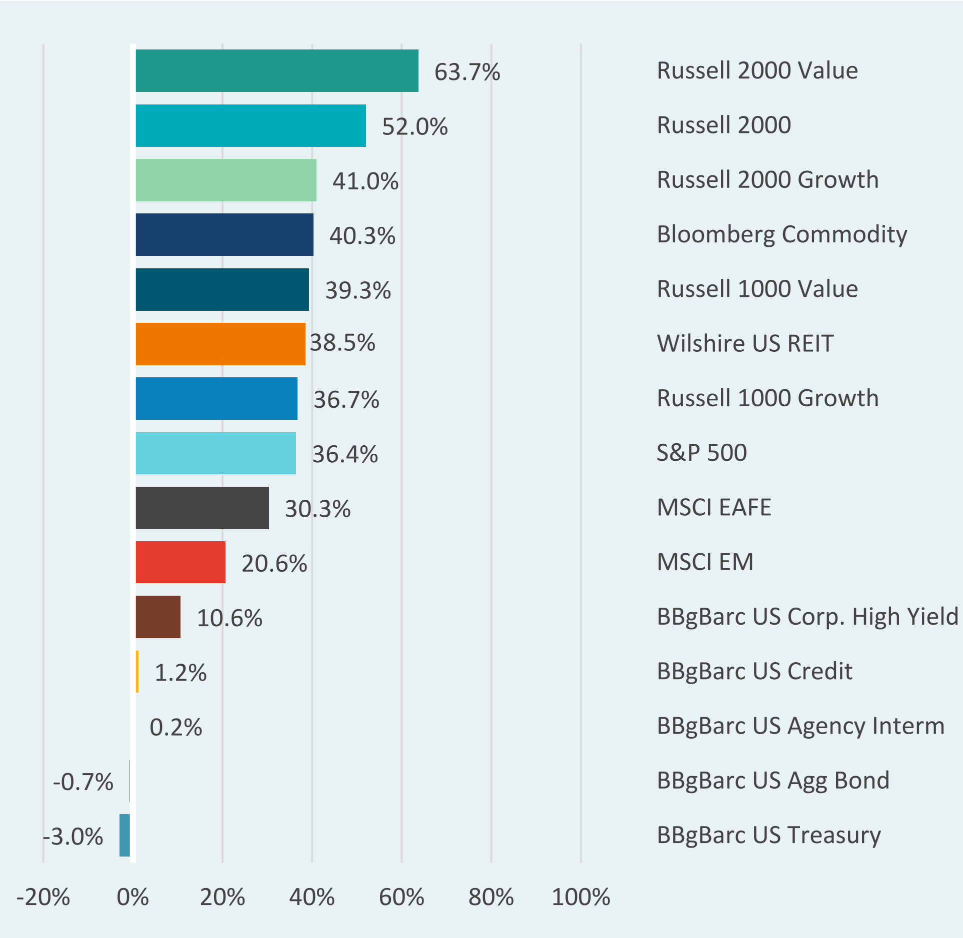
— The Covid-19 Delta variant has spread quickly around the world. The CDC has warned that this new strain is more contagious and may pose greater risks. A report from the Israeli Health Ministry found that the Pfizer vaccine is just 39% effective at preventing infection, though it remains 88% effective against hospitalization and 91% effective against severe virus illnesses.

— For the month of July, the Shanghai Composite Index fell -5.4%. The Hong Kong market experienced even sharper losses, at -9.9% during the month.

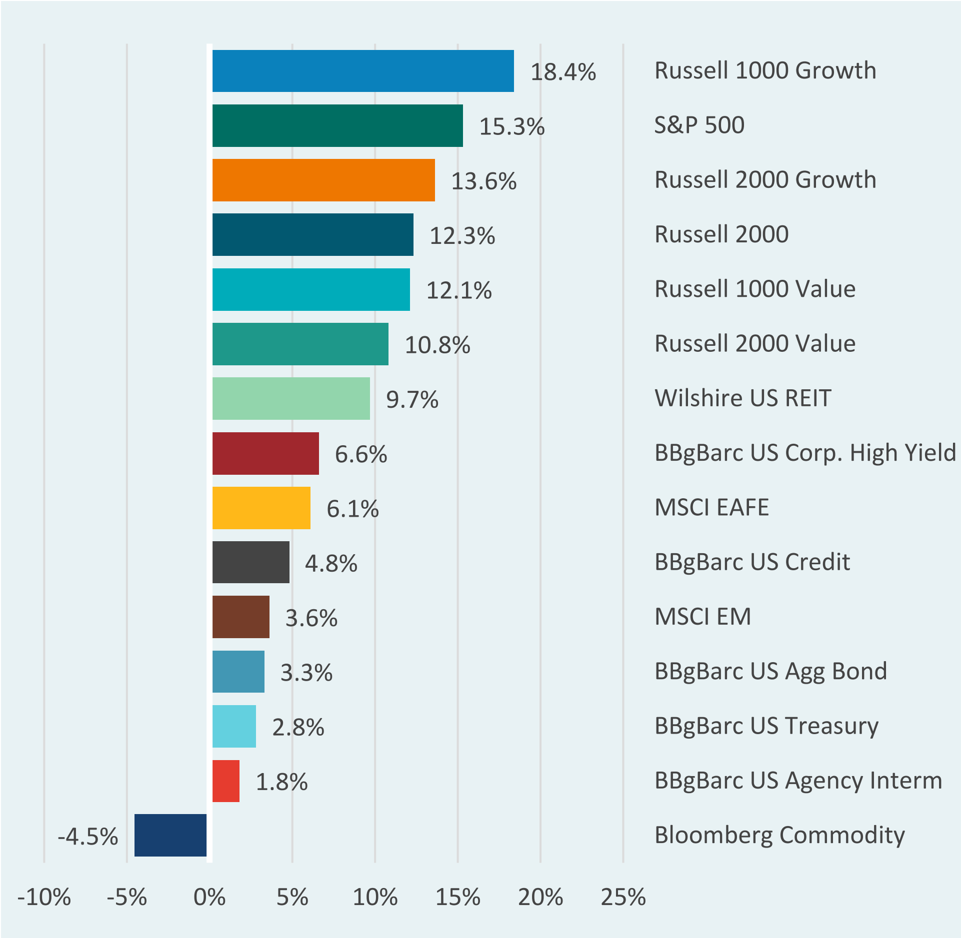
— The slide in Chinese markets was likely fueled by economic measures to curb Delta variant spread, as well as the potential for new government regulation which has led many U.S. funds to offload their China holdings.

Major asset class returns

ONE YEAR ENDING JULY



TEN YEARS ENDING JULY



**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 7/31/21

Source: Morningstar, as of 7/31/21

U.S. large cap equities

— The S&P 500 rose +2.4% as earnings continued to rebound. With 59% of companies reporting as of July, blended earnings grew 85.1% year-over-year. The industrial sector was a big contributor to S&P 500 profits as airlines, hotels and restaurants began to report positive year-over-year earnings numbers.

— The forward one-year P/E ratio fell over the month from 21.3 to 21.0. The S&P 500 price multiple has fallen every month for the last four months. Higher stock prices have been backed by earnings gains. As earnings rise faster than prices, this has resulted in a moderation of price-to-earnings multiples.

— Only two of the 11 S&P 500 GICS sectors posted negative performance in July. The top contributors to overall index performance were the healthcare (+4.9%) and information technology (+3.9%) sectors. The energy (-8.3%) and financials (-0.4%) sectors lagged the overall index.

— The Cboe VIX Index started the month hitting year-to-date lows of 15.1, before rising to 22.5, coinciding with a mid-month selloff surrounding uncertainty over increases in Delta variant cases. The index closed the month elevated and closely in line with the 100-day moving average of 18.3.

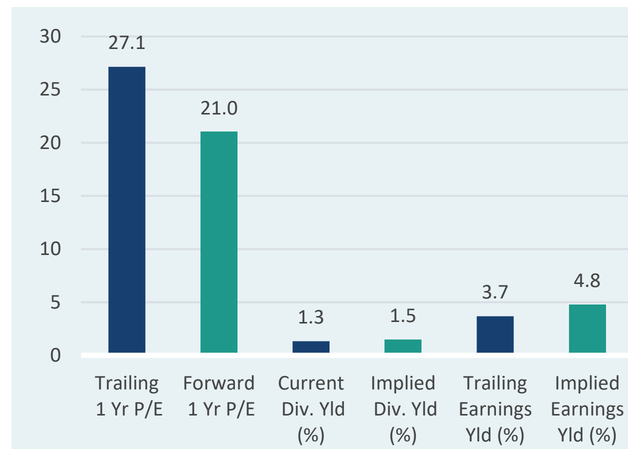
S&P 500 PRICE INDEX

Source: Bloomberg, as of 7/31/21

IMPLIED VOLATILITY (VIX INDEX)

Source: CBOE, as of 7/31/21

S&P 500 VALUATION SNAPSHOT



Source: Bloomberg, as of 7/31/21

Domestic equity size and style

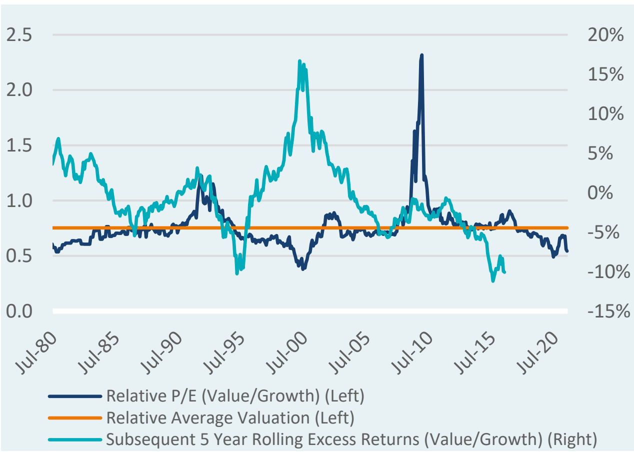
— Large-cap equities (Russell 1000 +2.1%) outperformed small-cap stocks (Russell 2000 -3.6%). Large-caps have outperformed small-caps for four consecutive months. Despite every sector in the Russell 1000 outperforming the Russell 2000, outperformance was concentrated in the larger health care companies, which posted 11.9% outperformance over small-cap peers.

— Large-cap stocks delivered a Sharpe Ratio 45% higher than small-cap stocks over the 3-year period, meaning large-cap stocks have provided superior risk-adjusted returns over the period.

— Growth stocks (Russell 3000 Growth +2.8%) outperformed value stocks (Russell 3000 Value +0.5%) in July. Growth's outsized rise in price was reflective of a poor month for value-tilted sectors such as energy and financials, which acted as a headwind.

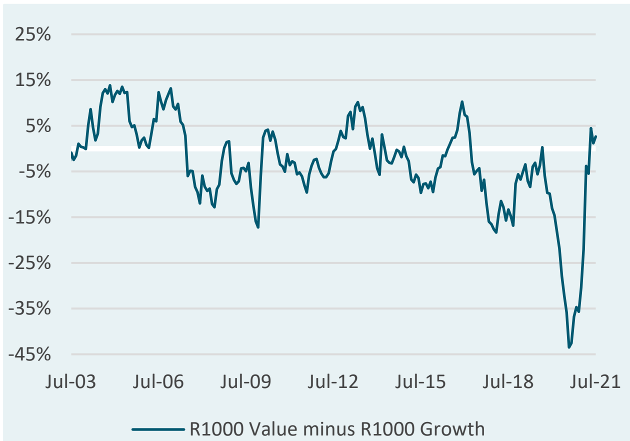
— The S&P 500 Low Volatility Index includes one hundred of the least volatile stocks over the past 12-month period and is weighted by the volatility of each stock. The S&P 500 Low Volatility Index outperformed the S&P 500 by 1.2% in July, as investors were not as compensated for holding riskier stocks.

VALUE VS. GROWTH RELATIVE VALUATIONS



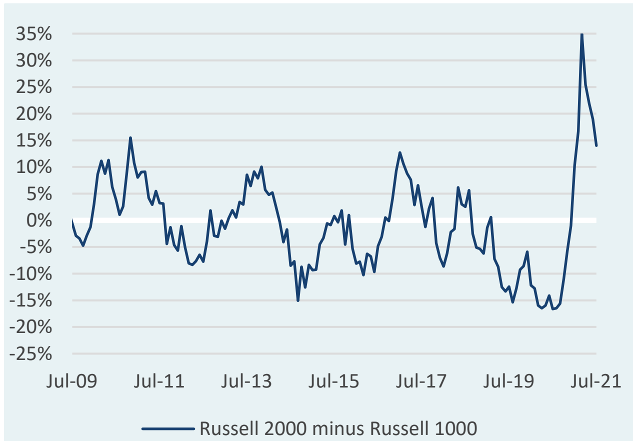
Source: FTSE, Bloomberg, as of 7/31/21

VALUE VS. GROWTH 1-YR ROLLING RELATIVE PERFORMANCE



Source: FTSE, Bloomberg, as of 7/31/21

SMALL VS. LARGE 1-YR ROLLING RELATIVE PERFORMANCE



Source: FTSE, Bloomberg, as of 7/31/21

Fixed income

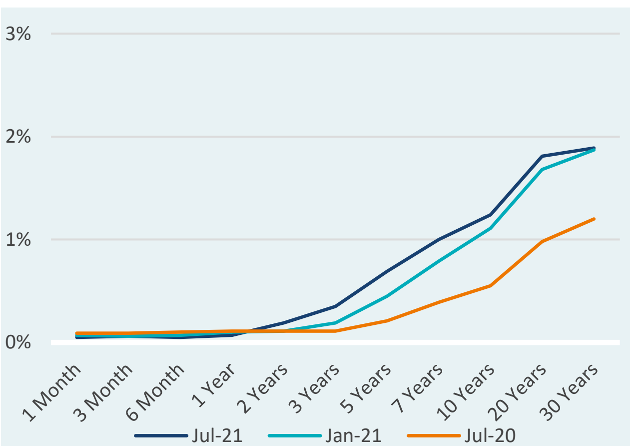
— 10-year TIPS breakeven inflation rate rose 10 basis points over the month, while the yield on the 10-year Treasury fell 21 basis points. Both movements boosted the performance of U.S. Treasury Inflation-Protected Securities (BBgBarc US TIPS +2.7%), which outperformed most other fixed income asset classes over the month.

— In July, the dollar rose +0.5% against a basket of emerging market currencies, which was a slight reversal from the 10.5% depreciation that occurred from March through mid-June.

— The European Central Bank set a new inflation target in its most recent policy review to a symmetric 2%, which will allow for overshoots when deemed necessary. In a recent statement, the ECB reiterated that it expects to keep interest rates "at their present or lower levels until it sees inflation reaching 2%, with a transitionary period above 2% allowed".

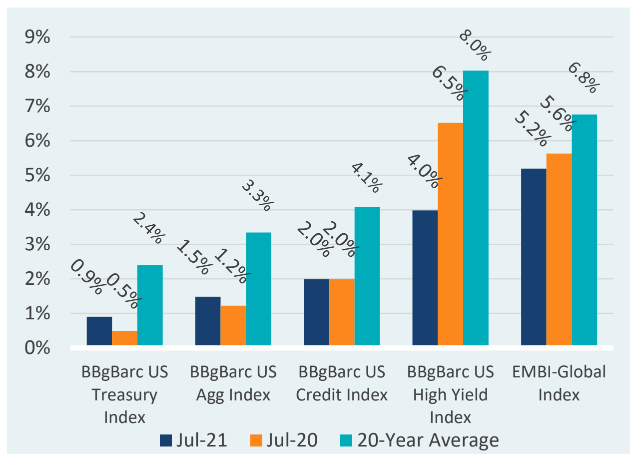
— The Bank of England left its monetary policy unchanged at a historically low rate of 0.1%. Policymakers also voted to keep the quantitative easing program in place despite inflation forecasts of 4% by year end considerably above its 2% target.

U.S. TREASURY YIELD CURVE



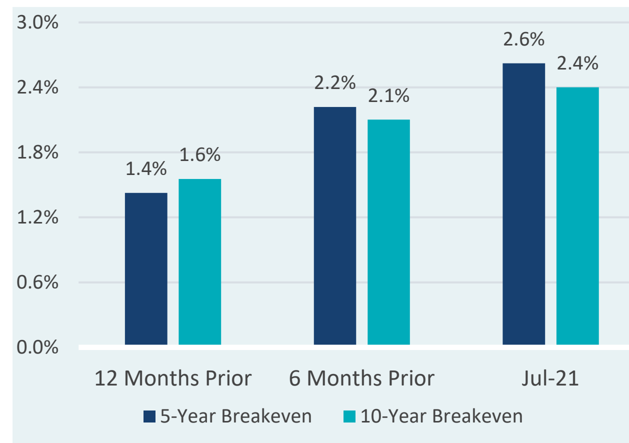
Source: Bloomberg, as of 7/31/21

NOMINAL YIELDS



Source: Morningstar, as of 7/31/21

BREAKEVEN INFLATION RATES



Source: Bloomberg, as of 7/31/21

Global markets

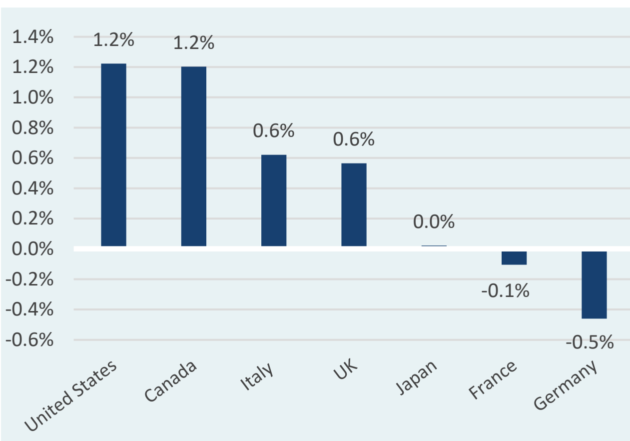
— Developed market equities (MSCI EAFE +0.8%) performed similarly to global equities (MSCI ACWI +0.7%) over the month. Global equities were weighed downed by the material underperformance of emerging market equities (MSCI EM -6.7%).

— Within the MSCI EM Index, Asian companies (MSCI EM Asia -6.7%) underperformed Latin American companies in U.S. dollar terms (MSCI EM Latin American -4.1%). Asian equities sold off over the month following the delisting of several Chinese tech companies.

— According to a survey by the International Monetary Fund, world GDP is expected to grow 6.0% in 2021, and 4.9% in 2022, revised upward from the October 2020 report 0.8% and 0.2%, respectively.

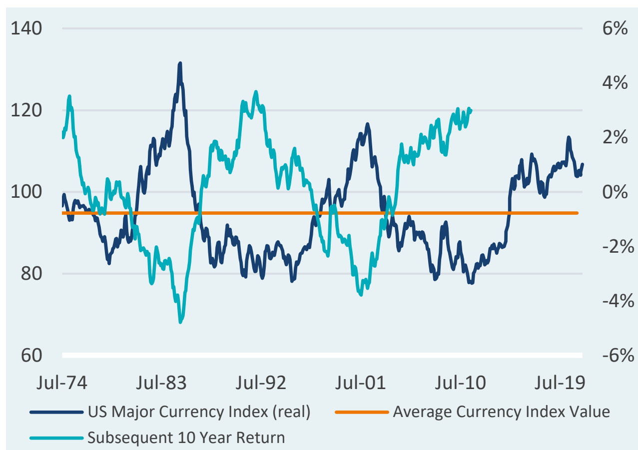
— The U.S. and China met for the first time since March. The meeting concluded with criticisms from both sides as Chinese officials stated that the U.S.-China relationship is "in a stalemate and faces serious difficulties". The Biden administration has broadly maintained the previous administration's tough stance and is working with U.S. allies to put pressure on China.

GLOBAL SOVEREIGN 10-YEAR YIELDS



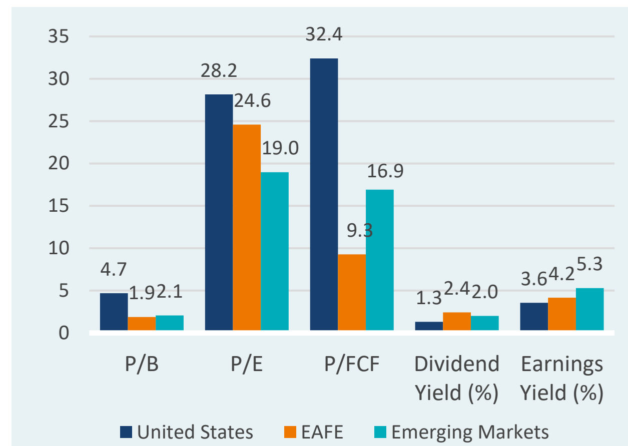
Source: Bloomberg, as of 7/31/21

U.S. DOLLAR MAJOR CURRENCY INDEX



Source: Federal Reserve, as of 7/31/21

MSCI VALUATION METRICS (3-MONTH AVG)



Source: Bloomberg, as of 7/31/21

Commodities

— The Bloomberg Commodity Index rose +1.8% over the month of July. The index was helped higher by the heavily weighted energy (+3.8%) and industrial metals (+4.0%) sectors, while the grains (-3.7%) component weighed on the performance of the overall commodity index.

— The Bloomberg Energy Sub-Index (+3.8%) finished the month higher, supported by natural gas (+10.7%). WTI Crude Oil saw a -8.9% sell off mid-month, surrounded by concerns over a Delta variant that may weigh on demand. Prices were likely pressured further by Saudi Arabia which reached agreement with the UAE to allow monthly supply hikes of 400,000 barrels per day.

— The Industrial Metals Sub-Index (+4.0%) was the top performing sub-index within the commodities basket. The biggest component of the sub-index, copper (+4.5%) contributed most to returns. The smallest weighted component of the sub-index, nickel (+7.3%), was the second largest contributor to overall returns.

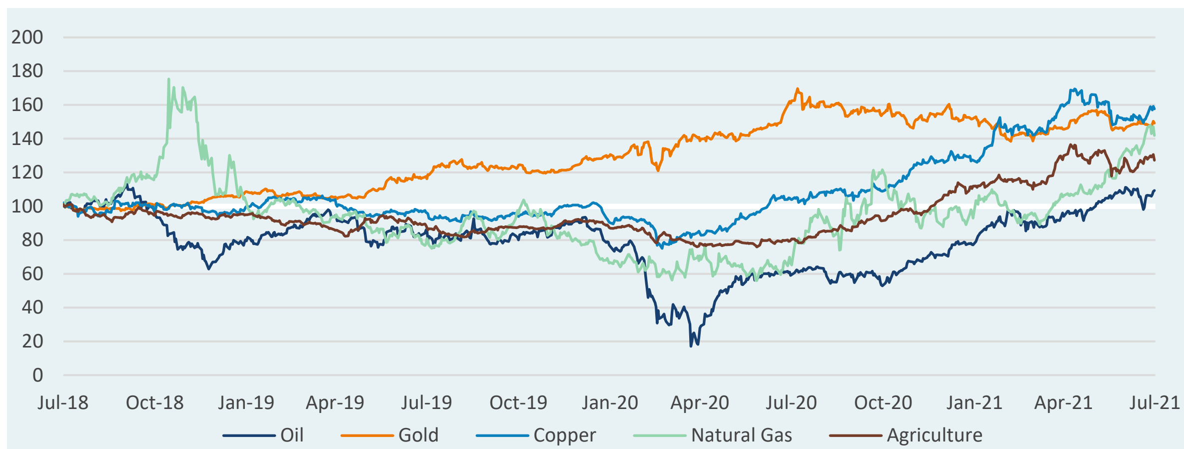
— The Grains Sub-Index (-3.7%) was weighed down by falling corn prices (-12.2%). The U.S. Court of Appeals ruled in favor of a lawsuit from an oil refining group that challenged a trump-era rule that let the EPA lift its ban on summertime sales of corn-based fuels like ethanol. Corn farmers could experience $1 billion in lost sales revenues.

INDEX AND SECTOR PERFORMANCE

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Bloomberg Commodity	1.8	1.8	23.4	40.3	5.3	3.9	(4.5)
Bloomberg Agriculture	(1.0)	(1.0)	19.3	58.0	9.2	1.7	(3.5)
Bloomberg Energy	3.8	3.8	50.1	56.9	(8.0)	(0.9)	(11.8)
Bloomberg Grains	(3.7)	(3.7)	16.0	60.2	7.9	2.2	(3.5)
Bloomberg Industrial Metals	4.0	4.0	22.2	45.2	10.7	11.2	(1.7)
Bloomberg Livestock	(0.3)	(0.3)	8.5	20.0	(5.4)	(3.1)	(4.3)
Bloomberg Petroleum	2.4	2.4	51.9	75.8	(4.6)	5.8	(7.6)
Bloomberg Precious Metals	1.2	1.2	(4.6)	(6.5)	13.1	4.2	(1.3)
Bloomberg Softs	6.2	6.2	24.2	39.5	7.6	(3.3)	(7.6)

Source: Morningstar, as of 7/31/21

COMMODITY PERFORMANCE



Source: Bloomberg, as of 7/31/21

Appendix

Periodic table of returns

BEST ↑ … ↓ WORST

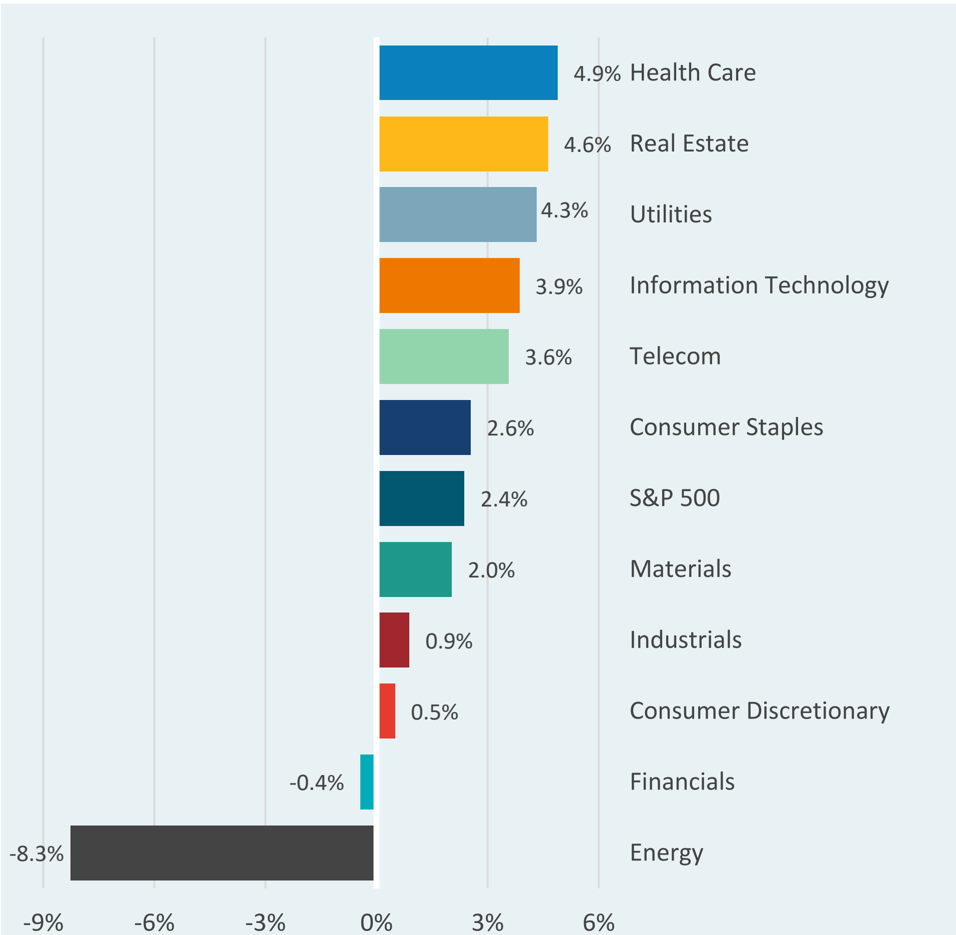
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	YTD	5-Year	10-Year
Commodities	66.4	31.8	14.0	25.9	56.3	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	13.3	31.7	37.3	6.7	36.4	38.5	23.4	23.3	18.4
Small Cap Value	43.1	22.8	8.4	10.3	48.5	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	34.6	22.2	17.6	15.4
Large Cap Value	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	21.0	18.0	16.4	13.6
Large Cap Equity	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	20.0	17.3	14.3	12.3
Large Cap Growth	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	18.3	16.7	11.6	12.1
Small Cap Equity	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	14.0	13.3	11.4	10.8
International Equity	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	10.3	9.7	10.4	8.8
60/40 Global Portfolio	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	7.8	7.0	9.4	7.1
Real Estate	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	7.5	5.7	9.4	6.1
Hedge Funds of Funds	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	4.6	5.1	6.2	3.8
Small Cap Growth	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	2.8	5.0	5.8	3.6
Emerging Markets Equity	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	0.5	0.2	3.9	3.3
Cash	-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	0.5	0.0	3.1	0.6
US Bonds	-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	-3.1	-0.5	1.1	-4.5

- 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 6/30/21.

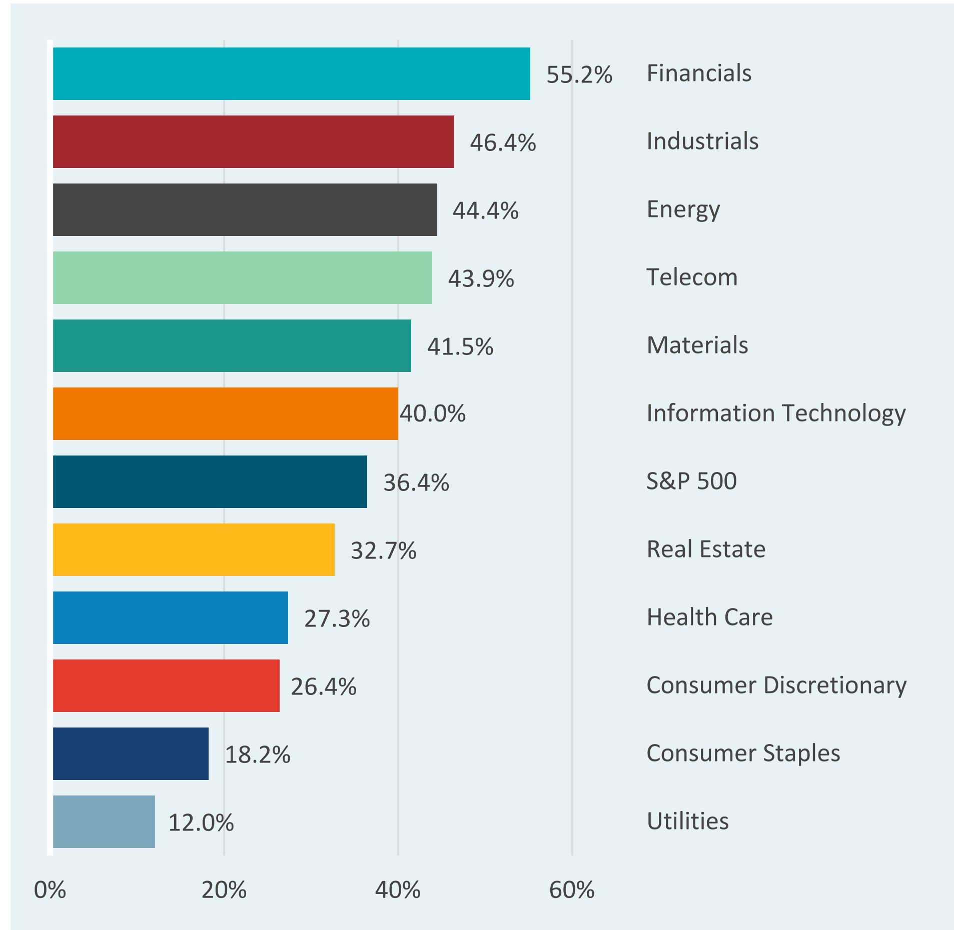
S&P 500 sector returns

QTD



Source: Morningstar, as of 7/31/21

ONE YEAR ENDING JULY



Source: Morningstar, as of 7/31/21

Detailed index returns

DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Core Index							
S&P 500	2.4	2.4	18.0	36.4	18.2	17.3	15.3
S&P 500 Equal Weighted	1.3	1.3	20.7	45.6	15.7	15.0	14.3
DJ Industrial Average	1.3	1.3	15.3	34.8	13.7	16.3	13.9
Russell Top 200	2.6	2.6	17.4	36.4	19.7	18.7	16.0
Russell 1000	2.1	2.1	17.3	38.0	18.6	17.6	15.4
Russell 2000	(3.6)	(3.6)	13.3	52.0	11.5	14.3	12.3
Russell 3000	1.7	1.7	17.1	38.7	18.1	17.4	15.2
Russell Mid Cap	0.8	0.8	17.1	42.6	15.8	14.8	13.7
Style Index							
Russell 1000 Growth	3.3	3.3	16.7	36.7	25.3	23.3	18.4
Russell 1000 Value	0.8	0.8	18.0	39.3	11.3	11.4	12.1
Russell 2000 Growth	(3.6)	(3.6)	5.0	41.0	13.9	16.4	13.6
Russell 2000 Value	(3.6)	(3.6)	22.2	63.7	8.3	11.6	10.8

INTERNATIONAL EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
MSCI ACWI	0.7	0.7	13.1	33.2	13.7	13.8	10.2
MSCI ACWI ex US	(1.6)	(1.6)	7.4	27.8	7.9	9.6	5.4
MSCI EAFE	0.8	0.8	9.7	30.3	7.7	9.4	6.1
MSCI EM	(6.7)	(6.7)	0.2	20.6	7.9	10.4	3.6
MSCI EAFE Small Cap	1.7	1.7	10.9	38.7	8.8	11.1	8.7
Style Index							
MSCI EAFE Growth	1.7	1.7	8.6	27.5	12.3	11.8	8.0
MSCI EAFE Value	(0.2)	(0.2)	10.4	32.9	2.7	6.7	4.1
Regional Index							
MSCI UK	0.9	0.9	13.5	30.6	1.9	5.3	3.8
MSCI Japan	(1.3)	(1.3)	(0.0)	25.2	6.6	8.5	6.6
MSCI Europe	1.0	1.0	(0.2)	0.4	5.9	3.5	3.7
MSCI EM Asia	(8.1)	(8.1)	(2.6)	18.2	9.7	12.3	6.1
MSCI EM Latin American	(4.1)	(4.1)	4.5	25.3	0.6	3.9	(2.5)

FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
BBgBarc US TIPS	2.7	2.7	4.4	6.9	7.6	4.5	3.3
BBgBarc US Treasury Bills	0.0	0.0	0.0	0.1	1.3	1.2	0.7
BBgBarc US Agg Bond	1.1	1.1	(0.5)	(0.7)	5.7	3.1	3.3
BBgBarc US Universal	1.0	1.0	(0.2)	0.4	5.9	3.5	3.7
Duration							
BBgBarc US Treasury 1-3 Yr	0.2	0.2	0.1	0.1	2.8	1.7	1.2
BBgBarc US Treasury Long	3.6	3.6	(4.6)	(11.1)	9.8	3.4	6.6
BBgBarc US Treasury	1.4	1.4	(1.3)	(3.0)	5.3	2.3	2.8
Issuer							
BBgBarc US MBS	0.6	0.6	(0.1)	0.0	4.0	2.4	2.6
BBgBarc US Corp. High Yield	0.4	0.4	4.0	10.6	7.2	7.0	6.6
BBgBarc US Agency Interm	0.5	0.5	(0.0)	0.2	3.5	2.0	1.8
BBgBarc US Credit	1.3	1.3	0.0	1.2	7.6	4.6	4.8

OTHER

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Index							
Bloomberg Commodity	1.8	1.8	23.4	40.3	5.3	3.9	(4.5)
Wilshire US REIT	5.1	5.1	29.0	38.5	11.7	6.5	9.7
CS Leveraged Loans	(0.0)	(0.0)	3.5	9.6	4.1	4.7	4.5
Alerian MLP	(6.3)	(6.3)	38.5	59.3	(5.3)	(3.4)	0.8
Regional Index							
JPM EMBI Global Div	0.4	0.4	(0.3)	4.1	6.0	4.6	5.5
JPM GBI-EM Global Div	(0.4)	(0.4)	(3.8)	3.0	3.3	3.0	0.3
Hedge Funds							
HFRI Composite	0.4	0.4	10.5	24.3	8.7	7.6	5.1
HFRI FOF Composite	0.2	0.2	5.1	15.9	6.3	5.8	3.8
Currency (Spot)							
Euro	(0.0)	(0.0)	(3.1)	0.3	0.4	1.2	(1.9)
Pound Sterling	0.6	0.6	1.7	5.9	2.0	0.9	(1.6)
Yen	1.1	1.1	(5.9)	(3.7)	0.7	(1.4)	(3.5)

Source: Morningstar, HFRI, as of 7/31/21

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	48.2	19.3	15.9	12.6
Global Private Equity Direct Funds *	58.5	22.9	20.0	15.2
U.S. Private Equity Direct Funds *	61.1	25.1	20.9	16.6
Europe Private Equity Direct Funds *	51.8	19.5	20.0	12.7
Asia Private Equity Direct Funds *	54.3	20.0	17.9	14.6
Public Index Time-weighted Returns				
MSCI World	54.0	12.8	13.4	9.9
S&P 500	56.4	16.8	16.3	13.9
MSCI Europe	44.9	5.6	8.2	5.1
MSCI AC Asia Pacific	51.8	8.2	12.2	6.7

Private Real Estate Pooled IRRs	1 Year	3 Year	5 Year	10 Year
U.S. All Private Real Estate	13.1	7.0	8.5	11.7
Public Index Time-weighted Returns				
FTSE NAREIT Equity REIT	37.8	9.5	5.3	8.6

Private Credit Pooled IRRs	1 Year	3 Year	5 Year	10 Year
U.S. All Private Debt **	32.0	10.4	11.5	10.4
Public Index Time-weighted Returns				
S&P / LSTA U.S. Leveraged Loan 100 Index	15.3	4.1	5.0	3.9

Private Real Assets Pooled IRRs	1 Year	3 Year	5 Year	10 Year
Global Nature Resources ***	19.6	(4.7)	1.7	0.6
Global Infrastructure	16.9	9.1	10.9	9.7
Public Index Time-weighted Returns				
S&P Global Natural Resources	67.7	5.5	11.4	1.1
S&P Global Infrastructure	37.0	5.7	6.8	6.3

Source: Pooled IRRs are from Thompson Reuters C|A and Time-weighted Returns are from Investment Metrics, as of March 31st, 2021. 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

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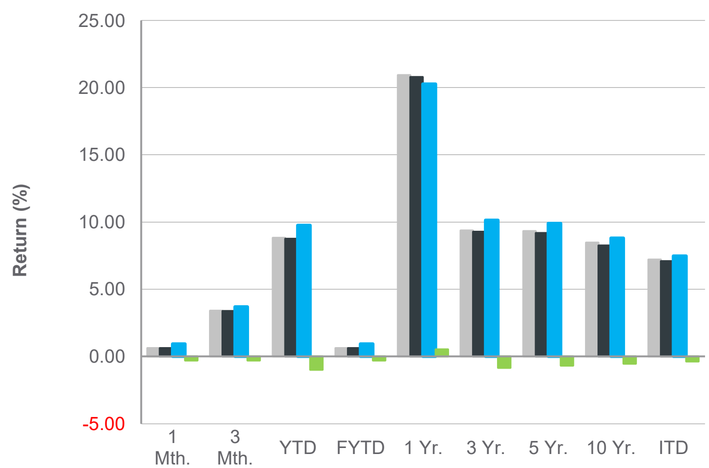
San Mateo County
Composite Return Summary
July 31,2021

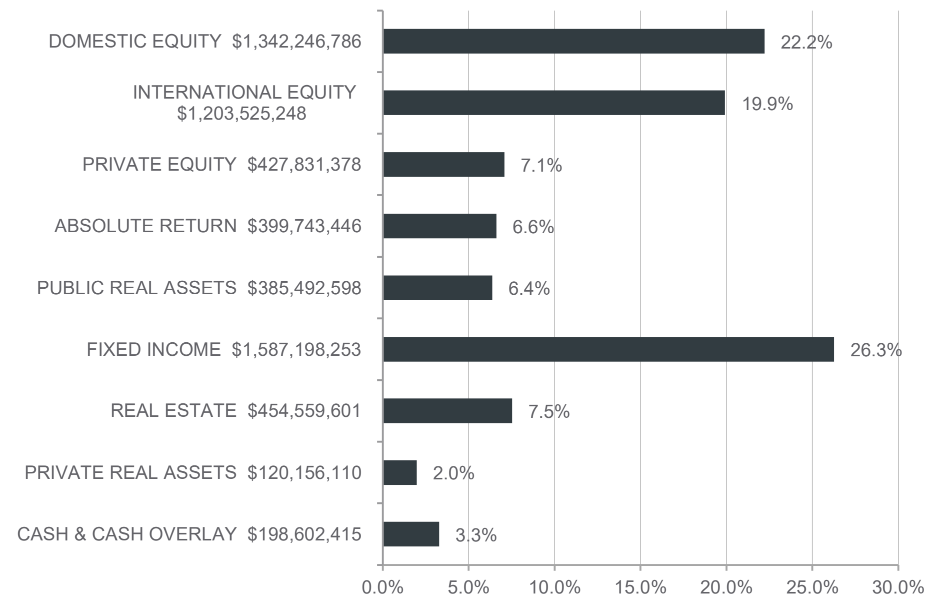
SamCERA

Total Fund Performance

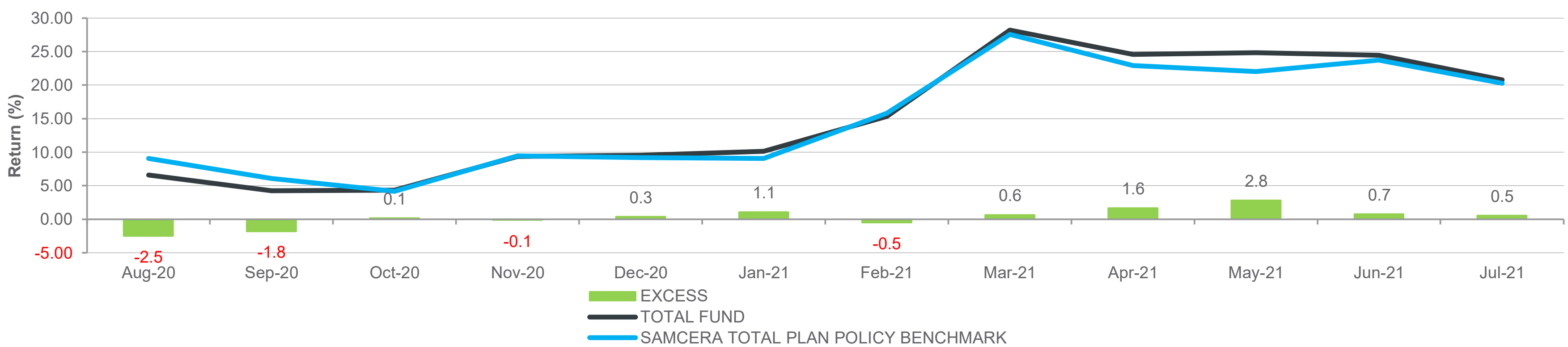


	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	10 Yr.	ITD
TOTAL FUND - Gross	0.6	3.4	8.8	0.6	20.9	9.4	9.3	8.5	7.2
TOTAL FUND - Net	0.6	3.4	8.8	0.6	20.8	9.3	9.2	8.3	7.1
SAMCERA PLAN BENCHMARK	0.9	3.7	9.8	0.9	20.3	10.1	9.9	8.8	7.5
Excess (Net)	-0.3	-0.3	-1.0	-0.3	0.5	-0.9	-0.7	-0.5	-0.4

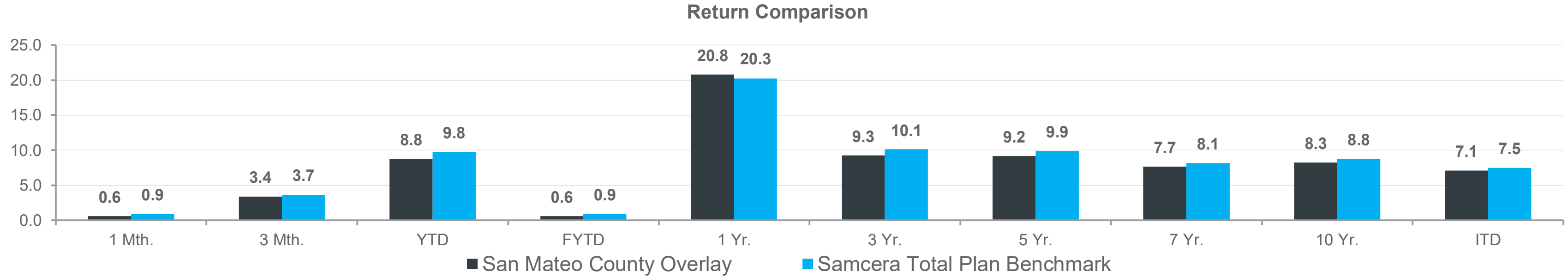
Asset Allocation



Rolling Month End Annual Returns



San Mateo County
Composite Return Summary
July 31,2021



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	6,042,284,211	0.6	3.4	8.8	0.6	20.8	9.3	9.2	7.7	8.3	7.1
Samcera Total Plan Benchmark		0.9	3.7	9.8	0.9	20.3	10.1	9.9	8.1	8.8	7.5
Excess		-0.3	-0.3	-1.0	-0.3	0.5	-0.9	-0.7	-0.5	-0.5	-0.4
San Mateo Ex-Clifton Overlay	6,029,213,275	0.6	3.4	8.8	0.6	20.8	9.2	9.1	7.6	8.2	7.0
Samcera Total Plan Benchmark		0.9	3.7	9.8	0.9	20.3	10.1	9.9	8.1	8.8	7.5
Excess		-0.3	-0.3	-1.0	-0.3	0.5	-1.0	-0.8	-0.6	-0.6	-0.5
Total Equity	2,545,772,034	0.1	2.9	12.2	0.1	32.4	12.5	13.2	10.4	10.9	8.5
Samcera Total Equity Benchmark		0.3	3.2	13.4	0.3	34.1	13.5	14.3	11.6	11.9	9.1
Excess		-0.2	-0.3	-1.3	-0.2	-1.8	-1.0	-1.1	-1.2	-1.0	-0.7
Fixed Income	1,587,198,253	0.6	2.1	2.0	0.6	5.2	5.9	5.1	4.3	4.7	5.5
Samcera Fixed Income Benchmark		0.9	2.1	0.7	0.9	2.0	6.3	4.0	3.9	3.7	5.1
Excess		-0.3	-0.0	1.3	-0.3	3.2	-0.4	1.1	0.4	1.0	0.5
Alternatives	827,574,824	2.3	8.0	12.2	2.3	35.8	17.5	13.6	10.5	8.3	0.9
Samcera Alternatives Benchmark		2.6	6.4	14.5	2.6	25.9	13.6	12.5	9.5	9.9	8.7
Excess		-0.3	1.6	-2.2	-0.3	9.9	4.0	1.1	1.0	-1.6	-7.8
Inflation Hedge	960,208,309	0.8	3.5	10.4	0.8	14.8	2.0	4.3	--	--	5.1
SamCERA Inflation Hedge Index		1.2	5.6	13.3	1.2	19.4	6.6	6.9	--	--	7.1
Excess		-0.4	-2.2	-2.9	-0.4	-4.7	-4.6	-2.7	--	--	-2.0
Cash	198,602,415	-0.0	-0.0	0.2	-0.0	0.3	0.8	0.8	0.7	0.7	1.8
Samcera Cash Benchmark		0.0	0.0	0.0	0.0	0.1	1.3	1.2	0.9	0.6	1.8
Excess		-0.1	-0.0	0.1	-0.1	0.2	-0.5	-0.3	-0.2	0.0	0.0

Composite Returns (NET)	Market Value ($)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
Total Equity	2,545,772,034	0.1	2.9	12.2	0.1	32.4	12.5	13.2	10.4	10.9	8.5
Samcera Total Equity Benchmark		0.3	3.2	13.4	0.3	34.1	13.5	14.3	11.6	11.9	9.1
Excess		-0.2	-0.3	-1.3	-0.2	-1.8	-1.0	-1.1	-1.2	-1.0	-0.7
Domestic Equity	1,342,246,786	1.7	4.1	15.4	1.7	34.3	14.9	15.7	13.2	13.7	9.6
Samcera Dom. Equity Benchmark		1.7	4.7	17.1	1.7	38.7	18.1	17.4	14.5	15.0	10.2
Excess		-0.0	-0.5	-1.6	-0.0	-4.4	-3.2	-1.7	-1.3	-1.3	-0.6
Large Cap Equity	1,229,999,461	2.1	4.6	15.1	2.1	33.0	15.7	16.3	13.9	14.3	10.3
Russell 1000		2.1	5.1	17.3	2.1	38.0	18.6	17.6	14.8	15.4	10.9
Excess		-0.0	-0.6	-2.2	-0.0	-4.9	-2.9	-1.3	-0.9	-1.1	-0.6
Blackrock Russell 1000	561,936,056	2.1	5.1	17.3	2.1	38.5	18.8	--	--	--	18.3
Russell 1000		2.1	5.1	17.3	2.1	38.0	18.6	--	--	--	18.1
Excess		-0.0	-0.1	-0.0	-0.0	0.6	0.2	--	--	--	0.2
DE Shaw Commingled Fund	201,748,837	1.7	3.9	12.6	1.7	35.9	15.3	16.5	--	--	14.3
Russell 1000		2.1	5.1	17.3	2.1	38.0	18.6	17.6	--	--	14.5
Excess		-0.4	-1.2	-4.7	-0.4	-2.0	-3.3	-1.1	--	--	-0.3
Acadian US MGD V-SL	229,060,908	2.3	5.4	13.7	2.3	25.0	--	--	--	--	16.7
Russell 1000		2.1	5.1	17.3	2.1	38.0	--	--	--	--	27.6
Excess		0.2	0.3	-3.7	0.2	-13.0	--	--	--	--	-10.9
Panagora Defuseq -SL	237,253,660	2.2	3.3	13.4	2.2	24.2	--	--	--	--	19.0
Russell 1000		2.1	5.1	17.3	2.1	38.0	--	--	--	--	27.6
Excess		0.1	-1.9	-3.9	0.1	-13.8	--	--	--	--	-8.6
Domestic Equity Overlay	0	0.5	4.0	100.3	0.5	153.9	--	--	--	--	149.7
ICE BofAML US 3-Month Treasury Bill		0.0	0.0	0.0	0.0	0.1	--	--	--	--	0.1
Excess		0.5	4.0	100.3	0.5	153.8	--	--	--	--	149.6
Small Cap Equity	112,247,324	-2.1	0.0	18.9	-2.1	49.3	6.2	9.9	7.5	9.5	6.8
Russell 2000		-3.6	-1.5	13.3	-3.6	52.0	11.5	14.3	11.8	12.3	8.9
Excess		1.5	1.6	5.7	1.5	-2.7	-5.3	-4.4	-4.3	-2.8	-2.0

San Mateo County
Composite Return Summary
July 31,2021

SamCERA

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	112,247,324	-2.1	0.0	18.9	-2.1	49.3	6.2	--	--	--	10.7
Russell 2000		-3.6	-1.5	13.3	-3.6	52.0	11.5	--	--	--	14.1
Excess		1.5	1.6	5.7	1.5	-2.7	-5.3	--	--	--	-3.4
International Equity	1,203,525,248	-1.7	1.5	8.5	-1.7	30.2	9.7	10.2	6.4	6.2	6.2
SamCERA Custom Hedge Intl		-1.3	1.5	9.4	-1.3	28.9	8.1	9.8	5.5	5.6	5.6
Excess		-0.4	0.1	-0.9	-0.4	1.3	1.6	0.4	0.9	0.6	0.5
Baillie Gifford	379,483,415	-1.2	2.0	5.7	-1.2	32.0	15.9	14.4	10.3	--	11.2
MSCI ACWI ex USA Growth		-1.5	1.3	5.1	-1.5	23.6	12.4	12.3	8.4	--	--
Excess		0.3	0.7	0.6	0.3	8.3	3.5	2.0	1.9	--	--
Blackrock MSCI ACWI ex US IMI	387,040,611	-1.3	1.0	8.2	-1.3	29.7	--	--	--	--	26.7
MS AC WIdxUS IMI Nt		-1.3	1.0	8.2	-1.3	29.5	--	--	--	--	26.9
Excess		-0.0	0.0	0.1	-0.0	0.2	--	--	--	--	-0.2
Mondrian Investment Partners	358,130,700	-2.5	0.2	8.1	-2.5	29.3	5.0	6.8	3.5	4.7	5.5
MSCI ACWI xUSA Value		-1.7	0.4	10.1	-1.7	33.0	4.1	7.7	2.8	4.1	5.4
Excess		-0.8	-0.3	-2.0	-0.8	-3.7	0.9	-0.9	0.6	0.5	0.1
Currency Hedge Futures	426,925,846	0.3	-1.1	-2.8	0.3	0.6	--	--	--	--	4.6
ICE BofAML US 3-Month Treasury Bill		0.0	0.0	0.0	0.0	0.1	--	--	--	--	0.1
Excess		0.3	-1.1	-2.9	0.3	0.5	--	--	--	--	4.5
Currency Hedge Futures Offsets	426,925,846	-0.0	0.0	0.0	-0.0	0.0	--	--	--	--	0.0
ICE BofAML US 3-Month Treasury Bill		0.0	0.0	0.0	0.0	0.1	--	--	--	--	0.1
Excess		-0.0	-0.0	-0.0	-0.0	-0.1	--	--	--	--	-0.1
International Equity Overlay	78,870,522	-0.5	-8.1	2.3	-0.5	15.6	--	--	--	--	33.2
ICE BofAML US 3-Month Treasury Bill		0.0	0.0	0.0	0.0	0.1	--	--	--	--	0.1
Excess		-0.5	-8.1	2.3	-0.5	15.6	--	--	--	--	33.2
Fixed Income	1,587,198,253	0.6	2.1	2.0	0.6	5.2	5.9	5.1	4.3	4.7	5.5
Samcera Fixed Income Benchmark		0.9	2.1	0.7	0.9	2.0	6.3	4.0	3.9	3.7	5.1
Excess		-0.3	-0.0	1.3	-0.3	3.2	-0.4	1.1	0.4	1.0	0.5

Northern Trust

San Mateo County
Composite Return Summary
July 31,2021

SamCERA

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	1,009,299,112	0.9	2.1	0.2	0.9	1.1	5.7	3.8	3.8	4.1	5.3
BBG Barclays US Aggregate		1.1	2.2	-0.5	1.1	-0.7	5.7	3.1	3.5	3.3	4.9
Excess		-0.2	-0.1	0.7	-0.2	1.8	-0.1	0.7	0.4	0.7	0.4
FIAM B Core Bond	272,234,785	1.2	2.4	0.1	1.2	1.1	6.9	4.1	--	--	4.9
BBG Barclays US Aggregate		1.1	2.2	-0.5	1.1	-0.7	5.7	3.1	--	--	3.7
Excess		0.1	0.3	0.6	0.1	1.8	1.1	1.0	--	--	1.2
Western Total Return	234,506,061	-0.1	1.0	-0.2	-0.1	4.2	5.3	4.9	--	--	4.6
BBG Barclays US Aggregate		1.1	2.2	-0.5	1.1	-0.7	5.7	3.1	--	--	3.6
Excess		-1.2	-1.1	0.3	-1.2	4.9	-0.5	1.8	--	--	1.0
DoubleLine	263,911,786	1.1	2.5	0.9	1.1	1.0	--	--	--	--	4.6
BBG Barclays US Aggregate		1.1	2.2	-0.5	1.1	-0.7	--	--	--	--	2.2
Excess		0.0	0.3	1.4	0.0	1.7	--	--	--	--	2.4
NISA Core Bond	240,445,379	1.2	2.3	-0.3	1.2	-0.4	--	--	--	--	2.1
BBG Barclays US Aggregate		1.1	2.2	-0.5	1.1	-0.7	--	--	--	--	1.5
Excess		0.1	0.1	0.2	0.1	0.3	--	--	--	--	0.6
Core Fixed Income Overlay	1,798,898	2.5	3.7	-0.8	2.5	-2.3	--	--	--	--	-0.9
ICE BofAML US 3-Month Treasury Bill		0.0	0.0	0.0	0.0	0.1	--	--	--	--	0.1
Excess		2.5	3.7	-0.8	2.5	-2.4	--	--	--	--	-1.0
Opportunistic Credit	577,899,141	-0.0	2.0	5.5	-0.0	13.9	6.2	7.3	5.8	7.6	8.5
BB Barc BA Intermediate HY Ind		0.5	2.0	3.0	0.5	7.4	7.8	6.3	5.8	6.3	7.3
Excess		-0.6	0.0	2.5	-0.6	6.5	-1.6	1.0	0.1	1.2	1.2
Pimco Private Income	53,168,388	0.0	3.3	9.3	0.0	23.3	--	--	--	--	8.7
BB Barc BA Intermediate HY Ind		0.5	2.0	3.0	0.5	7.4	--	--	--	--	7.7
Excess		-0.5	1.3	6.2	-0.5	15.9	--	--	--	--	1.0
AG CREDIT SOL FU LP	14,112,268	0.0	16.8	27.4	0.0	45.8	--	--	--	--	31.8
BB Barc BA Intermediate HY Ind		0.5	2.0	3.0	0.5	7.4	--	--	--	--	6.8
Excess		-0.5	14.9	24.4	-0.5	38.4	--	--	--	--	25.0

SamCERA

Composite Returns (NET)	Market Value ($)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
AG CSF ANX DISLOC FD	6,783,914	0.0	10.7	22.0	0.0	35.1	--	--	--	--	25.3
BB Barc BA Intermediate HY Ind		0.5	2.0	3.0	0.5	7.4	--	--	--	--	17.1
Excess		-0.5	8.7	18.9	-0.5	27.7	--	--	--	--	8.3
AG Opportunistic Whole Loan	1,520,998	0.0	5.2	25.3	0.0	46.8	14.3	16.5	11.7	--	11.0
BB Barc BA Intermediate HY Ind		0.5	2.0	3.0	0.5	7.4	7.8	6.3	5.8	--	5.6
Excess		-0.5	3.2	22.3	-0.5	39.4	6.5	10.2	6.0	--	5.4
Angelo Gordon	1	0.0	0.0	-12.8	0.0	53.9	21.7	22.2	16.5	--	15.9
BB Barc BA Intermediate HY Ind		0.5	2.0	3.0	0.5	7.4	7.8	6.3	5.8	--	5.8
Excess		-0.5	-2.0	-15.9	-0.5	46.6	13.8	15.9	10.7	--	10.0
Blackrock Direct Lending Feede	15,388,253	-0.0	1.1	1.9	-0.0	12.4	--	--	--	--	1.8
BB Barc BA Intermediate HY Ind		0.5	2.0	3.0	0.5	7.4	--	--	--	--	8.2
Excess		-0.5	-0.8	-1.1	-0.5	5.0	--	--	--	--	-6.4
Beach Point Select Fund	92,998,485	0.4	2.6	10.3	0.4	27.5	10.1	9.8	--	--	9.4
BB Barc BA Intermediate HY Ind		0.5	2.0	3.0	0.5	7.4	7.8	6.3	--	--	6.0
Excess		-0.2	0.6	7.2	-0.2	20.1	2.3	3.5	--	--	3.4
Brigade Cap Mngmt	87,124,716	-0.1	2.2	10.4	-0.1	22.8	6.1	7.3	5.0	6.3	6.8
BB Barc BA Intermediate HY Ind		0.5	2.0	3.0	0.5	7.4	7.8	6.3	5.8	6.3	6.8
Excess		-0.7	0.2	7.4	-0.7	15.4	-1.7	0.9	-0.7	-0.1	-0.0
White Oak YSF V	33,411,564	-1.8	-1.8	-1.2	-1.8	--	--	--	--	--	-1.2
BB Barc BA Intermediate HY Ind		0.5	2.0	3.0	0.5	--	--	--	--	--	4.4
Excess		-2.3	-3.7	-4.2	-2.3	--	--	--	--	--	-5.5
White Oak Yield Spec	32,964,449	0.0	1.6	3.2	0.0	7.6	6.2	--	--	--	--
BB Barc BA Intermediate HY Ind		0.5	2.0	3.0	0.5	7.4	7.8	--	--	--	6.3
Excess		-0.5	-0.4	0.2	-0.5	0.2	-1.7	--	--	--	--
PIMCO Div. Income Fund	135,453,512	0.7	2.2	1.2	0.7	5.1	6.3	--	--	--	5.1
BB Barc BA Intermediate HY Ind		0.5	2.0	3.0	0.5	7.4	7.8	--	--	--	6.0
Excess		0.1	0.2	-1.9	0.1	-2.3	-1.5	--	--	--	-0.9

SamCERA

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	28,026,092	0.0	1.3	4.7	0.0	10.6	7.2	--	--	--	--
BB Barc BA Intermediate HY Ind		0.5	2.0	3.0	0.5	7.4	7.8	6.3	--	--	6.7
Excess		-0.5	-0.7	1.7	-0.5	3.2	-0.6	--	--	--	--
Franklin Templeton	76,946,501	-1.0	-1.2	-2.6	-1.0	-2.7	-3.4	0.3	-0.5	1.4	1.9
BB Barclays Multiverse Index		1.3	1.4	-1.7	1.3	1.2	4.8	2.7	2.3	2.2	2.6
Excess		-2.2	-2.6	-0.9	-2.2	-3.9	-8.2	-2.4	-2.8	-0.8	-0.7
Alternatives	827,574,824	2.3	8.0	12.2	2.3	35.8	17.5	13.6	10.5	8.3	0.9
Samcera Alternatives Benchmark		2.6	6.4	14.5	2.6	25.9	13.6	12.5	9.5	9.9	8.7
Excess		-0.3	1.6	-2.2	-0.3	9.9	4.0	1.1	1.0	-1.6	-7.8
Private Equity	427,831,378	5.0	14.9	23.0	5.0	64.3	38.5	29.0	24.1	18.7	-6.3
Samcera PE Benchmark		5.3	12.9	30.0	5.3	54.2	22.1	19.4	16.9	17.8	17.9
Excess		-0.3	2.0	-7.0	-0.3	10.1	16.5	9.6	7.2	0.9	-24.2
Absolute Return	399,743,446	-0.4	1.2	1.9	-0.4	5.7	-4.5	-2.8	0.4	1.2	1.1
Samcera SOFR + 4%		0.3	1.0	2.3	0.3	4.1	5.3	5.3	5.0	4.7	4.7
Excess		-0.7	0.2	-0.4	-0.7	1.6	-9.8	-8.0	-4.6	-3.5	-3.6
Aberdeen Std GARS	78,939,735	-1.2	-0.9	-2.9	-1.2	1.7	3.7	2.7	--	--	1.6
Samcera SOFR + 4%		0.3	1.0	2.3	0.3	4.1	5.3	5.3	--	--	5.1
Excess		-1.6	-1.8	-5.3	-1.6	-2.4	-1.6	-2.6	--	--	-3.6
Graham Global Investment	89,327,656	-0.8	0.2	2.0	-0.8	9.5	--	--	--	--	3.8
Samcera SOFR +4%		0.3	1.0	2.3	0.3	4.1	--	--	--	--	4.4
Excess		-1.1	-0.8	-0.4	-1.1	5.4	--	--	--	--	-0.5
PIMCO MAARS Fund L.P.	73,577,063	3.4	4.6	4.3	3.4	3.2	--	--	--	--	5.0
Samcera SOFR +4%		0.3	1.0	2.3	0.3	4.1	--	--	--	--	4.2
Excess		3.1	3.6	1.9	3.1	-0.9	--	--	--	--	0.8
Acadian MAAR Fund LLC	72,880,064	1.2	5.4	2.4	1.2	--	--	--	--	--	4.3
Samcera SOFR +4%		0.3	1.0	2.3	0.3	--	--	--	--	--	3.4
Excess		0.9	4.4	0.1	0.9	--	--	--	--	--	0.9

San Mateo County
Composite Return Summary
July 31,2021

SamCERA

Composite Returns (NET)	Market Value ($)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
CFM SYS Global Macro Fund	85,018,928	-3.7	-2.0	6.1	-3.7	--	--	--	--	--	11.6
Samcera SOFR +4%		0.3	1.0	2.3	0.3	--	--	--	--	--	3.4
Excess		-4.0	-3.0	3.8	-4.0	--	--	--	--	--	8.3
Inflation Hedge	960,208,309	0.8	3.5	10.4	0.8	14.8	2.0	4.3	--	--	5.1
SamCERA Inflation Hedge Index		1.2	5.6	13.3	1.2	19.4	6.6	6.9	--	--	7.1
Excess		-0.4	-2.2	-2.9	-0.4	-4.7	-4.6	-2.7	--	--	-2.0
Real Estate	454,559,601	0.3	3.2	6.8	0.3	7.0	5.4	6.4	--	--	6.9
Samcera NCREIF ODCE EW (gross)		0.0	4.4	6.8	0.0	8.8	6.1	7.0	--	--	7.0
Excess		0.3	-1.2	0.0	0.3	-1.9	-0.6	-0.6	--	--	-0.1
Invesco Core Real Estate	272,695,112	-0.1	3.9	7.0	-0.1	6.6	4.7	6.0	8.2	8.9	7.3
Samcera NCREIF ODCE EW (gross)		0.0	4.4	6.8	0.0	8.8	6.1	7.0	8.8	9.8	7.5
Excess		-0.1	-0.5	0.2	-0.1	-2.2	-1.3	-0.9	-0.6	-0.9	-0.1
Invesco US Val IV	13,877,128	4.7	4.7	10.8	4.7	11.8	10.0	9.8	--	--	11.0
Samcera NCREIF ODCE EW (gross)		0.0	4.4	6.8	0.0	8.8	6.1	7.0	--	--	7.6
Excess		4.7	0.3	4.0	4.7	3.0	3.9	2.9	--	--	3.4
PGIM Real Estate US Debt Fund	85,216,557	-0.0	1.4	4.1	-0.0	5.4	5.7	--	--	--	4.9
Samcera NCREIF ODCE EW (gross)		0.0	4.4	6.8	0.0	8.8	6.1	--	--	--	6.6
Excess		-0.0	-3.0	-2.7	-0.0	-3.5	-0.3	--	--	--	-1.6
Invesco US VAL V	24,631,503	4.8	4.8	20.9	4.8	20.2	--	--	--	--	9.1
Samcera NCREIF ODCE EW (gross)		0.0	4.4	6.8	0.0	8.8	--	--	--	--	--
Excess		4.8	0.4	14.1	4.8	11.3	--	--	--	--	--
Harrison Street Core Property	53,684,007	-0.3	2.7	5.4	-0.3	6.5	--	--	--	--	4.6
Samcera NCREIF ODCE EW (gross)		0.0	4.4	6.8	0.0	8.8	--	--	--	--	5.3
Excess		-0.3	-1.7	-1.4	-0.3	-2.3	--	--	--	--	-0.6
Stockbridge Value IV	4,455,294	0.0	-9.4	--	0.0	--	--	--	--	--	-9.4
Samcera NCREIF ODCE EW (gross)		0.0	4.4	--	0.0	--	--	--	--	--	4.4
Excess		0.0	-13.8	--	0.0	--	--	--	--	--	-13.8

Northern Trust

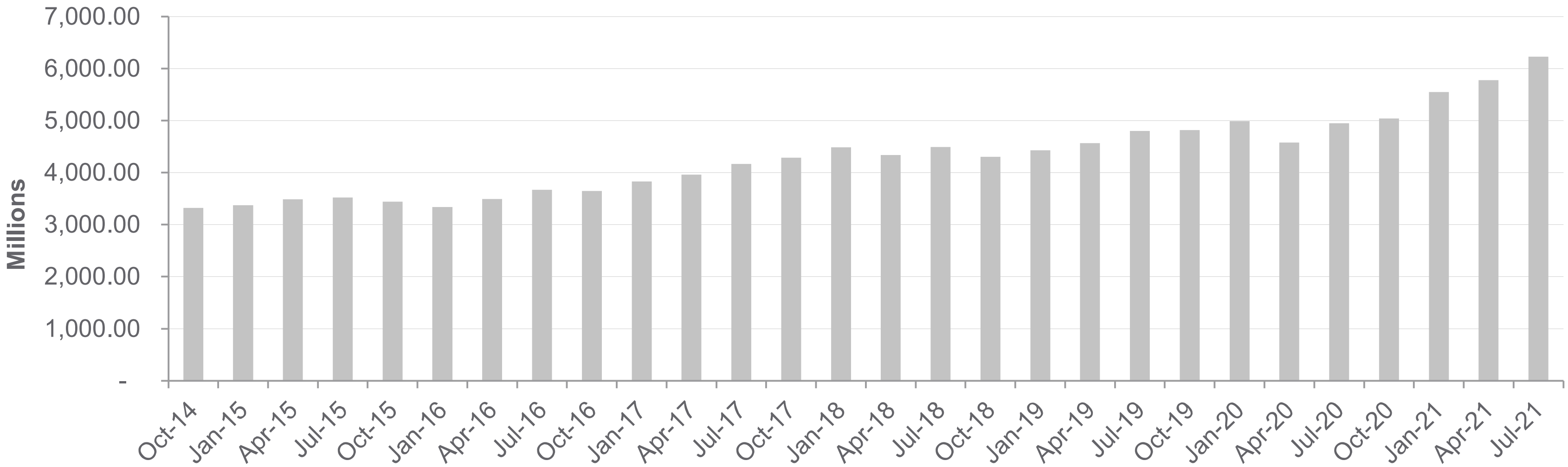
Composite Returns (NET)	Market Value ($)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
Public Real Assets	385,492,598	1.3	3.3	12.9	1.3	25.6	-1.6	--	--	--	--
SamCera Liquid Real Asset Inde		1.3	3.3	13.1	1.3	26.2	4.3	5.7	--	--	7.2
Excess		-0.0	-0.1	-0.2	-0.0	-0.6	-5.8	--	--	--	--
SSGA CST REAL ASSET NL	385,492,598	1.3	3.3	12.9	1.3	25.6	3.7	--	--	--	--
SamCera Liquid Real Asset Inde		1.3	3.3	13.1	1.3	26.2	4.3	--	--	--	6.2
Excess		-0.0	-0.1	-0.2	-0.0	-0.6	-0.6	--	--	--	--
Private Real Assets	120,156,110	1.2	5.4	21.2	1.2	27.4	3.1	6.3	--	--	9.3
SamCERA Private Real Asset Idx		3.6	10.8	28.2	3.6	39.0	7.8	10.0	--	--	12.7
Excess		-2.4	-5.4	-7.1	-2.4	-11.6	-4.7	-3.7	--	--	-3.4
Cash Overlay	13,070,936	0.0	0.0	0.1	0.0	0.1	--	--	--	--	0.3
ICE BofAML US 3-Month Treasury Bill		0.0	0.0	0.0	0.0	0.1	--	--	--	--	0.1
Excess		0.0	0.0	0.1	0.0	0.1	--	--	--	--	0.2
General Account	88,214,389	0.0	0.0	0.0	0.0	-0.0	1.3	1.2	1.0	0.7	1.9
County Treasury Pool	47,761,529	-0.2	-0.2	0.4	-0.2	0.9	1.6	1.4	1.2	1.1	2.6
Currency Hedge Cash Overlay	49,555,551	0.0	0.0	0.0	0.0	0.1	--	--	--	--	0.1
San Mateo County Overlay	6,042,284,211	0.6	3.4	8.8	0.6	20.8	9.3	9.2	7.7	8.3	7.1
Samcera Total Plan Benchmark		0.9	3.7	9.8	0.9	20.3	10.1	9.9	8.1	8.8	7.5
Excess		-0.3	-0.3	-1.0	-0.3	0.5	-0.9	-0.7	-0.5	-0.5	-0.4

SamCERA

Record of Asset Growth

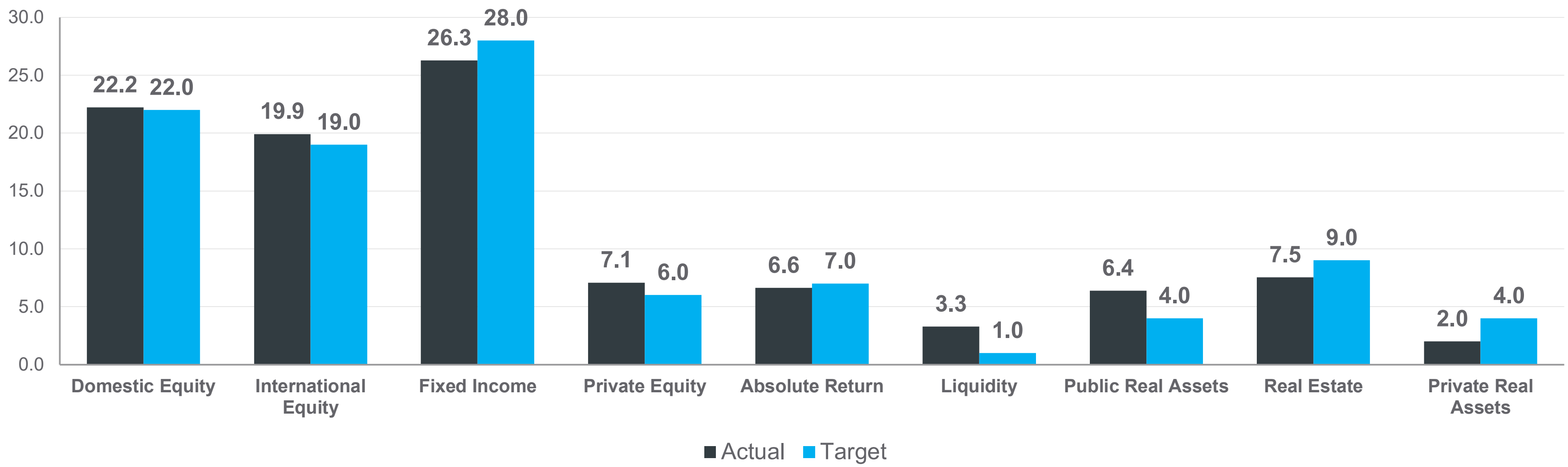
	Three Months	One Year
TOTAL FUND		
Beginning Market Value	5,773,282,307	4,950,044,380
Contributions	141,085,001	514,369,763
Withdrawals	-68,421,851	-535,212,429
Income Received	26,511,068	82,179,784
Gain/Loss	170,133,726	949,476,761
Ending Market Value	6,042,284,211	6,042,284,211

Net Asset Values Over Time ($000)



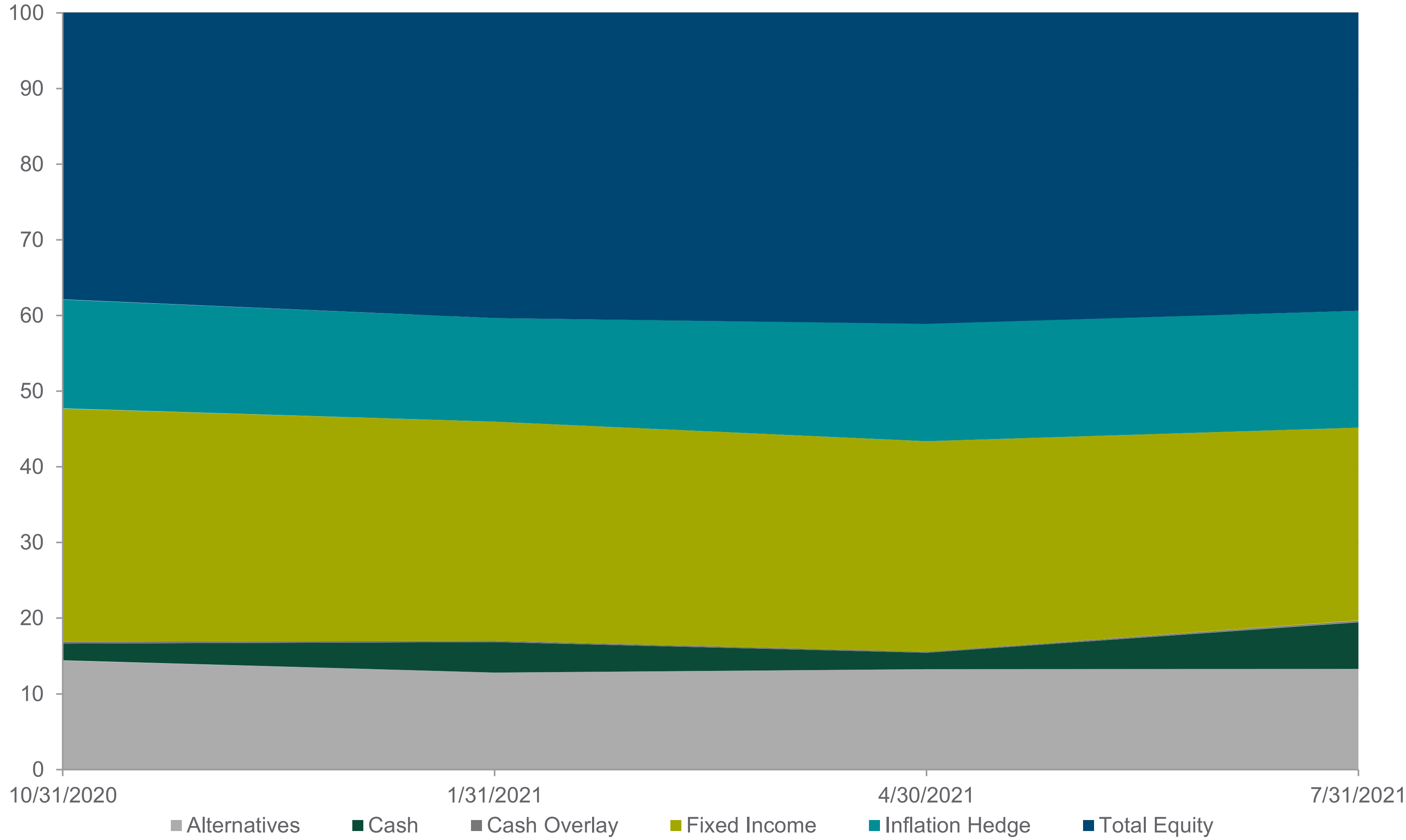
SamCERA

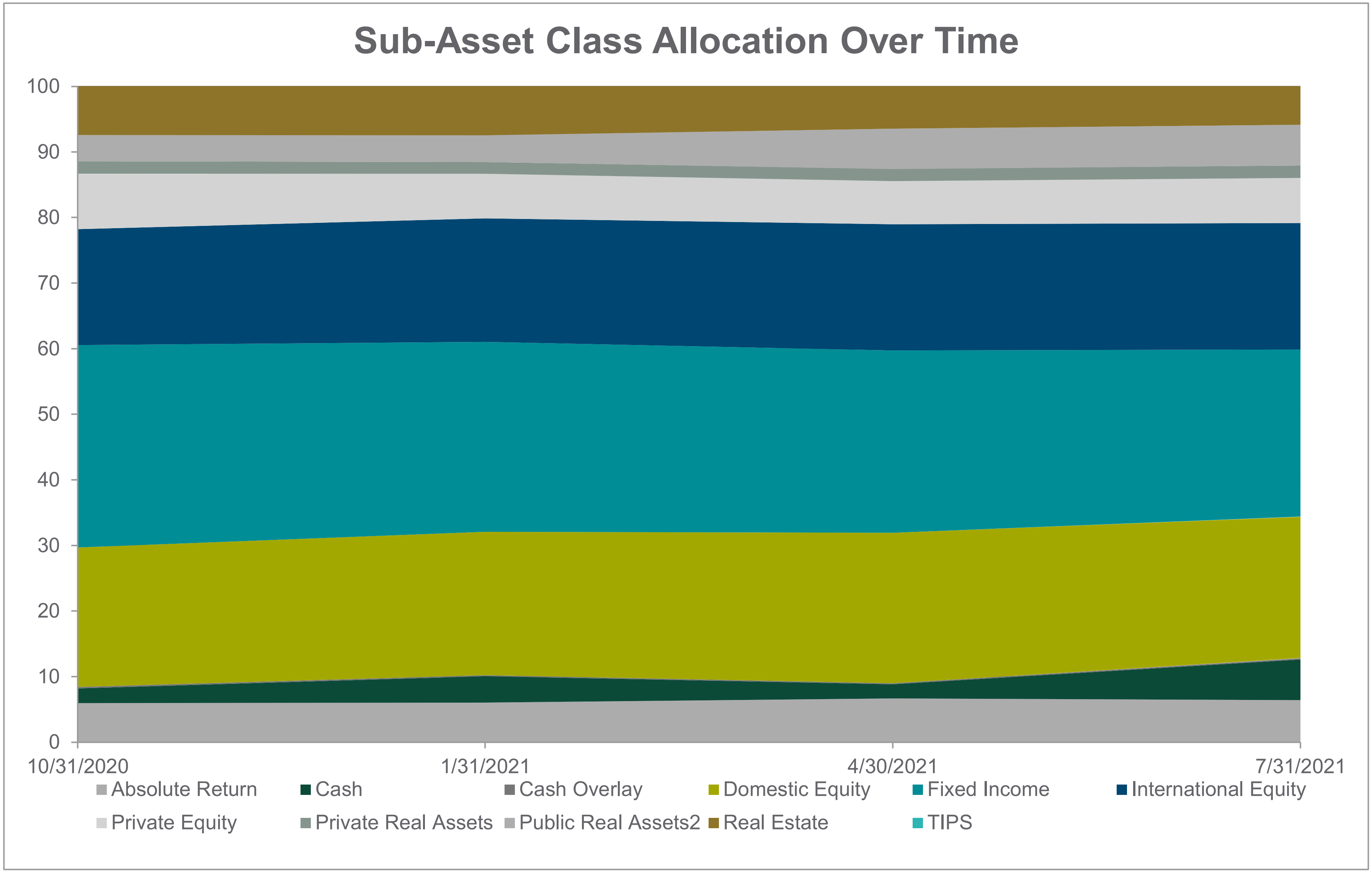
Actual vs Target Weights



	Min	Actual	Target	Deviation	Max
Domestic Equity	20.0	22.2	22.0	0.2	24.0
International Equity	17.0	19.9	19.0	0.9	21.0
Fixed Income	26.0	26.3	28.0	-1.7	30.0
Private Equity	4.0	7.1	6.0	1.1	8.0
Absolute Return	5.0	6.6	7.0	-0.4	9.0
Liquidity	0.0	3.3	1.0	2.3	2.0
Public Real Assets	2.0	6.4	4.0	2.4	6.0
Real Estate	7.0	7.5	9.0	-1.5	11.0
Private Real Assets	2.0	2.0	4.0	-2.0	6.0

Asset Allocation over Time




Sub-Asset Class Allocation Over Time
100
90
80
70
60
50
40
30
20
10
0
10/31/2020
1/31/2021
4/30/2021
7/31/2021
Absolute Return
Cash
Cash Overlay
Domestic Equity
Fixed Income
International Equity
Private Equity
Private Real Assets
Public Real Assets2
Real Estate
TIPS

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SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

August 24, 2021 Agenda Item 6.2

TO: Board of Retirement

FROM: Michael Coultrip, Chief Investment Officer Michael R. Coultrip

SUBJECT: Report on SamCERA's Risk Dashboard

Recommendation
Accept the SamCERA risk dashboard.

Background
Verus provides semi-annual risk management reporting (SamCERA Risk Dashboard) using index level holdings to better highlight various risk exposures of the plan. Verus presents the Risk Dashboard on an annual basis to the Board.

Discussion
Marc Gesell of Verus will present the SamCERA Risk Dashboard with data as of June 30, 2021.

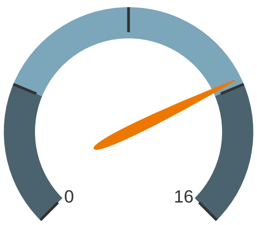
Attachment
SamCERA Risk Dashboard

San Mateo County Employees' Retirement Association

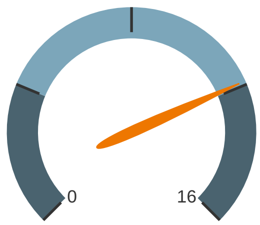
Portfolio Risk Report

June 30, 2021

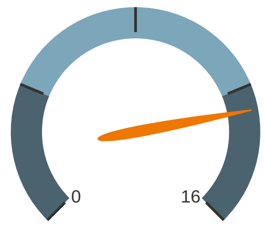
1 Portfolio risk



Portfolio: 11.8%



Policy: 11.9%



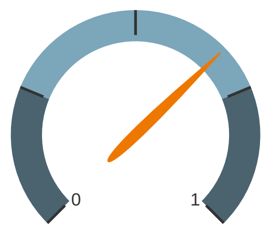
Average Public Pension: 12.7%

Global 60/40: 11.7%

2 Portfolio equity beta

Portfolio: 0.62

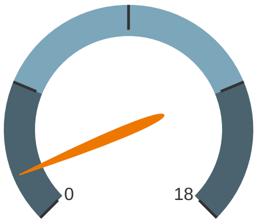
Policy: 0.63



Average Public Pension: 0.67

Global 60/40: 0.62

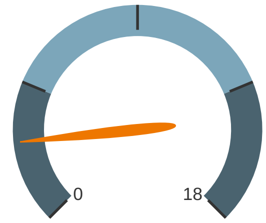
3 Portfolio interest rate risk - Duration



Portfolio: 1.5

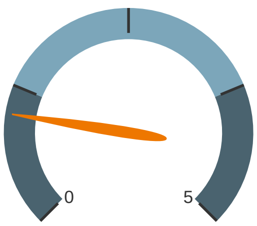
Policy: 1.7

Average Public Pension: 1.5

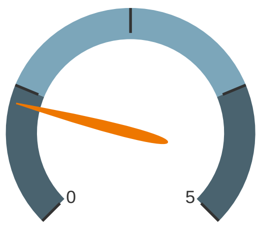


Global 60/40: 2.6

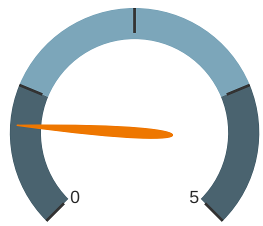
4 Portfolio credit risk - Spread duration



Portfolio: 1.0



Policy: 1.1



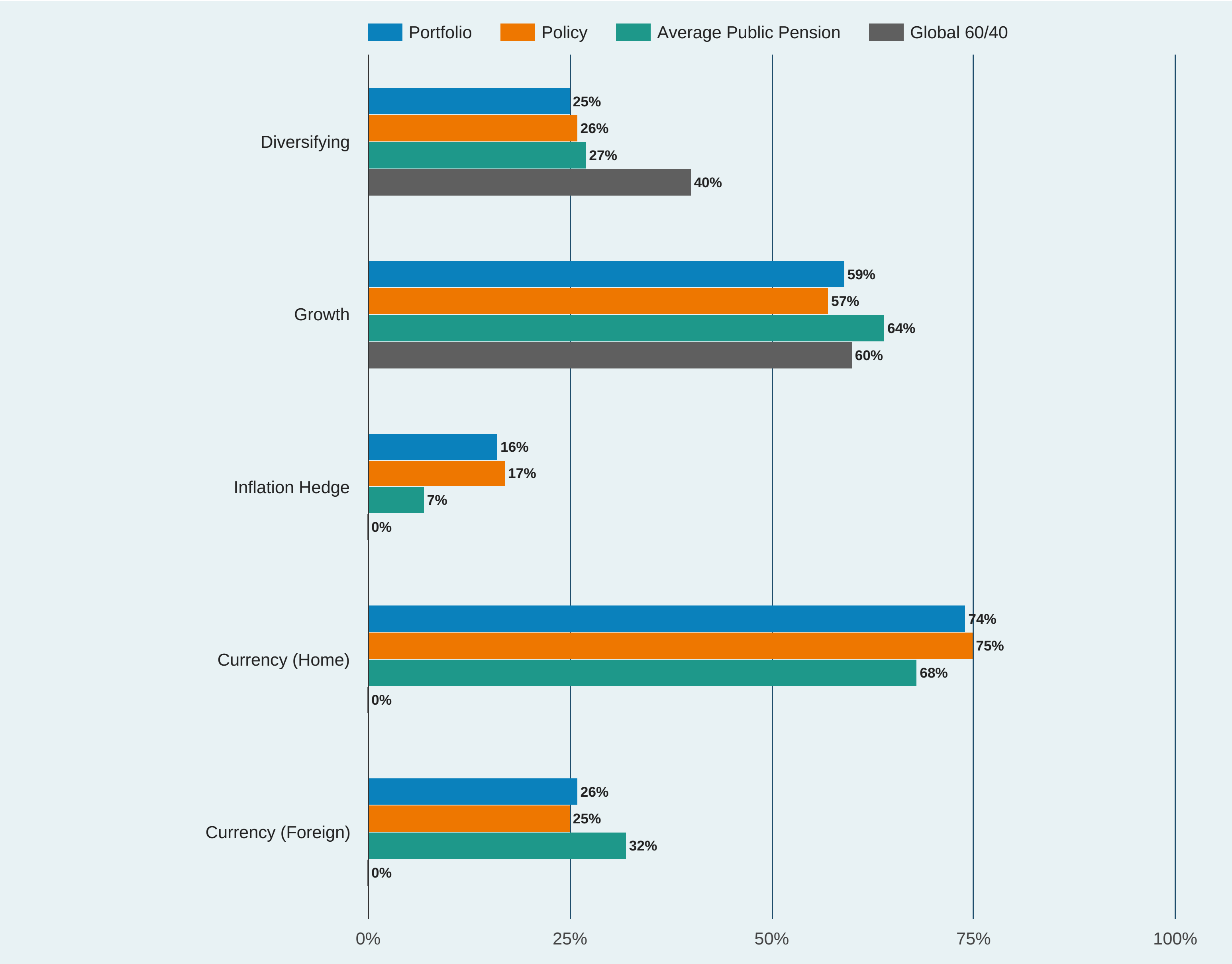
Average Public Pension: 0.9

Global 60/40: 1.4

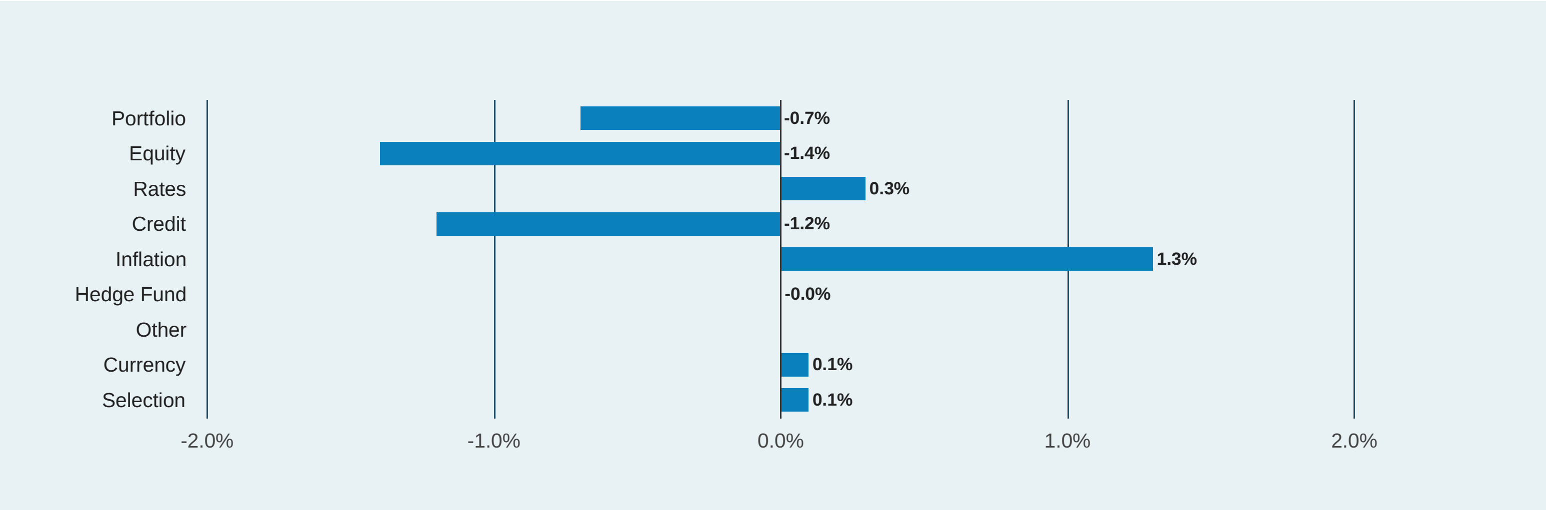
5 Exposure allocation by asset class

		Portfolio	Policy	Average Public Pension	Global 60/40
Diversifying	Liquidity	1.1%	1.0%	1.5%	
	Absolute Return	6.9%	7.0%	7.1%	
	Core Fixed	17.1%	18.0%	18.9%	40.0%
Diversifying Total		**25.0%**	**26.0%**	**27.5%**	**40.0%**
Growth	Emerging Markets	0%	4.0%	3.4%	
	Small Cap Equity	2.0%	2.0%		
	Private Credit	2.8%			
	Private Equity	7.0%	6.0%	8.6%	
	Opportunistic Credit	7.5%	10.0%	1.3%	
	Developed International	19.3%	15.0%	26.3%	60.0%
	Large Cap Equity	20.4%	20.0%	24.0%	
Growth Total		**59.0%**	**57.0%**	**63.6%**	**60.0%**
Inflation Hedge	Private Real Assets	2.0%	4.0%	1.4%	
	Public Real Assets	6.2%	4.0%		
	Real Estate	7.8%	9.0%	6.1%	
Inflation Hedge Total		**16.0%**	**17.0%**	**7.5%**	
Total Portfolio		**100%**	**100%**	**100%**	**100%**

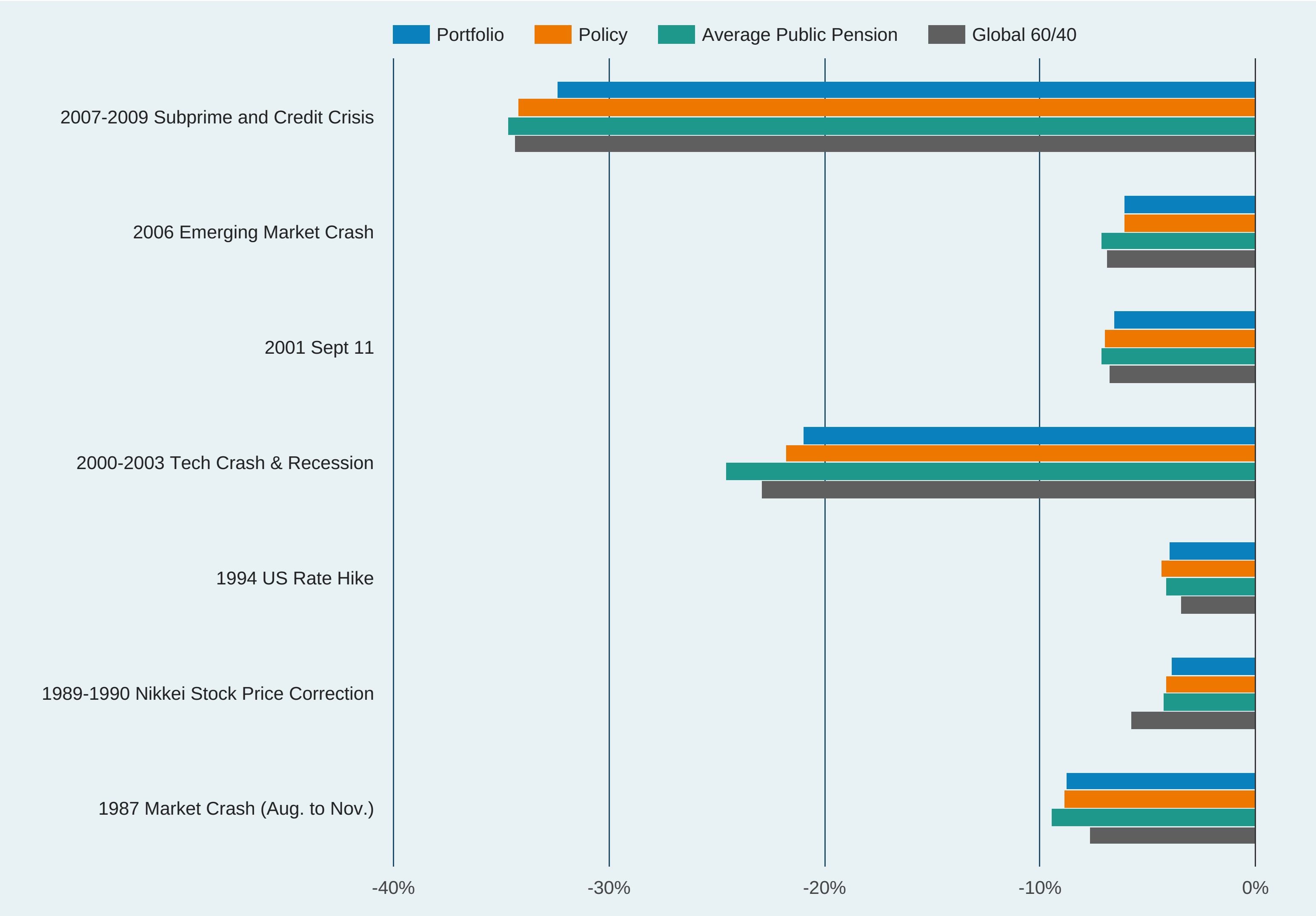
6 Exposure allocation



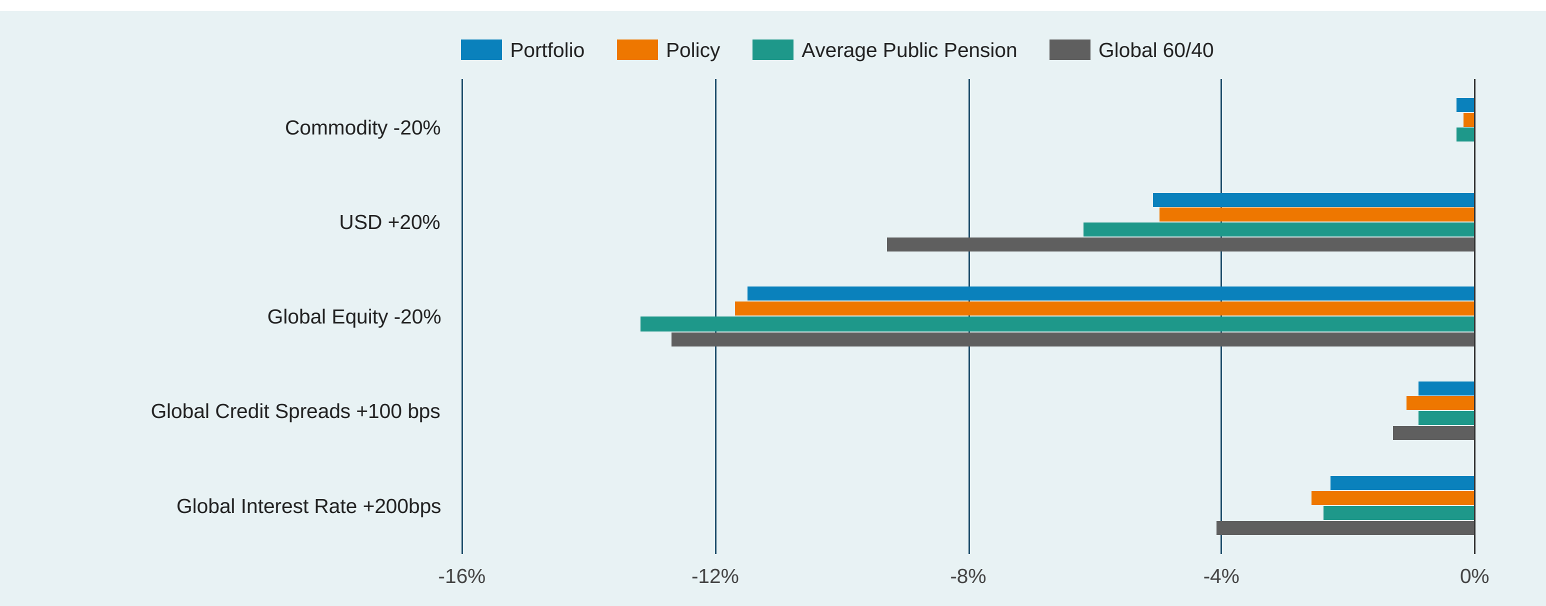
7 Risk factor weight relative to target



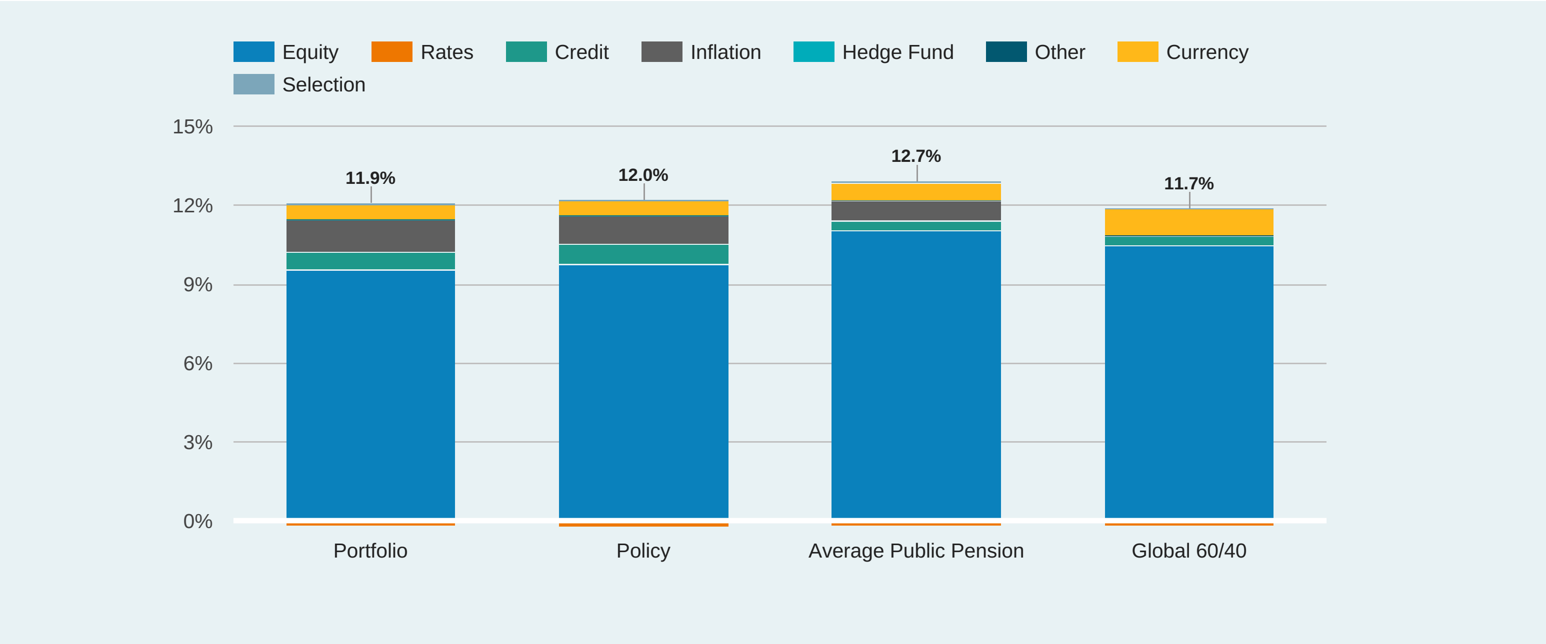
8 Tail risk - Scenario analysis



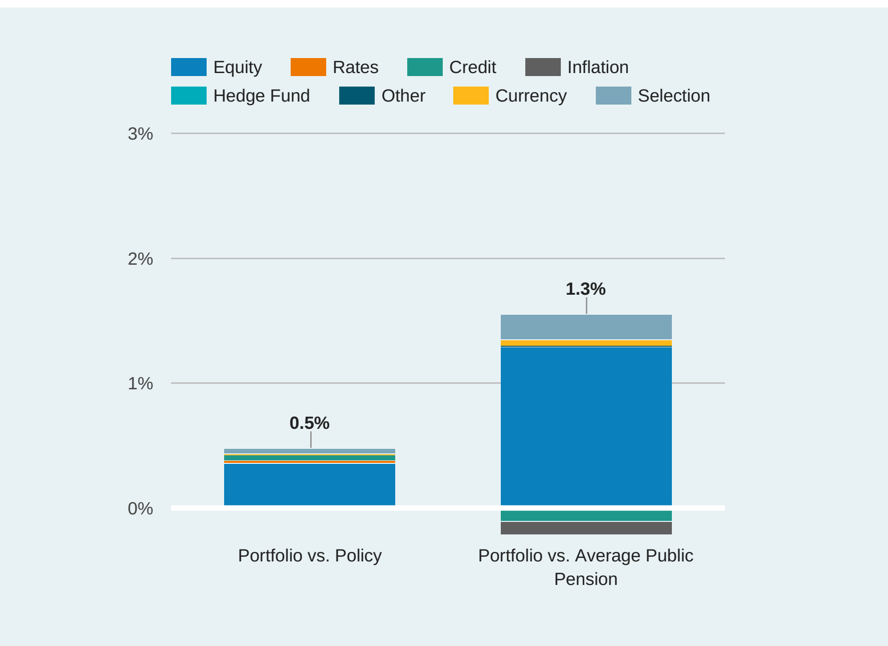
9 Tail risk - Stress tests



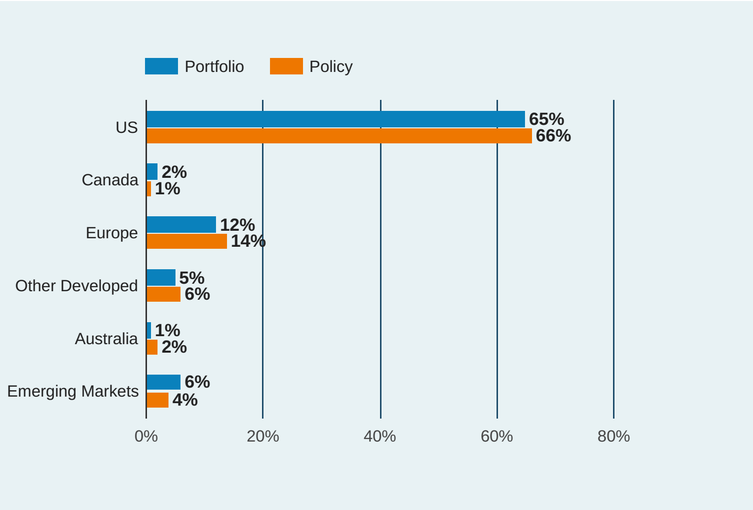
10 Risk contribution by risk factor



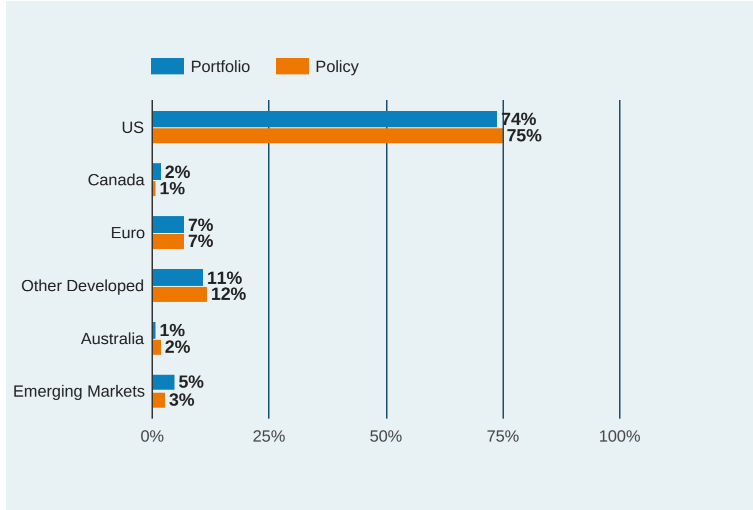
11 Active risk contribution by risk factor



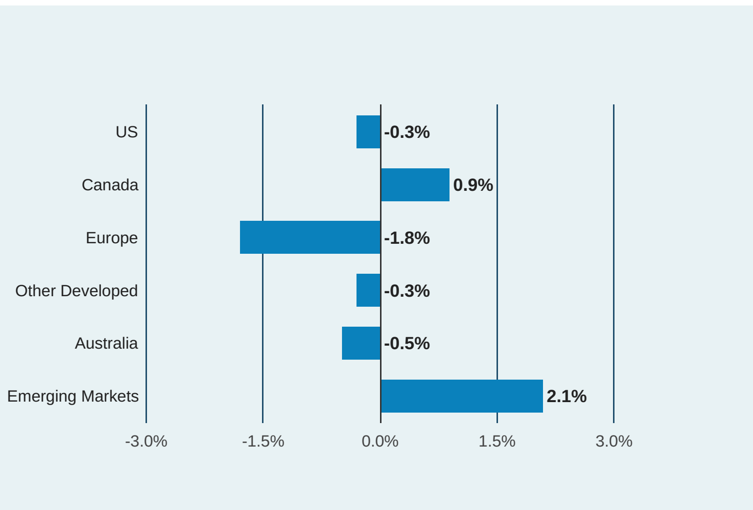
12 Geographic exposure



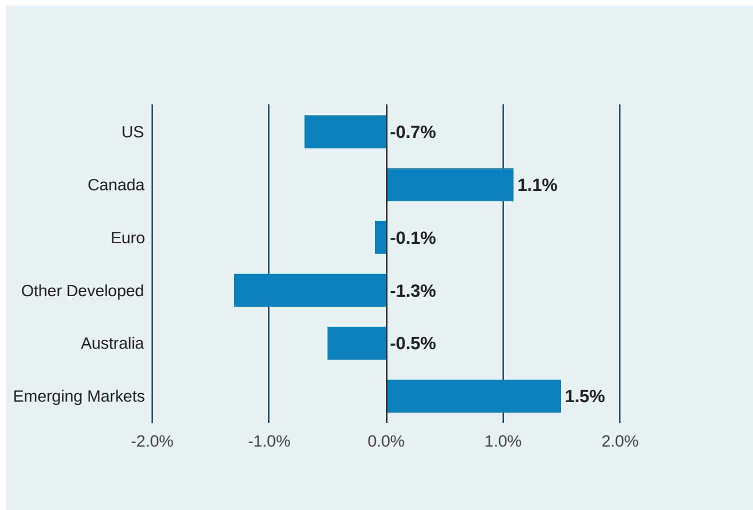
13 Currency exposure



14 Net geographic exposure



15 Net currency exposure



16 Market value summary per BarraOne

Bucket	Asset Class	Account Name	Account	Market Value (millions)
Cash	Cash	General Account	SAMCERA049	45.0
		Treasury & LAIF	SAMCERA050	8.6
		Cash Overlay	SAMCERA085	7.9
		Transition Account	SAMCERA078	0.0
Cash Total				61.5
Credit	Global Credit	PIMCO Diversified	SAMCERA064	134.6
		Franklin Templeton	SAMCERA_FRANKTEMP	77.7
		Angelo Gordon Credit Solutions	SAMCERA075	14.4
	HY Bonds	AG CSF Annex Dislocation Fund	SAMCERA079	7.2
	Private Credit	PIMCO Private Income	SAMCERA072	53.2
		White Oak YSF V	SamCERA094	34.0
		White Oak Yield	SAMCERA062	33.0
		TCP Direct Lending VIII	SAMCERA057	28.0
		Blackrock DL Feeder IX-U	SAMCERA074	12.5
	US Credit	Brigade Capital	SAMCERA029	107.3
		Beach Point Select	SAMCERA028	92.7
		Angelo Gordon Opportunistic	SAMCERA026	2.2
Credit Total				596.6
Equity	Global Equity	Baillie Gifford	SAMCERA014	384.0
		Mondrian	SAMCERA017	367.5
	International Equity	BlackRock MSCI ACWI EX-US IMI	SAMCERA091	372.2
	Private Equity	Private Equity	SAMCERA_PE	406.6
	US Equity	BlackRock Russell 1000	SAMCERA059	530.6
		PanAgora Defuseq	SAMCERA069	232.3
		Acadian US MGD V	SAMCERA068	223.9
		DE Shaw	SAMCERA004	198.4

		QMA US Small Cap	SAMCERA055	114.7
Equity Total				2,830.1
Hedge Fund	Fund of Funds	Aberdeen Standard GARS	SAMCERA037	79.9
	Hedge Fund	Graham Quant Macro	SAMCERA076	90.0
		CFM Systematic Global Macro	SamCERA093	88.3
		Acadian MAAR Fund LLC	SamCERA092	72.0
		PIMCO MAARS Fund LP	SAMCERA080	71.1
Hedge Fund Total				401.4
Inflation	Commodities	SSgA Custom Real Asset	SAMCERA058	360.6
	Real Estate	Invesco	SAMCERA044	274.9
		Private Real Asset	SAMCERA_RA	114.9
		PGIM RE US Debt Fund	SAMCERA063	85.5
		Harrison Street Core Property	SAMCERA073	53.4
		Invesco US Val V	SAMCERA071	24.6
		Invesco US Val IV	SAMCERA045	13.9
Inflation Total				927.8
Rates	Core Bonds	NISA Core Bond	SAMCERA090	237.6
	US Bonds	FIAM Bond	SAMCERA021	269.1
		DoubleLine	SAMCERA077	261.0
		Western TRU	SAMCERA022	224.4
Rates Total				992.1
Total Portfolio (millions)				**5,809.4**

Chart Definitions

1 **Portfolio risk**
Total risk comparison of Portfolio, Policy, and Average Public Pension. Policy is composed of: 10.0% Bloomberg Barclays U.S. Corporate High Yield, 18.0% Bloomberg Barclays Aggregate Index, 7.0% HFRI FOF Diversified, 1.0% Cash, 4.0% Custom Real Asset Index, 4.0% Custom Real Asset Index, 9.0% NCREIF ODCE, 15.0% MSCI EAFE, 4.0% MSCI EM, 6.0% Private Equity, 20.0% Russell 1000 Index, and 2.0% Russell 2000 Index. Average Public Pension consists of: 24.0% S&P 500 Index, 6.3% MSCI ACWI IMI, 17.4% MSCI ACWI ex USA IMI, 2.6% MSCI EAFE, 3.4% MSCI EM, 1.7% Bloomberg Barclays Global Aggregate, 1.4% Bloomberg Barclays Global Treasury ex US, 17.2% Bloomberg Barclays U.S. Aggregate, 1.3% Bloomberg Barclays Emerging Markets, 7.1% HFRI FOF Index, 8.6% Private Equity, 1.4% Bloomberg Commodity Index, 6.1% NCREIF Property Index, and 1.5% Cash. Global 60/40 is composed of 60% MSCI ACWI IMI and 40% Bloomberg Barclays Global Aggregate.

2 **Portfolio equity beta**
Equity risk presented by equity beta to market. Equity beta is a measure describing the sensitivity of portfolio returns with returns of the equity market (MSCI ACWI).

3 **Portfolio interest rate risk - Duration**
Interest rate risk presented by duration and dollar movement of portfolios. Duration of a financial asset that consists of fixed cash flows is the weighted average of the times until those fixed cash flows are received (measured in years). It also measures the percentage change in price for a given change in yields (the price sensitivity to yield). DV01 $ (dollar duration) is the change in price in dollars of a financial instrument resulting from a one basis point change in yield.

4 **Portfolio credit risk - Spread duration**
Credit risk presented by spread duration and dollar movement of portfolios. Spread duration measures the percentage change in price for a one percentage point change in spreads.

5 **Exposure allocation by asset class**
Actual exposures to various asset classes and sub-asset classes are as allocated in investment policy and are compared vs a reference benchmark. Assignment to sub-asset classes is at the custodial account level according to manager mandate.

6 **Exposure allocation**
Exposure allocation among major risk buckets (rates, credit, equity, inflation, currency) and net currency exposure (domestic vs. foreign). Full Cash collateral is assumed for all derivatives.

7 **Risk factor weight relative to target**
Contribution by factor to total relative risk of the Portfolio vs the Policy: For example, Equity is equity risk contribution to Portfolio minus equity risk contribution to the Policy, divided by total risk of the Policy. The factor overweights are additive to the total relative risk at the top line. "Other" includes Country factors and World factors.

8 **Tail risk - Scenario analysis**
Tail risk is a form of risk measurement that considers the possibility that a market will experience losses greater than what the normal distribution would suggest. This graph shows the expected performance under various historical scenarios (described in the appendix at the end of this report). For each historical scenario, the current market value is recalculated to determine return under identical market conditions, assuming an instantaneous shock.

9 **Tail risk - Stress tests**
This display shows expected performance when individual risk factors are subjected to instantaneous shocks. Directly affected assets are revalued at factor level.

10 **Risk contribution by risk factor**
Risk contribution by risk factor. Volatility measures the price variation of a portfolio or financial instrument over time.

11 **Active risk contribution by risk factor**
Active risk in terms of annual tracking error: Tracking Error (TE) measures how closely a portfolio follows its benchmark. It is the standard deviation of the difference between the portfolio and benchmark returns.

12 **Geographic exposure**
Geographic exposures are calculated using the notional exposure as a percentage of market value, including derivatives, cash securities and currency holdings, but excluding currency derivatives. Any portfolio that uses derivatives may have a total different than 100% because both cash and derivative country exposures are included.

13 **Currency exposure**
Currency portfolio allocation. Currency exposures from both the underlying securities and the purchasing currency of the futures contract are included.

14 **Net geographic exposure**
Difference between portfolio and policy allocation among major geographic areas.

15 **Net currency exposure**
Difference between portfolio and policy allocation among major currencies.

16 **Market value summary per BarraOne**
Market Value is presented by account and risk bucket in dollars as reported by BarraOne. Some differences may exist due to timing, pricing sources and availability of information on new investments.

Tail Risk Scenario Definitions

1 **2007-2009 Subprime and Credit Crisis**
(9/30/2007 - 3/4/2009) The burst of the housing bubble in mid-2007 marked the beginning of the years-long subprime mortgage crisis, rooted from the easy credit, low interest rates, and loose regulatory environment in the early 2000s, which made low quality (subprime) mortgaging extremely easy. The contagious meltdown quickly led to plunging asset prices in the financial markets, rising bankruptcies, delinquencies, and foreclosures, and central bank monetary rescues and fiscal interventions by governments around the globe.

2 **2006 Emerging Market Crash**
(5/10/2006 - 6/14/2006) A number of emerging markets, including Brazil, India, and Argentina, plunged rapidly in May 2006.

3 **2001 Sept 11**
(9/7/2001 - 9/21/2001) The U.S. stock market was closed for a week upon a series of coordinated suicide attacks upon the United States on September 11, 2001. It plunged sharply over the week upon reopening.

4 **2000-2003 Tech Crash & Recession**
(1/19/2000 - 3/12/2003) Period of crisis and slowdown for technological firms due to a rapid jump in stock prices when a speculative technology bubble began to burst, triggering a sell-off of companies. The period includes a slowdown for internet companies that went out of business as the stock market plummeted further.

5 **1994 US Rate Hike**
(1/31/1994 - 12/13/1994) In combating inflation, the U.S. Federal Reserve raised its interest rate from 3.25% in February to 5.5% in November 1994.

6 **1989-1990 Nikkei Stock Price Correction**
(12/29/1989 - 3/30/1990) After hitting the Nikkei stock index's all-time high on December 29, 1989, the Japan financial market crashed and plunged to a low in March 1990.

7 **1987 Market Crash (Aug. to Nov.)**
(8/3/1987 - 11/30/1987) The U.S. stock market began to topple on October 14, 1987 after reaching a record high. It was triggered by reports of a larger trade deficit and the elimination of the tax benefits of financing mergers. The aggravating selling pressure in October 19 from confused and fearful investors and the failing portfolio insurers' models led to a substantial global market sell-off.

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San Mateo County Employees' Retirement Association
Board of Retirement

August 24, 2021 Agenda Item 6.3

TO: Board of Retirement

FROM: Michael Coultrip, Chief Investment Officer Michael R. Coultrip

SUBJECT: Report on Quarterly Investment Performance Report for the Period Ended June 30, 2021

Recommendation
Accept Verus Advisory's quarterly performance report for the period ended June 30, 2021.

Discussion
The 2nd quarter net total return for the SamCERA portfolio was +5.0%, which was 30 bps higher than the +4.7% policy benchmark return. As can be seen on Page 20 and 21, alternatives (private equity and absolute return) were the main contributors of performance, while U.S. equity was the main detractor.

For the Fiscal Year ending June 30, 2021, the net total return for the SamCERA portfolio was 24.3%, which was 80 bps higher than the 23.5% policy benchmark return. Alternatives (private equity) and fixed income were the primary contributors to performance, while U.S. equity was the primary detractor.

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

Attachment
Verus Quarterly Performance Report Ending 6/30/2021

Verus

PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS

PERIOD ENDING: JUNE 30, 2021

Investment Performance Review for

San Mateo County Employees' Retirement Association

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Verus

VERUSINVESTMENTS.COM

SEATTLE 206-622-3700
LOS ANGELES 310-297-1777
SAN FRANCISCO 415-362-3484
PITTSBURGH 412-784-6678

2^{nd} quarter summary

THE ECONOMIC CLIMATE

— Real GDP grew at a 0.4% rate year-over-year in the first quarter (+6.4% quarterly annualized rate) as the U.S. recovery continued at a quicker-than-expected pace. It appears that GDP will fully recover in Q2.

— The U.S. unemployment rate has been slow to rebound, despite a full recovery in economic activity. This might suggest that government spending has had an outsized impact, and raises risks around a stimulus “hangover” when spending programs end.

— Economies around the world continued to recover as life began moving back to normal. This description does not apply to all economies, as Brazil, Japan, and much of Africa and Southeast Asia still grapple with effects of COVID and new variants of the virus.

PORTFOLIO IMPACTS

— Credit spreads grew even tighter during Q2, driven by investor demand and improvements in economic fundamentals. High yield spreads tightened to 2.68%—a new cycle low. Investment grade tightened 11 basis points to end the quarter at 0.80%.

— Inflation surprised on the upside in Q2, adding to investor fears. U.S. core CPI rose 4.5% year-over-year, while headline came in at 5.4%. The jump in prices has been concentrated in a few areas, including energy (+24.5% YoY) and used car & truck prices (+45.2% YoY).

THE INVESTMENT CLIMATE

— The Biden Administration’s Infrastructure Plan continues to be up in the air in terms of size and composition. As of mid-July, Democrat legislators had reached an agreement for $4.1 trillion in spending, comprised of $3.5 trillion in “human infrastructure” and $600 billion towards “traditional infrastructure” It is unclear whether this proposal will gain sufficient support from Democrats.

— It seems that investors have put the 2020 pandemic-induced recession behind them. Implied volatility, realized market volatility, and the risks reflected in asset prices are very low. This data suggests that investors perceive a strong economy, a healthy business environment, and very few threats on the horizon.

ASSET ALLOCATION ISSUES

— U.S. equities were a top performer again in Q2 (S&P 500 +8.5%). International equities (+5.2% MSCI EAFE Index) were on par with emerging markets (+5.1% MSCI Emerging Markets Index) on an unhedged currency basis.

— Factor performance suffered during Q2, reversing much of the gains from the prior quarter. Large capitalization stocks beat small (Russell 1000 +8.5%, Russell 2000 +4.3%) and growth stocks beat value (Russell 1000 Growth +11.9%, Russell 1000 Value +5.2%).

Economic progress continues to exceed expectations, though strong optimism may already be reflected in asset prices

We believe a neutral risk stance is warranted in the current environment

U.S. economics summary

— Real GDP grew at a 0.4% rate year-over-year in the first quarter (+6.4% quarterly annualized rate) as the U.S. recovery continued at a quicker-than-expected pace. It appears that gross domestic product (GDP) will fully recover in Q2.

— The U.S. unemployment rate has been slow to improve, falling very slightly from 6.0% in March to 5.9% in June. The labor market remains materially weaker relative to pre-pandemic conditions. This might suggest that a significant portion of the economic recovery has been fueled by government spending, and raises concerns about whether recent strength may prove fleeting when government intervention slows.

— The Biden Administration's Infrastructure Plan continues to be up in the air in terms of size and composition. As of mid-July, Democrat legislators had reached an agreement for $4.1 trillion in spending, comprised of $3.5 trillion in "human infrastructure" and $600 billion towards "traditional infrastructure" It is unclear whether this proposal will garner sufficient support from Democrats.

— Inflation surprised on the upside in Q2, adding to investor concerns around a potential sustained rise. U.S. core inflation, which excludes food & energy prices, rose 4.5% year-over-year in June. U.S. headline inflation came in at 5.4%. The rise in prices has so far been concentrated in a few specific areas, including energy (+24.5% YoY) and used car and truck prices (+45.2% YoY).

— Consumer sentiment further improved over the quarter, but has only regained roughly half of the deterioration post-pandemic.

	Most Recent	12 Months Prior
GDP *(YoY)*	0.4% *3/31/21*	0.3% *3/31/20*
Inflation *(CPI YoY, Core)*	4.5% *6/30/21*	1.2% *6/30/20*
Expected Inflation *(5yr-5yr forward)*	2.20% *6/30/21*	1.5% *6/30/20*
Fed Funds Target Range	0% – 0.25% *6/30/21*	0% – 0.25% *6/30/20*
10-Year Rate	1.47% *6/30/21*	0.66% *6/30/20*
U-3 Unemployment	5.9% *6/30/21*	11.1% *6/30/20*
U-6 Unemployment	9.8% *6/30/21*	18.0% *6/30/20*

International economics summary

— Economies around the world continued to recover as COVID-19 fears eased, government shutdown orders were removed, and life began moving back to normal. This description of course does not apply to all economies, as Brazil, Japan, and much of Africa and Southeast Asia still grapple with effects of COVID and new variants of the virus.

— While expanding access to quality vaccines enabled mainland Europe to close the gap relative to the U.K. and the U.S. regarding vaccination rates, many countries in Asia, Africa, and Central Europe continued to face procurement issues, which has led public policymakers to respond more forcefully to pickups in case growth.

— Inflation has risen around the world, with the U.S. experiencing one of the largest rises. This will likely be a key theme for markets in the coming months.

— The U.S. trade balance of goods and services remained at a near all-time-low level of $75B per month, perhaps indicating that the relative strength of the U.S. consumer has pushed up domestic imports to levels above exports. The U.S. trade deficit might be primed to recede if the global recovery were to broaden.

— The pace of global manufacturing sector activity growth remained high, while services sector activity in many countries began to expand.

— Chinese GDP growth reportedly moderated from a year-over-year pace of 18.3% in Q1 to 7.9% in Q2—slightly missing expectations (+8.0%), but keeping the 6% annual target in range. Retail sales (+12.1%) and industrial production (+8.3%) both grew by more than forecast, but policymakers continue to worry that the economic recovery has been uneven in composition, which could weigh on future growth.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	0.4% *3/31/21*	5.4% *6/30/21*	5.9% *6/30/21*
Eurozone	(1.3%) *3/31/21*	1.9% *6/30/21*	7.9% *5/31/21*
Japan	(1.6%) *3/31/21*	0.0% *6/30/21*	3.1% *5/31/21*
BRICS Nations	13.3% *3/31/21*	2.5% *6/30/21*	5.7% *12/31/20*
Brazil	1.0% *3/31/21*	8.4% *6/30/21*	14.7% *4/30/21*
Russia	(0.7%) *3/31/21*	6.5% *6/30/21*	4.9% *5/31/21*
India	1.6% *3/31/21*	6.3% *6/30/21*	9.2% *6/30/21*
China	7.9% *6/30/21*	1.1% *6/30/21*	5.0% *5/31/21*

NOTE: India lacks reliable government unemployment data. Unemployment rate shown above is estimated from the Centre for Monitoring Indian Economy. The Chinese unemployment rate represents the monthly surveyed urban unemployment rate in China.

Equity environment

— U.S. equities were a top performer again in Q2, returning +8.5%. International equities (+5.2% MSCI EAFE Index) were on par with emerging markets (+5.0% MSCI Emerging Markets Index) on an unhedged currency basis.

— Following the notable turnaround in value stock performance during Q1, growth stocks once again took the lead in Q2. Growth stocks beat value by 6.7% during the quarter, dampening excitement for a value comeback.

— U.S. small-cap stocks (+4.3%) lagged large-cap stocks (+8.5%) as the reflation trade lost steam, but have still outperformed by 21.2% over the last year.

— It seems that investors have put the 2020 pandemic-induced recession behind them. Implied volatility, actual market volatility, and the risk reflected in asset prices is very low. This data suggests that investors perceive a strong economy, a healthy business environment, and very few risks on the horizon.

— Per FactSet, the estimated year-over-year earnings growth for the S&P 500 Index as of Q2 2021 is 64.0%. If that rate were to materialize, it would mark the highest year-over-year growth rate reported by the index since Q4 2009 (109.1%).

— Global equities have marched higher without many hiccups over the last six months. The MSCI ACWI Index has not closed more than 5% below its prior peak level since November 2nd, 2020. In the second quarter, the furthest the ACWI ever closed below its prior high-water-mark was 3.3%.

	QTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (S&P 500)	8.5%		40.8%	
US Small Cap (Russell 2000)	4.3%		62.0%	
US Large Value (Russell 1000 Value)	5.2%		43.7%	
US Large Growth (Russell 1000 Growth)	11.9%		42.5%	
International Large (MSCI EAFE)	5.2%	4.9%	32.4%	28.0%
Eurozone (Euro Stoxx 50)	5.8%	5.1%	35.4%	29.7%
U.K. (FTSE 100)	5.8%	5.7%	31.9%	18.5%
Japan (NIKKEI 225)	(1.6%)	(1.0%)	27.0%	31.7%
Emerging Markets (MSCI Emerging Markets)	5.0%	3.5%	40.9%	35.1%

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 6/30/21

Domestic equity

U.S. equities were a top performer again in Q2, returning +8.5%. Per FactSet, the estimated year-over-year earnings growth for the S&P 500 Index as of June 30th was 64.0%. If that rate were to materialize, it would mark the highest year-over-year rate reported by the index since Q4 2009 (109.1%).

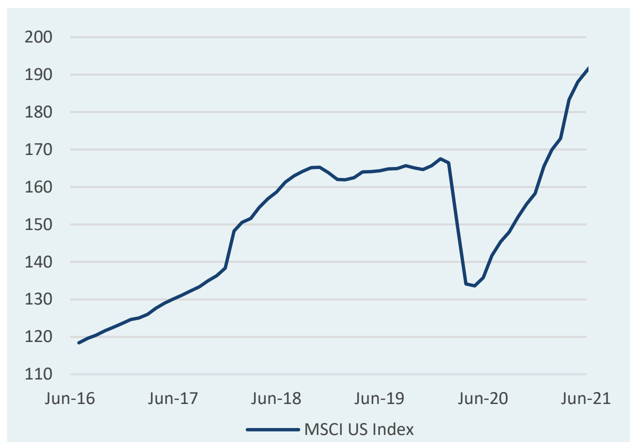
Concerns over the potential of the coronavirus delta variant to crimp the growth outlook helped to drive a rotation away from the more cyclical sectors that had driven the advance in U.S. equities since last August. Interest rates fell substantially, supporting outperformance of the Real Estate (+13.1%), IT (+11.6%), and Telecom (+10.7%) sectors. The shift in sentiment towards more cautious risk positioning led the quality factor (+10.6%) to outperform relative to MSCI's suite of long-only factor indices.

While it appears possible that equities could continue rallying into next year, the road could well become bumpier from here, given high valuations and the level of optimism baked into prices. We retain a cautiously optimistic view, given the uncertainty which shrouds the outlook.

S&P 500 INDEX

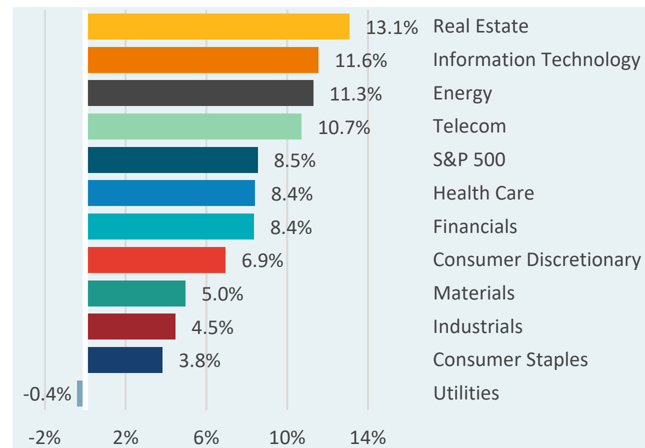
Source: Standard & Poor's, as of 6/30/21

FORWARD 12-MONTH EARNINGS PER SHARE



Source: MSCI, as of 6/30/21

Q2 SECTOR PERFORMANCE



Source: Standard & Poor's, as of 6/30/21

Domestic equity size & style

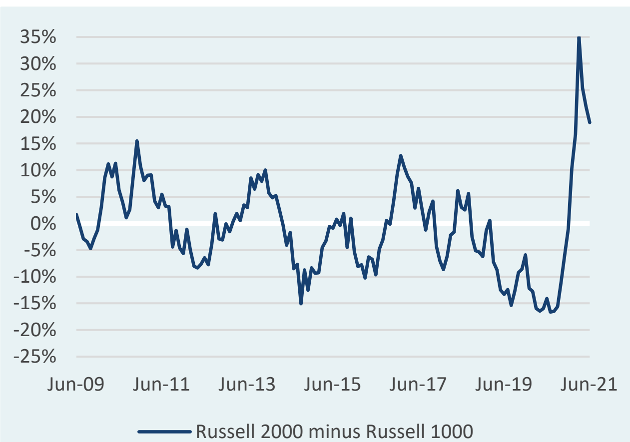
Large capitalization stocks beat small (Russell 1000 +8.5%, Russell 2000 +4.3%) and growth stocks beat value (Russell 1000 Growth +11.9%, Russell 1000 Value +5.2%), as investors rotated portfolios away from riskier exposures to larger, more quality names amid a more cautious risk outlook.

Following the notable turnaround in value stock performance during Q1, growth stocks once again took the lead in Q2, dampening excitement for a value comeback. As we have noted recently, sector trends can have large impacts on factor behavior. This may have been the case with value in the first quarter. Small capitalization stocks have exhibited a spectacular run over the past year, outperforming large cap stocks by 21.2% (Russell 2000 +62.0, Russell 1000 +43.1%).

In general, factor performance tends to be noisy and difficult to predict, which suggests that style investing should in most cases involve a longer-term focus.

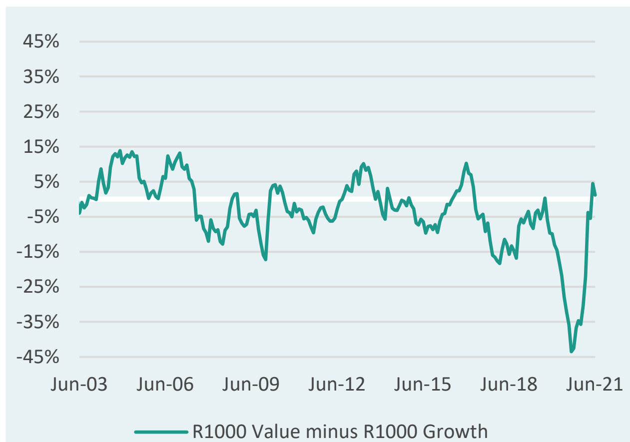
Small cap and value stocks delivered strong relative performance during Q1

SMALL CAP VS LARGE CAP (YOY)



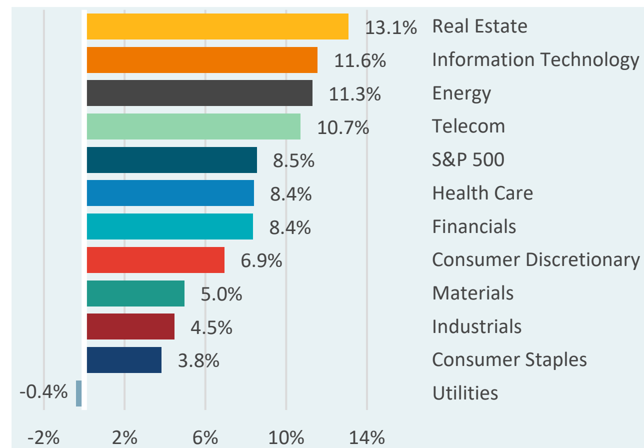
Source: FTSE, as of 6/30/21

VALUE VS GROWTH (YOY)



Source: FTSE, as of 6/30/21

Q2 SECTOR PERFORMANCE



Source: Standard & Poor's, as of 6/30/21

International developed equity

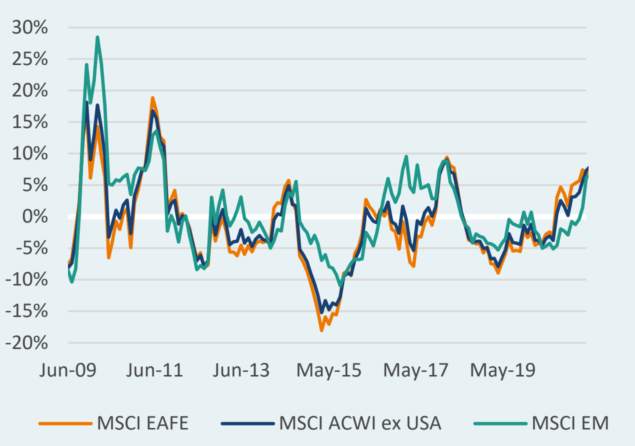
International equities delivered +5.2% (MSCI EAFE Index) during the quarter on an unhedged currency basis, lagging U.S. equities but in line with emerging market equities (MSCI Emerging Markets +5.0%). Broad dollar weakness over most of the quarter boosted returns for unhedged investors in international developed equities by 0.3%, European equities by 0.7%, and emerging markets by 1.5%. The Japanese yen depreciated slightly relative to the U.S. dollar, which presented headwinds for unhedged investors in Japanese equities. Fading of risk-on sentiment in June helped to spur a turnaround in the U.S. dollar late in the quarter, though short covering dynamics also played a factor.

Fresh concerns over the growth outlook following the emergence of the new, more virulent delta strain of the coronavirus pushed ECB policymakers to accelerate the pace of weekly asset purchases within the Pandemic Emergency Purchase Programme slightly, with the goal being to preserve financial conditions supporting a strong recovery. The commitment to easier policy over the short-to-intermediate term helped to keep interest rates at relatively low levels, which buoyed the valuation of European equities.

INTERNATIONAL DEVELOPED EQUITIES

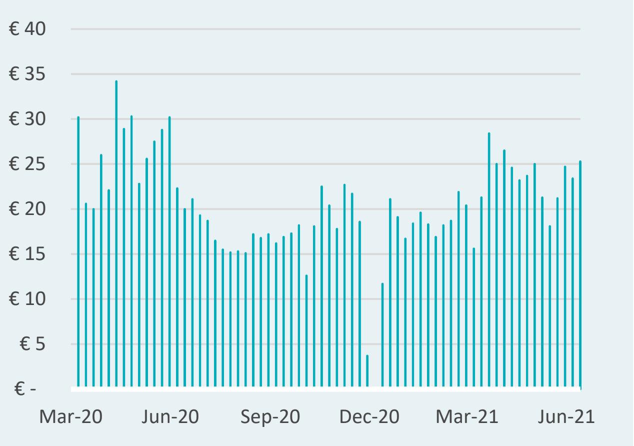
Source: MSCI, as of 6/30/21

EFFECT OF CURRENCY (1-YEAR ROLLING)



Source: MSCI, as of 6/30/21

ECB WEEKLY PEPP PURCHASES (BILLIONS)



Source: Bloomberg, ECB, as of 7/9/21

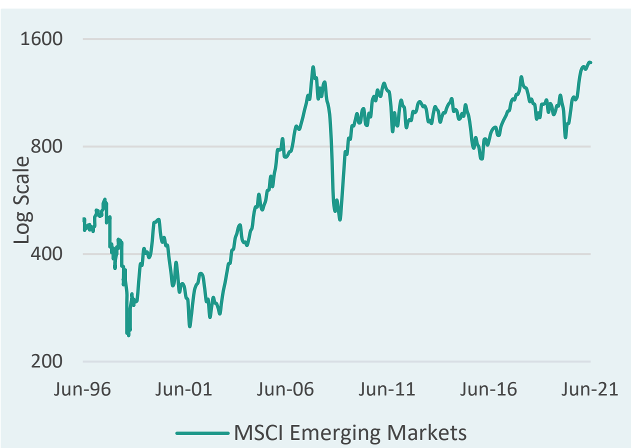
Emerging market equity

Emerging market equities (MSCI EM +5.0%) underperformed U.S. (S&P 500 +8.6%) and were in line with international developed equities (MSCI EAFE +5.2%) during the second quarter.

Latin American equities once again took the lead during the second quarter, outperforming the broader index by 10% (MSCI Latin America 15.0%, MSCI Emerging Markets +5.0%). Much of this performance was due to the notable underperformance of Chinese equities, which lagged the overall index by -2.8% during Q2 and -14.4% over the past year. Single countries in the emerging markets complex often display high volatility. In other words, large idiosyncratic moves such as the one witnessed recently by Chinese equities are not unusual.

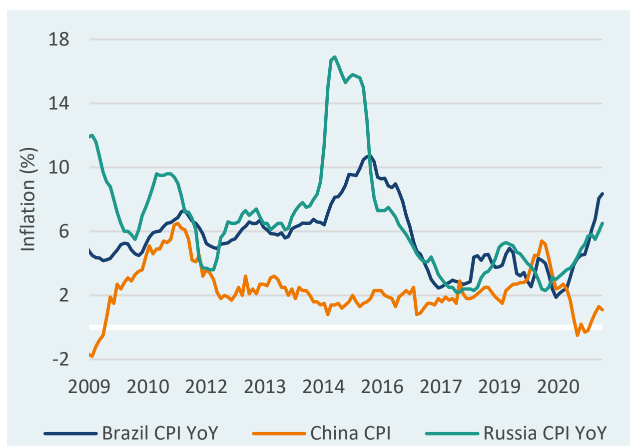
Headline Inflation in Brazil has risen to 8.4%, which is double the pre-pandemic level. Brazil has hiked their central bank rate from 2.00% to 4.25% to battle rising prices. Inflation in Russia has also jumped, now at 6.5%. Russia has hiked their key rate from 4.25% to 5.50%. This might suggest that central banks around the world have different views regarding how "transitory" the recent inflation rise will be, although volatile rates of inflation are common in the emerging markets.

EMERGING MARKET EQUITY



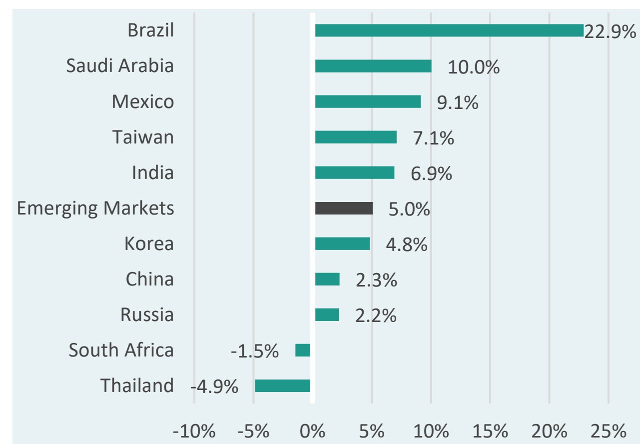
Source: MSCI, as of 6/30/21

INFLATION (YOY)



Source: Bloomberg, as of 6/30/21 or most recent data

Q2 PERFORMANCE – TOP 10 EM CONSTITUENTS



Source: Bloomberg, MSCI, as of 6/30/21, performance in USD terms

Fixed income environment

— The 10-year U.S. Treasury yield moved lower during Q2, from 1.75% to 1.44%. Many have attributed this trend to the Federal Reserve's recent indications that monetary policy will be kept very easy for the medium term. "Lower-for-longer" interest rates may act as a support to risk asset prices.

— Despite very dovish communication from central banks, derivative markets suggest investors are pricing between a 0-0.4% rise in interest rates over the next year in most developed countries.

— Headline Inflation in Brazil has risen to 8.4%, double the pre-pandemic level. Brazil has hiked their central bank rate from 2.00% to 4.25% to battle rising prices. Inflation in Russia has also jumped, now at 6.5%. Russia has hiked their key rate from 4.25 to 5.5%. This might suggest that central banks around the world have different views regarding how "transitory" the recent inflation rise will be.

— Risky credit outperformed over the quarter as spread levels compressed to decade-lows in the United States, and emerging markets debt bounced back. Hard-currency denominated emerging market debt returned 4.1% and high yield credit in the U.S. returned 2.7%.

— Policy shifts from the People's Bank of China resulted in a drawdown of liquidity across Asian markets over most of the quarter, which weighed on valuations for larger tech companies across the region. More recent concerns over the pace of the economic recovery in China may lead the government to withdraw liquidity more gradually.

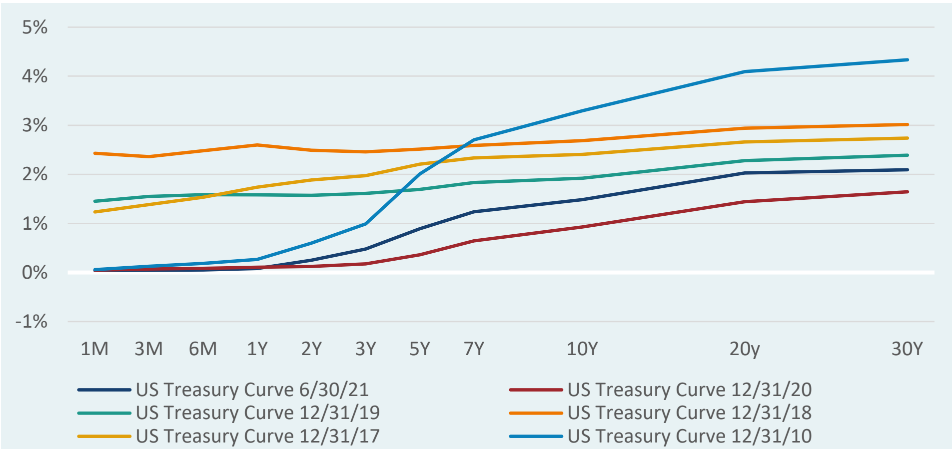
— While some developed market central banks (Bank of Canada, Bank of Korea, Norges Bank) have started to marginally tighten (or signal tighter) policy, the Federal Reserve and the European Central Bank are expected to keep policies accommodative for at least the next year to 18 months.

	QTD Total Return	1 Year Total Return
Core Fixed Income (BBgBarc U.S. Aggregate)	1.8%	(0.3%)
Core Plus Fixed Income (BBgBarc U.S. Universal)	2.0%	1.1%
U.S. Treasuries (BBgBarc U.S. Treasury)	1.7%	(3.2%)
U.S. High Yield (BBgBarc U.S. Corporate HY)	2.7%	15.4%
Bank Loans (S&P/LSTA Leveraged Loan)	1.4%	11.7%
Emerging Market Debt Local (JPM GBI-EM Global Diversified)	3.5%	6.6%
Emerging Market Debt Hard (JPM EMBI Global Diversified)	4.1%	7.5%
Mortgage-Backed Securities (BBgBarc MBS)	0.3%	(0.4%)

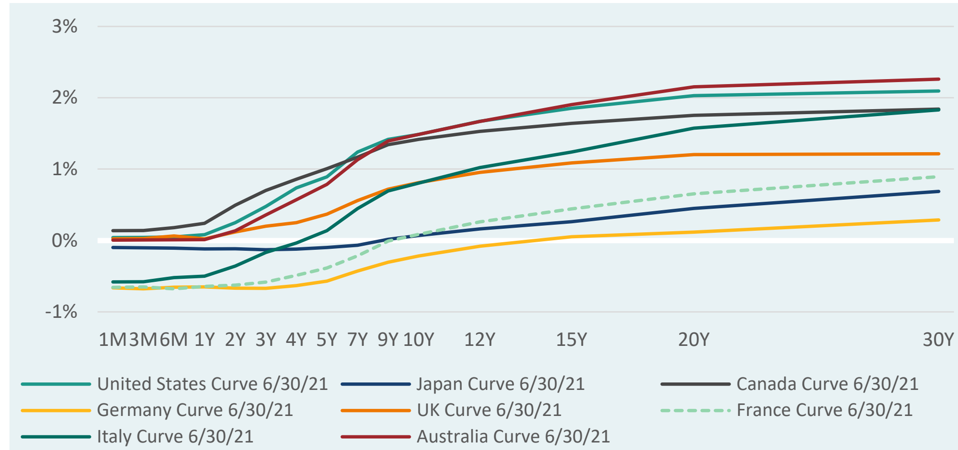
Source: Bloomberg, as of 6/30/21

Yield environment

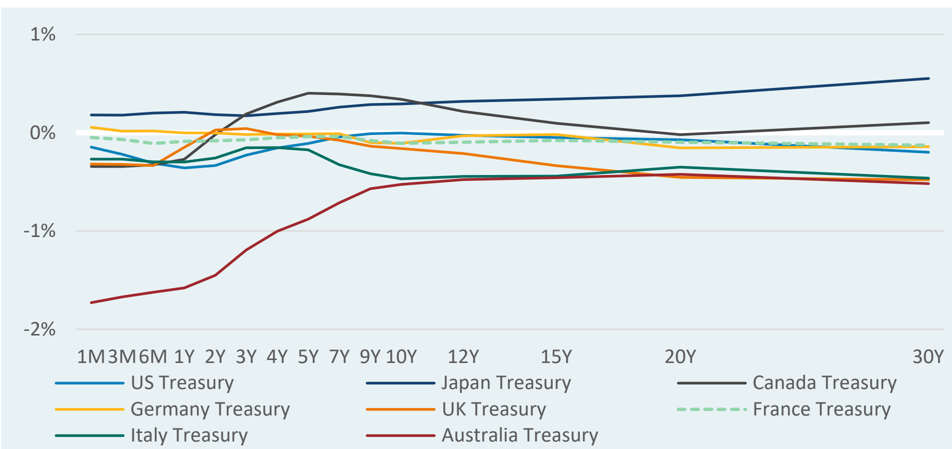
U.S. YIELD CURVE



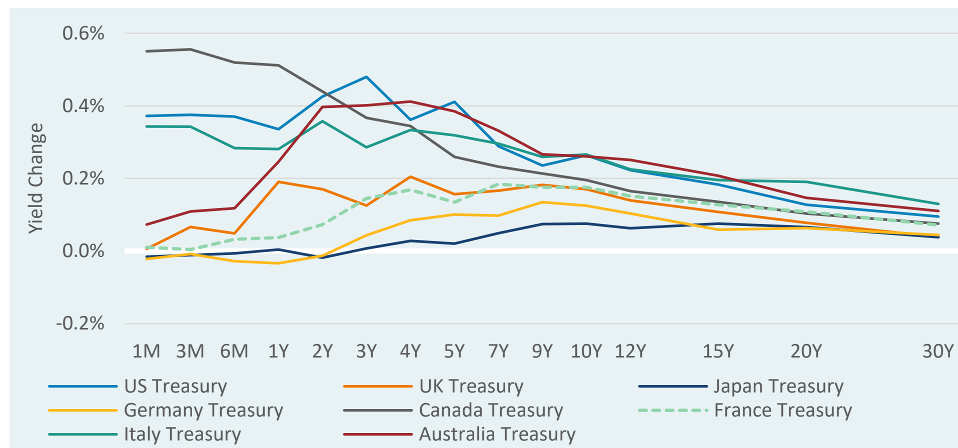
GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 6/30/21

Currency

The stabilization in the U.S. dollar that took place in the first quarter as Treasury yields rose began to fade as longer-term interest rates declined from pandemic-era high levels. The dollar sold off relative to major currencies in April and May, before finding a bid in June on the back of slightly more cautious sentiment. Investors remain quite polarized over the medium-to-long term path of the dollar, which might increase the probability of more volatility in the future.

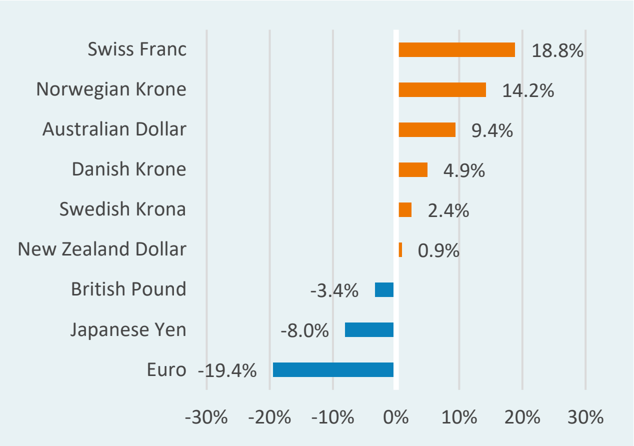
Despite U.S. dollar weakness relative to the euro and British pound over the quarter, those two European currencies remain relatively cheap on a purchasing power parity basis. The Japanese yen became even cheaper relative to the dollar over the period, while the Swiss franc and Norwegian Krone remained at relatively expensive valuations.

The embedded currency portfolio of the MSCI EAFE Index returned 0.3% over the quarter, but returned 4.4% over the trailing year on the back of a weakening U.S. dollar. Within Verus' preferred currency beta benchmark, the momentum factor (-6.8%) contributed significant headwinds to one-year trailing returns, as frequent shifts in market risk sentiment limited the capacity of risk-on and risk-off currencies from sustaining trends in one direction or the other.

BLOOMBERG DOLLAR SPOT INDEX

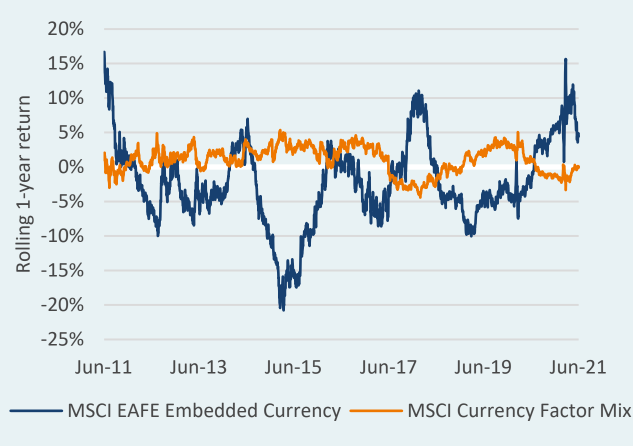
Source: Bloomberg, as of 6/30/21

PURCHASING POWER PARITY VALUATIONS VS. U.S. DOLLAR (OECD)



Source: Bloomberg, as of 6/30/21

CURRENCY BETA RELATIVE PERFORMANCE



Source: Bloomberg, MSCI, as of 6/30/21

— The Total Fund, net of manager fees, returned 5.0% in the first quarter of 2021 and in the ranked 54th percentile among other public plans greater than $1 billion (median of 5.1%). It beat the policy index return of 4.7%. The Total Fund ex Overlay returned 5.0% for the quarter. The Total Fund one-year return of 24.3% beat the policy index return of 23.5% and ranked in the 86th percentile of its peer universe. The three-year return of 9.4% (84th percentile) lagged the median large public plan (10.7) and the policy index (10.3%).

— First quarter results were enhanced by the following factors:

1. Brigade rose 3.7% beating its index (2.4%) placing them in the top 5% of its high yield peers. Brigade's outperformance was largely driven by outperforming positions in the energy sector.
2. The private equity composite gained 12.6% for the quarter with one year outperformance of approximately 20% vs its benchmark.
3. Baillie Gifford outperformed the MSCI ACWI ex US gaining 6.6% vs 5.6% for the index. It's growthy bias helped this quarter, as the MSCI ACWI ex US Growth gained 6.7%.

— First quarter results were hindered by the following factors:

1. Acadian Managed Vol and PanAgora Defensive Equity both lagged the Russell 1000 (8.5%) gaining 6.8% and 5.3% respectively. The underweights to information technology and overweight to utilities inherent in low vol strategies hurt relative returns as IT gained 11.4% during the quarter while utilities lost -0.5%.

	3 Mo (%)	Rank*	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Total Fund**	**5.0**	**54**	**7.8**	**80**	**24.3**	**86**	**11.4**	**88**	**9.4**	**84**	**9.5**	**86**	**8.1**	**51**
Policy Index[1]	*4.7*	*71*	*8.7*	*56*	*23.5*	*89*	*12.1*	*81*	*10.3*	*67*	*10.2*	*65*	*8.6*	*30*
InvMetrics Public DB > $1B Net Median	*5.1*		*8.8*		*26.3*		*13.5*		*10.7*		*10.5*		*8.2*	
Total Fund ex Overlay	**5.0**	**54**	**7.8**	**80**	**24.3**	**86**	**11.4**	**88**	**9.3**	**87**	**9.4**	**87**	**8.0**	**62**
Policy Index[1]	*4.7*	*71*	*8.7*	*56*	*23.5*	*89*	*12.1*	*81*	*10.3*	*67*	*10.2*	*65*	*8.6*	*30*
InvMetrics Public DB > $1B Net Median	*5.1*		*8.8*		*26.3*		*13.5*		*10.7*		*10.5*		*8.2*	
Public Equity	**6.3**	**88**	**12.0**	**78**	**37.8**	**89**	**17.7**	**88**	**13.2**	**86**	**13.8**	**88**	**10.5**	**67**
Blended Public Equity Index[1]	*6.9*	*69*	*13.1*	*50*	*39.7*	*75*	*19.4*	*56*	*14.4*	*62*	*14.9*	*54*	*11.1*	*48*
InvMetrics All DB Total Eq Net Median	*7.2*		*13.1*		*41.4*		*19.7*		*15.0*		*15.0*		*11.0*	
US Equity	**7.1**	**72**	**13.5**	**92**	**38.6**	**96**	**19.1**	**92**	**15.1**	**88**	**15.7**	**85**	**13.1**	**75**
Blended US Equity Index[1]	*8.2*	*16*	*15.1*	*61*	*44.2*	*54*	*23.9*	*16*	*18.7*	*13*	*17.9*	*18*	*14.5*	*15*
Russell 3000	*8.2*	*16*	*15.1*	*61*	*44.2*	*54*	*23.9*	*16*	*18.7*	*13*	*17.9*	*22*	*14.7*	*11*
InvMetrics All DB US Eq Net Median	*7.6*		*15.3*		*44.3*		*22.4*		*17.4*		*17.2*		*13.7*	
Large Cap Equity	**7.4**	**51**	**12.8**	**75**	**37.0**	**74**	**19.2**	**59**	**16.0**	**56**	**16.5**	**45**	**13.8**	**44**
Russell 1000	*8.5*	*35*	*15.0*	*52*	*43.1*	*37*	*24.0*	*33*	*19.2*	*35*	*18.0*	*33*	*14.9*	*29*
eV US Large Cap Equity Net Median	*7.5*		*15.0*		*40.5*		*20.8*		*16.8*		*15.9*		*13.3*	
Acadian US MGD V	6.8	75	11.1	89	26.7	95	11.1	96	--	--	--	--	--	--
BlackRock Russell 1000	8.5	27	15.0	50	43.1	23	24.0	17	19.2	21	--	--	--	--
DE Shaw	7.7	50	10.9	90	40.9	38	21.3	46	16.1	61	17.1	31	15.0	12
PanAgora Defuseq	5.3	91	11.0	89	27.6	93	11.4	95	--	--	--	--	--	--
Russell 1000	*8.5*	*26*	*15.0*	*51*	*43.1*	*23*	*24.0*	*17*	*19.2*	*22*	*18.0*	*15*	*14.9*	*13*
eV US Large Cap Core Equity Net Median	*7.7*		*15.0*		*39.5*		*20.7*		*16.9*		*16.1*		*13.6*	

** 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.

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Small Cap Equity	**4.1**	**61**	**21.2**	**41**	**57.8**	**56**	**16.1**	**84**	**7.7**	**89**	**11.7**	**84**	**9.7**	**88**
Russell 2000	*4.3*	*58*	*17.5*	*57*	*62.0*	*45*	*23.0*	*41*	*13.5*	*48*	*16.5*	*45*	*12.3*	*47*
eV US Small Cap Equity Net Median	*4.6*		*18.7*		*59.6*		*21.1*		*13.2*		*15.4*		*12.1*	
QMA US Small Cap	4.1	64	21.2	33	57.8	55	16.1	87	7.7	95	--	--	--	--
Russell 2000	*4.3*	*60*	*17.5*	*60*	*62.0*	*37*	*23.0*	*39*	*13.5*	*40*	*16.5*	*35*	*12.3*	*47*
eV US Small Cap Core Equity Net Median	*4.7*		*18.6*		*59.0*		*21.2*		*12.8*		*15.4*		*12.1*	
Domestic Equity Overlay	0.2	--	10.8	--	56.3	--	--	--	--	--	--	--	--	--
International Equity	**5.4**	**67**	**10.4**	**25**	**36.9**	**62**	**16.0**	**36**	**11.0**	**27**	**11.5**	**43**	**6.3**	**48**
Blended International Equity Index[1]	*5.2*	*80*	*10.8*	*20*	*34.5*	*85*	*14.2*	*74*	*9.4*	*64*	*11.3*	*52*	*5.9*	*62*
MSCI EAFE Gross	*5.4*	*72*	*9.2*	*57*	*32.9*	*90*	*12.5*	*87*	*8.8*	*79*	*10.8*	*73*	*6.4*	*46*
InvMetrics All DB ex-US Eq Net Median	*5.6*		*9.4*		*37.8*		*15.1*		*9.8*		*11.3*		*6.2*	
Baillie Gifford	6.6	64	6.9	55	41.7	38	26.2	25	16.9	23	16.1	46	--	--
MSCI ACWI ex US[1]	*5.6*	*75*	*9.4*	*24*	*36.3*	*58*	*14.2*	*95*	*9.9*	*93*	*11.6*	*96*	--	--
MSCI ACWI ex US Growth	*6.7*	*63*	*6.7*	*60*	*34.1*	*73*	*19.3*	*62*	*13.6*	*56*	*13.8*	*71*	--	--
eV ACWI ex-US Growth Equity Net Median	*7.7*		*7.1*		*38.4*		*21.9*		*14.7*		*15.7*		*9.1*	
Mondrian	4.6	56	11.0	66	37.1	72	9.3	78	6.9	41	8.0	62	4.8	59
MSCI ACWI ex USA Value Gross	*4.5*	*57*	*12.1*	*63*	*38.3*	*65*	*8.6*	*83*	*5.8*	*58*	*9.2*	*47*	*4.1*	*85*
MSCI ACWI ex USA Gross	*5.6*	*28*	*9.4*	*85*	*36.3*	*74*	*14.2*	*35*	*9.9*	*18*	*11.6*	*22*	*5.9*	*37*
eV ACWI ex-US Value Equity Net Median	*4.9*		*13.7*		*42.4*		*11.3*		*6.1*		*8.7*		*5.1*	
BlackRock MSCI ACWI EX-US IMI	5.7	53	9.7	48	37.4	67	--	--	--	--	--	--	--	--
MSCI ACWI ex USA IMI	*5.6*	*54*	*9.6*	*56*	*37.2*	*68*	*14.3*	*74*	*9.4*	*73*	*11.2*	*74*	*5.7*	*84*
eV ACWI ex-US All Cap Core Eq Net Median	*6.1*		*9.7*		*39.0*		*17.3*		*12.1*		*12.5*		*7.2*	
Int'l Equity Currency Overlay														
International Equity Overlay	-4.2	--	3.6	--	21.5	--	--	--	--	--	--	--	--	--

1. See Appendix for Benchmark History.

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Fixed Income	**2.1**	**42**	**1.0**	**16**	**5.7**	**25**	**5.2**	**43**	**5.7**	**49**	**5.1**	**25**	**4.7**	**28**
Blended Fixed Income Index[1]	*2.0*	*52*	*-0.2*	*42*	*3.5*	*50*	*4.9*	*49*	*6.1*	*36*	*4.1*	*53*	*3.8*	*60*
InvMetrics All DB Total Fix Inc Net Median	*2.0*		*-0.5*		*3.5*		*4.9*		*5.7*		*4.1*		*4.0*	
Core Fixed	**2.1**	**--**	**-0.8**	**--**	**1.6**	**--**	**4.6**	**--**	**5.4**	**--**	**3.7**	**--**	**4.0**	**--**
BBgBarc US Aggregate TR	*1.8*	*--*	*-1.6*	*--*	*-0.3*	*--*	*4.1*	*--*	*5.3*	*--*	*3.0*	*--*	*3.4*	*--*
DoubleLine	2.4	6	-0.3	65	1.4	59	--	--	--	--	--	--	--	--
BBgBarc US Aggregate TR	*1.8*	*10*	*-1.6*	*99*	*-0.3*	*90*	*4.1*	*10*	*5.3*	*6*	*3.0*	*51*	*3.4*	*49*
eV US Securitized Fixed Inc Net Median	*0.7*		*0.1*		*2.3*		*2.8*		*3.9*		*3.0*		*3.2*	
FIAM Bond	2.1	36	-1.0	30	1.8	26	5.7	7	6.5	11	4.1	6	4.2	17
NISA Core Bond	1.9	66	-1.6	67	-0.2	78	--	--	--	--	--	--	--	--
BBgBarc US Aggregate TR	*1.8*	*78*	*-1.6*	*72*	*-0.3*	*82*	*4.1*	*80*	*5.3*	*78*	*3.0*	*77*	*3.4*	*79*
eV US Core Fixed Inc Net Median	*2.0*		*-1.3*		*0.7*		*4.6*		*5.7*		*3.4*		*3.7*	
Western TRU	1.8	83	-0.4	9	6.1	2	4.8	39	5.2	87	4.7	3	--	--
3-Month Libor Total Return USD	*0.0*	*99*	*0.1*	*5*	*0.2*	*67*	*0.9*	*99*	*1.4*	*99*	*1.4*	*99*	*0.9*	*99*
BBgBarc US Aggregate TR	*1.8*	*78*	*-1.6*	*72*	*-0.3*	*82*	*4.1*	*80*	*5.3*	*78*	*3.0*	*77*	*3.4*	*79*
eV US Core Fixed Inc Net Median	*2.0*		*-1.3*		*0.7*		*4.6*		*5.7*		*3.4*		*3.7*	
Core Fixed Income Overlay	2.2	--	-3.2	--	-4.0	--	--	--	--	--	--	--	--	--
Opportunistic Credit	**2.3**	**--**	**4.4**	**--**	**14.0**	**--**	**6.3**	**--**	**6.4**	**--**	**7.6**	**--**	**7.7**	**--**
BBgBarc BA Intermediate HY	*2.4*	*--*	*2.5*	*--*	*11.5*	*--*	*7.3*	*--*	*8.0*	*--*	*6.7*	*--*	*5.8*	*--*
AG CSF Annex Dislocation Fund+	3.1	--	8.6	--	23.1	--	--	--	--	--	--	--	--	--
BBgBarc BA Intermediate HY	*2.4*	*--*	*2.5*	*--*	*11.5*	*--*	*7.3*	*--*	*8.0*	*--*	*6.7*	*--*	*5.8*	*--*
Angelo Gordon Opportunistic+	4.4	--	9.8	--	30.9	--	6.0	--	7.9	--	12.8	--	--	--
Angelo Gordon Credit Solutions+	6.5	1	16.3	1	35.5	1	--	--	--	--	--	--	--	--
BBgBarc BA Intermediate HY	*2.4*	*70*	*2.5*	*85*	*11.5*	*83*	*7.3*	*36*	*8.0*	*13*	*6.7*	*56*	*5.8*	*72*
eV US High Yield Fixed Inc Net Median	*2.6*		*3.5*		*14.4*		*6.7*		*6.8*		*6.9*		*6.2*	

+ *Preliminary return as of 6/30/2021.*

1. See Appendix for Benchmark History.

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Beach Point Select	3.5	7	9.7	2	27.0	2	12.4	1	9.9	3	10.2	3	--	--
BBgBarc BA Intermediate HY	*2.4*	*70*	*2.5*	*85*	*11.5*	*83*	*7.3*	*36*	*8.0*	*13*	*6.7*	*56*	*5.8*	*72*
eV US High Yield Fixed Inc Net Median	*2.6*		*3.5*		*14.4*		*6.7*		*6.8*		*6.9*		*6.2*	
Brigade Capital	3.7	5	10.6	2	27.2	2	8.6	13	6.5	66	8.0	15	6.2	52
BBgBarc BA Intermediate HY	*2.4*	*70*	*2.5*	*85*	*11.5*	*83*	*7.3*	*36*	*8.0*	*13*	*6.7*	*56*	*5.8*	*72*
50% Barclays HY/ 50% Bank Loan	*2.1*	*80*	*3.6*	*50*	*13.5*	*64*	*6.0*	*72*	*5.9*	*77*	*6.3*	*73*	*5.6*	*78*
eV US High Yield Fixed Inc Net Median	*2.6*		*3.5*		*14.4*		*6.7*		*6.8*		*6.9*		*6.2*	
PIMCO Diversified	2.8	37	0.2	99	7.5	97	4.8	90	6.5	67	--	--	--	--
Blended PIMCO Diversified Index[1]	*2.8*	*37*	*0.3*	*99*	*7.6*	*97*	*5.3*	*79*	*6.8*	*55*	*5.3*	*89*	*5.7*	*76*
BBgBarc BA Intermediate HY	*2.4*	*70*	*2.5*	*85*	*11.5*	*83*	*7.3*	*36*	*8.0*	*13*	*6.7*	*56*	*5.8*	*72*
eV US High Yield Fixed Inc Net Median	*2.6*		*3.5*		*14.4*		*6.7*		*6.8*		*6.9*		*6.2*	
Franklin Templeton	1.5	67	-1.7	72	-1.4	99	-4.6	99	-1.3	99	0.8	99	1.7	89
BBgBarc Multiverse TR	*1.4*	*68*	*-3.0*	*82*	*3.2*	*83*	*3.5*	*79*	*4.3*	*74*	*2.6*	*84*	*2.2*	*78*
eV All Global Fixed Inc Net Median	*1.8*		*-0.1*		*7.3*		*5.3*		*5.8*		*4.6*		*3.6*	
Private Credit	**0.3**	**--**	**2.6**	**--**	**8.5**	**--**	**6.6**	**--**	**6.9**	**--**	**--**	**--**	**--**	**--**
Cliffwater Direct Lending Index+	*3.2*	*--*	*6.6*	*--*	*14.4*	*--*	*8.0*	*--*	*8.2*	*--*	*8.7*	*--*	*9.4*	*--*
Blackrock DL Feeder IX-U+	0.0	99	1.9	94	6.7	98	--	--	--	--	--	--	--	--
Cliffwater Direct Lending Index	*3.2*	*10*	*6.6*	*6*	*14.4*	*50*	*8.0*	*19*	*8.2*	*12*	*8.7*	*6*	*9.4*	*1*
eV US High Yield Fixed Inc Net Median	*2.6*		*3.5*		*14.4*		*6.7*		*6.8*		*6.9*		*6.2*	
PIMCO Private Income+	0.0	99	5.0	14	14.9	44	9.1	9	--	--	--	--	--	--
BBgBarc BA Intermediate HY	*2.4*	*70*	*2.5*	*85*	*11.5*	*83*	*7.3*	*36*	*8.0*	*13*	*6.7*	*56*	*5.8*	*72*
Cliffwater Direct Lending Index	*3.2*	*10*	*6.6*	*6*	*14.4*	*50*	*8.0*	*19*	*8.2*	*12*	*8.7*	*6*	*9.4*	*1*
eV US High Yield Fixed Inc Net Median	*2.6*		*3.5*		*14.4*		*6.7*		*6.8*		*6.9*		*6.2*	

\+ *Preliminary return as of 6/30/2021.*

1. *See Appendix for Benchmark History.*

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
TCP Direct Lending VIII+	1.4	95	3.6	47	9.0	93	6.4	63	7.0	40	--	--	--	--
White Oak Yield+	0.0	99	1.6	99	4.9	99	5.1	85	5.8	79	--	--	--	--
White Oak YSF V+ *	0.0	99	0.0	99	--	--	--	--	--	--	--	--	--	--
Cliffwater Direct Lending Index	*3.2*	*10*	*6.6*	*6*	*14.4*	*50*	*8.0*	*19*	*8.2*	*12*	*8.7*	*6*	*9.4*	*1*
eV US High Yield Fixed Inc Net Median	*2.6*		*3.5*		*14.4*		*6.7*		*6.8*		*6.9*		*6.2*	
Alternatives	**7.4**	**--**	**8.6**	**--**	**47.8**	**--**	**23.1**	**--**	**16.6**	**--**	**13.8**	**--**	**8.8**	**--**
Blended Alternatives Index[1]	*3.8*	*--*	*11.6*	*--*	*30.9*	*--*	*14.4*	*--*	*12.7*	*--*	*12.4*	*--*	*9.4*	*--*
Private Equity* ++**	**12.6**	**20**	**14.7**	**56**	**86.4**	**2**	**47.6**	**2**	**35.8**	**2**	**28.7**	**2**	**18.8**	**5**
Blended Private Equity Index[1]	*7.2*	*47*	*23.7*	*30*	*65.5*	*12*	*24.7*	*23*	*20.2*	*23*	*19.1*	*21*	*16.8*	*12*
InvMetrics All DB Private Eq Net Median	*6.3*		*17.5*		*37.2*		*17.6*		*15.3*		*14.3*		*11.7*	
Hedge Fund/Absolute Return	**2.4**	**62**	**2.5**	**88**	**7.9**	**91**	**-3.0**	**95**	**-3.9**	**98**	**-2.2**	**98**	**1.3**	**94**
Absolute Return Custom Index[1]	*0.9*	*80*	*1.9*	*88*	*4.1*	*95*	*4.7*	*81*	*5.3*	*59*	*5.3*	*61*	*4.7*	*47*
InvMetrics All DB Hedge Funds Net Median	*2.9*		*6.7*		*21.0*		*8.9*		*5.9*		*5.7*		*4.6*	
Aberdeen Standard GARS	0.4	85	-1.7	92	5.9	79	4.4	68	4.3	62	2.9	76	--	--
Acadian MAAR Fund LLC**	1.3	77	1.3	81	--	--	--	--	--	--	--	--	--	--
CFM Systematic Global Macro**	6.3	20	12.1	24	--	--	--	--	--	--	--	--	--	--
Graham Quant Macro	4.3	37	2.8	73	10.2	70	--	--	--	--	--	--	--	--
PIMCO MAARS Fund LP	-0.7	90	0.9	84	1.2	91	--	--	--	--	--	--	--	--
Absolute Return Custom Index	*0.9*	*81*	*1.9*	*78*	*4.1*	*83*	*4.7*	*65*	*5.3*	*56*	*5.3*	*59*	*4.7*	*56*
eV Alt All Multi-Strategy Median	*2.7*		*6.5*		*17.4*		*7.6*		*6.1*		*6.3*		*5.7*	

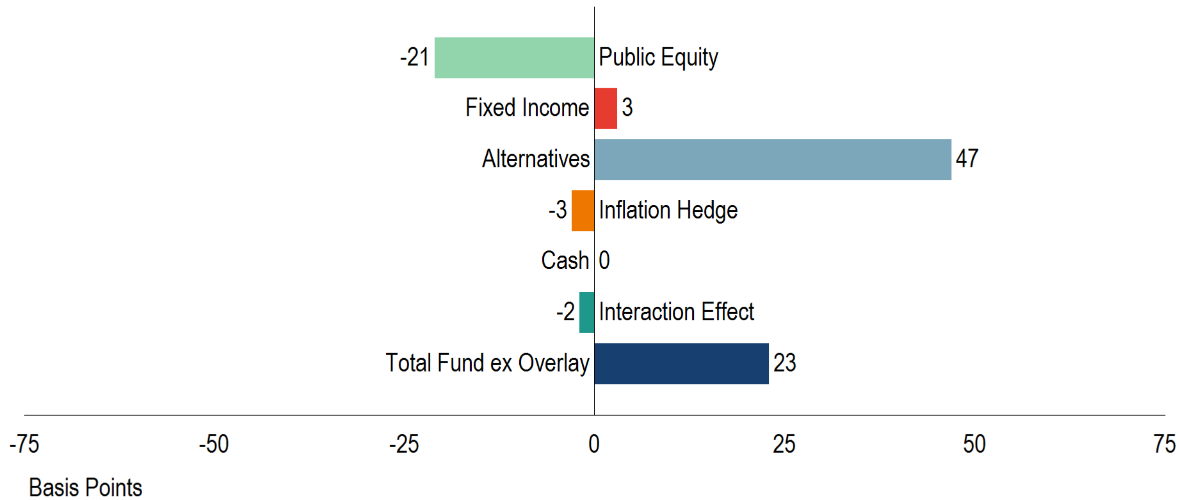
+ *Preliminary return as of 6/30/2021.*
* *Funded December 2020.*
** *Funded October 2020.*
*** *Returns are one-quarter lag.*
++ *Excludes EnCap Energy Capital Fund and Sheridan Production Partners.*
1. See Appendix for Benchmark History.

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Inflation Hedge	**4.8**	**--**	**9.4**	**--**	**16.5**	**--**	**2.1**	**--**	**2.2**	**--**	**3.8**	**--**	**--**	**--**
Blended Inflation Hedge Index[1]	*4.9*	--	*11.5*	--	*20.8*	--	*6.3*	--	*5.8*	--	*5.8*	--	--	--
Real Estate	**3.7**	**32**	**5.5**	**50**	**7.6**	**48**	**5.0**	**40**	**5.7**	**36**	**6.6**	**26**	**9.2**	**22**
NCREIF ODCE	*3.9*	*26*	*6.1*	*30*	*8.0*	*32*	*5.1*	*38*	*5.5*	*37*	*6.6*	*26*	*9.6*	*8*
InvMetrics All DB Real Estate Pub Net Median	*3.3*		*5.5*		*7.4*		*4.7*		*5.2*		*5.8*		*8.5*	
Harrison Street Core Property	2.8	--	4.3	--	6.7	--	--	--	--	--	--	--	--	--
NCREIF ODCE	*3.9*	--	*6.1*	--	*8.0*	--	*5.1*	--	*5.5*	--	*6.6*	--	*9.6*	--
Invesco	4.7	--	6.2	--	7.5	--	4.2	--	5.0	--	6.2	--	8.9	--
NCREIF ODCE	*3.9*	--	*6.1*	--	*8.0*	--	*5.1*	--	*5.5*	--	*6.6*	--	*9.6*	--
Invesco US Val IV	4.2	--	4.3	--	11.1	--	7.6	--	9.1	--	9.6	--	--	--
NCREIF ODCE	*3.9*	--	*6.1*	--	*8.0*	--	*5.1*	--	*5.5*	--	*6.6*	--	*9.6*	--
NCREIF ODCE + 2%	*4.4*	--	*7.2*	--	*10.2*	--	*7.2*	--	*7.6*	--	*8.7*	--	*11.8*	--
Invesco US Val V	3.1	--	12.9	--	18.2	--	9.9	--	--	--	--	--	--	--
NCREIF ODCE	*3.9*	--	*6.1*	--	*8.0*	--	*5.1*	--	*5.5*	--	*6.6*	--	*9.6*	--
NCREIF ODCE + 2%	*4.4*	--	*7.2*	--	*10.2*	--	*7.2*	--	*7.6*	--	*8.7*	--	*11.8*	--
PGIM RE US Debt Fund	1.4	--	2.8	--	5.3	--	5.2	--	5.7	--	--	--	--	--
NCREIF ODCE	*3.9*	--	*6.1*	--	*8.0*	--	*5.1*	--	*5.5*	--	*6.6*	--	*9.6*	--
Private Real Asset++	**4.6**	**--**	**18.6**	**--**	**27.6**	**--**	**8.3**	**--**	**3.3**	**--**	**1.3**	**--**	**--**	**--**
Blended Private Real Asset Index[1]	*5.8*	--	*23.4*	--	*48.4*	--	*6.3*	--	*7.0*	--	*5.7*	--	--	--
Blended Secondary CA Private RA Index[1]	*4.8*	--	*11.1*	--	*18.1*	--	*0.9*	--	*2.0*	--	*6.4*	--	--	--
Public Real Assets	**6.2**	**--**	**11.5**	**--**	**29.3**	**--**	**-1.7**	**--**	**-1.5**	**--**	**--**	**--**	**--**	**--**
Blended Public Real Asset Index[1]	*6.1*	--	*11.4*	--	*29.2*	--	*4.6*	--	*3.4*	--	*5.4*	--	--	--
SSgA Custom Real Asset	6.2	--	11.5	--	29.3	--	4.6	--	3.4	--	--	--	--	--
SSgA Custom Real Asset Index[1]	*6.1*	--	*11.4*	--	*29.2*	--	*4.6*	--	*3.4*	--	--	--	--	--

** *Returns are one-quarter lag.*

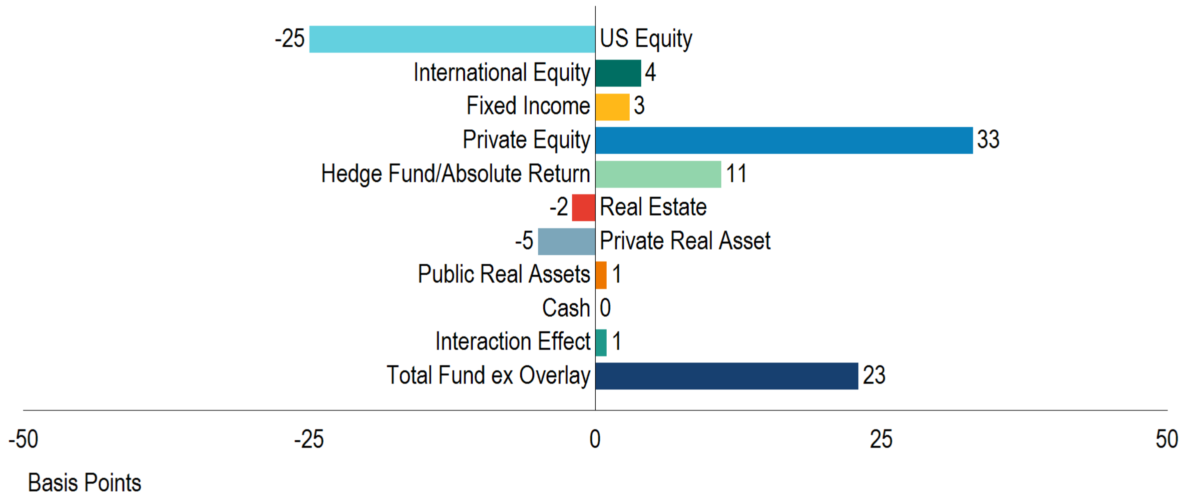
1. See Appendix for Benchmark History.

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
Cash	**0.1**	**--**	**0.2**	**--**	**0.5**	**--**	**0.7**	**--**	**0.9**	**--**	**0.9**	**--**	**0.8**	**--**
91 Day T-Bills	*0.0*	--	*0.0*	--	*0.1*	--	*0.7*	--	*1.2*	--	*1.1*	--	*0.6*	--
General Account	0.1	--	0.3	--	0.6	--	1.3	--	2.6	--	2.3	--	1.5	--
Treasury & LAIF	0.4	--	0.6	--	1.4	--	1.8	--	2.4	--	2.2	--	1.5	--
91 Day T-Bills	*0.0*	--	*0.0*	--	*0.1*	--	*0.7*	--	*1.2*	--	*1.1*	--	*0.6*	--
Currency Hedge Cash Overlay	-0.1	--	-0.1	--	-0.3	--	--	--	--	--	--	--	--	--



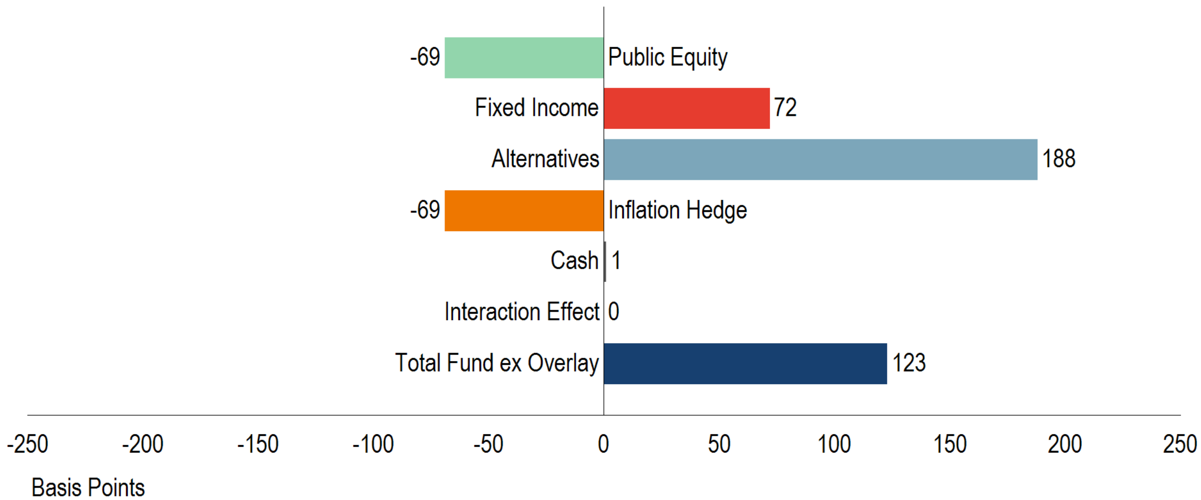
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction * Effects	Total Effects
Public Equity	6.34%	6.86%	-0.52%	-0.21%	0.02%	0.00%	-0.20%
Fixed Income	2.14%	2.02%	0.11%	0.03%	0.01%	0.00%	0.04%
Alternatives	7.41%	3.79%	3.61%	0.47%	0.00%	-0.01%	0.47%
Inflation Hedge	4.76%	4.92%	-0.15%	-0.03%	0.00%	0.00%	-0.03%
Cash	0.07%	0.00%	0.07%	0.00%	-0.05%	0.00%	-0.05%
Total	**4.93%**	**4.71%**	**0.23%**	**0.26%**	**-0.02%**	**-0.02%**	**0.23%**

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



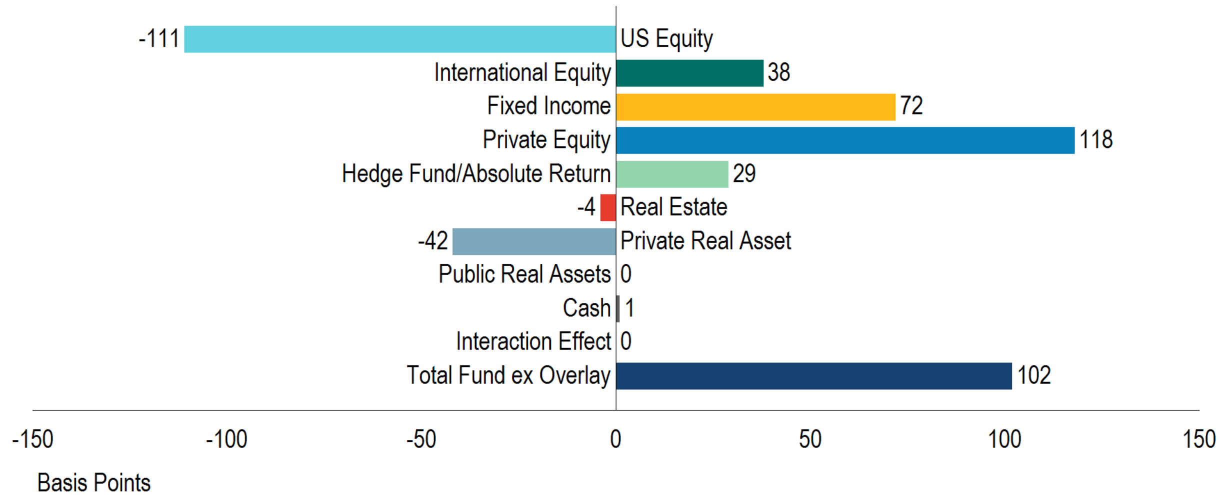
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction * Effects	Total Effects
US Equity	7.10%	8.24%	-1.14%	-0.25%	0.02%	0.00%	-0.23%
International Equity	5.44%	5.24%	0.20%	0.04%	0.00%	0.00%	0.04%
Fixed Income	2.14%	2.02%	0.11%	0.03%	0.01%	0.00%	0.04%
Private Equity	12.57%	7.24%	5.33%	0.33%	0.04%	-0.01%	0.36%
Hedge Fund/Absolute Return	2.43%	0.88%	1.55%	0.11%	0.01%	-0.01%	0.12%
Real Estate	3.74%	3.93%	-0.19%	-0.02%	0.01%	0.00%	-0.01%
Private Real Asset	4.63%	5.82%	-1.20%	-0.05%	-0.02%	0.02%	-0.05%
Public Real Assets	6.19%	6.06%	0.14%	0.01%	0.01%	0.00%	0.02%
Cash	0.07%	0.00%	0.07%	0.00%	-0.05%	0.00%	-0.05%
Total	**4.93%**	**4.71%**	**0.23%**	**0.20%**	**0.02%**	**0.01%**	**0.23%**

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



	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction * Effects	Total Effects
Public Equity	37.84%	39.67%	-1.83%	-0.69%	0.00%	0.00%	-0.69%
Fixed Income	5.66%	3.47%	2.19%	0.72%	0.00%	0.00%	0.72%
Alternatives	47.79%	30.86%	16.94%	1.88%	0.00%	0.00%	1.88%
Inflation Hedge	16.48%	20.83%	-4.36%	-0.69%	0.00%	0.00%	-0.69%
Cash	0.47%	0.05%	0.42%	0.01%	0.00%	0.00%	0.01%
Total	**24.30%**	**23.07%**	**1.23%**	**1.23%**	**0.00%**	**0.00%**	**1.23%**

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



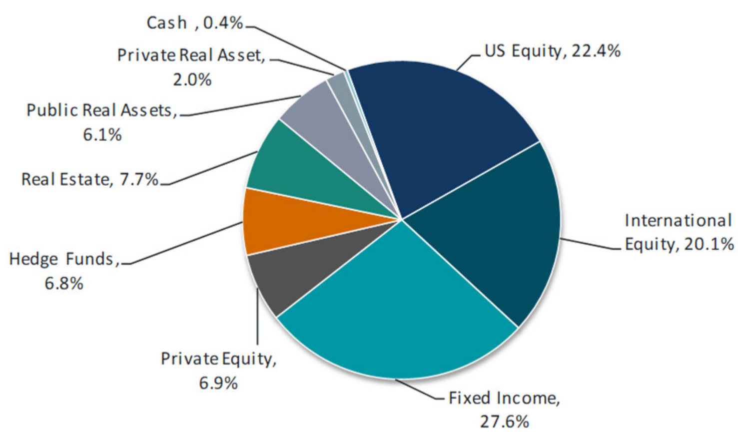
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction* Effects	Total Effects
US Equity	38.61%	44.16%	-5.55%	-1.11%	0.00%	0.00%	-1.11%
International Equity	36.88%	34.50%	2.38%	0.38%	0.00%	0.00%	0.38%
Fixed Income	5.66%	3.47%	2.19%	0.72%	0.00%	0.00%	0.72%
Private Equity	86.40%	65.53%	20.87%	1.18%	0.00%	0.00%	1.18%
Hedge Fund/Absolute Return	7.87%	4.07%	3.81%	0.29%	0.00%	0.00%	0.29%
Real Estate	7.56%	8.02%	-0.46%	-0.04%	0.00%	0.00%	-0.04%
Private Real Asset	27.58%	48.41%	-20.83%	-0.42%	0.00%	0.00%	-0.42%
Public Real Assets	29.32%	29.24%	0.08%	0.00%	0.00%	0.00%	0.00%
Cash	0.47%	0.05%	0.42%	0.01%	0.00%	0.00%	0.01%
Total	**24.34%**	**23.31%**	**1.02%**	**1.02%**	**0.00%**	**0.00%**	**1.02%**

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

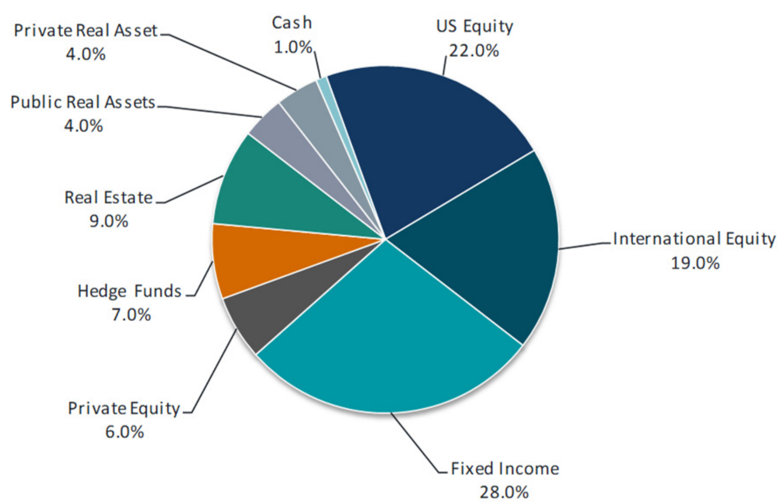
Period Ending: June 30, 2021

Current w/ Overlay



ASSET ALLOCATION	MARKET VALUE W/ OVERLAY	W/ OVERLAY	W/O OVERLAY
US Equity	1,311,453,508	22.4%	22.2%
International Equity	1,176,393,747	20.1%	19.2%
Fixed Income	1,618,987,041	27.6%	27.1%
Private Equity	406,570,411	6.9%	6.9%
Hedge Funds	401,402,928	6.8%	6.8%
Real Estate	452,270,511	7.7%	7.7%
Public Real Assets	360,643,196	6.1%	6.1%
Private Real Asset	114,919,200	2.0%	2.0%
Cash	22,029,869	0.4%	2.0%
TOTAL	**5,864,670,411**	**100.0%**	**100.0%**

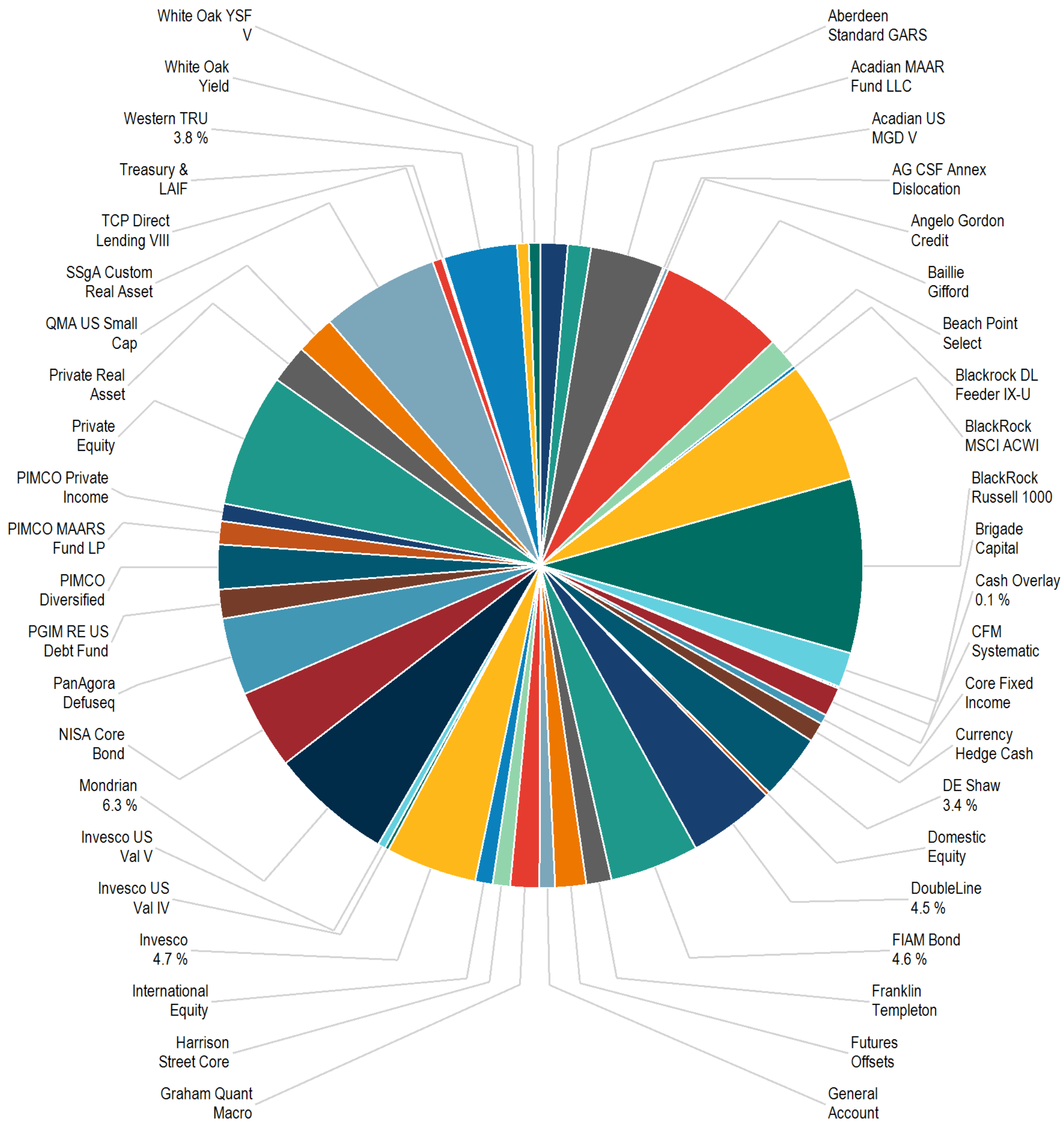
Target



ASSET ALLOCATION	W/ OVERLAY	TARGET	DIFF
US Equity	22.4%	22.0%	0.4%
International Equity	20.1%	19.0%	1.1%
Fixed Income	27.6%	28.0%	-0.4%
Private Equity	6.9%	6.0%	0.9%
Hedge Funds	6.8%	7.0%	-0.2%
Real Estate	7.7%	9.0%	-1.3%
Public Real Assets	6.1%	4.0%	2.1%
Private Real Asset	2.0%	4.0%	-2.0%
Cash	0.4%	1.0%	-0.6%
TOTAL	**100.0%**	**100.0%**	**0.0%**

Total Fund
Manager Allocation Analysis

Period Ending: June 30, 2021



	Actual	Actual
Aberdeen Standard GARS	$79,934,625	1%
Acadian MAAR Fund LLC	$72,000,012	1%
Acadian US MGD V	$223,919,722	4%
AG CSF Annex Dislocation Fund	$7,182,351	0%
Angelo Gordon Credit Solutions	$14,384,034	0%
Angelo Gordon Opportunistic	$2,190,000	0%
Baillie Gifford	$383,954,782	7%
Beach Point Select	$92,655,659	2%
Blackrock DL Feeder IX-U	$12,474,533	0%
BlackRock MSCI ACWI EX-US IMI	$372,152,063	6%
BlackRock Russell 1000	$530,596,488	9%
Brigade Capital	$107,261,688	2%
Cash Overlay	$7,864,507	0%
CFM Systematic Global Macro	$88,294,656	2%
Core Fixed Income Overlay	$30,914,258	1%
Currency Hedge Cash Overlay	$55,837,135	1%
DE Shaw	$198,434,973	3%
Domestic Equity Overlay	$11,578,280	0%
DoubleLine	$260,988,274	4%
FIAM Bond	$269,060,232	5%
Franklin Templeton	$77,700,193	1%
Futures Offsets (SMCE02001)	-$95,267,672	-2%
General Account	$44,971,843	1%
Graham Quant Macro	$90,043,453	2%
Harrison Street Core Property	$53,357,728	1%
International Equity Overlay	$52,775,134	1%
Invesco	$274,859,704	5%
Invesco US Val IV	$13,877,128	0%
Invesco US Val V	$24,631,503	0%
Mondrian	$367,511,768	6%
NISA Core Bond	$237,639,033	4%
PanAgora Defuseq	$232,253,685	4%
PGIM RE US Debt Fund	$85,544,448	1%
PIMCO Diversified	$134,577,606	2%
PIMCO MAARS Fund LP	$71,130,182	1%
PIMCO Private Income	$53,173,408	1%
Private Equity	$406,570,411	7%
Private Real Asset	$114,919,200	2%
QMA US Small Cap	$114,670,360	2%
SSgA Custom Real Asset	$360,643,196	6%
TCP Direct Lending VIII	$28,026,092	0%
Transition Account	$9	0%
Treasury & LAIF	$8,624,047	0%
Western TRU	$224,383,666	4%
White Oak Yield	$32,964,449	1%
White Oak YSF V	$33,411,565	1%
Total	**$5,864,670,411**	**100%**

Statistics Summary

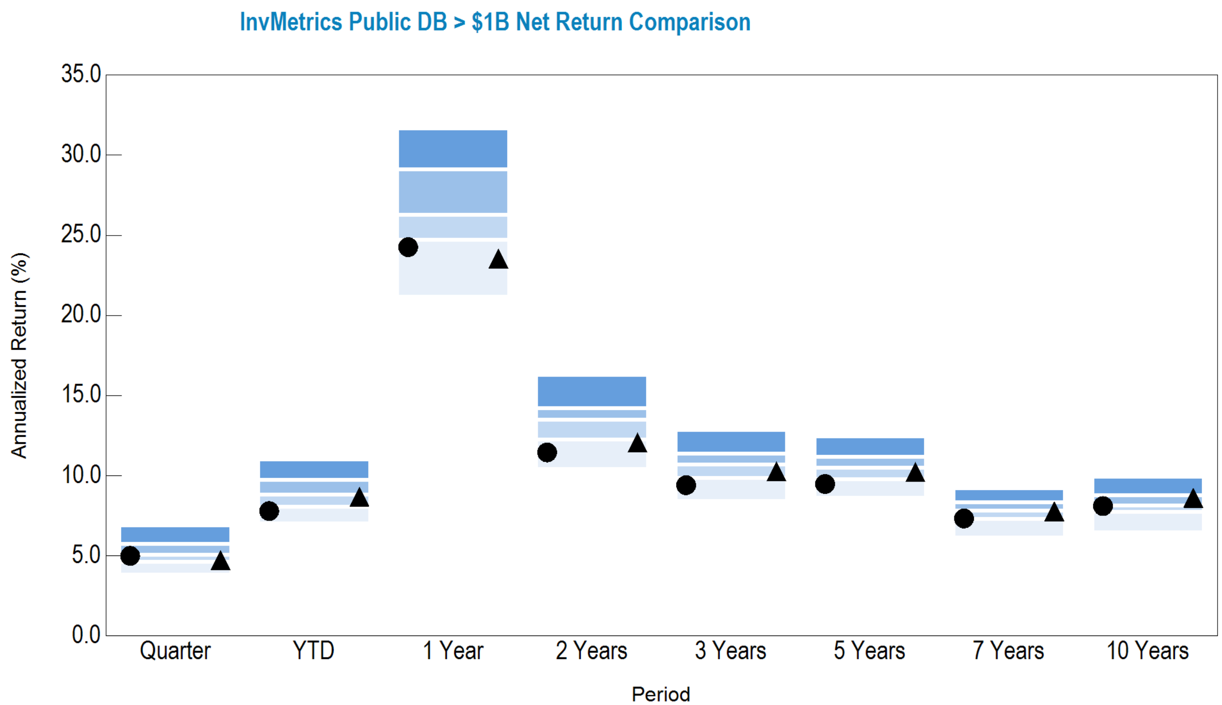
3 Years

	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	9.4%	84	9.4%	25	0.9	45	-0.4	66	2.3%	79
Policy Index	10.3%	67	9.3%	23	1.0	28	--	--	0.0%	1
InvMetrics Public DB > $1B Net Median	10.7%	--	10.9%	--	0.8	--	-0.1	--	1.4%	--

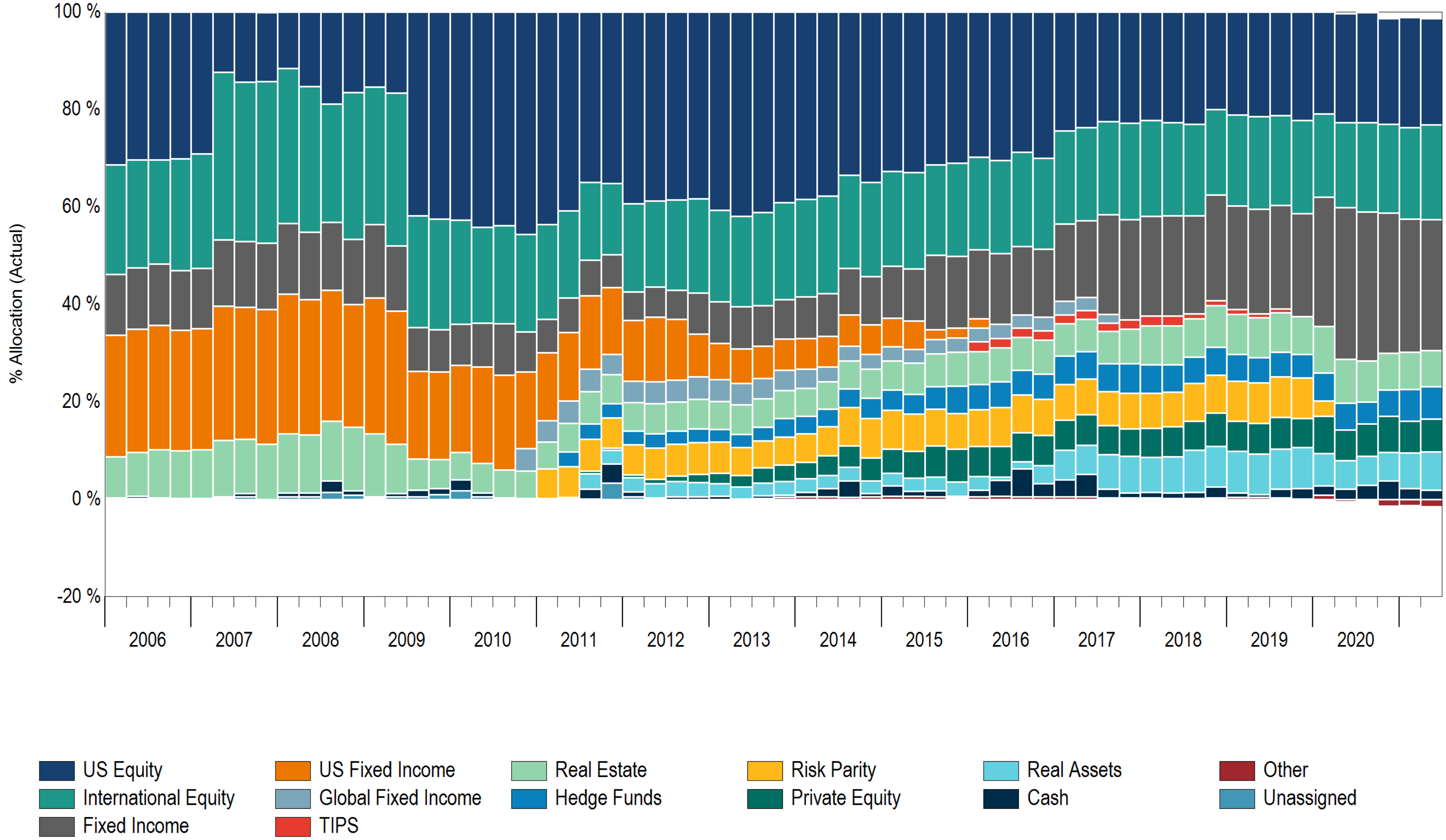
Statistics Summary

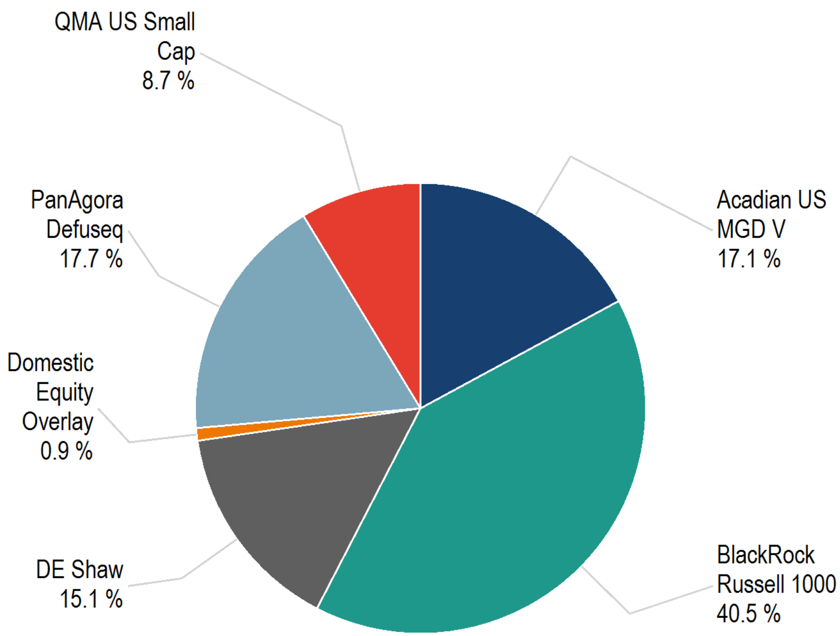
5 Years

	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	9.5%	86	7.7%	25	1.1	36	-0.4	81	1.9%	77
Policy Index	10.2%	65	7.6%	23	1.2	26	--	--	0.0%	1
InvMetrics Public DB > $1B Net Median	10.5%	--	8.8%	--	1.1	--	0.0	--	1.3%	--



	Return (Rank)															
5th Percentile	6.9		11.0		31.6		16.3		12.8		12.4		9.2		9.9	
25th Percentile	5.7		9.8		29.1		14.2		11.4		11.2		8.4		8.8	
Median	5.1		8.8		26.3		13.5		10.7		10.5		7.8		8.2	
75th Percentile	4.6		8.1		24.7		12.3		9.9		9.8		7.3		7.7	
95th Percentile	3.8		7.0		21.2		10.4		8.4		8.6		6.2		6.5	
# of Portfolios	57		57		57		57		57		57		57		54	
● **Total Fund**	5.0	(54)	7.8	(80)	24.3	(86)	11.4	(88)	9.4	(84)	9.5	(86)	7.3	(75)	8.1	(51)
▲ **Policy Index**	4.7	(71)	8.7	(56)	23.5	(89)	12.1	(81)	10.3	(67)	10.2	(65)	7.8	(52)	8.6	(30)


100 %
80 %
60 %
40 %
20 %
0 %
-20 %
% Allocation (Actual)
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
US Equity
International Equity
Fixed Income
US Fixed Income
Global Fixed Income
TIPS
Real Estate
Hedge Funds
Risk Parity
Private Equity
Real Assets
Cash
Other
Unassigned



	Actual $	Actual %	Manager Contribution to Excess Return %
Acadian US MGD V	$223,919,722	17.1%	-0.3%
BlackRock Russell 1000	$530,596,488	40.5%	0.0%
DE Shaw	$198,434,973	15.1%	-0.1%
PanAgora Defuseq	$232,253,685	17.7%	-0.5%
QMA US Small Cap	$114,670,360	8.7%	0.0%
Domestic Equity Overlay	$11,578,280	0.9%	0.0%
Actual vs. Policy Weight Difference			-0.2%
Total	**$1,311,453,508**	**100.0%**	**-1.1%**

Statistics Summary

3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
US Equity	15.1%	18.8%	0.7	-2.1	1.7%
Blended US Equity Index	18.7%	19.4%	0.9	--	0.0%
Russell 3000	18.7%	19.4%	0.9	--	0.0%

Statistics Summary

3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Large Cap Equity	16.0%	18.2%	0.8	-1.7	1.9%
Russell 1000	19.2%	19.1%	0.9	--	0.0%
BlackRock Russell 1000	19.2%	19.1%	0.9	0.5	0.0%
Russell 1000	19.2%	19.1%	0.9	--	0.0%
DE Shaw	16.1%	19.5%	0.8	-1.1	2.8%
Russell 1000	19.2%	19.1%	0.9	--	0.0%
Small Cap Equity	7.7%	27.1%	0.2	-1.1	5.1%
Russell 2000	13.5%	25.6%	0.5	--	0.0%
QMA US Small Cap	7.7%	27.1%	0.2	-1.1	5.1%
Russell 2000	13.5%	25.6%	0.5	--	0.0%

Statistics Summary

5 Years

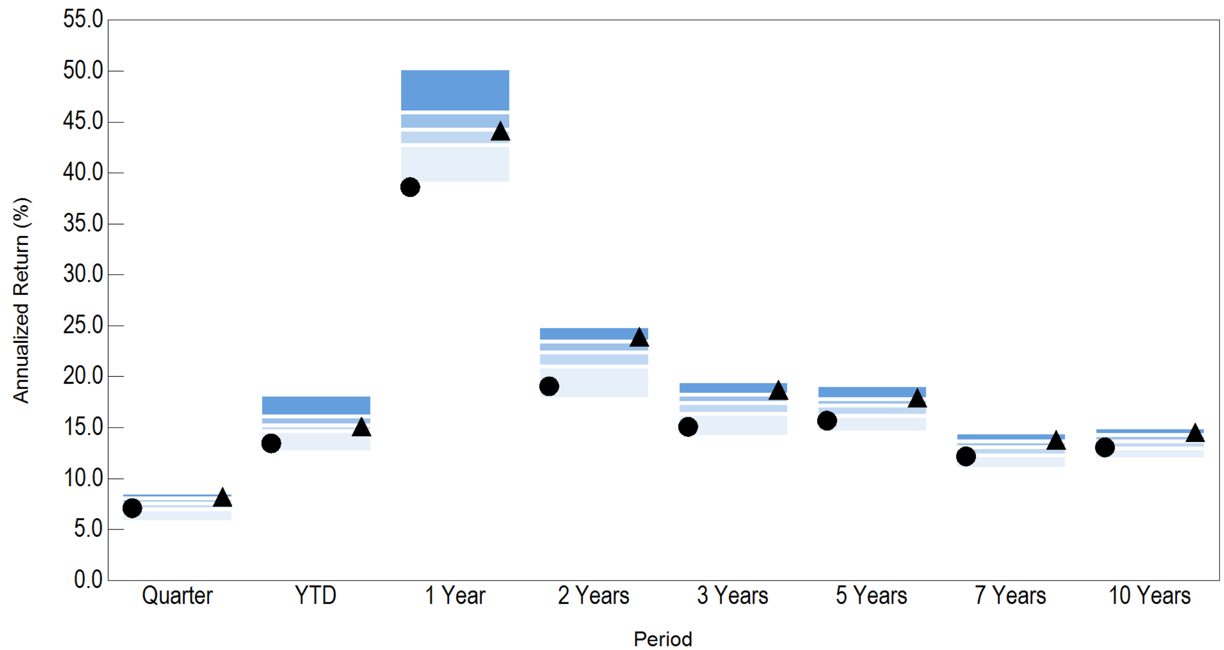
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
US Equity	15.7%	15.2%	1.0	-1.6	1.5%
Blended US Equity Index	17.9%	15.7%	1.1	--	0.0%
Russell 3000	17.9%	15.6%	1.1	-0.7	0.1%

Statistics Summary

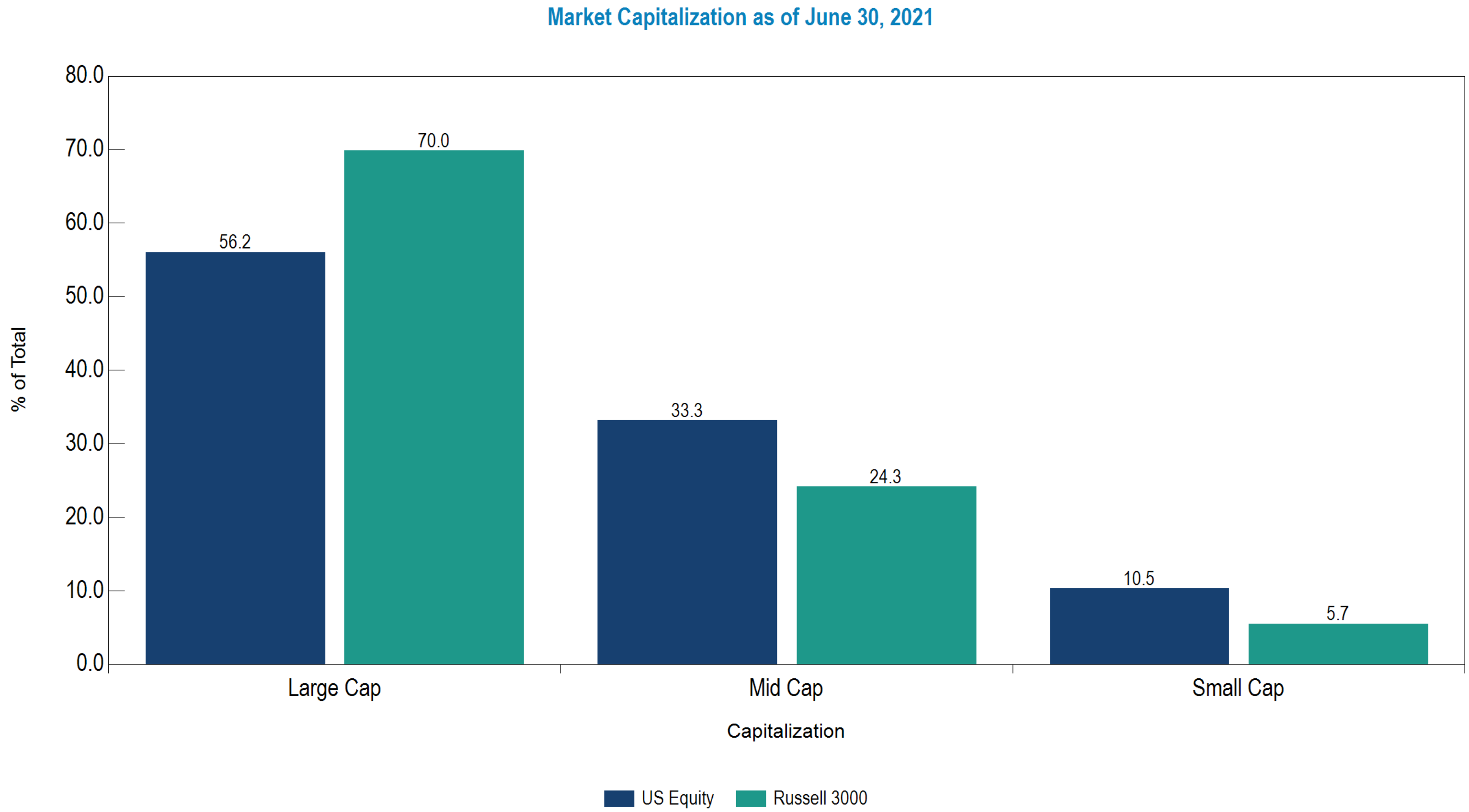
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Large Cap Equity	16.5%	14.7%	1.1	-0.9	1.7%
Russell 1000	18.0%	15.4%	1.1	--	0.0%
DE Shaw	17.1%	15.6%	1.0	-0.3	2.6%
Russell 1000	18.0%	15.4%	1.1	--	0.0%
Small Cap Equity	11.7%	22.1%	0.5	-1.1	4.3%
Russell 2000	16.5%	21.0%	0.7	--	0.0%

InvMetrics All DB US Eq Net Return Comparison



	Return (Rank)															
5th Percentile	8.6		18.2		50.3		24.9		19.5		19.2		14.5		15.0	
25th Percentile	8.1		16.1		46.0		23.5		18.3		17.8		13.7		14.3	
Median	7.6		15.3		44.3		22.4		17.4		17.2		13.1		13.7	
75th Percentile	7.0		14.7		42.8		21.0		16.4		16.2		12.3		13.0	
95th Percentile	5.8		12.6		39.0		17.9		14.1		14.5		11.0		11.9	
# of Portfolios	436		436		433		433		429		401		386		313	
● **US Equity**	7.1	(72)	13.5	(92)	38.6	(96)	19.1	(92)	15.1	(88)	15.7	(85)	12.2	(78)	13.1	(75)
▲ **Blended US Equity Index**	8.2	(16)	15.1	(61)	44.2	(54)	23.9	(16)	18.7	(13)	17.9	(18)	13.8	(19)	14.5	(15)



See appendix for the market capitalization breakpoints.

Equity Only Summary Statistics

Characteristics

	Portfolio	Russell 3000
Number of Holdings	2,914	2,916
Weighted Avg. Market Cap. ($B)	334.9	408.7
Median Market Cap. ($B)	4.5	2.8
Price To Earnings	23.9	26.5
Price To Book	4.1	4.4
Price To Sales	2.6	3.2
Return on Equity (%)	19.6	18.4
Yield (%)	1.4	1.3

Top Holdings

APPLE INC	3.7%
MICROSOFT CORP	3.6%
AMAZON.COM INC	2.0%
ALPHABET INC	1.8%
FACEBOOK INC	1.4%
ALPHABET INC	0.9%
VERIZON COMMUNICATIONS INC	0.9%
TESLA INC	0.9%
JOHNSON & JOHNSON	0.9%
BERKSHIRE HATHAWAY INC	0.8%

Best Performers

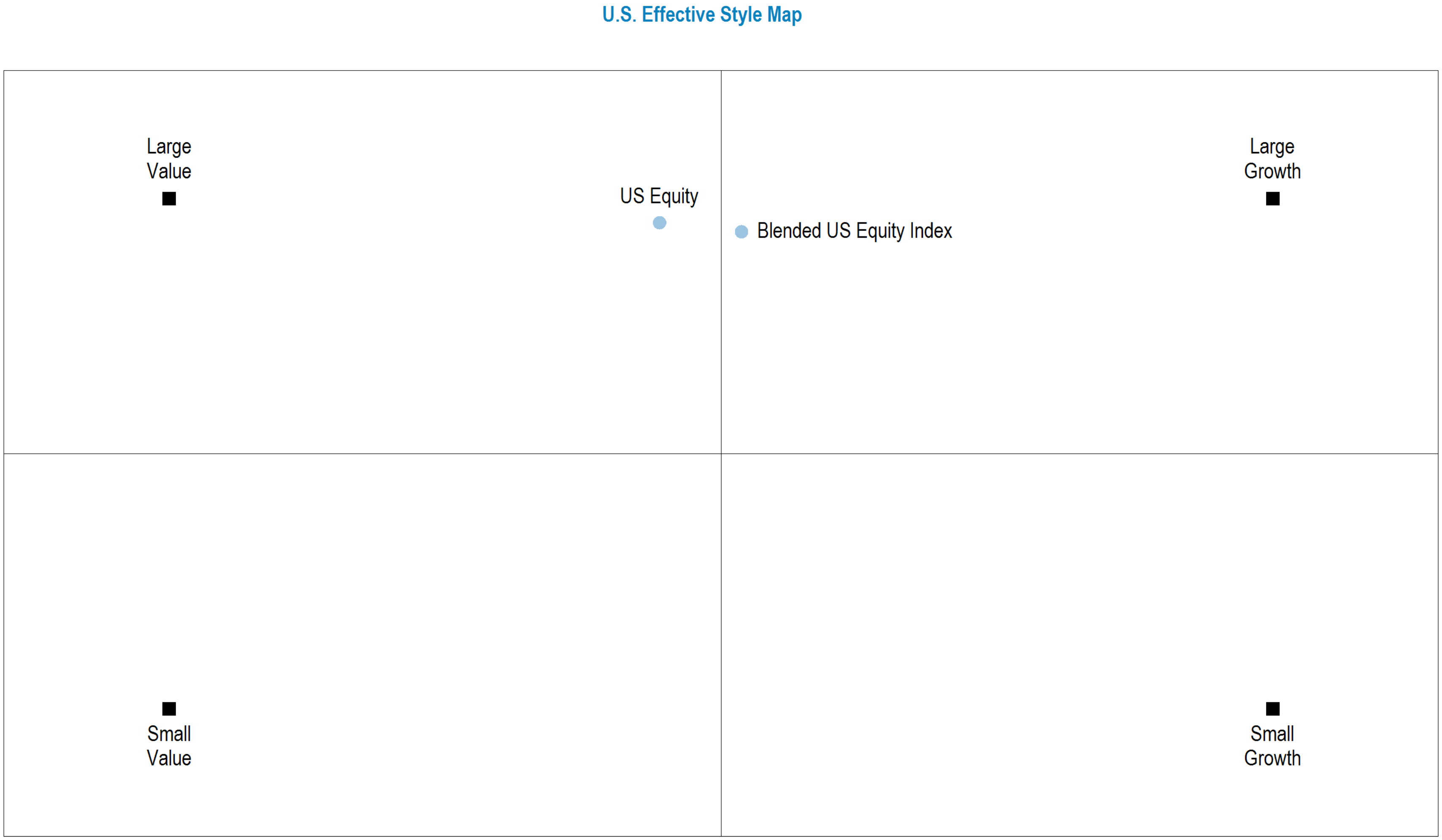
	Return %
AMC ENTERTAINMENT HOLDINGS INC (AMC)	455.1%
SILVERBOW RESOURCES INC (SBOW)	198.5%
PDS BIOTECHNOLOGY CORP (PDSB)	175.8%
Peabody Energy Corp (BTU)	159.2%
APOLLO MEDICAL HOLDINGS INC (AMEH)	131.9%
AGILITI INC	116.5%
BIONTECH SE (BNTX)	105.0%
PROTHENA CORP PLC (PRTA)	104.7%
ALPHA METALLURGICAL RESOURCE INC (AMR)	102.9%
J JILL INC (JILL)	102.2%

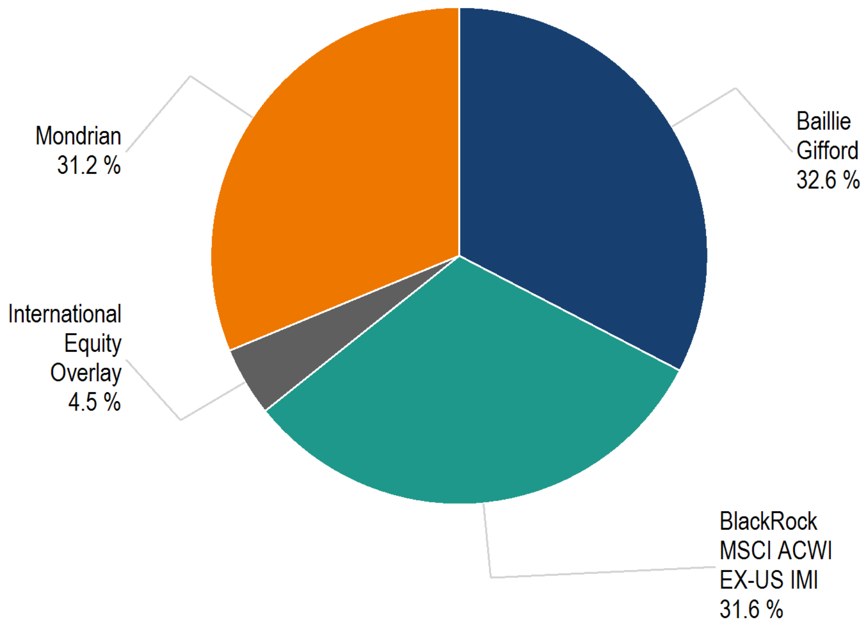
Worst Performers

	Return %
CHEMOCENTRYX INC (CCXI)	-73.9%
ATEA PHARMACEUTICALS INC (AVIR)	-65.2%
ADVERUM BIOTECHNOLOGIES INC (ADVM)	-64.5%
AVENUE THERAPEUTICS INC (ATXI)	-58.6%
BLACK DIAMOND THERAPEUTICS INC (BDTX)	-49.8%
VYNE THERAPEUTICS INC (VYNE)	-48.7%
ARRAY TECHNOLOGIES INC (ARRY)	-47.7%
ATRECA INC (BCEL)	-44.4%
PRAXIS PRECISION MEDICINES I COMMON STOCK USD.0001 (PRAX)	-44.2%
SCHOLAR ROCK HOLDING CORP (SRRK)	-43.0%

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%	15.4%	12.4%	2.7%	2.3%
Materials	-0.1%		0.0%	0.0%	0.0%	3.6%	4.9%	4.2%	2.9%
Industrials	0.0%		0.0%	0.0%	0.0%	4.1%	3.9%	9.5%	9.9%
Consumer Discretionary	0.0%		0.0%	0.0%	0.0%	6.7%	6.7%	11.3%	12.3%
Consumer Staples	-0.3%		-0.1%	-0.2%	0.0%	2.5%	3.6%	9.5%	5.6%
Health Care	-0.1%		-0.1%	0.0%	0.0%	7.6%	8.2%	14.1%	13.6%
Financials	-0.1%		-0.1%	0.0%	0.0%	6.4%	7.3%	9.0%	11.7%
Information Technology	-0.3%		-0.2%	-0.1%	0.0%	10.7%	11.4%	22.3%	25.7%
Communication Services	-0.2%		-0.2%	0.0%	0.0%	8.7%	11.0%	9.9%	10.0%
Utilities	-0.1%		0.0%	-0.1%	0.0%	-0.1%	-0.4%	4.1%	2.6%
Real Estate	0.0%		0.0%	0.0%	0.0%	11.7%	11.7%	3.2%	3.3%
Cash	0.0%		0.0%	0.0%	0.0%	0.0%	--	0.2%	0.0%
Unclassified	0.0%		0.0%	0.0%	0.0%	8.4%	--	0.1%	0.0%
Portfolio	**-1.0%**	**=**	**-0.6% +**	**-0.4% +**	**0.0%**	**7.2%**	**8.2%**	**100.0%**	**100.0%**


U.S. Effective Style Map
Large Value
US Equity
Blended US Equity Index
Large Growth
Small Value
Small Growth



	Actual $	Actual %	Manager Contribution to Excess Return %
Baillie Gifford	$383,954,782	32.6%	0.3%
Mondrian	$367,511,768	31.2%	0.0%
BlackRock MSCI ACWI EX-US IMI	$372,152,063	31.6%	0.0%
International Equity Overlay	$52,775,134	4.5%	0.0%
Actual vs. Policy Weight Difference			-0.2%
Total	**$1,176,393,747**	**100.0%**	**0.2%**

Statistics Summary

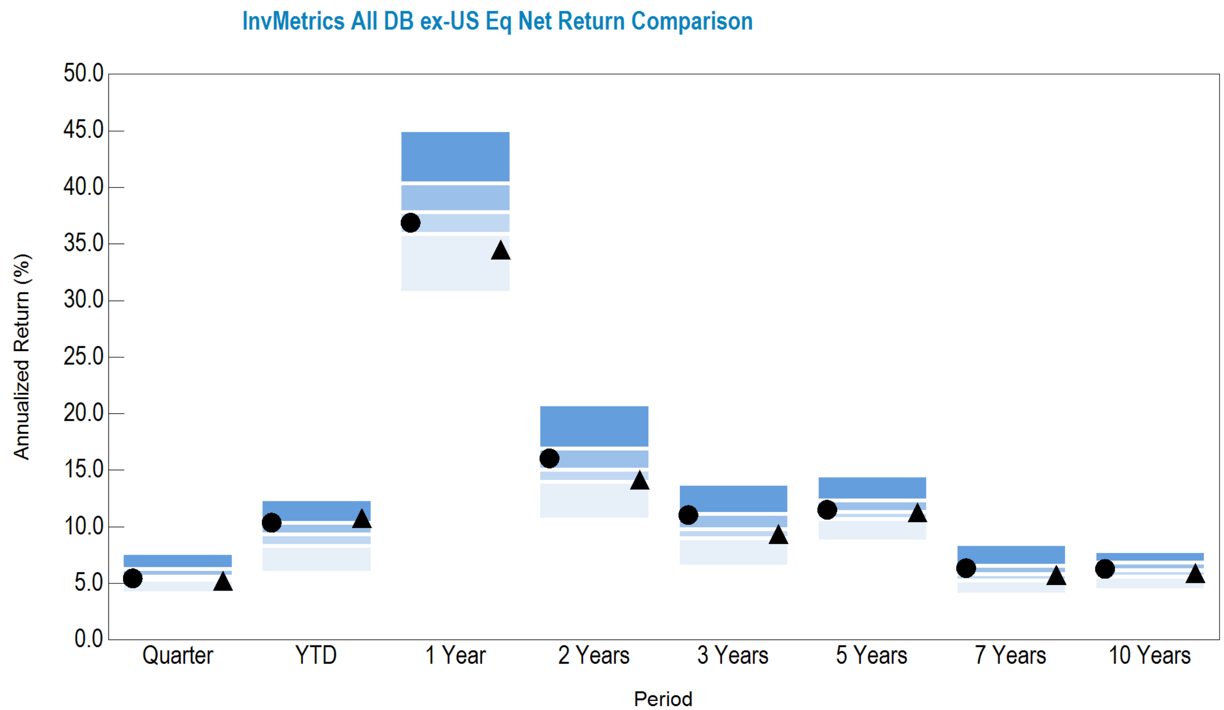
3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
International Equity	11.0%	16.6%	0.6	1.1	1.5%
Blended International Equity Index	9.4%	16.7%	0.5	--	0.0%
Baillie Gifford	16.9%	18.5%	0.8	1.1	6.2%
MSCI ACWI ex US	9.9%	17.6%	0.5	--	0.0%
Mondrian	6.9%	18.9%	0.3	0.4	2.8%
MSCI ACWI ex USA Value Gross	5.8%	20.1%	0.2	--	0.0%

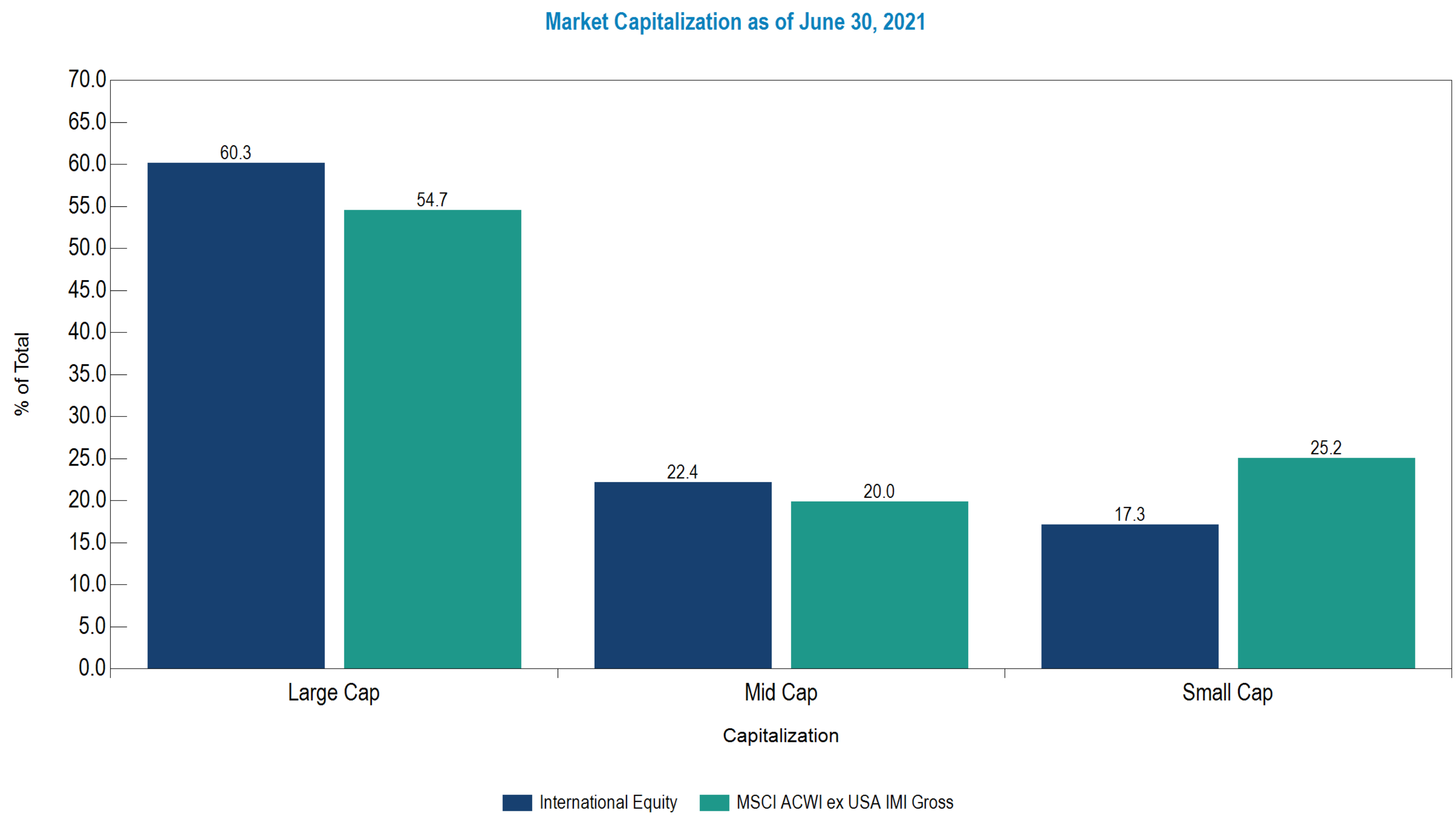
Statistics Summary

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
International Equity	11.5%	14.0%	0.7	0.1	1.6%
Blended International Equity Index	11.3%	13.9%	0.7	--	0.0%
Baillie Gifford	16.1%	15.6%	1.0	0.8	5.7%
MSCI ACWI ex US	11.6%	14.6%	0.7	--	0.0%
Mondrian	8.0%	15.7%	0.4	-0.4	3.4%
MSCI ACWI ex USA Value Gross	9.2%	16.5%	0.5	--	0.0%



	Return (Rank)															
5th Percentile	7.7		12.4		45.0		20.8		13.8		14.5		8.4		7.8	
25th Percentile	6.3		10.4		40.4		17.0		11.2		12.4		6.6		6.9	
Median	5.6		9.4		37.8		15.1		9.8		11.3		5.9		6.2	
75th Percentile	5.3		8.4		35.9		14.0		9.0		10.7		5.3		5.6	
95th Percentile	4.2		6.0		30.7		10.7		6.5		8.8		4.0		4.5	
# of Portfolios	286		286		285		285		282		262		251		199	
● International Equity	5.4	(67)	10.4	(25)	36.9	(62)	16.0	(36)	11.0	(27)	11.5	(43)	6.3	(31)	6.3	(48)
▲ Blended International Equity Index	5.2	(80)	10.8	(20)	34.5	(85)	14.2	(74)	9.4	(64)	11.3	(52)	5.8	(53)	5.9	(62)



See appendix for the market capitalization breakpoints.

Characteristics

	Portfolio	MSCI ACWI ex USA IMI Gross
Number of Holdings	6,769	6,755
Weighted Avg. Market Cap. ($B)	93.1	91.0
Median Market Cap. ($B)	2.0	2.0
Price To Earnings	20.2	18.9
Price To Book	2.9	2.7
Price To Sales	1.6	1.5
Return on Equity (%)	10.8	10.9
Yield (%)	2.2	2.4

Top Holdings

TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	1.4%
ASML HOLDING NV	1.4%
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	1.3%
ALIBABA GROUP HOLDING LTD	1.2%
UNITED OVERSEAS BANK LTD	1.2%
SANOFI	1.0%
ZALANDO SE	1.0%
CK HUTCHISON HOLDINGS LTD	0.9%
BANCO SANTANDER SA	0.8%
SHOPIFY INC	0.8%

Best Performers

	Return %
WAN HAI LINES (TW:WHL)	494.7%
YANG MING MARINE TRANSPORT CORP	394.1%
EVERGREEN MARINE CORP (TAIWAN) LTD	341.9%
GENEONE LIFE SCIENCE INC	303.2%
CELLID CO LTD	232.3%
UXIN LTD (UXIN)	229.1%
XTEP INTERNATIONAL HOLDINGS LTD	225.5%
CHUNG HUNG STEEL (TW:UUE)	220.4%
WISDOM MARINE LINES CO LTD	215.1%
NATURECELL CO LTD	202.6%

Worst Performers

	Return %
FOCUS DYNAMICS GROUP BHD	-93.3%
Perennial Energy Holdings Limited	-88.1%
F&F HOLDINGS CO LTD	-85.2%
SERBA DINAMIK HOLDINGS BERHAD	-80.7%
POSEIDON CONCEPTS CORP (POOSF)	-80.0%
PIRAEUS FINANCIAL HOLDINGS SA	-79.1%
KINEMASTER CORP	-65.0%
BIT MINING LTD (BTCM)	-63.1%
AI INSIDE INC	-62.4%
CHINA ONLINE EDUCATION GROUP (COE)	-61.5%

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	-0.1%		-0.1%		0.0%		0.0%	6.1%	8.9%	3.8%	4.2%
Materials	-0.1%		0.0%		0.0%		0.0%	6.3%	6.6%	5.1%	8.6%
Industrials	0.1%		0.1%		0.0%		0.0%	5.9%	5.4%	13.5%	13.2%
Consumer Discretionary	0.2%		0.2%		0.0%		0.1%	6.0%	4.8%	17.1%	13.6%
Consumer Staples	-0.1%		-0.1%		0.0%		0.0%	6.2%	7.5%	7.3%	8.0%
Health Care	-0.1%		-0.1%		0.0%		0.0%	8.9%	10.1%	9.4%	8.7%
Financials	0.0%		0.0%		0.0%		-0.1%	4.3%	4.5%	14.5%	17.8%
Information Technology	0.3%		0.3%		0.0%		0.0%	8.8%	6.9%	14.8%	12.5%
Communication Services	0.0%		0.0%		-0.1%		0.0%	2.0%	1.6%	8.6%	6.6%
Utilities	0.0%		0.0%		0.0%		0.0%	1.1%	0.8%	3.0%	3.2%
Real Estate	0.0%		0.1%		0.0%		0.0%	6.3%	4.5%	1.5%	3.6%
Cash	-0.1%		0.0%		-0.1%		0.0%	0.0%	--	1.4%	0.0%
Unclassified	0.0%		--		--		--	--	--	0.0%	0.0%
Portfolio	**0.1%**	**=**	**0.3%**	**+**	**-0.1%**	**+**	**-0.1%**	**5.9%**	**5.8%**	**100.0%**	**100.0%**

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

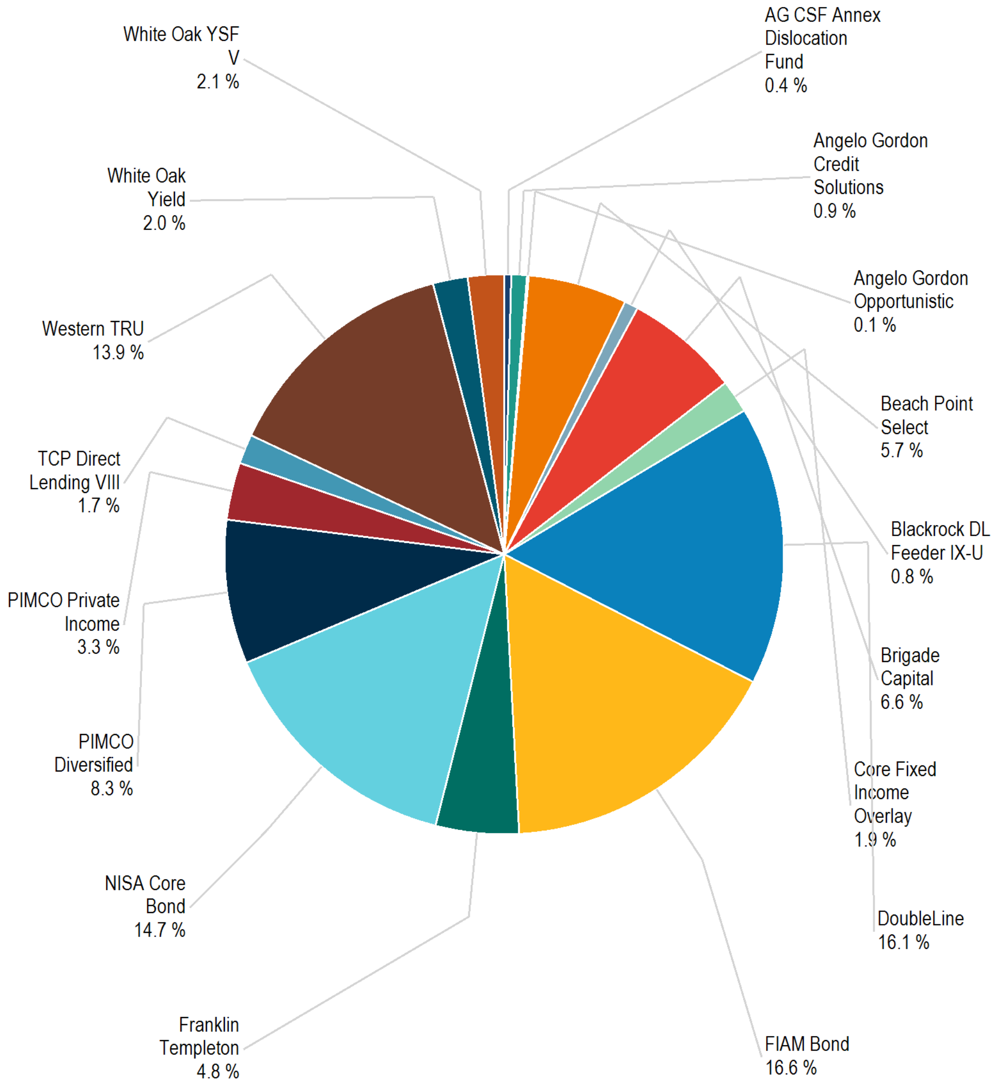
	Returns and Weights				Attribution Effects				
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	Total Effects
Europe									
Austria	9.1%	10.6%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Belgium	9.6%	9.6%	0.2%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Czech Republic*	14.1%	13.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Denmark	18.1%	13.0%	0.8%	1.4%	0.1%	0.0%	0.0%	0.0%	0.0%
Finland	4.2%	10.7%	0.7%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%
France	11.4%	9.4%	5.8%	6.3%	0.1%	0.0%	0.0%	0.0%	0.1%
Germany	10.7%	5.4%	4.2%	5.6%	0.3%	0.0%	0.0%	-0.1%	0.2%
Greece*	6.1%	6.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Hungary*	14.5%	14.6%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Ireland	4.7%	2.9%	0.2%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Italy	0.4%	5.3%	1.8%	1.6%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Luxembourg	3.2%	5.8%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Netherlands	7.5%	7.2%	3.0%	2.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Norway	4.3%	4.5%	0.2%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Poland*	19.9%	19.7%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Portugal	9.3%	0.9%	0.3%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Russia*	13.5%	14.4%	0.4%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Spain	8.6%	4.7%	2.1%	1.5%	0.1%	0.0%	0.0%	0.0%	0.1%
Sweden	9.7%	7.3%	3.5%	2.6%	0.1%	0.0%	0.0%	0.0%	0.1%
Switzerland	12.0%	11.8%	3.5%	5.5%	0.0%	-0.1%	0.0%	0.0%	-0.1%
United Kingdom	5.0%	5.8%	12.1%	9.4%	-0.1%	0.0%	0.0%	0.0%	-0.1%

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

	Returns and Weights				Attribution Effects				
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	Total Effects
AsiaPacific									
Australia	10.3%	6.9%	2.6%	4.6%	0.2%	-0.1%	0.0%	-0.1%	0.0%
China*	7.1%	2.7%	10.1%	10.5%	0.5%	0.0%	0.0%	0.0%	0.5%
Hong Kong	2.1%	2.5%	4.0%	2.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%
India*	6.7%	8.3%	3.7%	3.1%	-0.1%	0.0%	0.0%	0.0%	0.0%
Indonesia*	-6.6%	-4.7%	0.3%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Japan	0.2%	-0.3%	19.2%	16.1%	0.1%	-0.2%	0.0%	0.0%	-0.1%
Korea*	4.9%	5.2%	2.7%	4.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Malaysia*	-4.0%	-3.8%	0.2%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
New Zealand	5.6%	-1.2%	0.6%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Pakistan*	0.2%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Philippines*	7.4%	7.5%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Singapore	0.3%	0.7%	1.7%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
Taiwan*	3.4%	7.8%	4.7%	4.4%	-0.2%	0.0%	0.0%	0.0%	-0.2%
Thailand*	-5.2%	-3.7%	0.3%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Americas									
Argentina*	5.8%	7.8%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Brazil*	17.7%	24.6%	1.2%	1.4%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Canada	16.4%	10.2%	4.0%	6.7%	0.5%	-0.1%	-0.1%	-0.2%	0.1%
Chile*	-12.9%	-12.8%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Colombia*	-3.8%	-3.8%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Mexico*	9.7%	9.3%	0.5%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Peru*	-11.1%	-9.1%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
United States	19.0%	8.8%	0.7%	0.0%	0.0%	0.0%	0.0%	0.1%	0.1%

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

	Returns and Weights				Attribution Effects				
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	Total Effects
Other									
Egypt*	-4.5%	-4.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Israel	8.1%	8.0%	0.2%	0.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Kuwait*	9.6%	10.0%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Qatar*	2.4%	2.5%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Saudi Arabia*	10.5%	10.5%	0.3%	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%
South Africa*	-7.4%	0.2%	1.0%	1.1%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Turkey*	-4.9%	-4.9%	0.0%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
United Arab Emirates*	11.1%	11.1%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Totals									
Americas	15.3%	11.7%	7.0%	8.9%	0.4%	-0.1%	-0.1%	-0.1%	0.1%
Europe	8.2%	7.8%	39.7%	40.3%	0.2%	0.0%	-0.1%	0.0%	0.1%
Asia/Pacific	3.3%	2.9%	50.1%	47.5%	0.2%	-0.1%	0.0%	0.0%	0.1%
Other	-1.1%	5.2%	1.7%	3.2%	-0.2%	0.0%	0.0%	0.1%	-0.1%
Cash	0.0%	--	1.4%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%
Total	**5.9%**	**5.8%**	**100.0%**	**100.0%**	**0.5%**	**-0.2%**	**-0.2%**	**0.0%**	**0.2%**
Totals									
Developed	6.1%	5.8%	72.1%	70.1%	0.3%	0.0%	-0.1%	0.0%	0.3%
Emerging*	5.8%	5.7%	26.4%	29.9%	0.1%	0.0%	-0.1%	0.0%	0.0%
Cash	0.0%	--	1.4%	0.0%	0.0%	-0.1%	0.0%	0.0%	-0.1%



	Actual $	Actual %	Manager Contribution to Excess Return %
AG CSF Annex Dislocation Fund	$7,182,351	0.4%	0.0%
Angelo Gordon Credit Solutions	$14,384,034	0.9%	0.0%
Angelo Gordon Opportunistic	$2,190,000	0.1%	0.0%
Beach Point Select	$92,655,659	5.7%	0.1%
Blackrock DL Feeder IX-U	$12,474,533	0.8%	0.0%
Brigade Capital	$107,261,688	6.6%	0.1%
DoubleLine	$260,988,274	16.1%	0.1%
FIAM Bond	$269,060,232	16.6%	0.0%
Franklin Templeton	$77,700,193	4.8%	0.0%
NISA Core Bond	$237,639,033	14.7%	0.0%
PIMCO Diversified	$134,577,606	8.3%	0.0%
PIMCO Private Income	$53,173,408	3.3%	-0.1%
TCP Direct Lending VIII	$28,026,092	1.7%	0.0%
Western TRU	$224,383,666	13.9%	0.2%
White Oak Yield	$32,964,449	2.0%	-0.1%
White Oak YSF V	$33,411,565	2.1%	-0.1%
Core Fixed Income Overlay	$30,914,258	1.9%	0.0%
Actual vs. Policy Weight Difference			-0.2%
Total	**$1,618,987,041**	**100.0%**	**0.1%**

Statistics Summary

3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Fixed Income	5.7%	3.5%	1.3	-0.2	1.8%
Blended Fixed Income Index	6.1%	4.1%	1.2	--	0.0%
Core Fixed	5.4%	3.0%	1.4	0.0	1.5%
BBgBarc US Aggregate TR	5.3%	3.5%	1.2	--	0.0%
FIAM Bond	6.5%	4.0%	1.3	0.7	1.6%
BBgBarc US Aggregate TR	5.3%	3.5%	1.2	--	0.0%
Western TRU	5.2%	6.6%	0.6	0.6	6.6%
3-Month Libor Total Return USD	1.4%	0.3%	0.8	--	0.0%
Opportunistic Credit	6.4%	6.8%	0.8	-0.4	4.3%
BBgBarc BA Intermediate HY	8.0%	7.9%	0.9	--	0.0%
Angelo Gordon Opportunistic	7.9%	17.8%	0.4	0.1	17.9%
BBgBarc US Aggregate TR	5.3%	3.5%	1.2	--	0.0%
Beach Point Select	9.9%	8.9%	1.0	0.4	4.9%
BBgBarc BA Intermediate HY	8.0%	7.9%	0.9	--	0.0%
Brigade Capital	6.5%	12.2%	0.4	-0.2	7.1%
BBgBarc BA Intermediate HY	8.0%	7.9%	0.9	--	0.0%
PIMCO Diversified	6.5%	6.9%	0.8	-0.2	1.3%
Blended PIMCO Diversified Index	6.8%	7.7%	0.7	--	0.0%
Franklin Templeton	-1.3%	6.6%	-0.4	-0.7	7.5%
BBgBarc Multiverse TR	4.3%	4.5%	0.7	--	0.0%

Statistics Summary

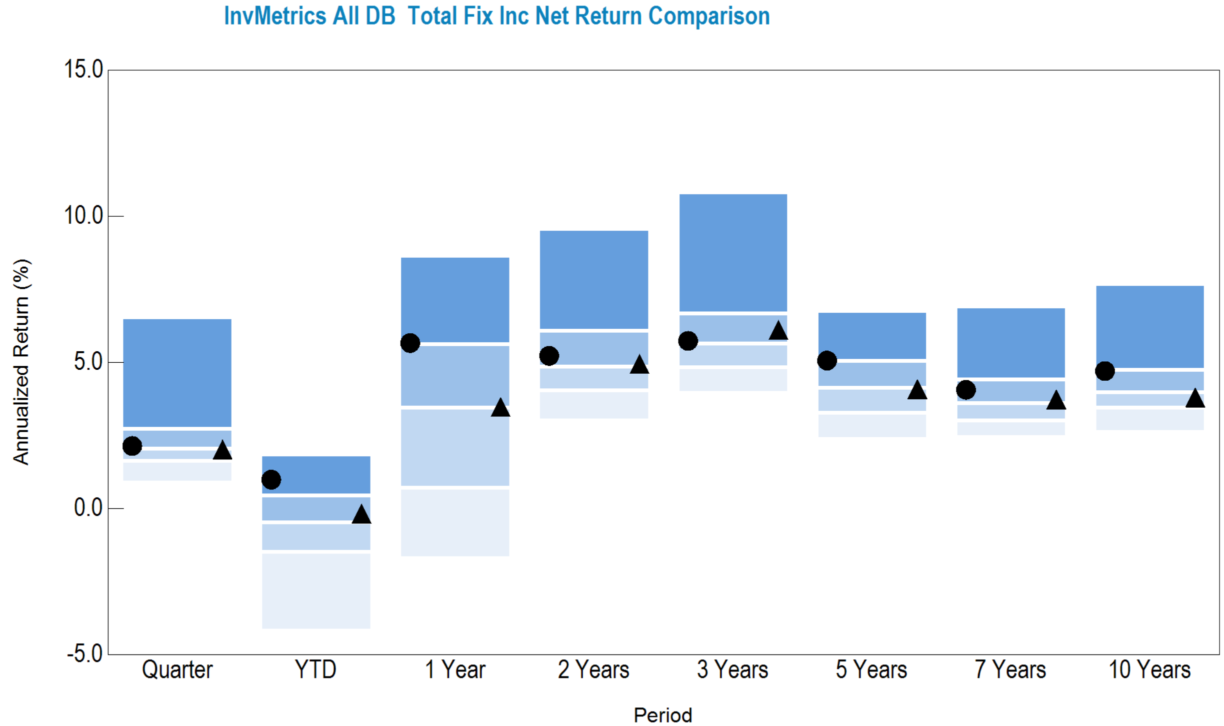
3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Private Credit	6.9%	4.1%	1.4	-0.4	2.8%
Cliffwater Direct Lending Index	8.2%	5.6%	1.2	--	0.0%
TCP Direct Lending VIII	7.0%	3.0%	2.0	-0.2	4.7%
Cliffwater Direct Lending Index	8.2%	5.6%	1.2	--	0.0%
White Oak Yield	5.8%	3.1%	1.5	-0.7	3.6%
Cliffwater Direct Lending Index	8.2%	5.6%	1.2	--	0.0%

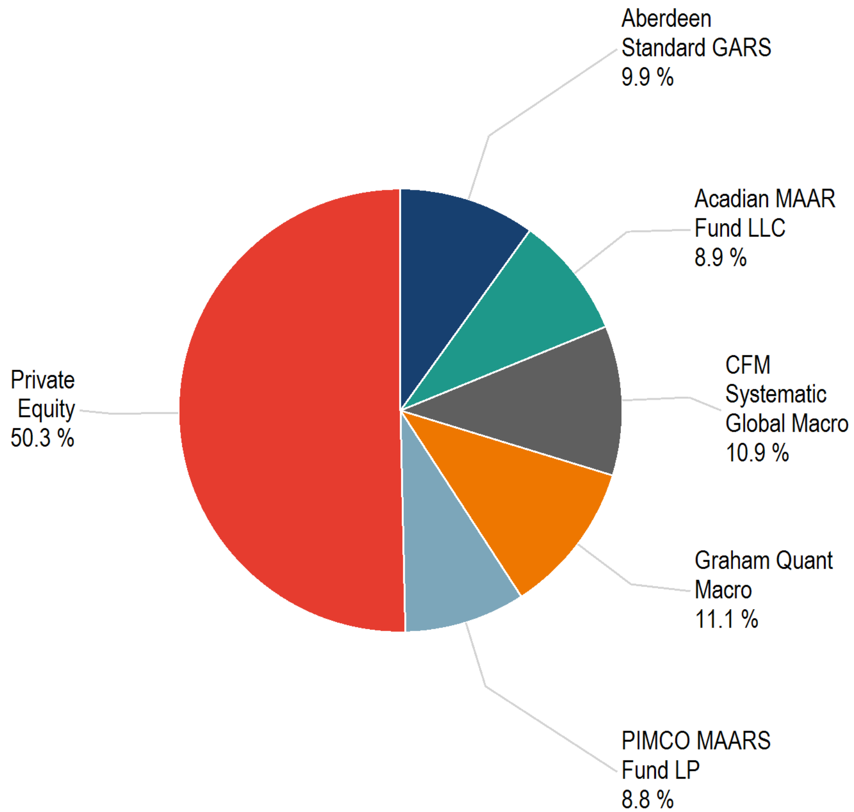
Statistics Summary

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Fixed Income	5.1%	3.0%	1.3	0.5	1.8%
Blended Fixed Income Index	4.1%	3.6%	0.8	--	0.0%
Core Fixed	3.7%	2.8%	1.0	0.6	1.3%
BBgBarc US Aggregate TR	3.0%	3.3%	0.6	--	0.0%
FIAM Bond	4.1%	3.6%	0.8	0.8	1.2%
BBgBarc US Aggregate TR	3.0%	3.3%	0.6	--	0.0%
Western TRU	4.7%	5.4%	0.7	0.6	5.5%
3-Month Libor Total Return USD	1.4%	0.3%	1.3	--	0.0%
Opportunistic Credit	7.6%	5.5%	1.2	0.2	3.7%
BBgBarc BA Intermediate HY	6.7%	6.3%	0.9	--	0.0%
Angelo Gordon Opportunistic	12.8%	15.1%	0.8	0.6	15.3%
BBgBarc US Aggregate TR	3.0%	3.3%	0.6	--	0.0%
Beach Point Select	10.2%	7.0%	1.3	0.9	4.0%
BBgBarc BA Intermediate HY	6.7%	6.3%	0.9	--	0.0%
Brigade Capital	8.0%	9.7%	0.7	0.2	5.7%
BBgBarc BA Intermediate HY	6.7%	6.3%	0.9	--	0.0%
Franklin Templeton	0.8%	6.3%	0.0	-0.2	7.7%
BBgBarc Multiverse TR	2.6%	4.6%	0.3	--	0.0%



	Return (Rank)															
5th Percentile	6.5		1.8		8.6		9.5		10.8		6.8		6.9		7.7	
25th Percentile	2.7		0.5		5.6		6.1		6.7		5.1		4.4		4.8	
Median	2.0		-0.5		3.5		4.9		5.7		4.1		3.6		4.0	
75th Percentile	1.6		-1.5		0.7		4.0		4.8		3.3		3.0		3.5	
95th Percentile	0.9		-4.2		-1.7		3.0		4.0		2.4		2.4		2.6	
# of Portfolios	256		256		255		255		253		235		224		188	
● Fixed Income	2.1	(42)	1.0	(16)	5.7	(25)	5.2	(43)	5.7	(49)	5.1	(25)	4.1	(32)	4.7	(28)
▲ Blended Fixed Income Index	2.0	(52)	-0.2	(42)	3.5	(50)	4.9	(49)	6.1	(36)	4.1	(53)	3.7	(44)	3.8	(60)



	Actual $	Actual %	Manager Contribution to Excess Return %
Aberdeen Standard GARS	$79,934,625	9.9%	0.0%
Acadian MAAR Fund LLC	$72,000,012	8.9%	0.0%
CFM Systematic Global Macro	$88,294,656	10.9%	0.6%
Graham Quant Macro	$90,043,453	11.1%	0.3%
PIMCO MAARS Fund LP	$71,130,182	8.8%	-0.1%
Private Equity	$406,570,411	50.3%	2.6%
Actual vs. Policy Weight Difference			0.2%
Total	**$807,973,339**	**100.0%**	**3.6%**

Statistics Summary

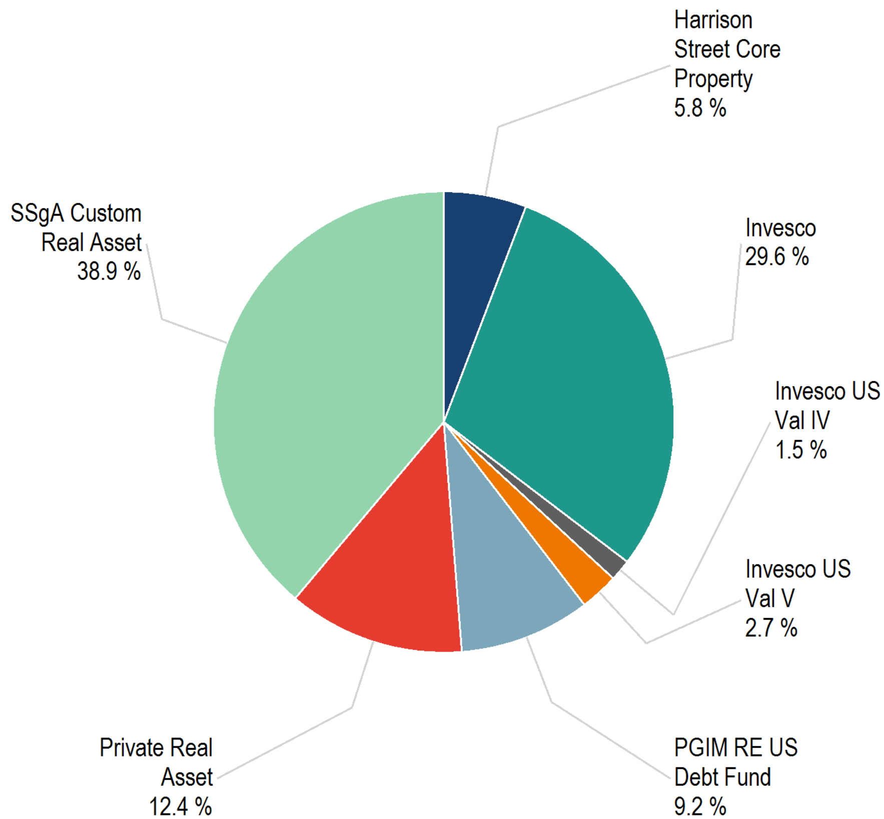
3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Alternatives	16.6%	14.8%	1.0	0.3	14.8%
Blended Alternatives Index	12.7%	9.3%	1.2	--	0.0%
Private Equity	35.8%	24.9%	1.4	0.6	25.5%
Blended Private Equity Index	20.2%	18.7%	1.0	--	0.0%
Hedge Fund/Absolute Return	-3.9%	6.7%	-0.8	-1.4	6.8%
Absolute Return Custom Index	5.3%	0.3%	13.1	--	0.0%
Aberdeen Standard GARS	4.3%	4.7%	0.7	-0.2	4.7%
Absolute Return Custom Index	5.3%	0.3%	13.1	--	0.0%

Statistics Summary

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Alternatives	13.8%	12.0%	1.1	0.1	11.9%
Blended Alternatives Index	12.4%	7.7%	1.5	--	0.0%
Private Equity	28.7%	20.2%	1.4	0.5	20.9%
Blended Private Equity Index	19.1%	15.4%	1.2	--	0.0%
Hedge Fund/Absolute Return	-2.2%	5.9%	-0.6	-1.3	5.9%
Absolute Return Custom Index	5.3%	0.3%	15.9	--	0.0%
Aberdeen Standard GARS	2.9%	4.1%	0.4	-0.6	4.2%
Absolute Return Custom Index	5.3%	0.3%	15.9	--	0.0%



	Actual $	Actual %	Manager Contribution to Excess Return %
Harrison Street Core Property	$53,357,728	5.8%	-0.1%
Invesco	$274,859,704	29.6%	0.2%
Invesco US Val IV	$13,877,128	1.5%	0.0%
Invesco US Val V	$24,631,503	2.7%	0.0%
PGIM RE US Debt Fund	$85,544,448	9.2%	-0.3%
Private Real Asset	$114,919,200	12.4%	-0.1%
SSgA Custom Real Asset	$360,643,196	38.9%	0.1%
Actual vs. Policy Weight Difference			0.0%
Total	**$927,832,907**	**100.0%**	**-0.2%**

Statistics Summary

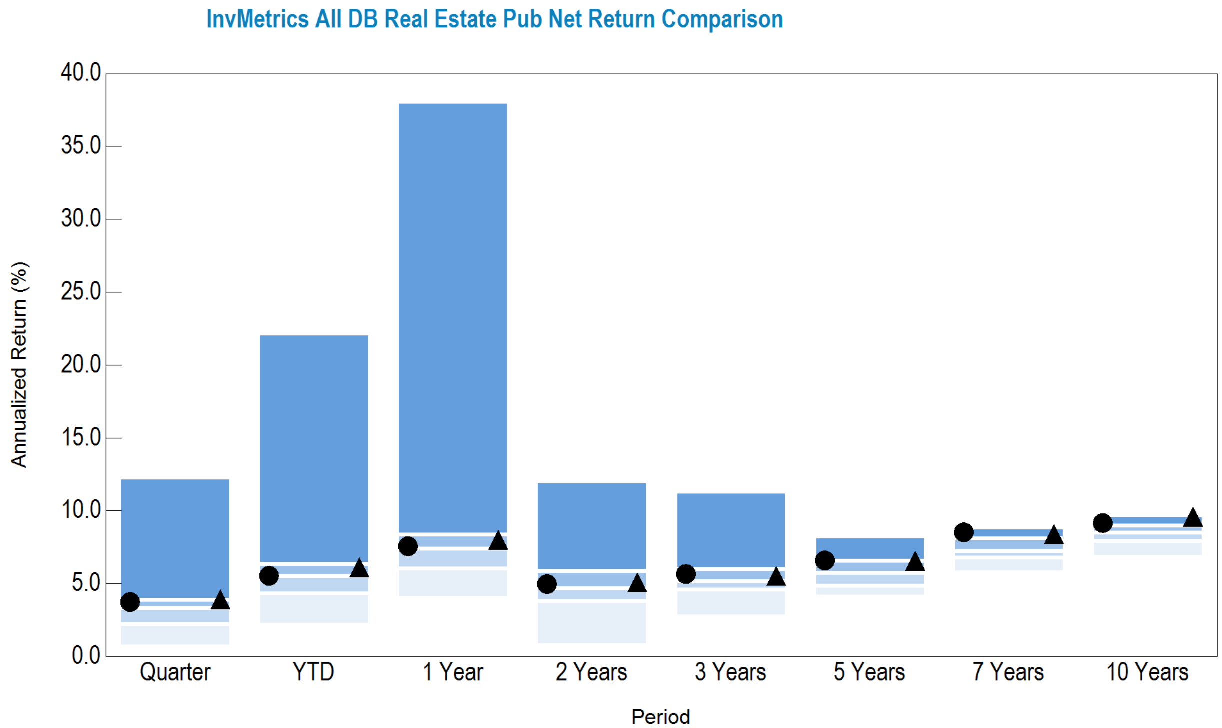
3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Inflation Hedge	2.2%	7.1%	0.1	-1.0	3.4%
Blended Inflation Hedge Index	5.8%	6.5%	0.7	--	0.0%
Real Estate	5.7%	3.8%	1.2	0.1	1.2%
NCREIF ODCE	5.5%	3.3%	1.3	--	0.0%
Invesco	5.0%	4.7%	0.8	-0.2	2.0%
NCREIF ODCE	5.5%	3.3%	1.3	--	0.0%
Invesco US Val IV	9.1%	6.6%	1.2	0.8	4.4%
NCREIF ODCE	5.5%	3.3%	1.3	--	0.0%
PGIM RE US Debt Fund	5.7%	2.2%	2.1	0.1	2.7%
NCREIF ODCE	5.5%	3.3%	1.3	--	0.0%
Private Real Asset	3.3%	12.6%	0.2	-0.2	21.5%
Blended Private Real Asset Index	7.0%	20.2%	0.3	--	0.0%
Public Real Assets	-1.5%	19.9%	-0.1	-1.1	4.4%
Blended Public Real Asset Index	3.4%	16.7%	0.1	--	0.0%
SSgA Custom Real Asset	3.4%	16.4%	0.1	0.0	0.8%
SSgA Custom Real Asset Index	3.4%	16.7%	0.1	--	0.0%

Statistics Summary

5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error Rank
Real Estate	6.6%	3.6%	1.5	0.0	13
NCREIF ODCE	6.6%	3.3%	1.6	--	1
Invesco	6.2%	4.2%	1.2	-0.2	--
NCREIF ODCE	6.6%	3.3%	1.6	--	--
Invesco US Val IV	9.6%	5.9%	1.4	0.8	--
NCREIF ODCE	6.6%	3.3%	1.6	--	--
Private Real Asset	1.3%	10.4%	0.0	-0.2	--
Blended Private Real Asset Index	5.7%	16.3%	0.3	--	--



Return (Rank)	Quarter		YTD		1 Year		2 Years		3 Years		5 Years		7 Years		10 Years	
5th Percentile	12.3		22.2		38.0		12.0		11.3		8.2		8.8		9.7	
25th Percentile	3.9		6.4		8.4		5.9		6.0		6.6		8.1		9.0	
Median	3.3		5.5		7.4		4.7		5.2		5.8		7.3		8.5	
75th Percentile	2.3		4.3		6.1		3.8		4.6		4.9		6.8		8.0	
95th Percentile	0.7		2.2		4.0		0.8		2.8		4.1		5.8		6.9	
# of Portfolios	73		73		73		73		71		67		66		54	
● Real Estate	3.7	(32)	5.5	(50)	7.6	(48)	5.0	(40)	5.7	(36)	6.6	(26)	8.5	(15)	9.2	(22)
▲ NCREIF ODCE	3.9	(26)	6.1	(30)	8.0	(32)	5.1	(38)	5.5	(37)	6.6	(26)	8.4	(17)	9.6	(8)

Aberdeen Standard (ASI) Global Absolute Return Strategy (GARS)

The Aberdeen Standard Global Absolute Return Strategy (GARS) was designed in 2005 to address the needs of Standard Life's own Defined Benefit pension plan, with an objective to generate absolute returns with significantly less volatility than equity investments. 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 examines and reviews position proposals to approve a high conviction, short list of positions that should work well together. The GARS strategy is built using a broad range of return-seeking positions (i.e. multi-strategy) that incorporate multiple risk views when constructing the portfolio. The strategy will take some directional risk at times if the portfolio management team believes that it will earn positive returns over their three-year time horizon. Given the scale of the GARS portfolio, the team requires all investment positions to be both scalable and suitably liquid. In addition, the strategy's risk-based approach requires the team to be able to reliably model the risk behavior of each selected investment, so all assets used must be well-understood from a risk perspective before going into the portfolio.

Acadian Asset Management – Acadian U.S. Managed Volatility

Acadian's goal is to build a portfolio focused on absolute return and risk with the aim of achieving an absolute return similar to or better than that of a domestic equity index but with lower volatility over the long term. Acadian targets absolute risk to be 25-35% less than a typical capitalization-weighted benchmark. That said, tracking error is not a major consideration and can appear relatively high due in part to Acadian's comfort with carrying large sector variations versus the benchmark. Acadian seeks to combine the values of all of the security-level factors to determine a peer-relative return forecast for each stock. Separately they make a top-down forecast for the stock's peer group, and then add that forecast to the stock's score. Acadian's managed volatility strategies utilize the same alpha forecasts as Acadian's active equity strategies but with risk being the initial consideration when constructing portfolios. Alpha forecasts play a modest role relative to the importance of risk estimates but are important to the goal of achieving a higher risk-adjusted return. Incorporation of alpha forecasts generally results in higher exposure to value, size and quality.

Acadian Asset Management – MAARS Fund

Acadian Multi-Asset Absolute Return (MAARS) strategy was incepted in November 2017. MAARS targets a volatility of 6%-8% and a return of cash plus 5%. This is a multi-factor strategy that aims to exploit behavioral inefficiencies within and across global markets and is designed to be diversifying, dynamic and defensive. It is market neutral, implemented using long and short positions across five primary asset classes (equity, fixed income, currency, commodities, and volatility) and over 100 underlying assets with a focus on liquid instruments. Return forecasts incorporate asset-specific and macroeconomic insights and are utilized to harvest active returns from within and across asset classes through market selection and directional positioning. The strategy integrates risk and return across asset classes. Avoidance of downside events is highlighted in the approach with a greater weighting in their models allocated to down market beneficiaries, such as quality factors, and asymmetric positioning which reduces positions when risk rises. Differentiated attributes of this approach are its approach and weighting to commodities and its volatility sleeve which can incorporate long volatility.

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

The Angelo Gordon Opportunistic Whole Loan (OWL) Fund was established to make investments primarily in a portfolio of non-performing loans (NPLs) and re-performing loans (RPLs). AG sees a lot of operational inefficiency in the market place. By acquiring these loans at a discounted price and replacing original servicers with better-focused special servicers, AG believes it can improve operational efficiency and generate attractive returns. In addition, OWL may 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. OWL is towards the end of its fund life and is continuing to sell down the fund's holdings and distribute proceeds to LPs.

Angelo, Gordon & Co. – Credit Solutions

The Angelo Gordon (AG) Credit Solutions Fund (CSF) expects to hold concentrated positions of 5-8% of NAV (averaging 30 positions over the life of the Fund with recycling). The Fund is targeting a net 15% IRR with a 5-7% current yield. The Fund should be 70% concentrated in the U.S. with the balance in Europe. Finally, while the opportunities can be sourced from both the public markets and the private markets, AG is finding compelling sources of return at this time through structuring new privately placed secured term loans out of public investments made by the firm. CSF 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 pandemic and will need to restructure, but whose creation value is materially lower than the issuer's intrinsic value.

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 they 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 pandemic 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 60-90stocks, with country and sector weights +/-10% relative to the index and stock 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 – 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 monitors their funds daily to ensure that additions and deletions to the indexes, mergers and acquisitions, restructurings and other capitalization changes are made to the fund in such a way as to minimize tracking error and transactions costs.

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 monitors their funds daily to ensure that additions and deletions to the indexes, mergers and acquisitions, restructurings and other capitalization changes are made to the fund in such a way as to minimize tracking error and transactions costs.

BlackRock (formerly Tennenbaum Capital Partners) - Direct Lending Funds VIII and IX

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. SamCERA committed $35 million to DLF VIII in June 2016 in its unlevered fund sleeve and $35 million to the DLF IX in June 2019.

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.

CFM - Systematic Global Macro

Capital Fund Management (CFM) Systematic Global Macro (SCM) is a directional strategy that takes long and short positions in liquid future and forwards across 130+ markets and across equities, bonds, currencies, and commodities. It is a new strategy that draws on model signals from existing strategies at the firm – Discus (diversified CTA), CFM ISTrends (trend following) and CFM ISTrend Equity Capped (defensive trend following) - and SamCERA is a seed investor with an attractive fee. SGM's objective is to provide absolute returns that are uncorrelated with traditional asset classes over a long time horizon with an annualized volatility target between 8% and 12%. SGM uses a diverse set of trading strategies that are based on factors (momentum, value, carry, macro and sentiment) across asset classes. These technical and fundamental factors operate at different time scales and can have varying degrees of influence on performance depending on market and economic conditions. An additional global macro defensive overlay is combined with these outputs in constructing the final portfolio. CFM uses a form of portfolio construction known as agnostic risk parity to ensure that the SGM portfolio is diversified on an out-of-sample basis. The goal of SGM is to generate consistent returns while limiting drawdowns.

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 two decades in the course of research conducted for purposes of managing the firm's hedge funds. 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. Securitized Income seeks to maximize income and total return by investing across the structured products universe, focusing on agency mortgage-backed securities (MBS) and investment grade securitized credit. DoubleLine takes a barbelled approach to investing in the securitized market, and they will separate rates from credit and will adjust the allocations to both at the based on the economic cycle and opportunities. Duration positioning is achieved through Agency MBS, Agency CMBS, and treasuries while credit exposure is attained through all areas of structured credit.

Fidelity (FIAM) – 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.

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 looks to acquire fundamentally sound but broken "core" assets that can be repositioned into institutional-quality, income producing properties. Investments are 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 provides a complement to the more conservative Invesco Core Fund and offers 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 applies a risk-controlled approach to all of its fixed income portfolios. This approach does not permit large bets or positions that generate significant tracking error versus the benchmark. Instead, NISA invests in a large number of small, diversified, active positions which seek tight tracking error to the chosen benchmark. Benchmark weight is a significant consideration when constructing and managing portfolios. The investment strategy is comprised of strategic (top-down) and tactical (bottom-up) decisions. Strategic decisions include sector selection and yield curve positioning while tactical decisions include industry and security selection and trading activity. Review of both strategic and tactical decisions is continual. The amount of portfolio risk budget devoted to one aspect versus the other will change as market conditions warrant. In general, strategic decisions change relatively infrequently, while tactical decisions, especially security selection, will change fairly often as market conditions provide opportunities. Over a typical market cycle, the bottom-up is expected to contribute to 70% of value-added while top-down is roughly 30%.

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

PanAgora's Defensive Equity strategy seeks to harness the 'low-volatility premium' through a systematic, factor-based investment approach focused on achieving market-like returns with less risk. This is accomplished by leveraging PanAgora's proprietary Risk Parity portfolio construction methodology, which seeks to efficiently capture the equity premium associated with low volatility, while taking minimal unintended risks. Since the firm's inception, PanAgora has been using quantitative techniques to integrate fundamental insights with large amounts of dynamic market data. They score individual securities on a factor basis and also on a diversification basis, in the context of a broadly diversified portfolio. The portfolio construction process optimizes the portfolio around the intended factor exposure (volatility) while maintaining equal risk contribution across sectors (ex., overweight utilities and consumer staples, underweight financials and technology). Shorter term volatility and longer term correlation analysis is combined in the approach. The result for the US Defensive Equity strategy is a portfolio expected to have lower volatility (beta around 0.65-0.75), and similar returns relative to the capitalization-weighted benchmark over a full market cycle. PanAgora expects the strategy to participate in approximately 75% of up markets and 55% in down markets.

Parametric Overlay – Cash Overlay and Currency Hedge

Parametric's cash overlay program is an efficient way for SamCERA to maintain its target asset allocation in a systematic fashion through cash securitization at the fund and manager level, transition/reallocation support and asset class rebalancing back to target within defined bands. The cash overlay program is invested synthetically using liquid futures with cash balances reviewed daily. A combination of large and small cap futures implementation is the proxy for private equity. SamCERA's investment guidelines initially allowed only for cash overlay. Rebalancing was added to the SamCERA program in January 2014. Cash overlay and rebalancing is expected to add 10-20 bps to the portfolio over time. An additional currency overlay hedge placed on half of the notional value of developed international equities. The addition of currency hedging started in September 2018 and was fully implemented on 10/1/2019. The purpose of the currency is first and foremost to lower portfolio risk and secondarily to add incremental performance.

PIMCO Diversified

PIMCO's Diversified Income (DI) Fund is a multi-sector strategy that invests across a broad spectrum of global credit market sectors, including investment grade and high yield corporate debt, as well as emerging markets. The allocation among these will vary based on PIMCO's assessment of global trends and relative valuations. This active and dynamic approach allows for increased responsiveness in asset allocation to changing economic and market conditions while remaining anchored by PIMCO's investment process and longer-term orientation. The ability to invest globally helps to improve diversification and may allow investors to benefit from differences in business cycles across regions and credit quality trends across credit sectors. PIMCO's DI investment strategy seeks to provide high yield-like returns with lower volatility against a blended index (1/3 Bloomberg Barclays Global Agg Credit ex-EM; 1/3 BofA Merrill Lynch BB-B rated Developed Markets High Yield; 1/3 JPMorgan EMBI Global). The fund allows for a duration band of 3-8 years. The team focuses its investments into these groups: credit strategies (investment grade, high yield, emerging markets and non-core credits including MBS, municipals and other govt-related sectors); duration strategies (U.S. and non-U.S. duration) and currencies (tactical non-USD exposure).

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). As reflected in the design of the MAARS strategies, PIMCO believes that alternative risk premia strategies are best implemented using a systematic approach that minimizes the discretionary inputs in day-to-day portfolio management. MAARS places a greater emphasis and weighting on global interest rates, currencies and commodities and a lesser emphasis on equities than many of its Alt Beta peers. Relative to Alt Beta peers, the strategy's rates and currency (FX) models are particularly robust, reflective of PIMCO's core competency and long history managing these asset classes using derivative instruments.

PIMCO Private Income Fund

PIMCO Private Income Fund (PIF) uses an opportunistic and flexible approach to global private credit. PIF provides a 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. PIMCO's Private Income Fund (PIF) is targeting 8-12% net returns with income providing most of the fund's returns. The Private Income Investment Committee (IC) identifies market themes and direction for their relative value framework, and sector specialists provide recommendations to the PM team within that construct. PIF has the ability to invest throughout the capitalization structure. The fund can use a moderate amount of leverage to enhance portfolio returns (1.5 times with a hard cap of 2 times).

PGIM RE Debt

PGIM Real Estate US Debt Fund (PREDS) 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. SamCERA was a founding investor in the PREDS strategy which invests in US commercial real estate debt in an open-ended vehicle with a return target of 7-8% (gross) coming from stable current income. The fund makes investments in first lien mortgages and mezzanine debt. First lien mortgages can be floating rate or fixed rate, but only floating rate loans will use leverage. Subordinate investments (mezzanine debt and preferred equity) will be limited by design. The fund can source and invest in secondary loans through a variety of Prudential real estate professionals, but the primary focus will be on direct origination through the real estate finance team.

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.

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 Roll Select Commodity Index, S&P Global Mid-Large Cap Natural Resources Index, S&P Global Infrastructure Index, and Bloomberg Barclays TIPS Index. SSgA provides beta exposure through these underlying liquid components which can be customized to changing client needs (ex., TIPS was added in May 2020 with the other three parts of the portfolio reduced pro-rata). The portfolio is used to fund upcoming private real asset mandates.

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.

White Oak - White Oak Yield Spectrum Fund V

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Total Plan Policy Index	As of 2/1/21	1/1/21	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%	0.0%	0.0%
60/40 MSCI World/BBgBarc Global Aggregate (RP)	0.0%	0.0%	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%	0.0%	0.0%
91 Day T-Bills	1.0%	1.0%	1.0%	1.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Aggregate	18.0%	21.0%	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%	10.0%	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%	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%	0.0%	0.0%
BBgBarc Multiverse	0.0%	0.0%	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%	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%	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%
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%	0.0%	0.0%
Blended Public Real Asset	4.0%	4.0%	4.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	0.0%	0.0%	0.0%
Blended Private Real Asset	4.0%	3.0%	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)	0.0%	0.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	5.0%
SOFR +4% (HF)	7.0%	6.0%	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	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 100% Hedged (Net)	9.5%	9.0%	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%	0.0%	0.0%	19.0%	19.0%
MSCI ACWI ex-US IMI (Net)	9.5%	9.0%	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%	0.0%	0.0%
NCREIF ODCE	9.0%	10.0%	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%	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%	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%	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%	0.0%	0.0%
Russell 3000	22.0%	21.0%	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%	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%	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%	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%	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%
SOFR +4% (HF)	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	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%	0.0%	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%

Public Equity Benchmark	As of: 2/1/21	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%	0.0%	34.0%	31.3%	23.1%	0.0%	0.0%	0.0%
MSCI ACWI ex US IMI 100% Hedged (Net)	23.2%	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%	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)	23.2%	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%	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%	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%	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%	0.0%	8.3%	12.0%	13.2%	13.5%	15.4%	24.2%	25.0%	25.0%
Russell 3000	53.7%	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%	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%	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: 2/1/21	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	64.3%	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	35.7%	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%	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%	0.0%	16.0%	15.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Multiverse	0.0%	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%	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%	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%	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%

Alternatives Benchmark	As of: 2/1/21	1/1/21	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%	0.0%	0.0%	30.0%
Bloomberg Commodity	0.0%	0.0%	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%	0.0%	0.0%	11.8%	12.5%	0.0%
Libor +4% (HF)	0.0%	0.0%	50.0%	46.2%	46.2%	41.7%	29.4%	25.0%	15.0%
SOFR +4% (HF)	53.8%	50.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Russell 3000 +3% (PE)	0.0%	0.0%	0.0%	0.0%	53.8%	58.3%	41.2%	43.8%	40.0%
Russell 3000 +3% 1Q Lag (PE)	46.2%	50.0%	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%	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: 1/1/21	10/1/10
Libor +4%	0.00%	100.00%
SOFR +4%	100.0%	0.0%
	100.0%	100.0%

Inflation Hedge	As of: 2/1/21	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%	0.00%	5.88%	11.1%	12.5%	14.3%	14.3%
Bloomberg Commodity	0.00%	0.00%	0.00%	0.00%	0.0%	0.0%	0.0%	21.4%
CPI + 5% (RA)	0.00%	0.00%	0.00%	0.00%	0.0%	0.0%	0.0%	14.3%
Blended Public Real Asset	23.53%	23.53%	35.29%	35.29%	33.3%	0.0%	0.0%	0.0%
Blended Private Real Asset	23.53%	17.65%	11.77%	11.77%	11.1%	43.8%	35.7%	0.0%
NCREIF ODCE	52.94%	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%	100.0%

Public Real Asset Benchmark	As of: 5/1/20	10/1/16	1/1/14
Bloomberg Roll Select Commodity	25.0%	34.0%	0.0%
S&P Global Large-MidCap Commodity and Resources	25.0%	33.0%	0.0%
S&P Global Infrastructure	25.0%	33.0%	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: 1/1/21	4/1/18	10/1/16	1/1/14
Bloomberg Roll Select Commodity	0.00%	0.00%	34.00%	0.0%
S&P Global Large-MidCap Commodity and Resources	0.00%	0.00%	33.00%	0.0%
S&P Global Infrastructure	0.00%	0.00%	33.00%	0.0%
50/50 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL	0.00%	100.00%	0.00%	0.0%
75/25 S&P Global Infra & Lrg-MidCap Com & Resources +2% 1QL	100.00%	0.00%	0.00%	0.0%
CPI + 5%	0.00%	0.00%	0.00%	100.0%
	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%

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%
	100.0%	100.0%

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%
	100.0%	100.0%

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

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

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%
	100.0%	100.0%

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-MSCI ACWI ex US IMI Index Fund

On All Assets:	0.045% per annum

DoubleLine

On All Assets:	0.30% per annum

NISA

First $500 million:	0.15% per annum
Next $1 billion:	0.125% per annum
Next $1 billion:	0.105% per annum
Next $1.5 billion	0.085% per annum
Thereafter:	0.065% 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

Name	Primary Benchmark	Rule 1	Rule 2	Rule 3
Acadian US MGD V	Russell 1000	--	--	--
DE Shaw	Russell 1000	⚐	✓	⚐
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	✓	✓	⚐
AG CSF Annex Dislocation Fund	BBgBarc BA Intermediate HY	--	--	--
Angelo Gordon Opportunistic	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	✓	✓	⚐
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	--	--	--
White Oak YSF V	Cliffwater Direct Lending Index	--	--	--
Aberdeen Standard GARS	Absolute Return Custom Index	⚐	⚐	⚐
Acadian MAAR Fund LLC	Absolute Return Custom Index	--	--	--
CFM Systematic Global Macro	Absolute Return Custom Index	--	--	--
Graham Quant Macro	Absolute Return Custom Index	--	--	--
PIMCO MAARS Fund LP	Absolute Return Custom Index	--	--	--

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

Name	Primary Benchmark	Rule 1	Rule 2	Rule 3
Acadian US MGD V	Russell 1000	--	--	--
DE Shaw	Russell 1000	⚐	✓	⚐
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	✓	✓	⚐
AG CSF Annex Dislocation Fund	BBgBarc BA Intermediate HY	--	--	--
Angelo Gordon Opportunistic	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	✓	✓	⚐
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	--	--	--
White Oak YSF V	Cliffwater Direct Lending Index	--	--	--
Aberdeen Standard GARS	Absolute Return Custom Index	⚐	⚐	⚐
Acadian MAAR Fund LLC	Absolute Return Custom Index	--	--	--
CFM Systematic Global Macro	Absolute Return Custom Index	--	--	--
Graham Quant Macro	Absolute Return Custom Index	--	--	--
PIMCO MAARS Fund LP	Absolute Return Custom Index	--	--	--

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

3RD QUARTER 2021

Investment Landscape

Recent Verus research

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

Topics of interest

MEASURING & BUDGETING ACTIVE RISK

Active risk budgeting is valuable in the construction, monitoring, and overall governance of the investment portfolio. An active risk budget identifies how much risk an investor wants to take in the portfolio and where the investor plans to allocate that risk. In this paper we provide an introduction to active risk and demonstrate how to measure and budget that risk. We also discuss the individual sources that drive active risk and why they're important to identify. Last, we review a practical example of how active risk can inform portfolio construction and demonstrate how the Verus active management environment research can be used to inform active/passive allocations throughout the portfolio.

Sound thinking

THINKING SKEPTICALLY

Risk markets are currently trading at all-time highs, cryptocurrencies are soaring, and investment markets are looking forward to a broadly positive post-COVID future. At times like these it can be valuable to consider the role that skepticism plays in the investment process. This short paper is designed to help clarify the role that skepticism can play, and also to clarify how investors can use it as a tool without being captured by it, because excessive skepticism may lead to missed opportunities.

Annual research

2021 REAL ASSETS OUTLOOK

In last year's outlook, COVID-19 was front and center in our views and outlooks across all asset classes. A year later, we are beginning to return to a more normalized pre-COVID lifestyle and with that, a recovery in many of the sectors impacted in 2020. One of the topics being debated among investors is the potential for inflationary pressure, a portfolio risk that hasn't emerged in several decades. That discussion has reignited interest in real assets and capital flows into the asset class.

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2nd quarter summary

THE ECONOMIC CLIMATE

— Real GDP grew at a 0.4% rate year-over-year in the first quarter (+6.4% quarterly annualized rate) as the U.S. recovery continued at a quicker-than-expected pace. It appears that GDP will fully recover in Q2. ***p. 12***

— The U.S. unemployment rate has been slow to rebound, despite a full recovery in economic activity. This might suggest that government spending has had an outsized impact, and raises risks around a stimulus "hangover" when spending programs end. ***p. 14***

— Economies around the world continued to recover as life began moving back to normal. This description does not apply to all economies, as Brazil, Japan, and much of Africa and Southeast Asia still grapple with effects of COVID and new variants of the virus. ***p. 20***

PORTFOLIO IMPACTS

— Credit spreads grew even tighter during Q2, driven by investor demand and improvements in economic fundamentals. High yield spreads tightened to 2.68%—a new cycle low. Investment grade tightened 11 basis points to end the quarter at 0.80%. ***p. 25***

— Inflation surprised on the upside in Q2, adding to investor fears. U.S. core CPI rose 4.5% year-over-year, while headline came in at 5.4%. The jump in prices has been concentrated in a few areas, including energy (+24.5% YoY) and used car & truck prices (+45.2% YoY). ***p. 13***

THE INVESTMENT CLIMATE

— The Biden Administration's Infrastructure Plan continues to be up in the air in terms of size and composition. As of mid-July, Democrat legislators had reached an agreement for $4.1 trillion in spending, comprised of $3.5 trillion in "human infrastructure" and $600 billion towards "traditional infrastructure" It is unclear whether this proposal will gain sufficient support from Democrats. ***p. 12***

— It seems that investors have put the 2020 pandemic-induced recession behind them. Implied volatility, realized market volatility, and the risks reflected in asset prices are very low. This data suggests that investors perceive a strong economy, a healthy business environment, and very few threats on the horizon. ***p. 35***

ASSET ALLOCATION ISSUES

— U.S. equities were a top performer again in Q2 (S&P 500 +8.5%). International equities (+5.2% MSCI EAFE Index) were on par with emerging markets (+5.1% MSCI Emerging Markets Index) on an unhedged currency basis. ***p. 28***

— Factor performance suffered during Q2, reversing much of the gains from the prior quarter. Large capitalization stocks beat small (Russell 1000 +8.5%, Russell 2000 +4.3%) and growth stocks beat value (Russell 1000 Growth +11.9%, Russell 1000 Value +5.2%). ***p. 30***

Economic progress continues to exceed expectations, though strong optimism may already be reflected in asset prices

We believe a neutral risk stance is warranted in the current environment

What drove the market in Q2?

"Delta Covid variant first found in India spreads to 62 countries, hot spots form in Asia and Africa, WHO says"

GLOBAL COVID-19 CASES (MILLIONS)

Jan	Feb	Mar	Apr	May	Jun
26.3	28.7	30.5	32.3	33.3	33.7

Article Source: CNBC, as of June 2nd, 2021

"Inflation: Is it transitory or not?"

CORE CPI GROWTH (YEAR-OVER-YEAR)

Jan	Feb	Mar	Apr	May	Jun
1.4%	1.3%	1.6%	3.0%	3.8%	4.5%

Article Source: Yahoo Finance, June 15th, 2021

"TREASURIES-U.S. Treasury yield curve flattens as Fed seen more proactive on inflation"

IMPLIED EFFECTIVE FED FUNDS RATE IN DECEMBER 2023

Jan	Feb	Mar	Apr	May	Jun
0.15%	0.30%	0.40%	0.47%	0.49%	0.80%

Article Source: Reuters, June 18th, 2021

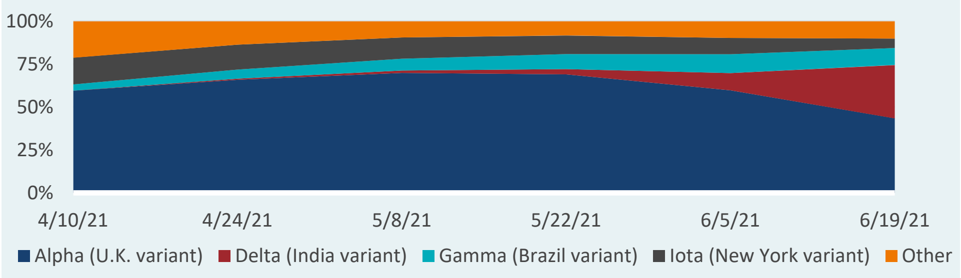
"Is the reflation trade over? What stock-market investors need to watch"

TEN-YEAR U.S. TREASURY YIELD

Jan	Feb	Mar	Apr	May	Jun
1.07%	1.40%	1.74%	1.63%	1.59%	1.47%

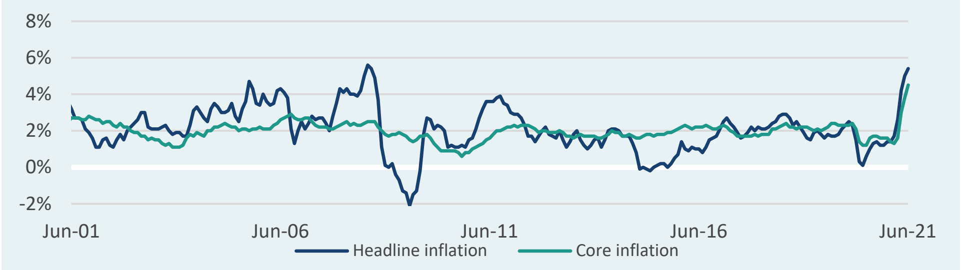
Article Source: MarketWatch, June 21st, 2021

SHARE OF U.S. COVID-19 CASE GROWTH BY VIRUS VARIANT



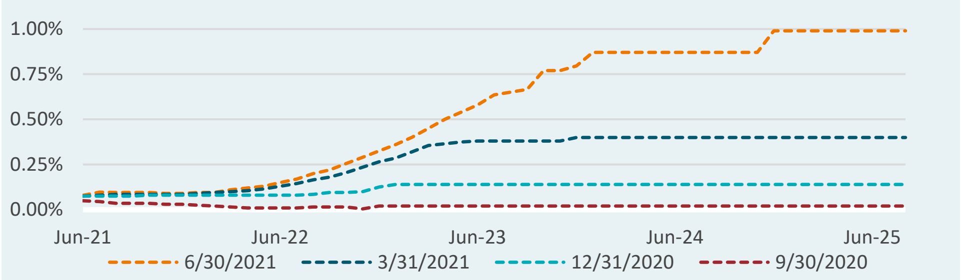
Source: U.S. Center for Disease Control, as of 6/19/21

U.S. INFLATION RATES (YEAR-OVER-YEAR)



Source: Bloomberg, as of 6/30/21

IMPLIED EFFECTIVE FED FUNDS RATE



Source: Bloomberg, as of 6/30/21

Economic environment

U.S. economics summary

— Real GDP grew at a 0.4% rate year-over-year in the first quarter (+6.4% quarterly annualized rate) as the U.S. recovery continued at a quicker-than-expected pace. It appears that gross domestic product (GDP) will fully recover in Q2.

— The U.S. unemployment rate has been slow to improve, falling very slightly from 6.0% in March to 5.9% in June. The labor market remains materially weaker relative to pre-pandemic conditions. This might suggest that a significant portion of the economic recovery has been fueled by government spending, and raises concerns about whether recent strength may prove fleeting when government intervention slows.

— The Biden Administration's Infrastructure Plan continues to be up in the air in terms of size and composition. As of mid-July, Democrat legislators had reached an agreement for $4.1 trillion in spending, comprised of $3.5 trillion in "human infrastructure" and $600 billion towards "traditional infrastructure" It is unclear whether this proposal will garner sufficient support from Democrats.

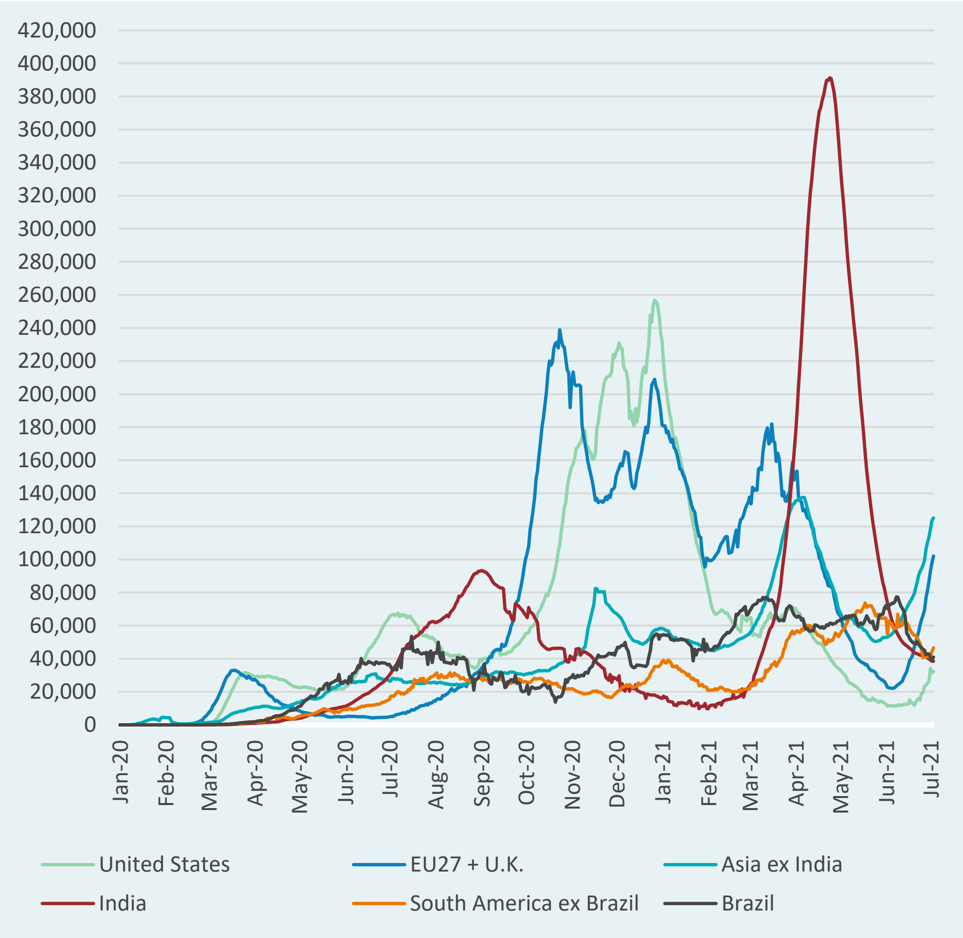
— Inflation surprised on the upside in Q2, adding to investor concerns around a potential sustained rise. U.S. core inflation, which excludes food & energy prices, rose 4.5% year-over-year in June. U.S. headline inflation came in at 5.4%. The rise in prices has so far been concentrated in a few specific areas, including energy (+24.5% YoY) and used car and truck prices (+45.2% YoY).

— Consumer sentiment further improved over the quarter, but has only regained roughly half of the deterioration post-pandemic.

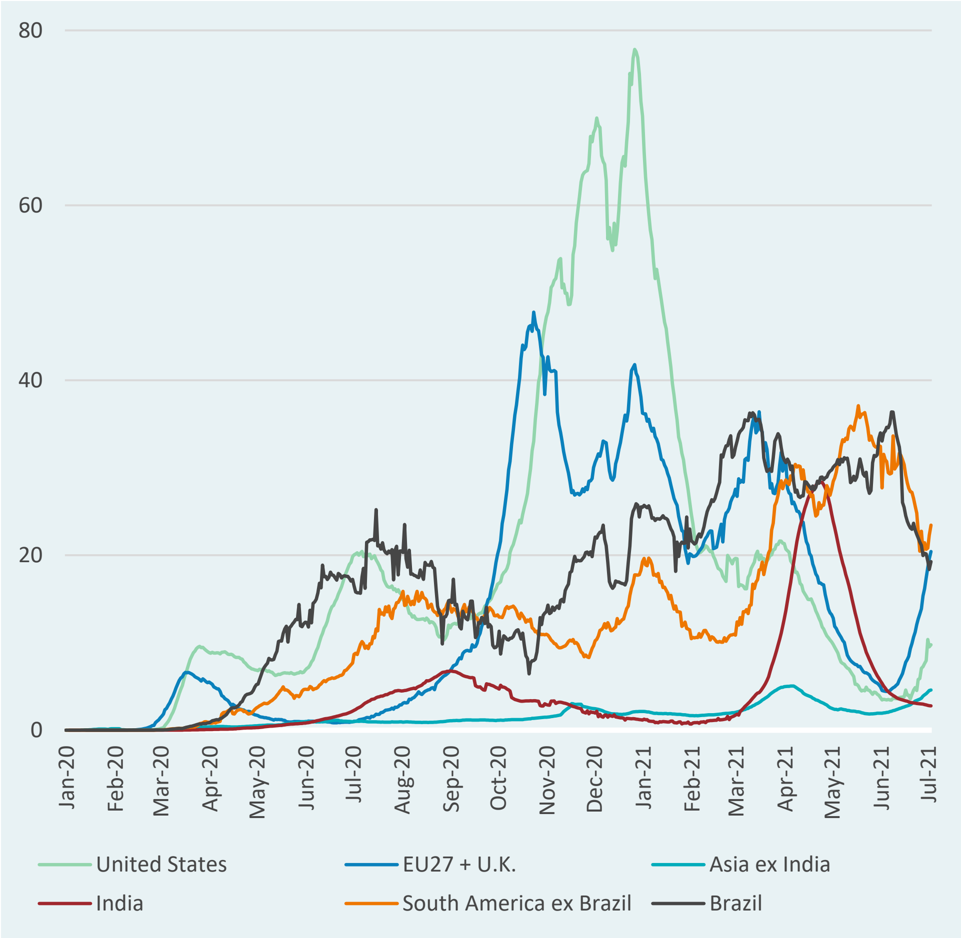
	Most Recent	**12 Months Prior**
GDP *(YoY)*	0.4% *3/31/21*	0.3% *3/31/20*
Inflation *(CPI YoY, Core)*	4.5% *6/30/21*	1.2% *6/30/20*
Expected Inflation *(5yr-5yr forward)*	2.20% *6/30/21*	1.5% *6/30/20*
Fed Funds Target Range	0% – 0.25% *6/30/21*	0% – 0.25% *6/30/20*
10-Year Rate	1.47% *6/30/21*	0.66% *6/30/20*
U-3 Unemployment	5.9% *6/30/21*	11.1% *6/30/20*
U-6 Unemployment	9.8% *6/30/21*	18.0% *6/30/20*

COVID-19 case growth

SEVEN-DAY AVERAGE DAILY CASE GROWTH



SEVEN-DAY AVERAGE DAILY CASE GROWTH – PER 100,000 RESIDENTS

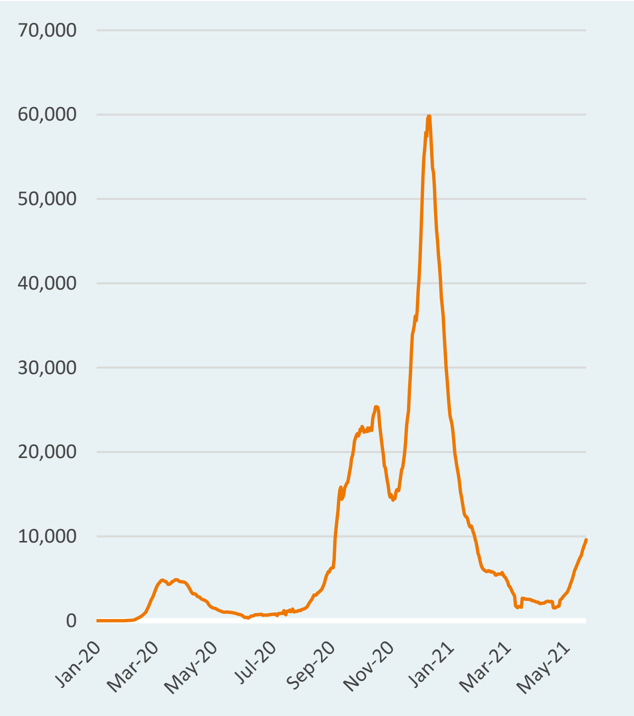


Source: Bloomberg, as of 7/18/21

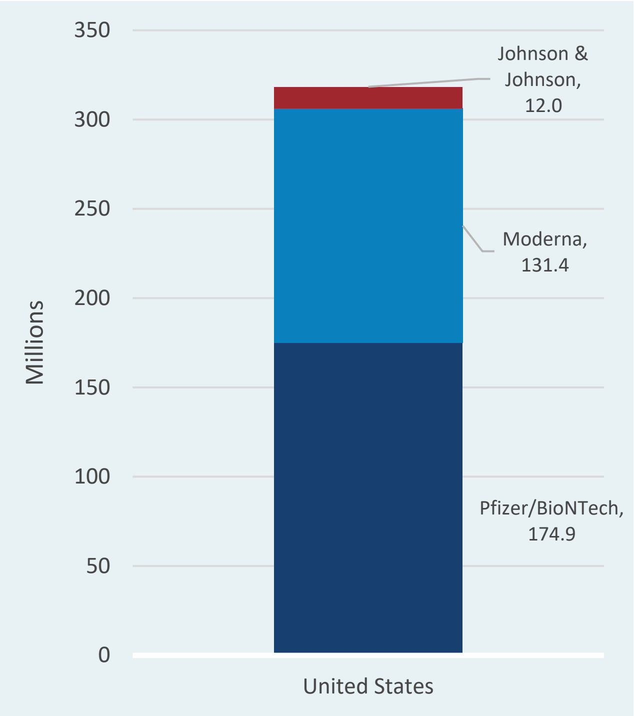
Delta variant

Spread of the more virulent delta variant (which originated in India) of the coronavirus within the U.K. led officials to push back the date for reopening from mid-June to mid-July, and has sparked concerns in recent months that material spread outside of the U.K. could lead to a reintroduction of social distancing controls.

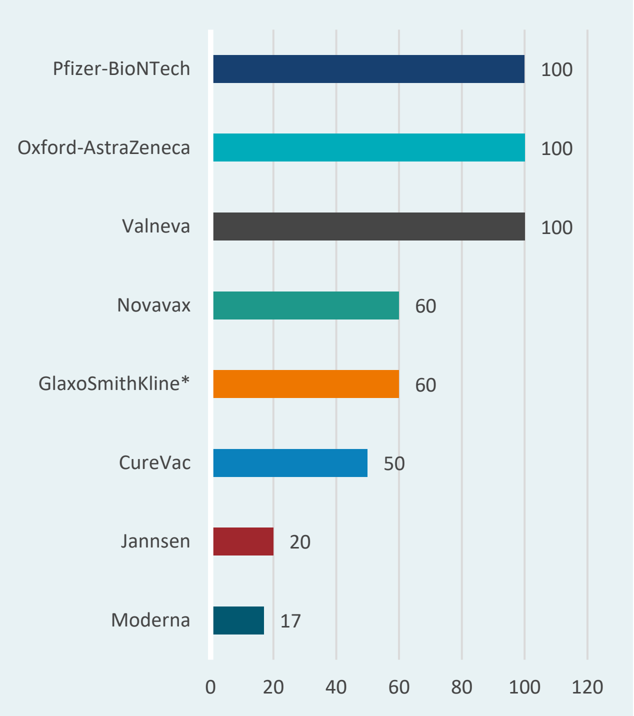
U.K. – SEVEN-DAY AVERAGE CASE GROWTH



U.S. –VACCINE DOSES ADMINISTERED BY TYPE



U.K. VACCINE DOSE ORDERS (MILLIONS)



Source: Bloomberg, BBC, U.K. government, as of 6/21/21
**Joint project with Sanofi Pasteur.*

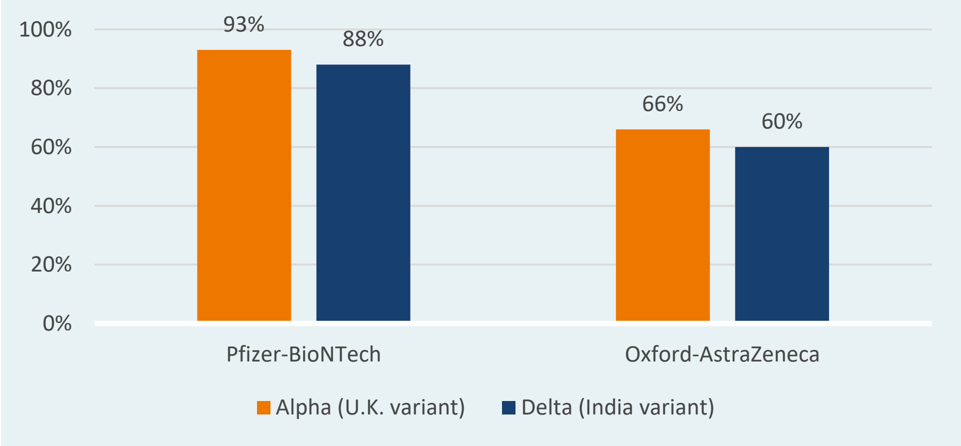
Public Health England (PHE) findings

While case growth has picked up from very low levels within the U.K., there are several factors in play which probably reduce the likelihood that delta case growth picks up materially in the U.S.

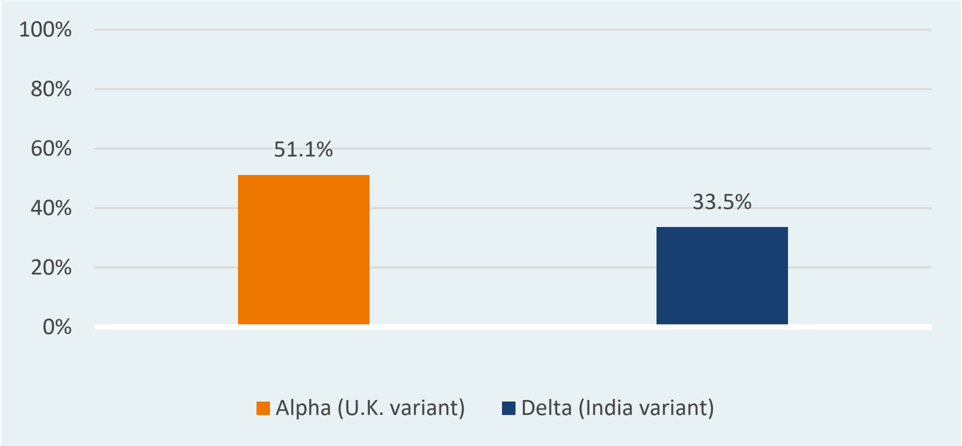
1. The U.K. has a much higher exposure to the Astra vaccine, which is significantly less effective at preventing symptomatic infection.

2. Early prioritization of the one-dose vaccine regimen in the U.K. resulted in lower levels of protection.

TWO-DOSE REGIMEN EFFECTIVENESS FOR PFIZER AND ASTRAZENECA



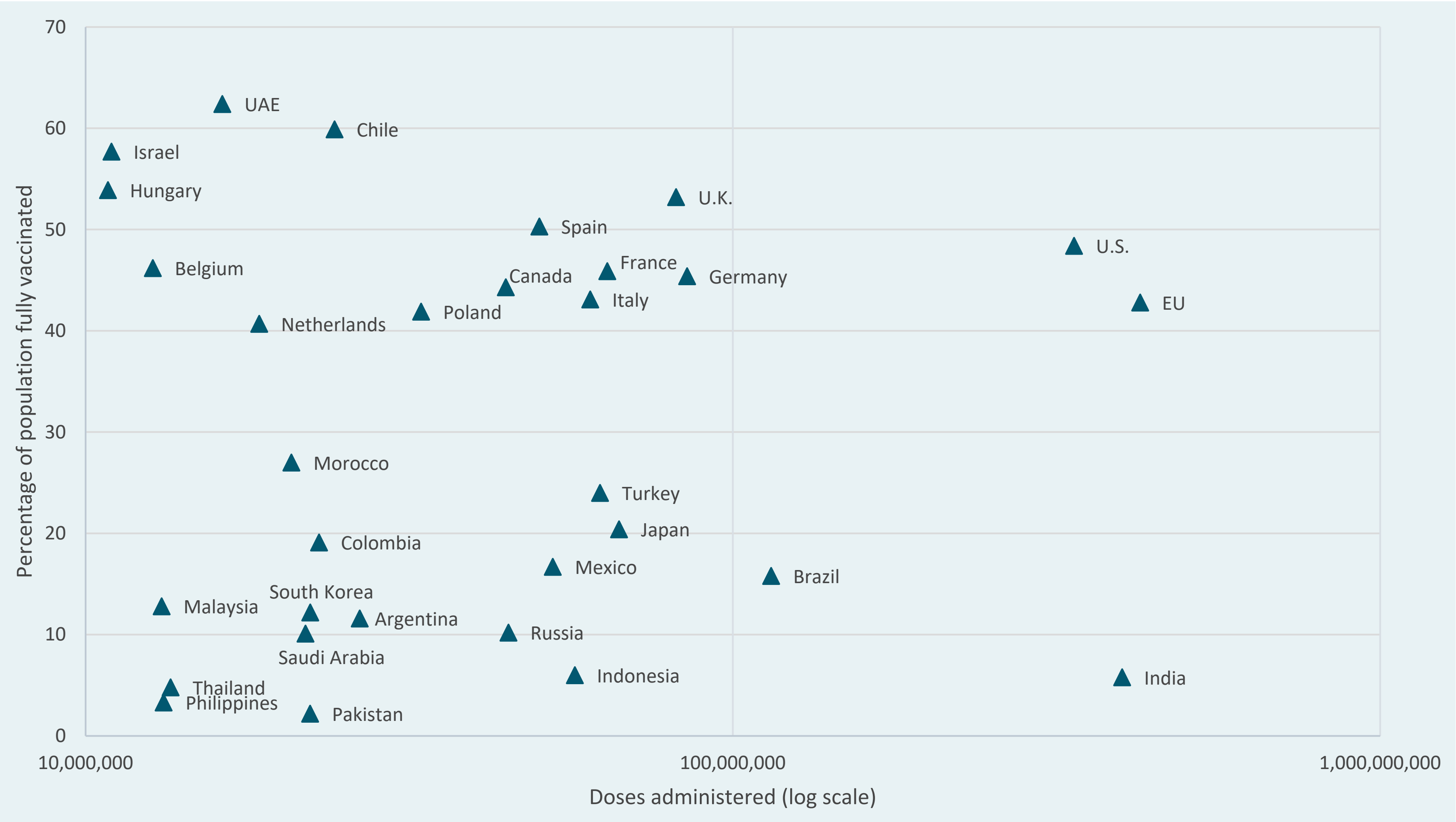
ONE-DOSE REGIMEN EFFECTIVENESS FOR PFIZER AND ASTRAZENECA



Source: https://www.medrxiv.org/content/10.1101/2021.05.22.21257658v1

Global vaccination campaign

DOSES ADMINISTERED RELATIVE TO PERCENTAGE OF POPULATION FULLY VACCINATED



The EU has closed the vaccine gap relative to the U.S. and the U.K., led by a pickup in administration in Germany

Source: Bloomberg, as of 7/16/21

GDP growth

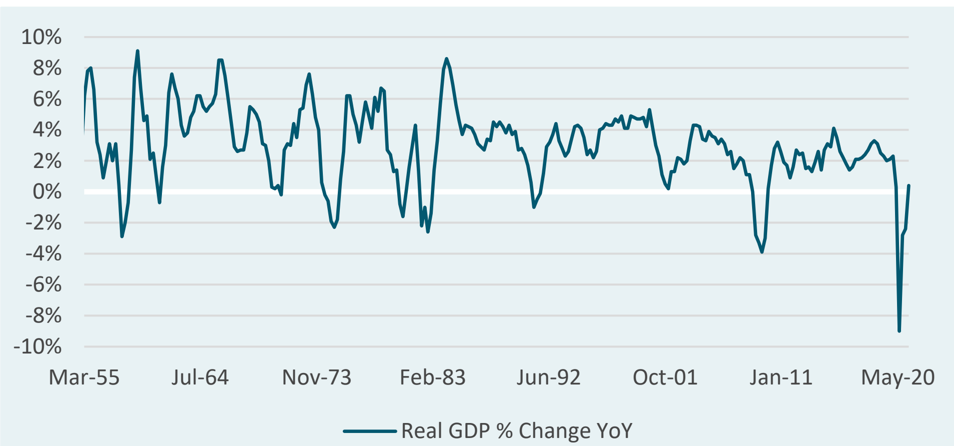
Real GDP grew at a 0.4% rate year-over-year in Q1 (+6.4% quarterly annualized rate) as the U.S. recovery continued at a quicker-than-expected pace. It appears that real gross domestic product (GDP) will once again reach its pre-pandemic level in Q2. The Atlanta Fed GDPNow estimate suggests a 7.9% Q2 growth rate as of July 9th (seasonally-adjusted quarterly annualized rate).

The Biden Administration's Infrastructure Plan continues to be up in the air in terms of size and composition. As of mid-July, Democrat legislators had reached an agreement for $4.1 trillion in spending, comprised of $3.5 trillion in "human infrastructure" (Medicare funding, childcare, government-funded college, and energy transition), and $600 billion towards "traditional infrastructure" (roads, bridges, power infrastructure, rail, broadband internet, and water infrastructure). It is unclear whether this proposal will garner adequate buy-in, and it is also unclear whether Republicans will withdraw support, now that Democrats appear ready to proceed with many of the more controversial spending items that the RNC negotiated against.

The Biden Administration has held strong in its push for further government spending, despite an arguably speedy economic recovery. These efforts have been met with opposition, as some view these proposals as excessive, given the stronger state of the economy. Additional government spending may increase the risk of economic overheating and inflation.

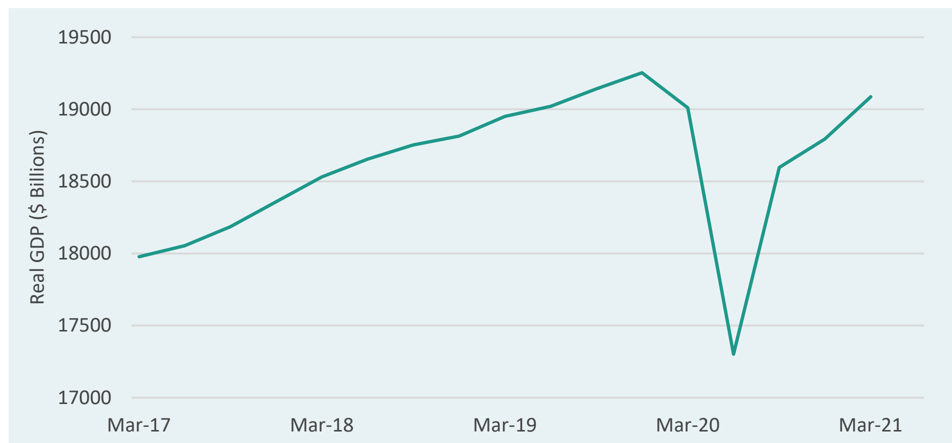
The U.S. economy likely fully recovered during Q2 2021

U.S. REAL GDP GROWTH (YOY)



Source: Bloomberg, as of 3/31/21

U.S. REAL GROSS DOMESTIC PRODUCT



Source: FRED, as of 3/31/21

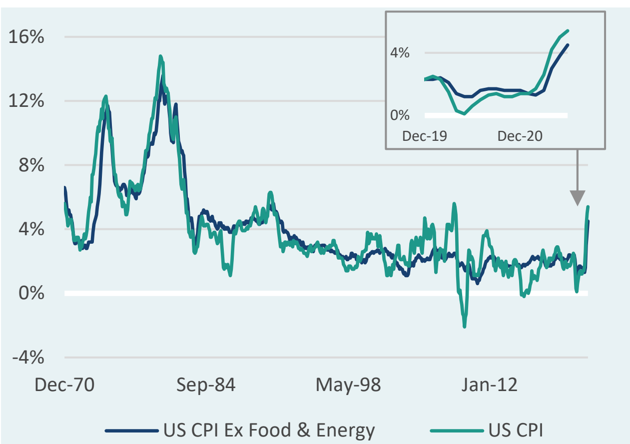
Inflation

Inflation surprised on the upside in Q2, adding to investor concerns around a sustained rise. U.S. core CPI, which excludes food & energy prices, rose 4.5% YoY in June. U.S. headline inflation came in at 5.4%. The rise in prices has so far been concentrated in a few areas. Energy prices (+24.5% YoY) have had the most significant impact, with extreme gasoline price rises (+45.1% YoY) being very noticeable at the pump. Used automobile prices (+45.2% YoY) have also seen large gains.

We maintain our belief that recent price rises will generally prove transitory as most increases can be explained either by base effects or one-time effects from pandemic supply and spending dynamics. Energy price growth is an example of 'base effects', where prices fell dramatically in spring 2020 and then recovered by spring 2021, creating the mirage of high inflation (inflation is a 12-month price change measurement). Higher used car prices is likely an example of 'one-time effects' from supply issues (chip shortages led to decreased supply of new cars) and also consumer spending habit changes during COVID (fear of public transportation led to auto purchases, and stimulus checks provided funds for purchases). As auto sales slow, we believe this will mitigate high prices. However, there are also some signs of more structural price rises, such as owner's equivalent rent (OER) which is much slower moving due to the impact of lease arrangements and the longer time it takes for home price increases to impact household budgets more broadly.

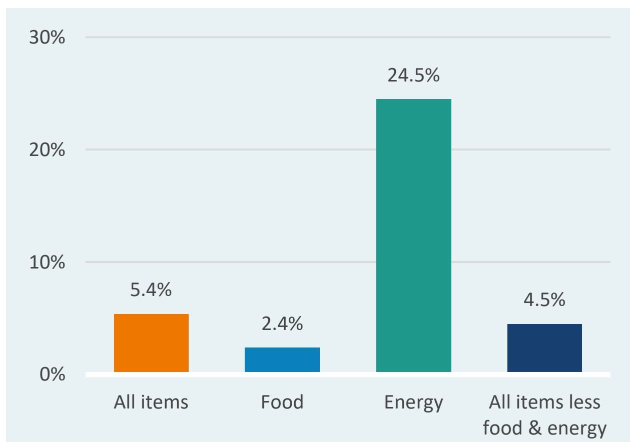
It is important to distinguish between *one-time* and *transitory* price rises in the current environment

U.S. CPI (YOY)



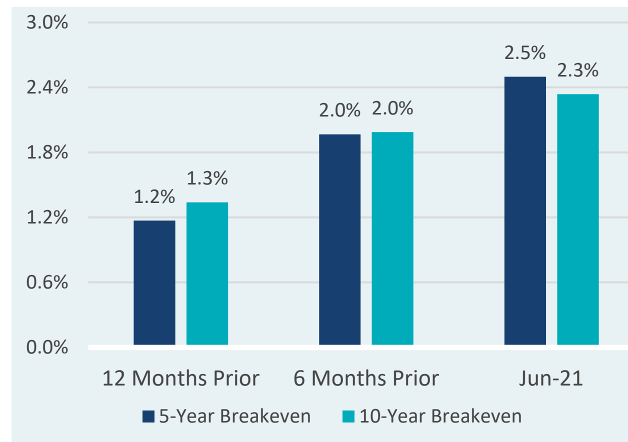
Source: Bloomberg, as of 6/30/21

U.S. CPI (YOY)



Source: BLS, as of 6/30/21

BREAKEVEN INFLATION RATES



Source: Bloomberg, as of 6/30/21

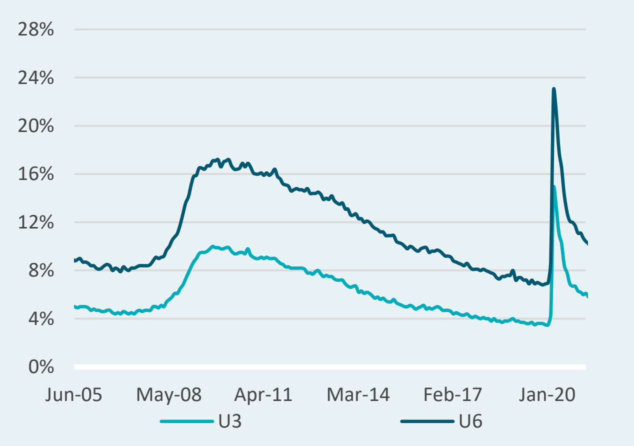
Labor market

The U.S. labor market rate has been slow to recover, as unemployment fell only slightly from 6.0% in March to 5.9% in June. Labor participation also paints a lukewarm picture, rising from 61.5% to 61.6% during the quarter. The labor market remains materially weaker relative to pre-pandemic conditions. This might suggest that a significant portion of the economic recovery has been fueled by government spending and raises concerns about whether recent strength may prove fleeting once government spending slows.

Beginning mid-June, a few U.S. states decided to stop accepting Federal emergency unemployment benefits. Among the benefits were a $300 weekly unemployment add-on, expanded eligibility, and an extension of the duration of benefits overall. Research regarding the impacts of these programs on joblessness are mixed. Based on one study from the Federal Reserve Bank of St. Louis, states that have stopped these programs have seen unemployment fall by 5% more than states that have continued offering expanded benefits (12% unemployment vs. 7%). This study suggests that many unemployed workers may come back into the workforce as government subsidies roll off. It is worth mentioning that other factors are in play regarding the timid labor market recovery, including parents declining work to care for children, fears of workplace safety, and early retirements. These labor dynamics are complex and it may be overly simplistic to attribute problems to a single cause.

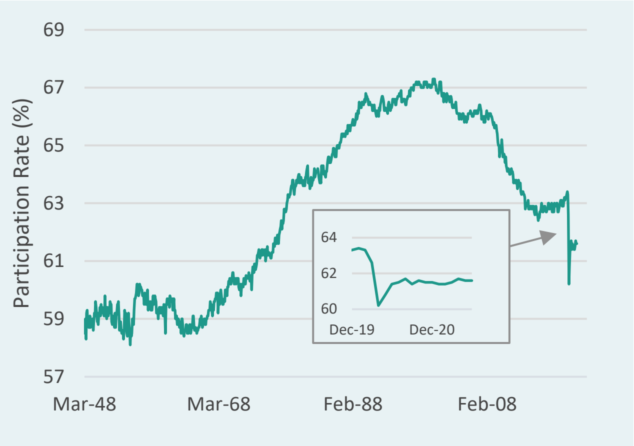
A large portion of the U.S. labor force remains neither employed nor seeking work

U.S. UNEMPLOYMENT



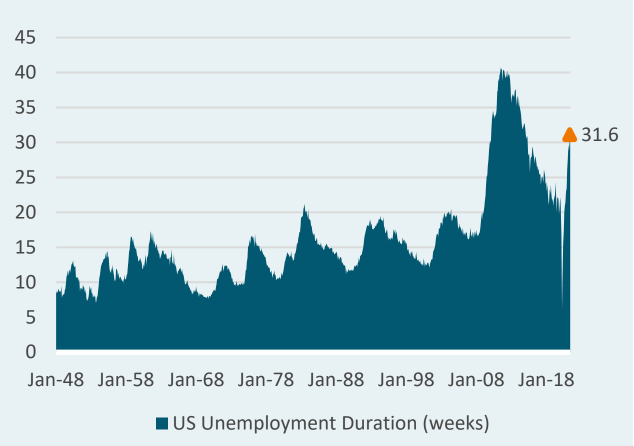
Source: FRED, as of 6/30/21

LABOR PARTICIPATION RATE



Source: FRED, as of 6/30/21

UNEMPLOYMENT DURATION



Source: FRED, as of 6/30/21

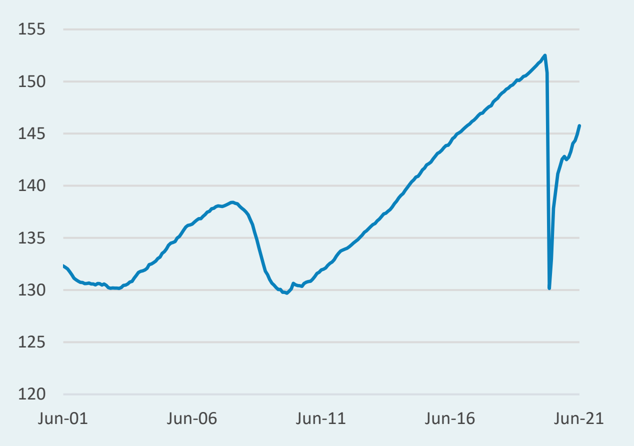
Employment conditions

Nonfarm payrolls expanded by 567,000 per month on average in the second quarter, reaching a total of 145.8 million by quarter-end. This number was 6.8 million below the pre-pandemic peak of February 2020. Labor market conditions have been improving overall, but the road has been bumpy, given the ebb and flow of virus cases and the impact on individual state and city policy decisions.

Job openings rose to a fresh record of 9.2 million in May, underscoring the fact that the recent bounce back in consumer demand has outpaced the ability of business owners to hire to meet that demand. In order to address that shortfall, many business owners have begun to raise wages, offer signing bonuses, offer more flexible work hours, and offer the ability to work from home. Said another way, the sellers have the upper hand in the labor market at present. The number of people who quit their jobs in May (3.6 million) remained near record levels, reflecting workers' confidence in their ability to find other employment.

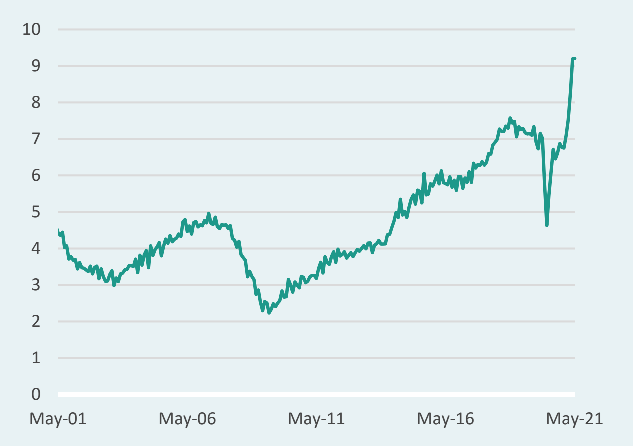
While employers are struggling to find qualified employees in the current environment, the expiration of a litany of additional unemployment insurance programs through the end of the year could push up labor market supply. Whether the skills of the currently not-working contingent matches up with current labor demand remains to be seen.

U.S. EMPLOYEES ON NONFARM PAYROLLS



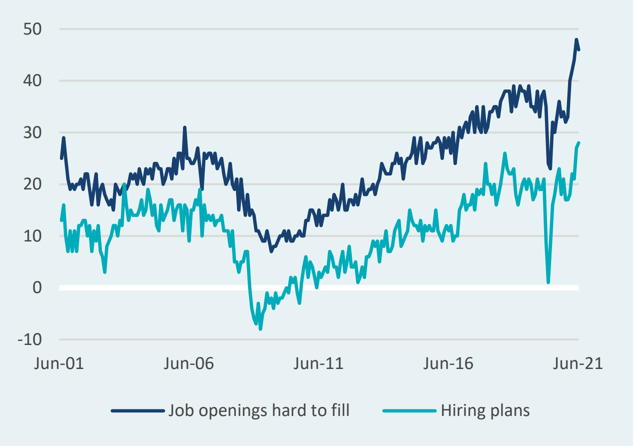
Source: BLS, as of 6/30/21

U.S. JOB OPENINGS (MILLIONS)



Source: BLS, as of 5/31/21

SMALL BUSINESS OWNERS' HIRING CONDITIONS



Source: NFIB, as of 6/30/21

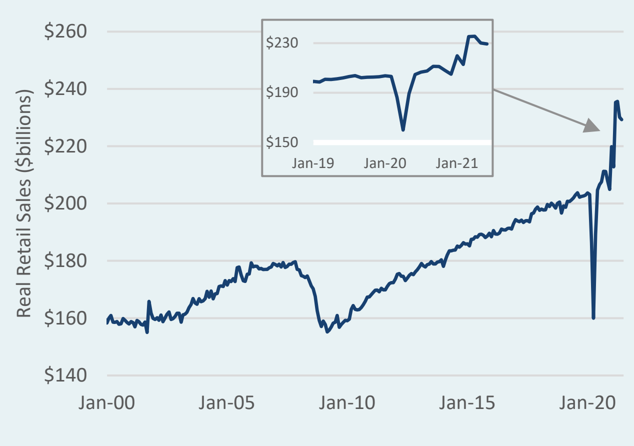
The consumer

U.S. retail sales would appear red hot if defined on a year-over-year growth basis (+12%). But, as we have mentioned during past quarters, year-over-year numbers are skewed due to the events of early-2020. In reality, retail sales fell -2.5% from Q1 to Q2.

As vast government stimulus translated to hot consumer spending, it might be reasonable to ask what will happen to recent trends as government spending slows and once stimulus money has been spent. This effect might in part explain the recent drop in U.S. auto sales, which have fallen to the lowest level since 2014. We remain cautious about assuming a clean economic turnaround, as much of the recent rebound has been due to government spending rather than a natural rebound in jobs, spending, and household economic/financial security. This effect may tie closely with the more muted improvement in consumer sentiment and comfort indicators, as illustrated on slide 18.

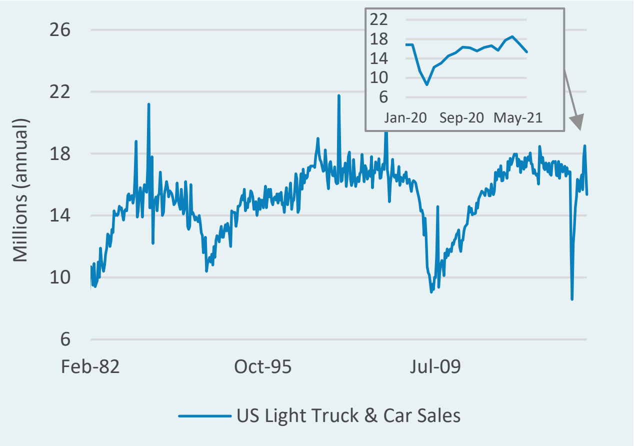
According to anonymized cellular phone data collected by Google for COVID-19 public health research, Americans appear to have returned to normal life in most respects. Travel to the workplace and transit usage, however, remain notably depressed relative to pre-COVID activity. If work-from-home policies are extended or even made permanent at many businesses, it is likely that this type of travel remains lower.

REAL RETAIL SALES



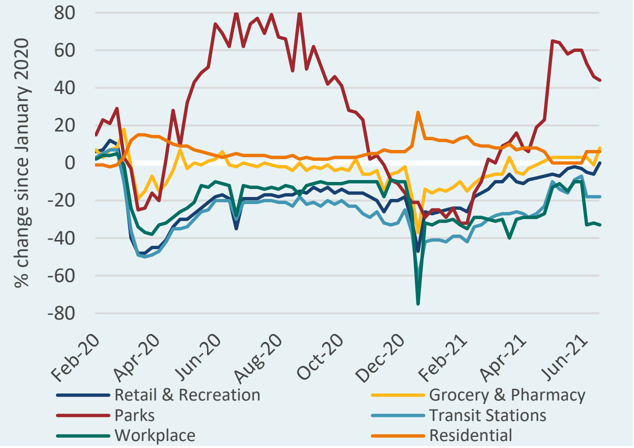
Source: FRED, as of 6/30/21

AUTO SALES



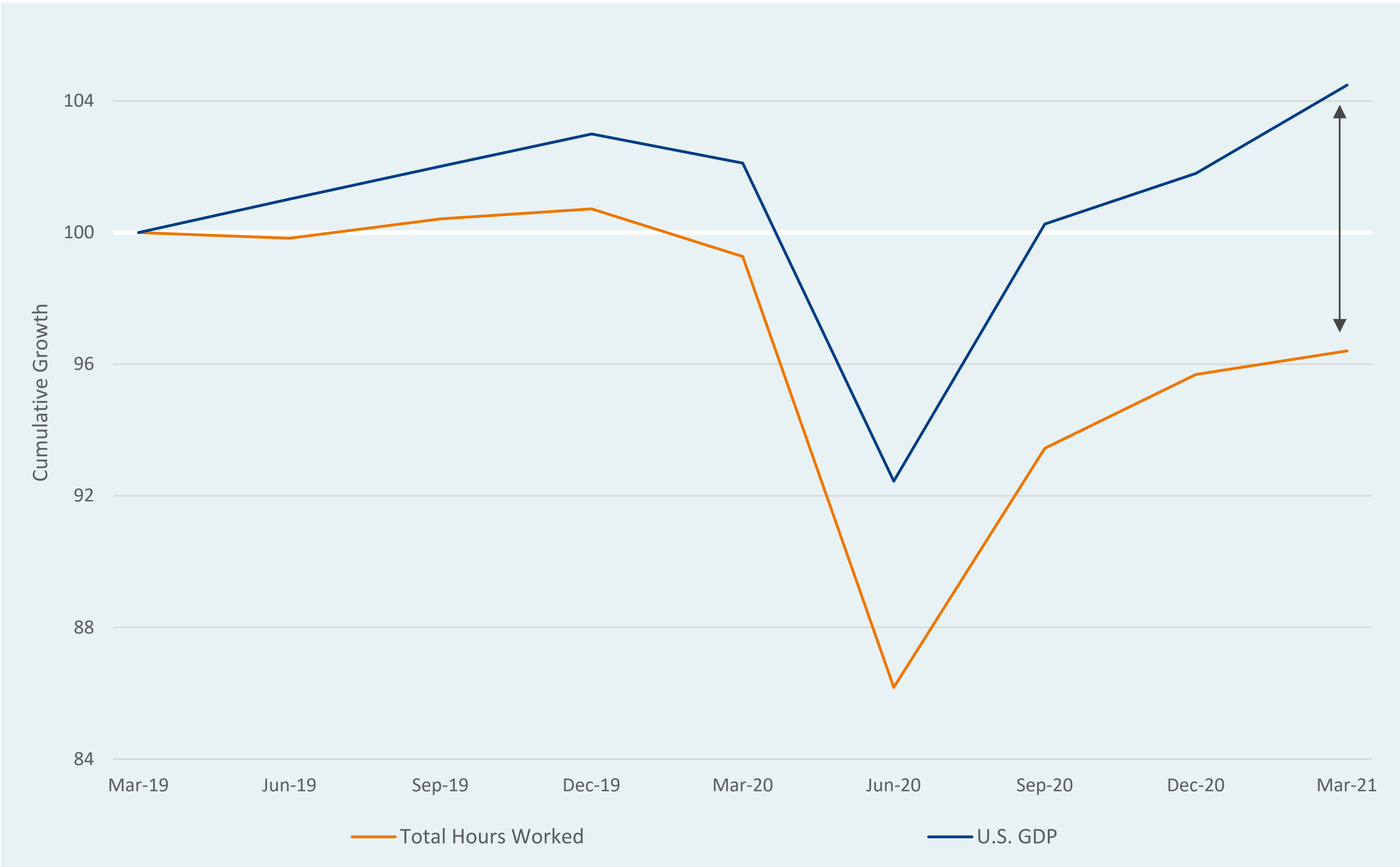
Source: Federal Reserve, as of 6/30/21

GOOGLE U.S. ACTIVITY TRACKER



Source: Google anonymized U.S. citizen mobility, as of 6/30/21

An unbalanced recovery



Despite the strong recovery in U.S. GDP, the labor market remains depressed

The stark contrast between GDP and the total number of hours worked by Americans illustrates this divide

Source: Fred, Verus, as of 3/31/21 – Nonfarm business sector total hours worked, nominal U.S. gross domestic product (GDP)

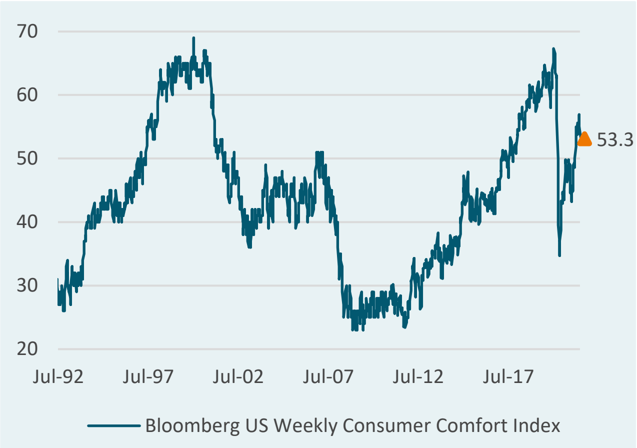
Sentiment

Consumer sentiment further improved over the quarter but has only recovered roughly half of the deterioration post-COVID, according to the indices below.

The Bloomberg Consumer Comfort Index attempts to gauge Americans' views on the economy, their personal financial situations, and buying conditions. The index rose from 50.0 to 53.3. The University of Michigan Consumer Sentiment Survey attempts to gauge attitudes about the business climate, personal finances, and spending conditions. The index jumped from 84.9 to 85.5. As reported by the university, "…consumers' complaints about rising prices on homes, vehicles, and household durables reached an all-time record." The survey surmised that Americans have accumulated significant savings, and a critical issue going forward will be whether these savings are held for safety or are spent.

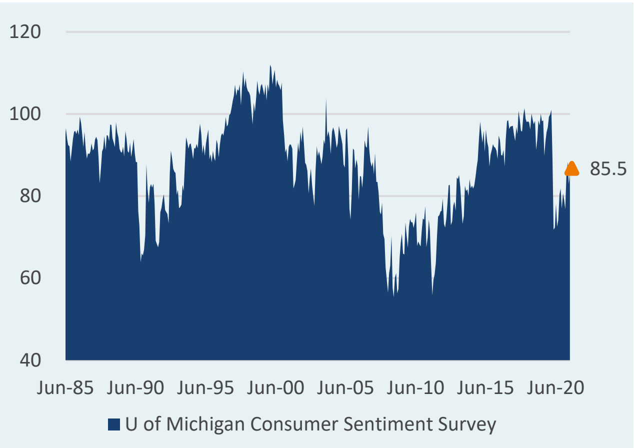
Small business optimism improved over the quarter but remained below pre-pandemic levels. Business owners are optimistic on the outlook, supported by expectations for gradual economic reopening, but continue to struggle to fill open positions due to a shortage of qualified employees in the labor pool.

CONSUMER COMFORT



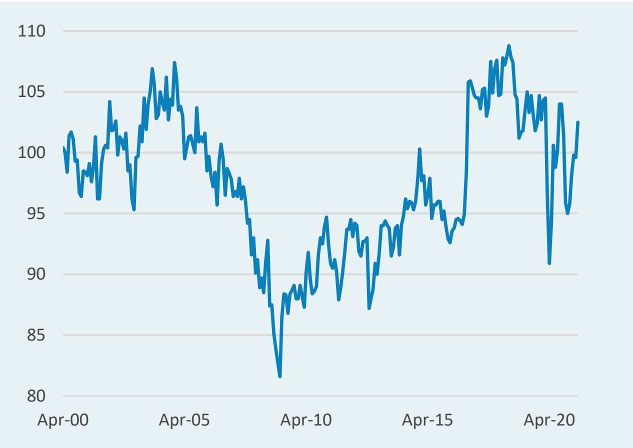
Source: Bloomberg, as of 6/30/21

CONSUMER SENTIMENT



Source: University of Michigan, as of 6/30/21

SMALL BUSINESS OPTIMISM



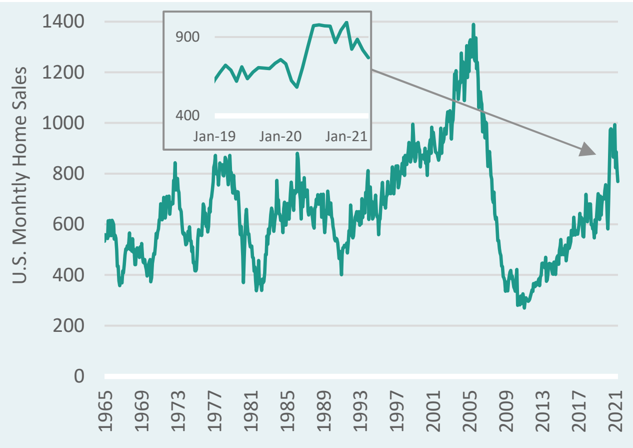
Source: NFIB, as of 6/30/21

Housing

Home sales activity surged considerably in late 2020, but has slowed year-to-date, closer to pre-COVID levels in May. The median home sales price in May was 23.6% higher than one year prior, pushed upward by very low inventory and very high demand. Recent price rises have been some of the strongest on record, generating wealth for many Americans, but also hurting affordability and diminishing the chance of homeownership for prospective future homeowners.

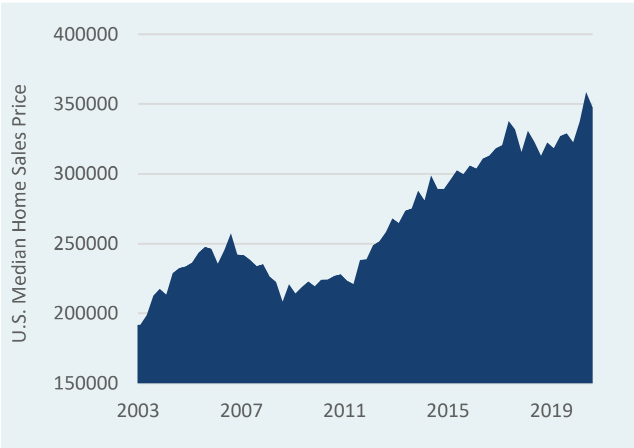
The strength of the recent housing boom has been surprising. It is not yet clear whether the current upward trend will persist. Housing inventory has improved, now standing at 5.1 months of supply, which is closer to pre-pandemic levels. This likely eases some price pressure. Earlier in the year it appeared that mortgage interest rates were rebounding towards prior levels, beginning the year at 2.67% and reaching 3.18% by the end of March. However, this trend reversed course during the second quarter, as rates fell back to 2.98%. An increasing volume of new home construction is likely easing tight inventories, as demonstrated below.

U.S. MONTHLY HOME SALES



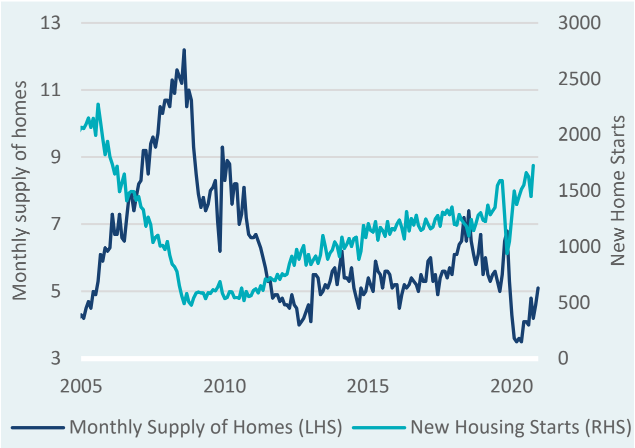
Source: U.S. Census Bureau, as of 5/31/21

U.S. MEDIAN HOME SALES PRICE



Source: FRED, as of 6/30/21

HOUSING SUPPLY VS NEW CONSTRUCTION



Source: FRED, as of 5/31/21

International economics summary

— Economies around the world continued to recover as COVID-19 fears eased, government shutdown orders were removed, and life began moving back to normal. This description of course does not apply to all economies, as Brazil, Japan, and much of Africa and Southeast Asia still grapple with effects of COVID and new variants of the virus.

— While expanding access to quality vaccines enabled mainland Europe to close the gap relative to the U.K. and the U.S. regarding vaccination rates, many countries in Asia, Africa, and Central Europe continued to face procurement issues, which has led public policymakers to respond more forcefully to pickups in case growth.

— Inflation has risen around the world, with the U.S. experiencing one of the largest rises. This will likely be a key theme for markets in the coming months.

— The U.S. trade balance of goods and services remained at a near all-time-low level of $75B per month, perhaps indicating that the relative strength of the U.S. consumer has pushed up domestic imports to levels above exports. The U.S. trade deficit might be primed to recede if the global recovery were to broaden.

— The pace of global manufacturing sector activity growth remained high, while services sector activity in many countries began to expand.

— Chinese GDP growth reportedly moderated from a year-over-year pace of 18.3% in Q1 to 7.9% in Q2—slightly missing expectations (+8.0%), but keeping the 6% annual target in range. Retail sales (+12.1%) and industrial production (+8.3%) both grew by more than forecast, but policymakers continue to worry that the economic recovery has been uneven in composition, which could weigh on future growth.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	0.4% *3/31/21*	5.4% *6/30/21*	5.9% *6/30/21*
Eurozone	(1.3%) *3/31/21*	1.9% *6/30/21*	7.9% *5/31/21*
Japan	(1.6%) *3/31/21*	0.0% *6/30/21*	3.1% *5/31/21*
BRICS Nations	13.3% *3/31/21*	2.5% *6/30/21*	5.7% *12/31/20*
Brazil	1.0% *3/31/21*	8.4% *6/30/21*	14.7% *4/30/21*
Russia	(0.7%) *3/31/21*	6.5% *6/30/21*	4.9% *5/31/21*
India	1.6% *3/31/21*	6.3% *6/30/21*	9.2% *6/30/21*
China	7.9% *6/30/21*	1.1% *6/30/21*	5.0% *5/31/21*

NOTE: India lacks reliable government unemployment data. Unemployment rate shown above is estimated from the Centre for Monitoring Indian Economy. The Chinese unemployment rate represents the monthly surveyed urban unemployment rate in China.

International economics

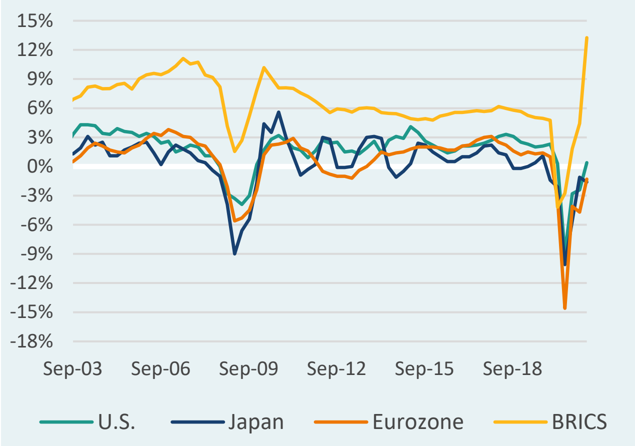
Economies around the world continued to recover, as COVID-19 fears eased, government shutdown orders were removed, and life began moving back to normal. This description of course does not apply to all economies, as Brazil, Japan, and much of Africa and Southeast Asia still grapple with effects of COVID and new variants of the virus.

A third wave of COVID has hit the Asia-Pacific region, as the Delta variant triggered economic restrictions in the area. Slower vaccination rollouts in many countries has resulted in greater vulnerability to new variants.

Inflation has jumped nearly everywhere across the globe, though the U.S. has seen one of the largest rises. This will likely be a key theme for markets and central banks in the coming months.

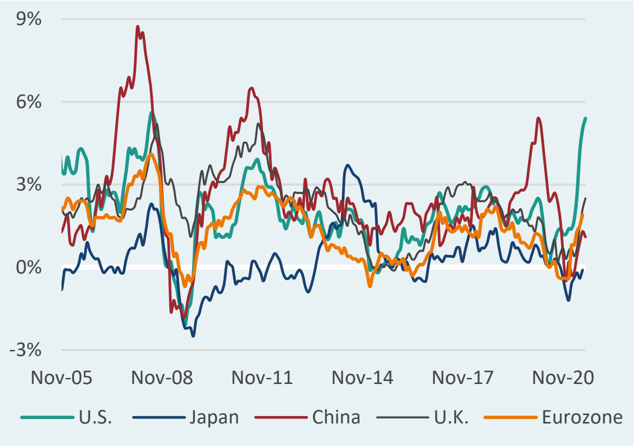
The rate of unemployment was mixed during the second quarter. The U.S. and Eurozone labor markets improved moderately over the quarter, while Japan saw a rise in joblessness. As we have described in prior quarters, governments have taken very different approaches to supporting workers, which has made global labor market trends difficult to compare.

REAL GDP GROWTH (YOY)



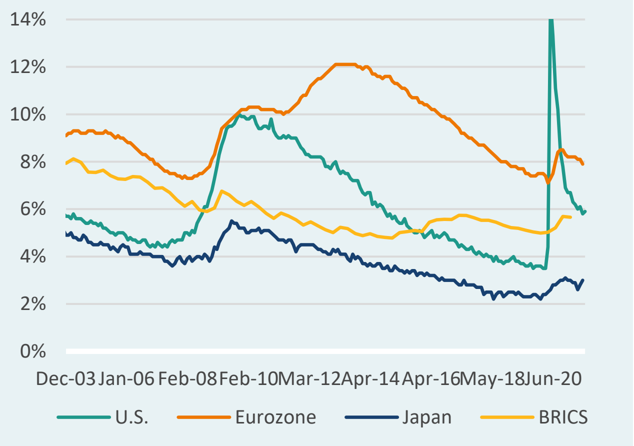
Source: Bloomberg, as of 3/31/21

INFLATION (CPI YOY)



Source: Bloomberg, as of 6/30/21 – or most recent release

UNEMPLOYMENT



Source: Bloomberg, as of 6/30/21 – or most recent release

Fixed income rates & credit

Fixed income environment

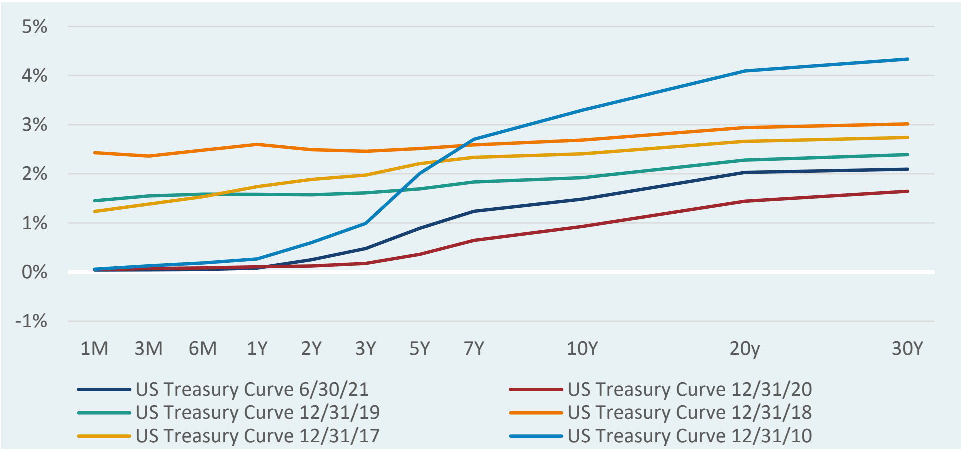
- The 10-year U.S. Treasury yield moved lower during Q2, from 1.75% to 1.44%. Many have attributed this trend to the Federal Reserve's recent indications that monetary policy will be kept very easy for the medium term. "Lower-for-longer" interest rates may act as a support to risk asset prices.
- Despite very dovish communication from central banks, derivative markets suggest investors are pricing between a 0-0.4% rise in interest rates over the next year in most developed countries.
- Headline Inflation in Brazil has risen to 8.4%, double the pre-pandemic level. Brazil has hiked their central bank rate from 2.00% to 4.25% to battle rising prices. Inflation in Russia has also jumped, now at 6.5%. Russia has hiked their key rate from 4.25 to 5.5%. This might suggest that central banks around the world have different views regarding how "transitory" the recent inflation rise will be.
- Risky credit outperformed over the quarter as spread levels compressed to decade-lows in the United States, and emerging markets debt bounced back. Hard-currency denominated emerging market debt returned 4.1% and high yield credit in the U.S. returned 2.7%.
- Policy shifts from the People's Bank of China resulted in a drawdown of liquidity across Asian markets over most of the quarter, which weighed on valuations for larger tech companies across the region. More recent concerns over the pace of the economic recovery in China may lead the government to withdraw liquidity more gradually.
- While some developed market central banks (Bank of Canada, Bank of Korea, Norges Bank) have started to marginally tighten (or signal tighter) policy, the Federal Reserve and the European Central Bank are expected to keep policies accommodative for at least the next year to 18 months.

	QTD Total Return	1 Year Total Return
Core Fixed Income (BBgBarc U.S. Aggregate)	1.8%	(0.3%)
Core Plus Fixed Income (BBgBarc U.S. Universal)	2.0%	1.1%
U.S. Treasuries (BBgBarc U.S. Treasury)	1.7%	(3.2%)
U.S. High Yield (BBgBarc U.S. Corporate HY)	2.7%	15.4%
Bank Loans (S&P/LSTA Leveraged Loan)	1.4%	11.7%
Emerging Market Debt Local (JPM GBI-EM Global Diversified)	3.5%	6.6%
Emerging Market Debt Hard (JPM EMBI Global Diversified)	4.1%	7.5%
Mortgage-Backed Securities (BBgBarc MBS)	0.3%	(0.4%)

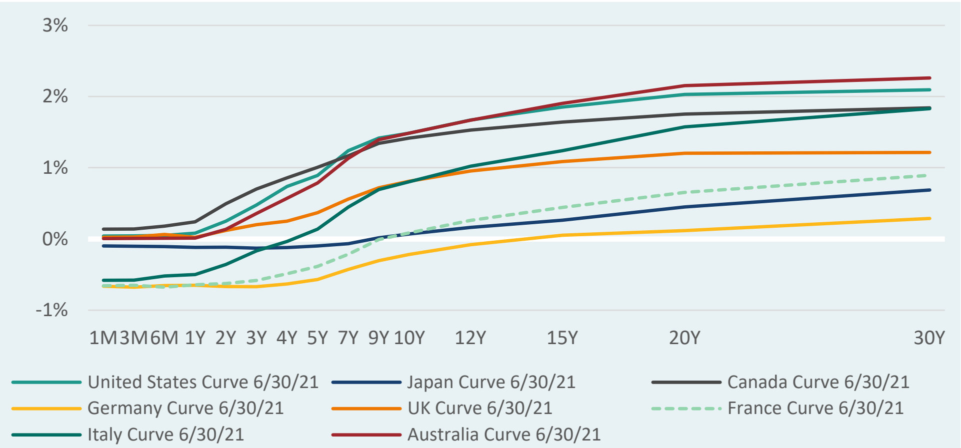
Source: Bloomberg, as of 6/30/21

Yield environment

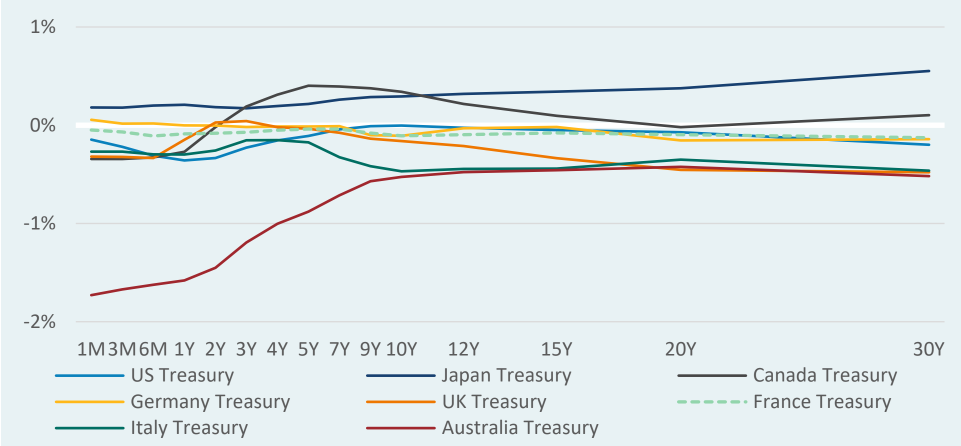
U.S. YIELD CURVE



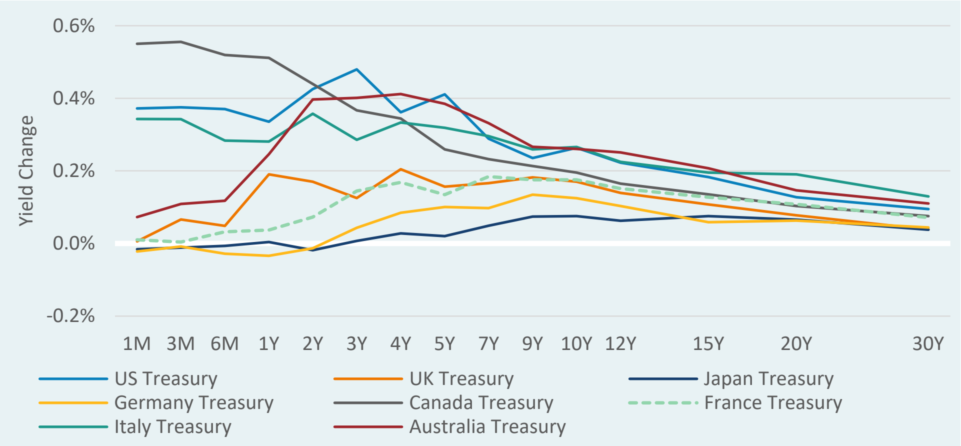
GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 6/30/21

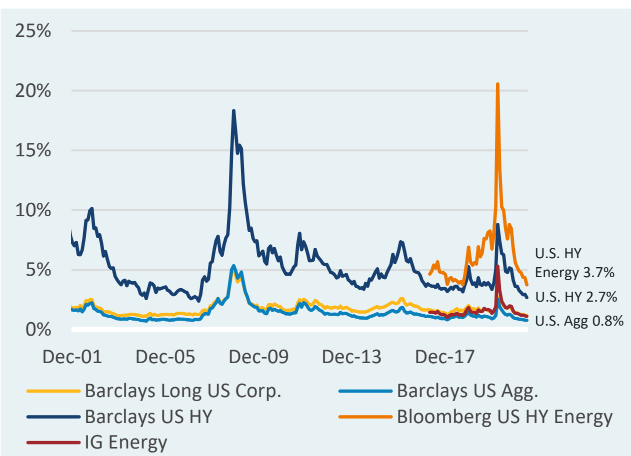
Credit environment

Credit markets performed positively in the second quarter, supported by strong corporate earnings, strong inflows and the expectation that supply will moderate in the second half of the year. Interest rates, specifically on the long-end of the curve, fell over the quarter, providing further duration tailwinds for fixed income securities. Corporate investment grade credit returned +3.6% over the quarter while high yield and leverage loans returned +2.7% and +1.4%, respectively.

Credit spreads grew tighter during the quarter, driven by strong investor demand and continued improvements in economic fundamentals. High yield spreads tightened 42 basis points to 268 basis points, a new cycle low. Investment grade tightened a more modest 11 basis points to end the quarter at 80 basis points.

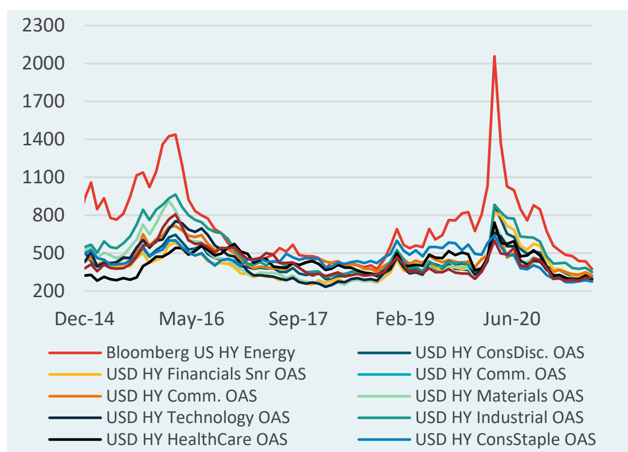
Lower quality bonds continue to outperform within both high yield and leverage loans. CCC bonds have now outperformed the broad high yield bond index in 10 of the past 11 months while split B/CCC loans have outperformed in 11 consecutive months.

SPREADS



Source: Barclays, Bloomberg, as of 6/30/21

HIGH YIELD SECTOR SPREADS (BPS)



Source: Bloomberg, as of 6/30/21

	Credit Spread (OAS)	
Market	**6/30/21**	**6/30/20**
Long U.S. Corp	1.2%	2.0%
U.S. Inv Grade Corp	0.8%	1.5%
U.S. High Yield	2.7%	6.3%
U.S. Bank Loans*	4.3%	6.2%

Source: Barclays, Credit Suisse, Bloomberg, as of 6/30/21
**Discount margin (4-year life)*

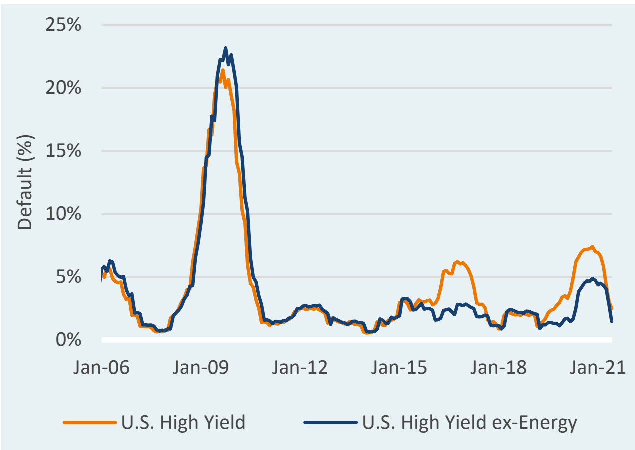
Default & issuance

Default activity remained modest over the quarter, with defaults totaling $3.5 billion on bonds and loans. Notably, fewer defaults occurred during the past two quarters than at any time in the past two years—an impressive development, given that the U.S. economy is still recovering from the pandemic. In addition, rolling twelve-month defaults have fallen as larger default volumes experienced last June exited the rolling window. This brought the par-weighted U.S. high yield default rate down 3.4% to end the quarter at 2.5%. Similarly, the loan par-weighted default rate ended the quarter at 1.9%, down 1.9% since March and down 2.5% year-to-date.

High yield bond issuance remains elevated, but has slowed from the record-setting levels experienced last quarter. Gross issuance for the quarter was $160.8 billion, bringing the year-to date total to $338.4 billion. This was notably greater than the $238.0 billion issued in the first half of 2020. Leveraged loan issuance also slowed to $119.3, down from $163.9 billion issued in the first quarter.

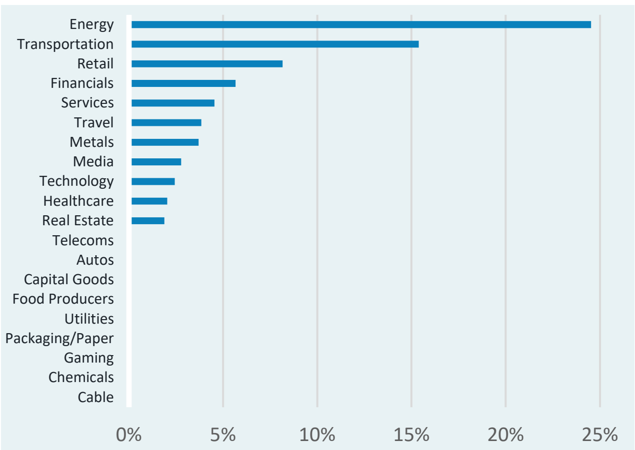
Investment grade issuance for the quarter totaled $350 billion, below the four-year average second quarter issuance of $401, and less than the $423 billion issued in Q1.

HY DEFAULT RATE (ROLLING 1-YEAR)



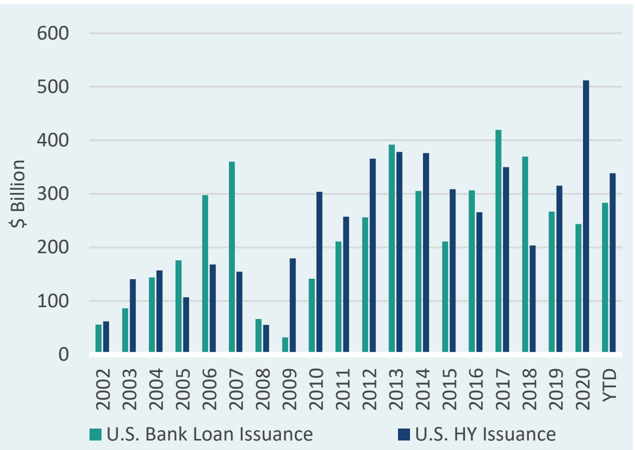
Source: BofA Merrill Lynch, as of 6/30/21

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



Source: BofA Merrill Lynch, as of 6/30/21 – par weighted

U.S. ISSUANCE ($ BILLIONS)



Source: BofA Merrill Lynch, as of 6/30/21

Equity

Equity environment

— U.S. equities were a top performer again in Q2, returning +8.5%. International equities (+5.2% MSCI EAFE Index) were on par with emerging markets (+5.0% MSCI Emerging Markets Index) on an unhedged currency basis.

— Following the notable turnaround in value stock performance during Q1, growth stocks once again took the lead in Q2. Growth stocks beat value by 6.7% during the quarter, dampening excitement for a value comeback.

— U.S. small-cap stocks (+4.3%) lagged large-cap stocks (+8.5%) as the reflation trade lost steam, but have still outperformed by 21.2% over the last year.

— It seems that investors have put the 2020 pandemic-induced recession behind them. Implied volatility, actual market volatility, and the risk reflected in asset prices is very low. This data suggests that investors perceive a strong economy, a healthy business environment, and very few risks on the horizon.

— Per FactSet, the estimated year-over-year earnings growth for the S&P 500 Index as of Q2 2021 is 64.0%. If that rate were to materialize, it would mark the highest year-over-year growth rate reported by the index since Q4 2009 (109.1%).

— Global equities have marched higher without many hiccups over the last six months. The MSCI ACWI Index has not closed more than 5% below its prior peak level since November 2nd, 2020. In the second quarter, the furthest the ACWI ever closed below its prior high-water-mark was 3.3%.

	QTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (S&P 500)	8.5%		40.8%	
US Small Cap (Russell 2000)	4.3%		62.0%	
US Large Value (Russell 1000 Value)	5.2%		43.7%	
US Large Growth (Russell 1000 Growth)	11.9%		42.5%	
International Large (MSCI EAFE)	5.2%	4.9%	32.4%	28.0%
Eurozone (Euro Stoxx 50)	5.8%	5.1%	35.4%	29.7%
U.K. (FTSE 100)	5.8%	5.7%	31.9%	18.5%
Japan (NIKKEI 225)	(1.6%)	(1.0%)	27.0%	31.7%
Emerging Markets (MSCI Emerging Markets)	5.0%	3.5%	40.9%	35.1%

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 6/30/21

Domestic equity

U.S. equities were a top performer again in Q2, returning +8.5%. Per FactSet, the estimated year-over-year earnings growth for the S&P 500 Index as of June 30th was 64.0%. If that rate were to materialize, it would mark the highest year-over-year rate reported by the index since Q4 2009 (109.1%).

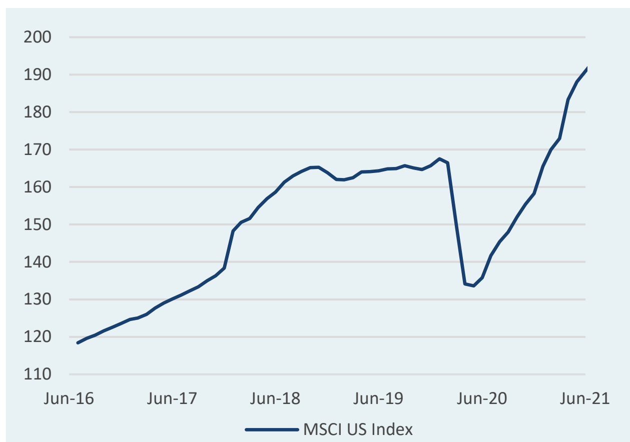
Concerns over the potential of the coronavirus delta variant to crimp the growth outlook helped to drive a rotation away from the more cyclical sectors that had driven the advance in U.S. equities since last August. Interest rates fell substantially, supporting outperformance of the Real Estate (+13.1%), IT (+11.6%), and Telecom (+10.7%) sectors. The shift in sentiment towards more cautious risk positioning led the quality factor (+10.6%) to outperform relative to MSCI's suite of long-only factor indices.

While it appears possible that equities could continue rallying into next year, the road could well become bumpier from here, given high valuations and the level of optimism baked into prices. We retain a cautiously optimistic view, given the uncertainty which shrouds the outlook.

S&P 500 INDEX

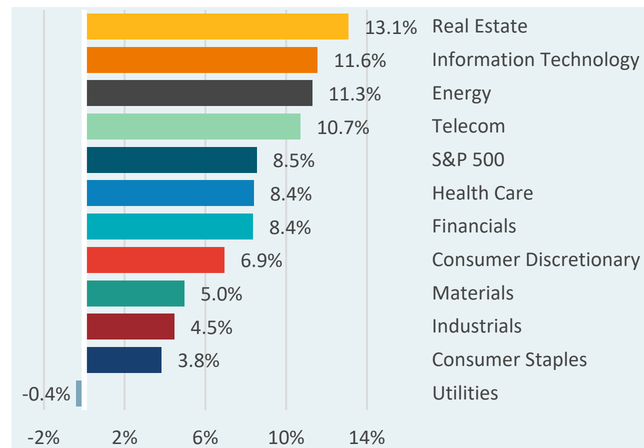
Source: Standard & Poor's, as of 6/30/21

FORWARD 12-MONTH EARNINGS PER SHARE



Source: MSCI, as of 6/30/21

Q2 SECTOR PERFORMANCE



Source: Standard & Poor's, as of 6/30/21

Domestic equity size & style

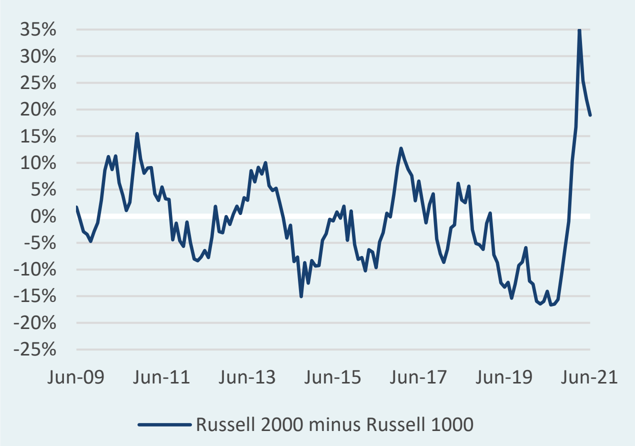
Large capitalization stocks beat small (Russell 1000 +8.5%, Russell 2000 +4.3%) and growth stocks beat value (Russell 1000 Growth +11.9%, Russell 1000 Value +5.2%), as investors rotated portfolios away from riskier exposures to larger, more quality names amid a more cautious risk outlook.

Following the notable turnaround in value stock performance during Q1, growth stocks once again took the lead in Q2, dampening excitement for a value comeback. As we have noted recently, sector trends can have large impacts on factor behavior. This may have been the case with value in the first quarter. Small capitalization stocks have exhibited a spectacular run over the past year, outperforming large cap stocks by 21.2% (Russell 2000 +62.0, Russell 1000 +43.1%).

In general, factor performance tends to be noisy and difficult to predict, which suggests that style investing should in most cases involve a longer-term focus.

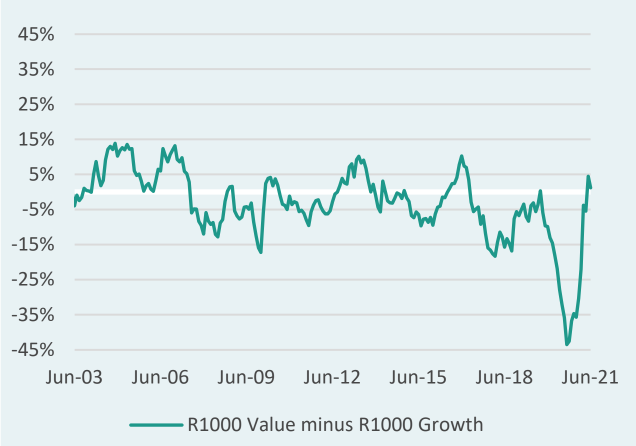
Small cap and value stocks delivered strong relative performance during Q1

SMALL CAP VS LARGE CAP (YOY)



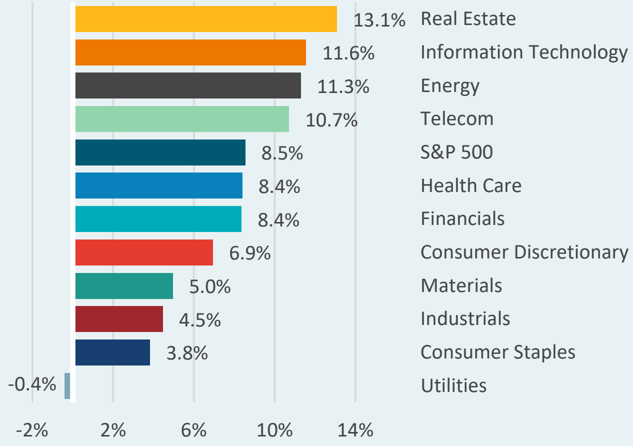
Source: FTSE, as of 6/30/21

VALUE VS GROWTH (YOY)



Source: FTSE, as of 6/30/21

Q2 SECTOR PERFORMANCE



Source: Standard & Poor's, as of 6/30/21

International developed equity

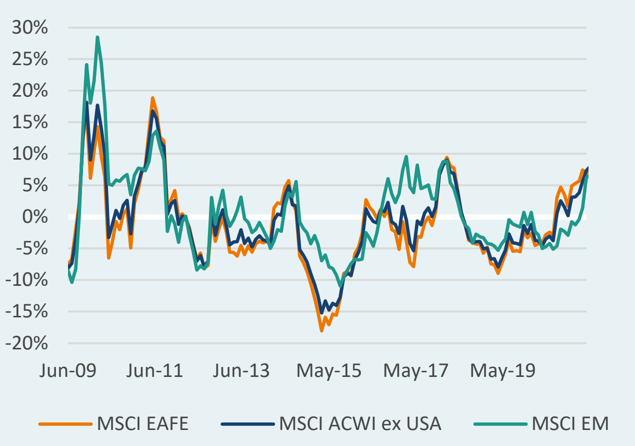
International equities delivered +5.2% (MSCI EAFE Index) during the quarter on an unhedged currency basis, lagging U.S. equities but in line with emerging market equities (MSCI Emerging Markets +5.0%). Broad dollar weakness over most of the quarter boosted returns for unhedged investors in international developed equities by 0.3%, European equities by 0.7%, and emerging markets by 1.5%. The Japanese yen depreciated slightly relative to the U.S. dollar, which presented headwinds for unhedged investors in Japanese equities. Fading of risk-on sentiment in June helped to spur a turnaround in the U.S. dollar late in the quarter, though short covering dynamics also played a factor.

Fresh concerns over the growth outlook following the emergence of the new, more virulent delta strain of the coronavirus pushed ECB policymakers to accelerate the pace of weekly asset purchases within the Pandemic Emergency Purchase Programme slightly, with the goal being to preserve financial conditions supporting a strong recovery. The commitment to easier policy over the short-to-intermediate term helped to keep interest rates at relatively low levels, which buoyed the valuation of European equities.

INTERNATIONAL DEVELOPED EQUITIES

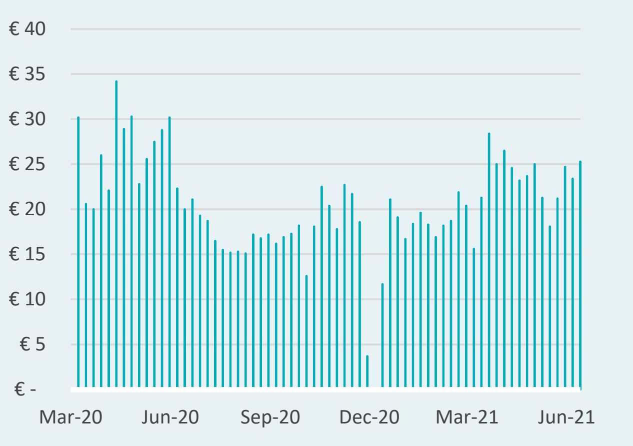
Source: MSCI, as of 6/30/21

EFFECT OF CURRENCY (1-YEAR ROLLING)



Source: MSCI, as of 6/30/21

ECB WEEKLY PEPP PURCHASES (BILLIONS)



Source: Bloomberg, ECB, as of 7/9/21

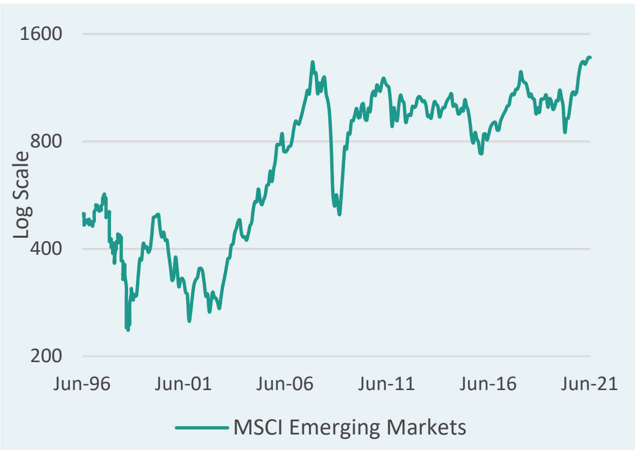
Emerging market equity

Emerging market equities (MSCI EM +5.0%) underperformed U.S. (S&P 500 +8.6%) and were in line with international developed equities (MSCI EAFE +5.2%) during the second quarter.

Latin American equities once again took the lead during the second quarter, outperforming the broader index by 10% (MSCI Latin America 15.0%, MSCI Emerging Markets +5.0%). Much of this performance was due to the notable underperformance of Chinese equities, which lagged the overall index by -2.8% during Q2 and -14.4% over the past year. Single countries in the emerging markets complex often display high volatility. In other words, large idiosyncratic moves such as the one witnessed recently by Chinese equities are not unusual.

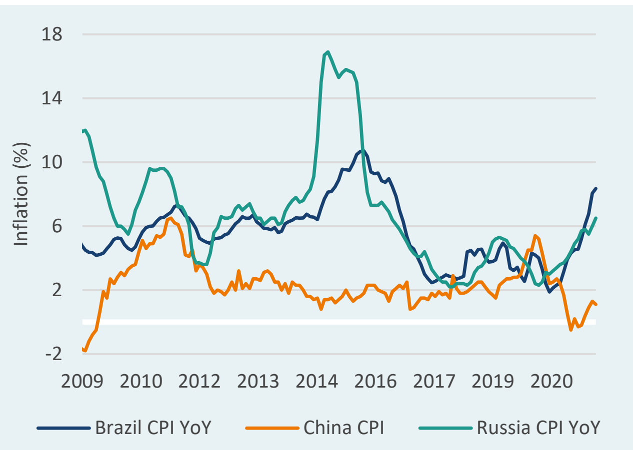
Headline Inflation in Brazil has risen to 8.4%, which is double the pre-pandemic level. Brazil has hiked their central bank rate from 2.00% to 4.25% to battle rising prices. Inflation in Russia has also jumped, now at 6.5%. Russia has hiked their key rate from 4.25% to 5.50%. This might suggest that central banks around the world have different views regarding how "transitory" the recent inflation rise will be, although volatile rates of inflation are common in the emerging markets.

EMERGING MARKET EQUITY



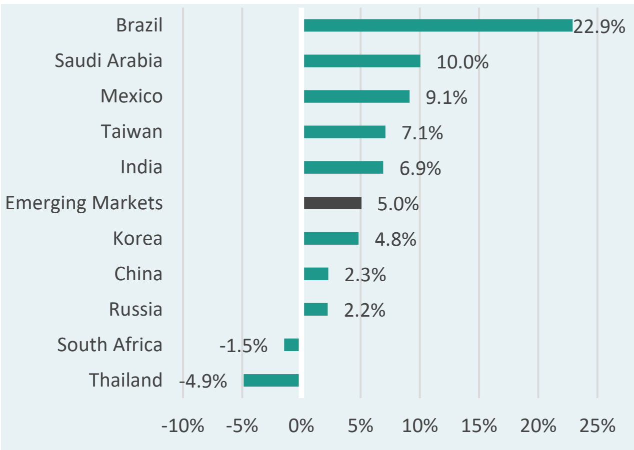
Source: MSCI, as of 6/30/21

INFLATION (YOY)



Source: Bloomberg, as of 6/30/21 or most recent data

Q2 PERFORMANCE – TOP 10 EM CONSTITUENTS



Source: Bloomberg, MSCI, as of 6/30/21, performance in USD terms

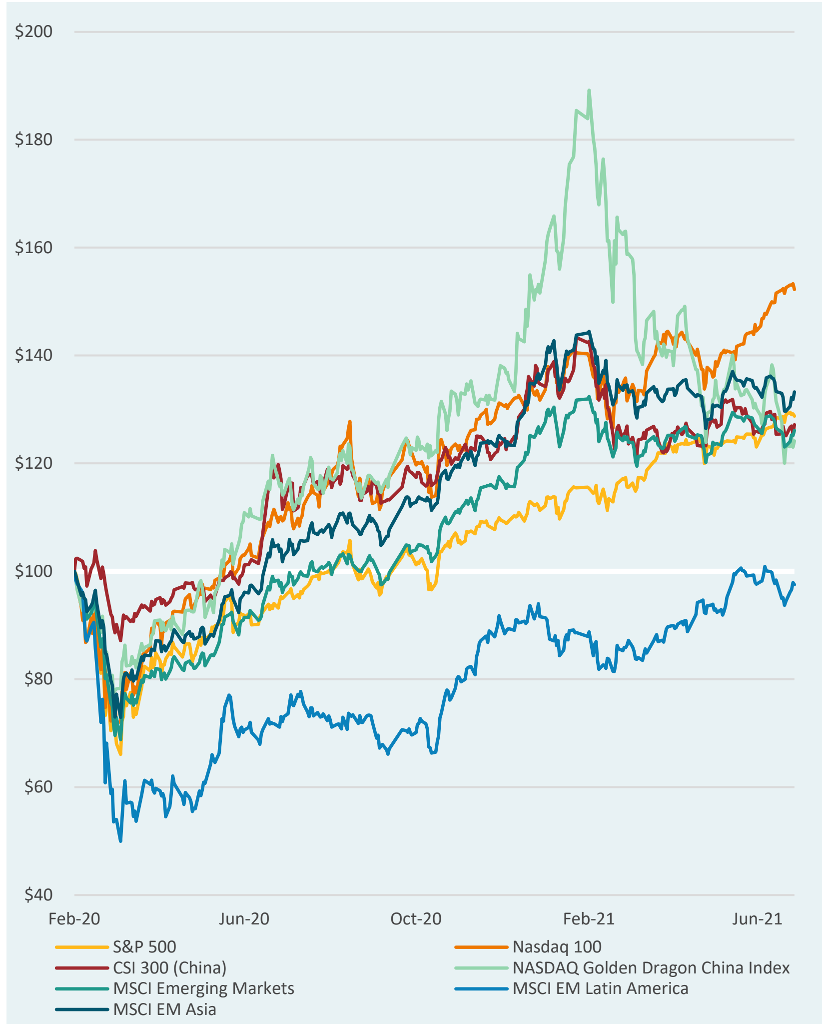
Chinese markets

— The Chinese equity market has now lagged the broader emerging markets by -1.1% on a 3-year annualized basis, -13.8% on a 1-year basis, and -5.7% year-to-date (MSCI China, MSCI Emerging Markets).

— Chinese equities began to sell off in late February, with the initial catalyst appearing to be a decision by the People's Bank of China to shift its focus away from an accommodative financial stance towards tightening, with the aim of limiting the risks that excessive leverage within certain segments of the economy poses to the economy.

— This shift in focus from ensuring economic recovery to managing the risks of financial excesses came in the form of a marginal tightening of liquidity across the country, which sparked a sell-off in some of the high-flying tech companies that had driven outperformance in the early days of the pandemic. Losses in China accelerated in the second quarter of 2021 when regulators cracked down on some national champions in the IT industry, reportedly over concerns around the risks of the data gathered by those companies falling into the wrong hands, which could undermine the position of the Communist Party of China. While it appears that both general liquidity conditions have begun to improve and the tech crackdown has showed signs of easing, these issues remain front and center for the broader emerging market universe.

— Recent larger idiosyncratic moves in the Chinese market highlight the benefits of gaining diversified exposure to the asset class.



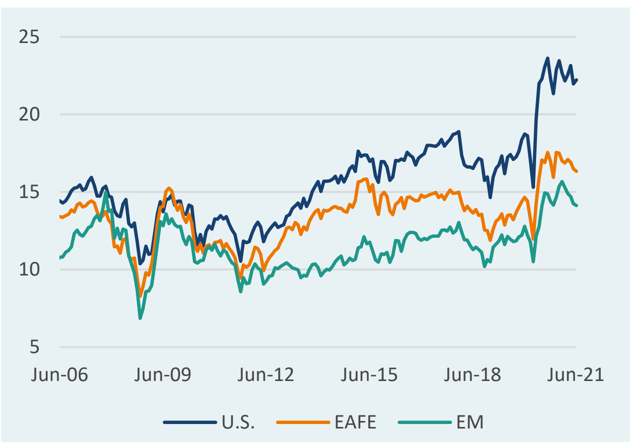
Chinese tech companies listed in the U.S. but whose business is primarily conducted in China have sold off significantly since late February 2021

Equity valuations

Industry analysts forecast a 11.2% gain over the next 12 months for the S&P 500, according to FactSet, despite record-high valuations.

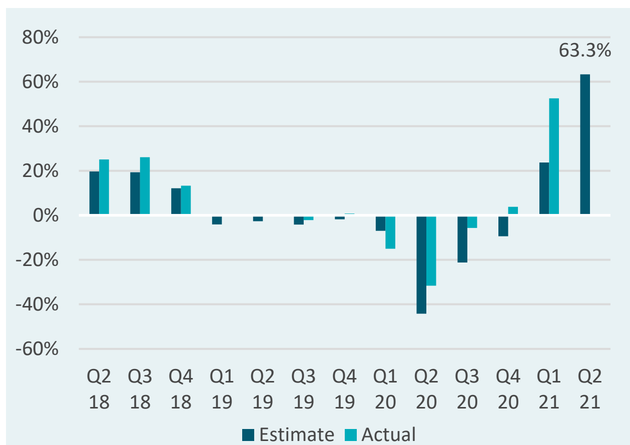
Valuations remain at very high levels relative to history, supported by extremely low interest rates, central bank accommodation, and unprecedented government spending. As is often the case when valuations rise, opinions differ regarding whether: a) valuations are supported by the environment and will stay elevated for the long-term, resulting in lower expected returns, or b) valuations are excessive and will come back down due to a market correction. Some investors might question the possibility of a third scenario – that future earnings growth will be strong enough to naturally bring down valuations. However, this third scenario is not currently supported by earnings forecasts. Our view on these conditions continues to be somewhat aligned with scenario "a"—that valuations are indeed high, but that unusual conditions and a potentially synchronized global economic comeback may support these high prices for the medium term. Nonetheless, with such optimism baked into risk asset prices, it will be important to watch closely for any disruptions to the market's optimistic outlook.

FORWARD P/E RATIOS



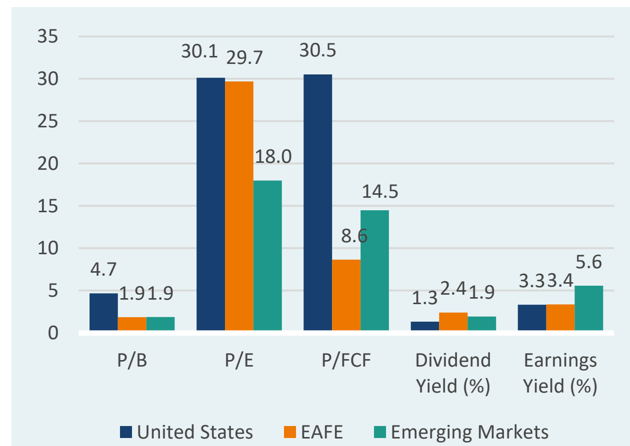
Source: MSCI, 12m forward P/E, as of 6/30/21

S&P 500 EARNINGS GROWTH VS. FORECASTS



Source: Bloomberg, as of 6/30/21

VALUATION METRICS (3-MONTH AVERAGE)



Source: Bloomberg, MSCI as of 6/30/21 - trailing P/E

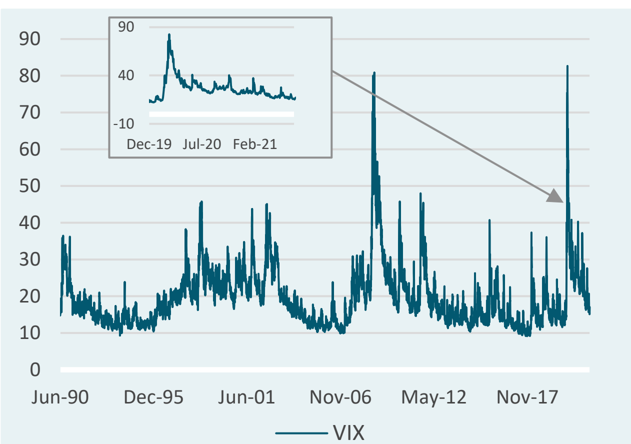
Equity volatility

The Cboe VIX Index has fallen further year-to-date, reaching 15 in June. This compares to the longer-term average of 19. One-year trailing realized volatility has now returned to pre-COVID levels.

It seems that investors have put the 2020 pandemic-induced recession behind them. Implied volatility, actual market volatility, and the risk reflected in asset prices is very low. This data suggests that investors perceive a strong economy, a healthy business environment, and very few risks on the horizon. However, it is reasonable to question the degree to which unprecedented government stimulus and easy money has influenced markets as of late.

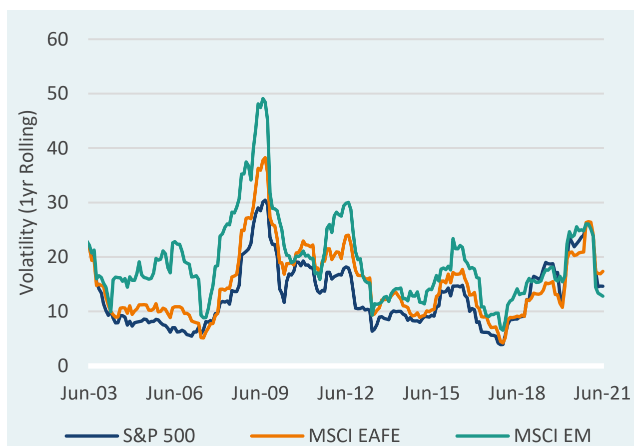
The Cboe Skew Index, which measures the perceived tail risk of the distribution of S&P 500 Index returns over a 30-day horizon, rose to 161.9, 35% above its average level since inception in 1990. The high level of the skew index indicates a steep implied volatility curve, which could be interpreted as more bearish bears, more bullish bulls, or both. In any case, disagreement among investors appears to be wide at present, which could allow for larger short-term price swings.

U.S. IMPLIED VOLATILITY (VIX)



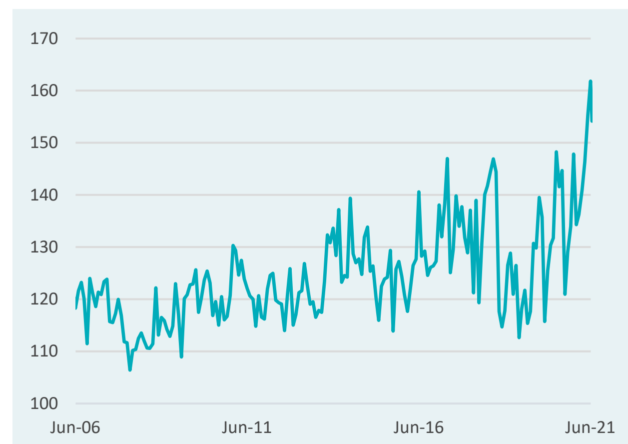
Source: Cboe, as of 6/30/21

REALIZED VOLATILITY



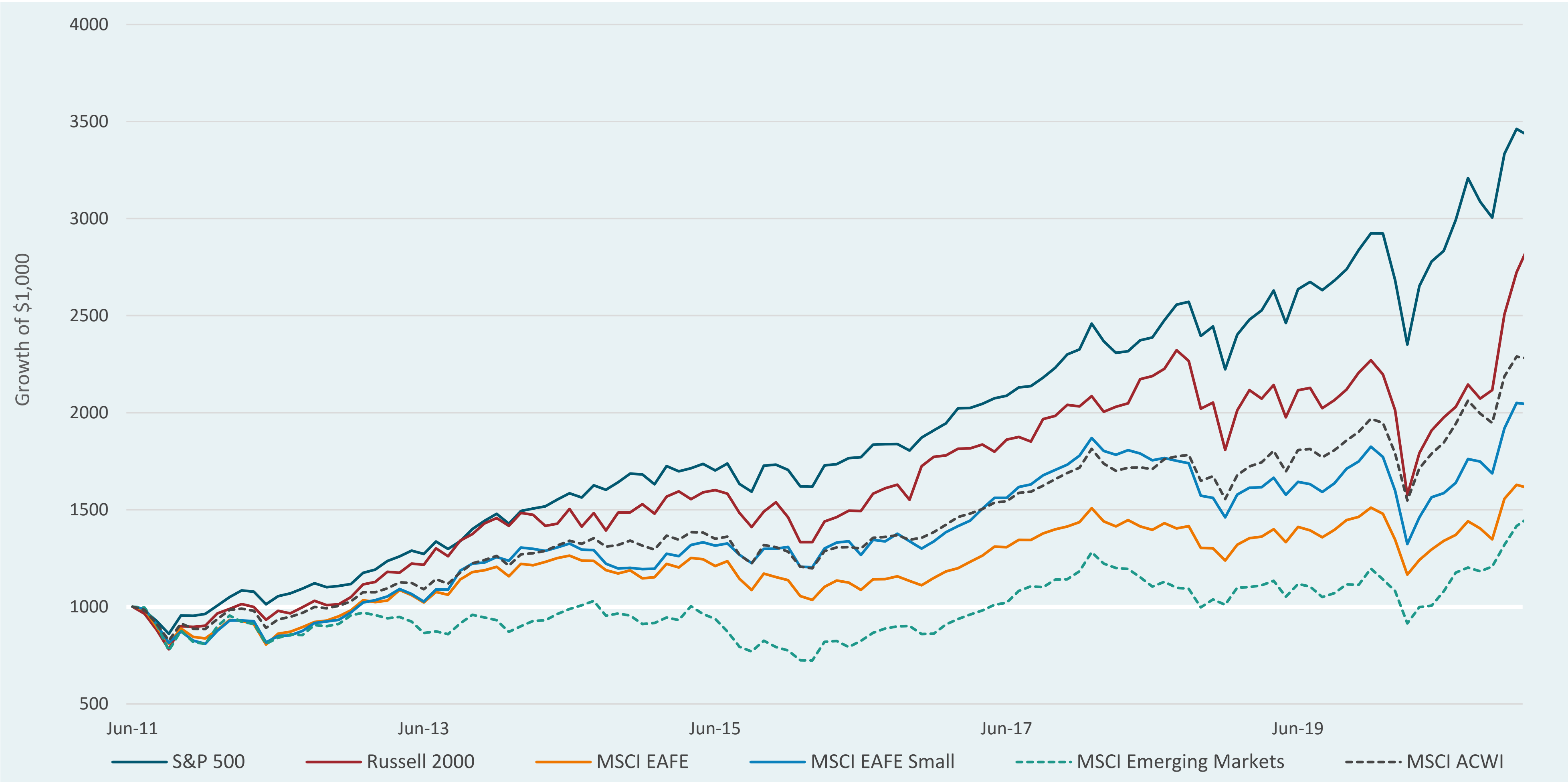
Source: Standard & Poor's, MSCI, as of 6/30/21

CBOE SKEW INDEX



Source: Cboe, Bloomberg, as of 6/30/21

Long-term equity performance



Source: Morningstar, as of 6/30/21

Other assets

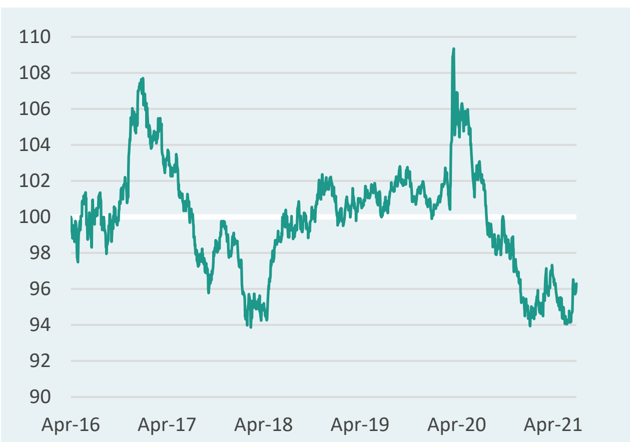
Currency

The stabilization in the U.S. dollar that took place in the first quarter as Treasury yields rose began to fade as longer-term interest rates declined from pandemic-era high levels. The dollar sold off relative to major currencies in April and May, before finding a bid in June on the back of slightly more cautious sentiment. Investors remain quite polarized over the medium-to-long term path of the dollar, which might increase the probability of more volatility in the future.

Despite U.S. dollar weakness relative to the euro and British pound over the quarter, those two European currencies remain relatively cheap on a purchasing power parity basis. The Japanese yen became even cheaper relative to the dollar over the period, while the Swiss franc and Norwegian Krone remained at relatively expensive valuations.

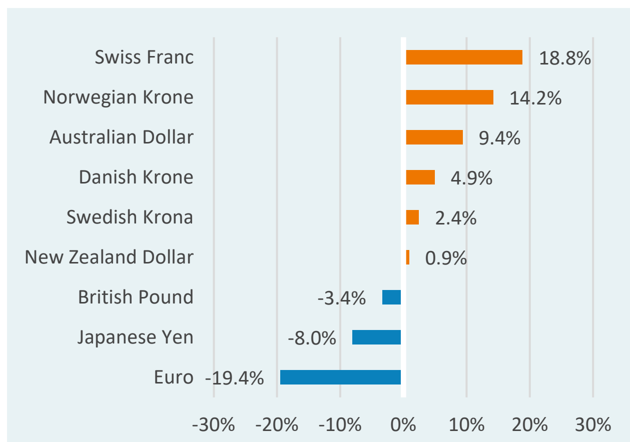
The embedded currency portfolio of the MSCI EAFE Index returned 0.3% over the quarter, but returned 4.4% over the trailing year on the back of a weakening U.S. dollar. Within Verus' preferred currency beta benchmark, the momentum factor (-6.8%) contributed significant headwinds to one-year trailing returns, as frequent shifts in market risk sentiment limited the capacity of risk-on and risk-off currencies from sustaining trends in one direction or the other.

BLOOMBERG DOLLAR SPOT INDEX



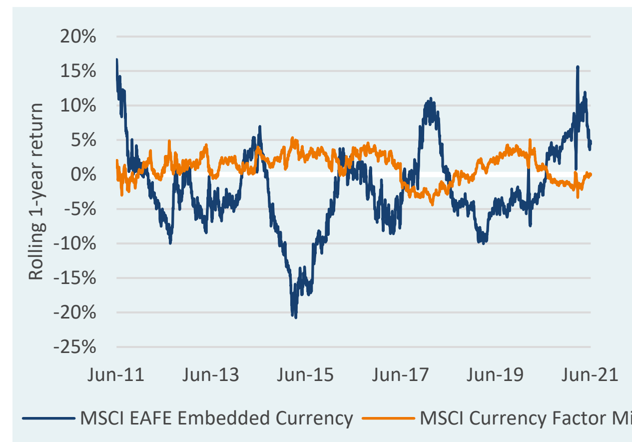
Source: Bloomberg, as of 6/30/21

PURCHASING POWER PARITY VALUATIONS VS. U.S. DOLLAR (OECD)



Source: Bloomberg, as of 6/30/21

CURRENCY BETA RELATIVE PERFORMANCE



Source: Bloomberg, MSCI, as of 6/30/21

Appendix

Periodic table of returns

BEST ↑ / ↓ WORST

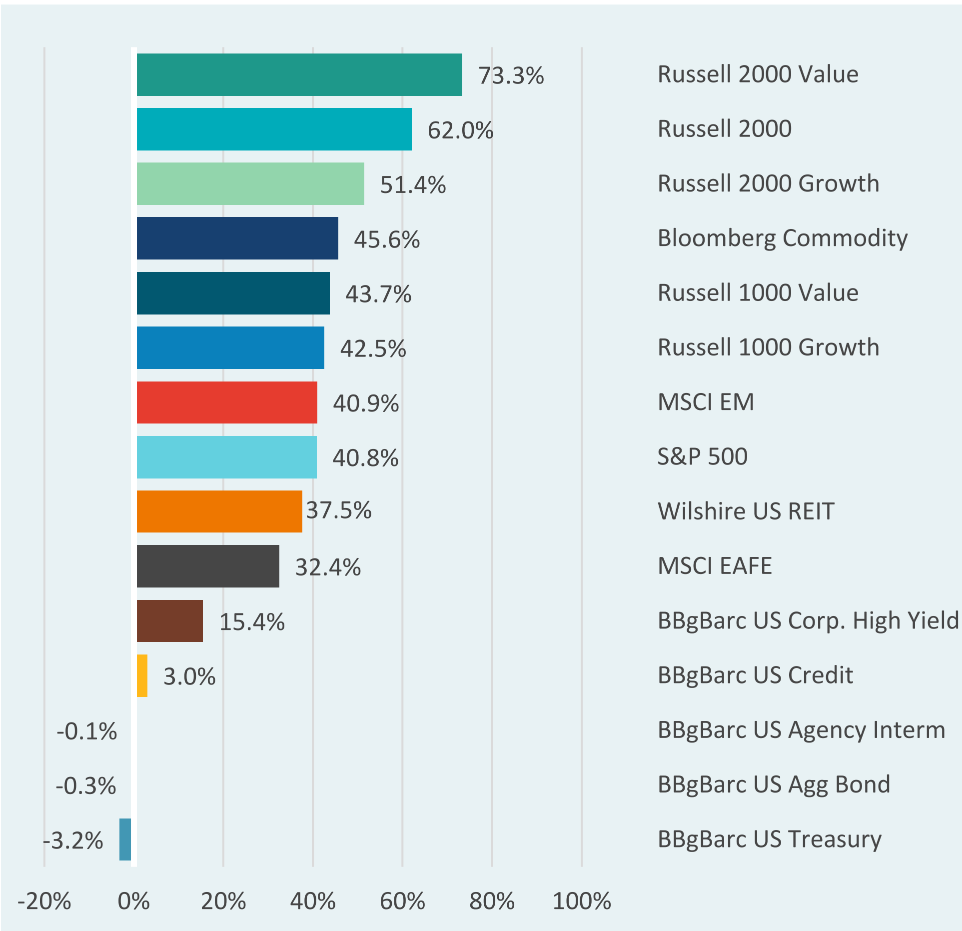
	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	YTD	5-Year	10-Year
Small Cap Value	66.4	31.8	14.0	25.9	56.3	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	13.3	31.7	37.3	6.7	36.4	38.5	26.7	23.7	17.9
Commodities	43.1	22.8	8.4	10.3	48.5	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	34.6	21.1	18.8	14.9
Small Cap Equity	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	21.0	17.5	18.0	13.5
Large Cap Value	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	20.0	17.0	16.5	12.3
Large Cap Equity	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	18.3	15.0	13.6	11.6
Large Cap Growth	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	14.0	13.0	13.0	10.8
Small Cap Growth	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	10.3	9.0	11.9	8.8
International Equity	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	7.8	8.8	10.3	6.9
Emerging Markets Equity	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	7.5	7.4	9.8	5.9
60/40 Global Portfolio	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	4.6	6.0	6.1	4.3
Hedge Funds of Funds	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	2.8	4.7	5.8	3.8
Real Estate	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	0.5	1.7	3.0	3.4
Cash	-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	0.5	0.0	2.4	0.6
US Bonds	-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	-3.1	-1.6	1.1	-4.4

- 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

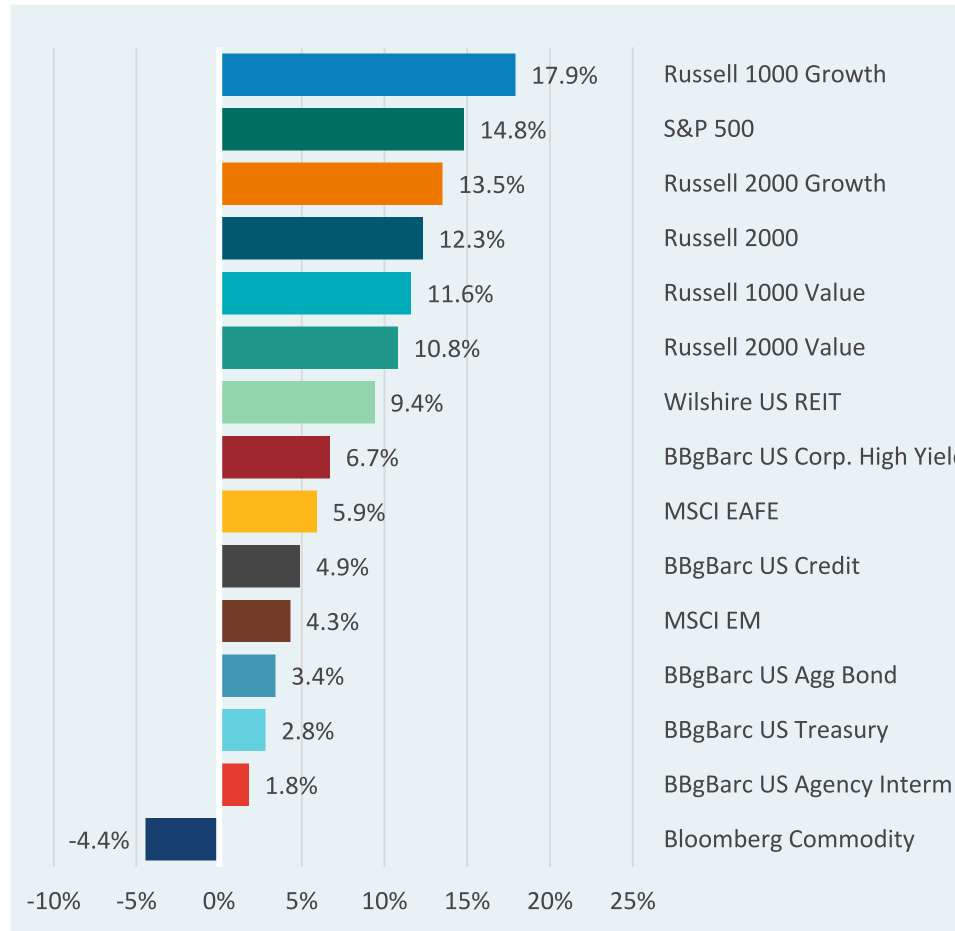
Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BBgBarc US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, BBgBarc Global Bond. NCREIF Property Index performance data as of 3/31/21.

Major asset class returns

ONE YEAR ENDING JUNE



TEN YEARS ENDING JUNE



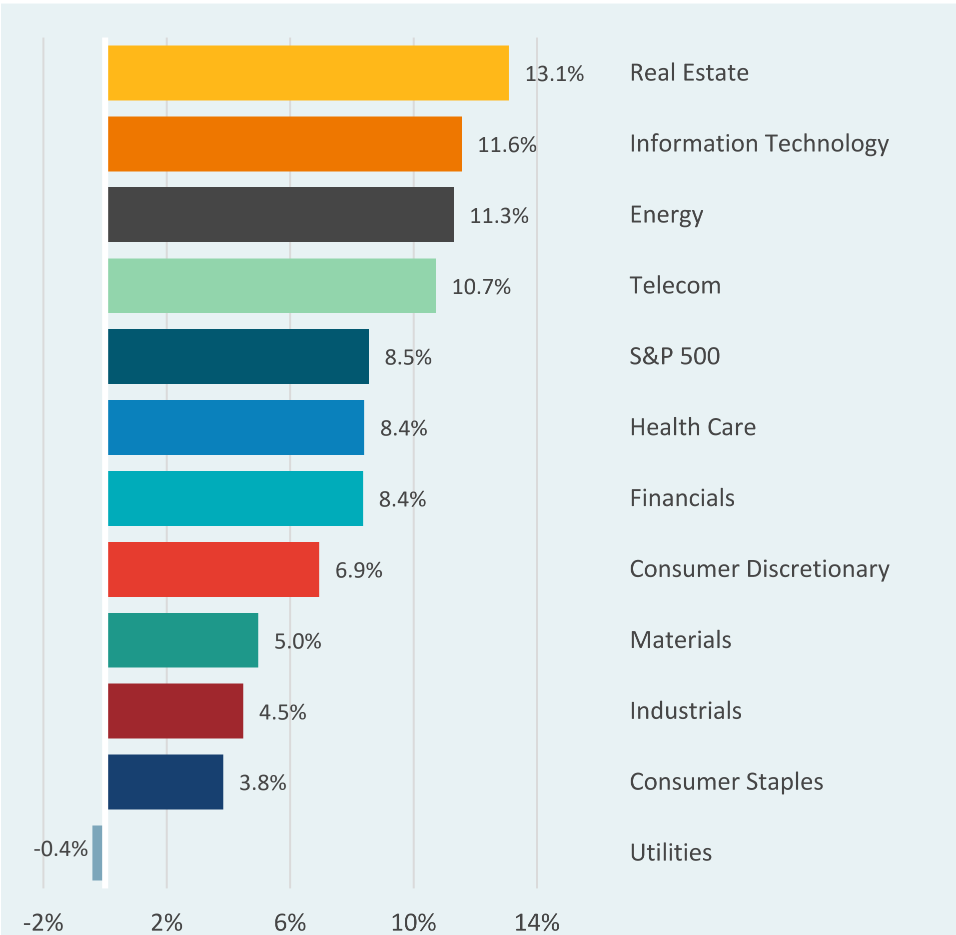
**Only publicly traded asset performance is shown here. Performance of private assets is typically released with a 3- to 6-month delay.*

Source: Morningstar, as of 6/30/21

Source: Morningstar, as of 6/30/21

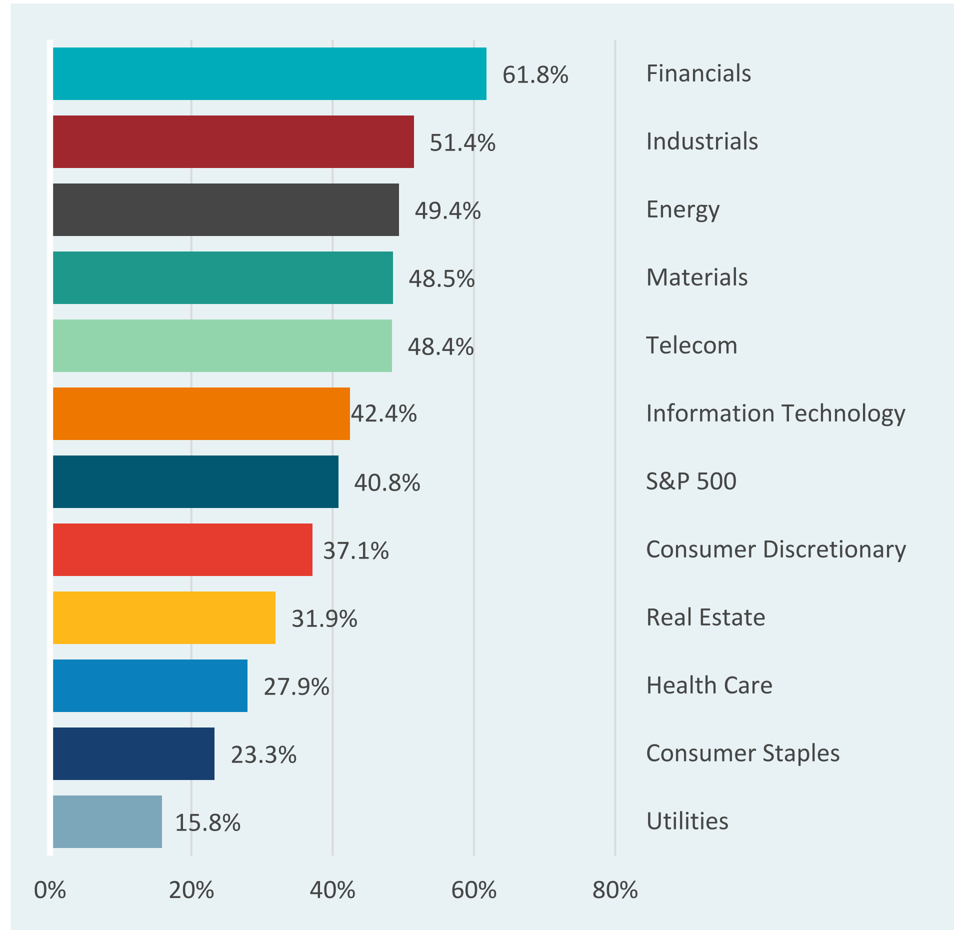
S&P 500 sector returns

Q2 2021



Source: Morningstar, as of 6/30/21

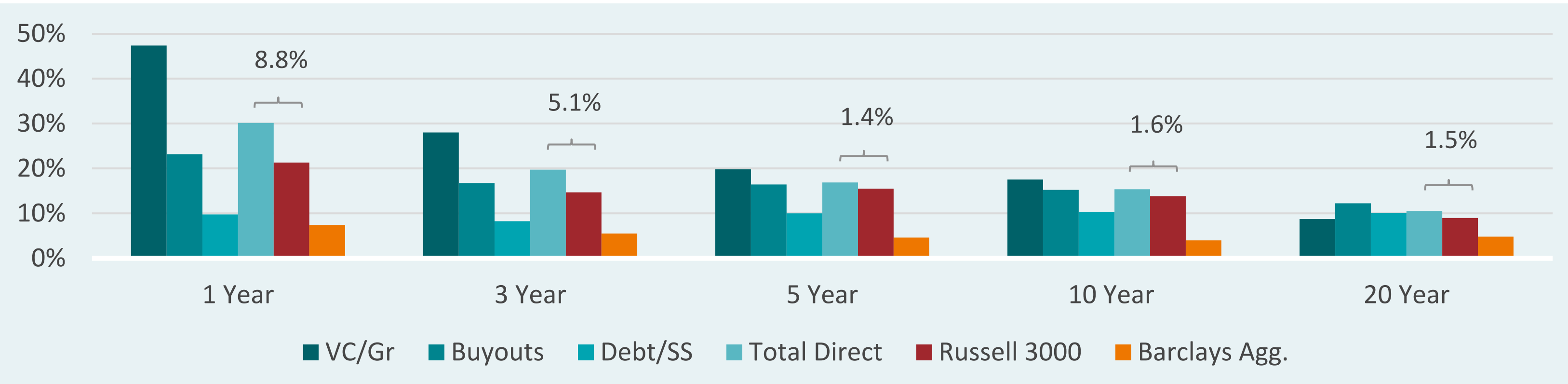
ONE YEAR ENDING JUNE



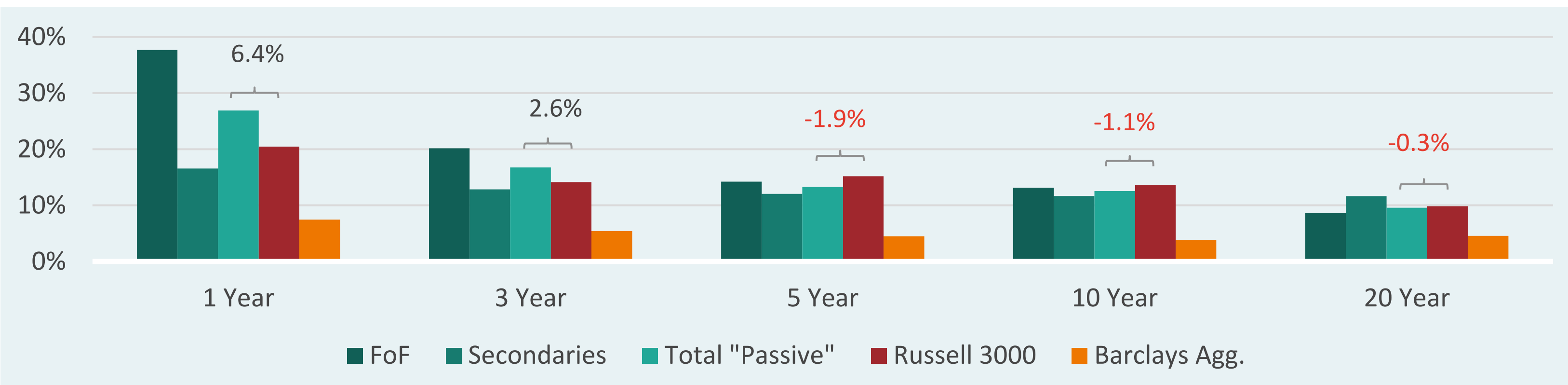
Source: Morningstar, as of 6/30/21

Private equity vs. traditional assets performance

DIRECT PRIVATE EQUITY FUND INVESTMENTS



"PASSIVE" STRATEGIES



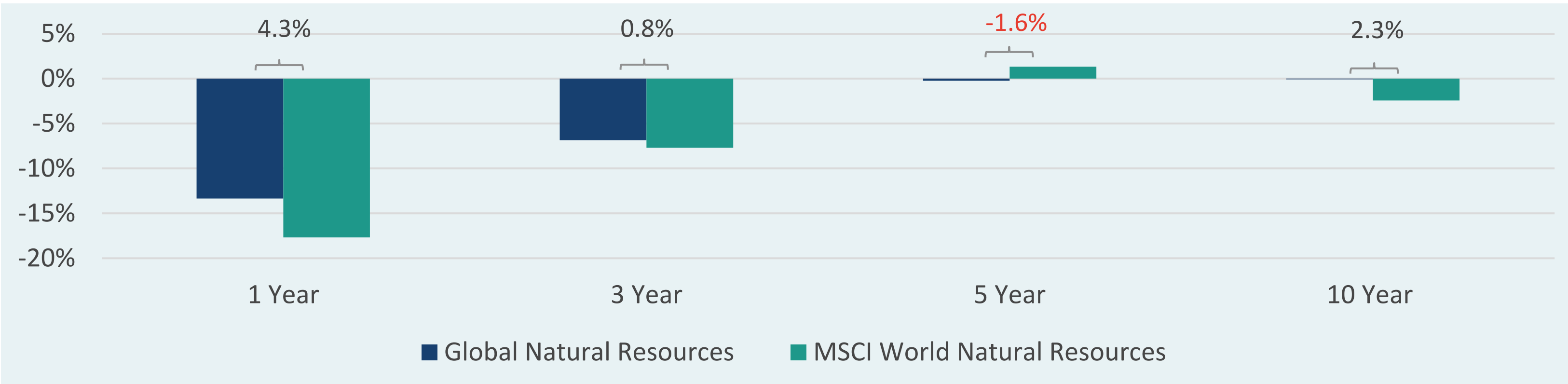
Direct P.E Fund Investments outperformed comparable public equites across all time periods.

"Passive" strategies underperformed comparable public equities across all time periods, aside from the 1 and 3-year basis.

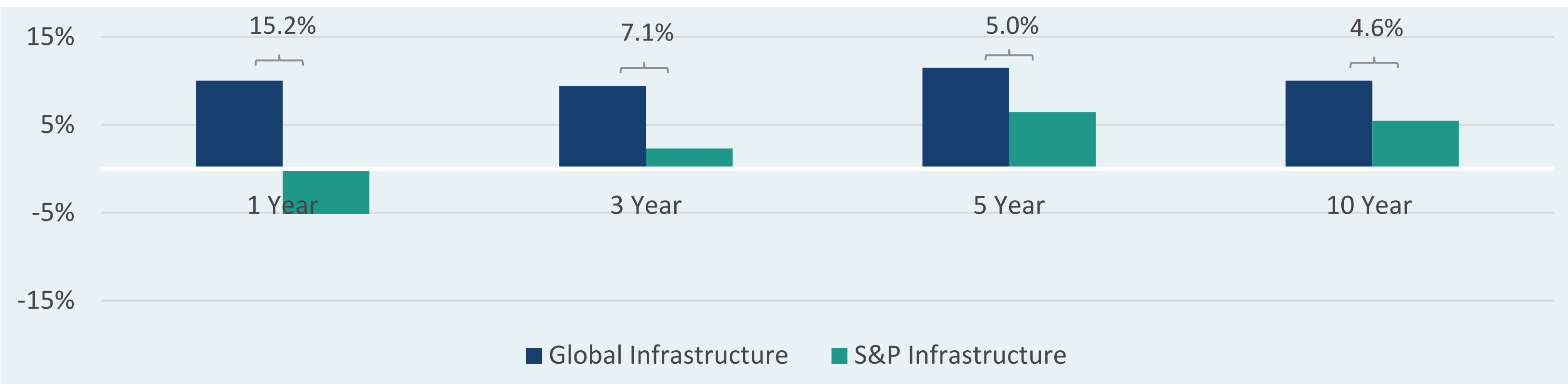
Sources: Thomson Reuters Cambridge Universe's PME Module: U.S. Private Equity Funds sub asset classes as of December 31, 2020. Public Market Equivalent returns resulted from "Total Passive" and Total Direct's identical cash flows invested into and distributed from respective traditional asset comparable.

Private vs. liquid real assets performance

GLOBAL NATURAL RESOURCES FUNDS



GLOBAL INFRASTRUCTURE FUNDS



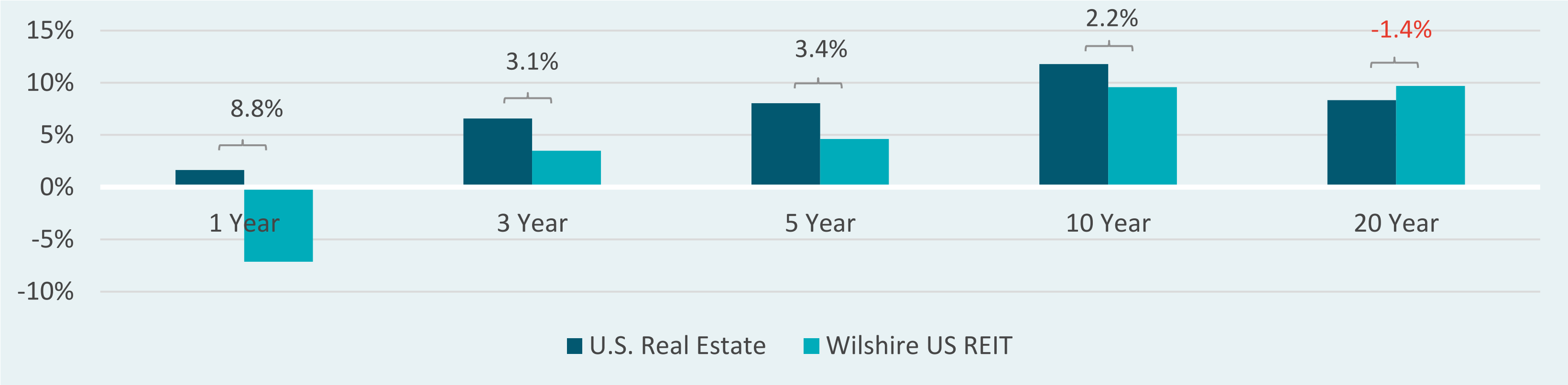
N.R. funds outperformed the MSCI World Natural Resources benchmark across all time periods, aside on a 5-year basis.

Infra. funds outperformed the S&P Infra. across all periods.

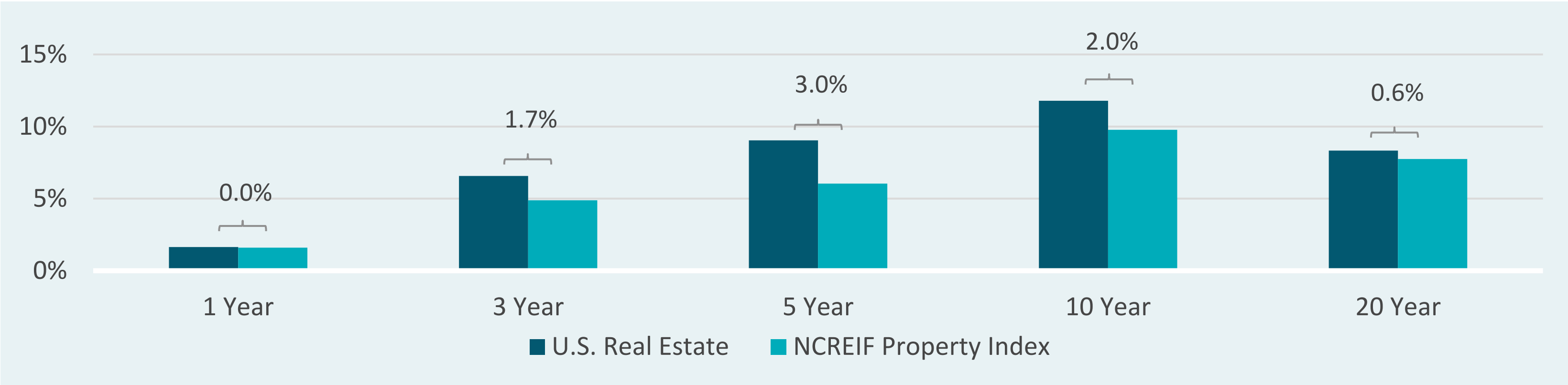
Sources: Thomson Reuters C|A PME: Global Natural Resources (vintage 1999 and later, inception of MSCI World Natural Resources benchmark) and Global Infrastructure (vintage 2002 and later, inception of S&P Infrastructure benchmark) universes as of December 31, 2020. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real assets universes.

Private vs. liquid and core real estate performance

U.S. PRIVATE REAL ESTATE FUNDS VS. LIQUID UNIVERSE



U.S. PRIVATE REAL ESTATE FUNDS VS. CORE FUNDS



U.S. Private R.E. funds outperformed the Wilshire U.S. REIT Index over the past 10 years, but have lagged on a 20-year basis.

U.S. Private R.E. Funds outperformed the NCREIF Property Index across all time periods, besides the past year.

Sources: Thomson Reuters C|A PME: Global and U.S. Real Estate universes as of December 31, 2020. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real estate universes.

Detailed index returns

DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Core Index							
S&P 500	2.3	8.5	15.3	40.8	18.7	17.6	14.8
S&P 500 Equal Weighted	0.1	6.9	19.2	50.7	16.4	15.7	13.8
DJ Industrial Average	0.0	5.1	13.8	36.3	15.0	16.7	13.5
Russell Top 200	2.9	8.9	14.5	40.8	20.2	18.9	15.6
Russell 1000	2.5	8.5	15.0	43.1	19.2	18.0	14.9
Russell 2000	1.9	4.3	17.5	62.0	13.5	16.5	12.3
Russell 3000	2.5	8.2	15.1	44.2	18.7	17.9	14.7
Russell Mid Cap	1.5	7.5	16.2	49.8	16.4	15.6	13.2
Style Index							
Russell 1000 Growth	6.3	11.9	13.0	42.5	25.1	23.7	17.9
Russell 1000 Value	(1.1)	5.2	17.0	43.7	12.4	11.9	11.6
Russell 2000 Growth	4.7	3.9	9.0	51.4	15.9	18.8	13.5
Russell 2000 Value	(0.6)	4.6	26.7	73.3	10.3	13.6	10.8

INTERNATIONAL EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
MSCI ACWI	1.3	7.4	12.3	39.3	14.6	14.6	9.9
MSCI ACWI ex US	(0.6)	5.5	9.2	35.7	9.4	11.1	5.4
MSCI EAFE	(1.1)	5.2	8.8	32.4	8.3	10.3	5.9
MSCI EM	0.2	5.0	7.4	40.9	11.3	13.0	4.3
MSCI EAFE Small Cap	(1.7)	4.3	9.0	41.0	8.4	12.0	8.4
Style Index							
MSCI EAFE Growth	0.0	7.4	6.8	31.0	12.5	12.5	7.8
MSCI EAFE Value	(2.3)	3.0	10.7	33.5	3.8	7.8	3.9
Regional Index							
MSCI UK	(2.4)	6.0	12.5	31.3	1.9	5.7	3.7
MSCI Japan	(0.3)	(0.3)	1.3	24.8	7.2	10.2	7.2
MSCI Europe	0.7	6.7	(1.1)	1.1	5.6	3.5	3.7
MSCI EM Asia	0.1	3.8	6.0	41.0	13.1	15.3	7.0
MSCI EM Latin American	2.7	15.0	8.9	44.9	5.1	5.9	(2.5)

FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Broad Index							
BBgBarc US TIPS	0.6	3.2	1.7	6.5	6.5	4.2	3.4
BBgBarc US Treasury Bills	(0.0)	0.0	0.0	0.1	1.4	1.2	0.7
BBgBarc US Agg Bond	0.7	1.8	(1.6)	(0.3)	5.3	3.0	3.4
BBgBarc US Universal	0.7	2.0	(1.1)	1.1	5.6	3.5	3.7
Duration							
BBgBarc US Treasury 1-3 Yr	(0.2)	(0.0)	(0.1)	0.1	2.7	1.6	1.2
BBgBarc US Treasury Long	3.6	6.5	(7.9)	(10.6)	8.0	3.1	6.7
BBgBarc US Treasury	0.6	1.7	(2.6)	(3.2)	4.7	2.2	2.8
Issuer							
BBgBarc US MBS	(0.0)	0.3	(0.8)	(0.4)	3.8	2.3	2.6
BBgBarc US Corp. High Yield	1.3	2.7	3.6	15.4	7.4	7.5	6.7
BBgBarc US Agency Interm	(0.1)	0.5	(0.6)	(0.1)	3.3	1.9	1.8
BBgBarc US Credit	1.5	3.3	(1.3)	3.0	7.4	4.6	4.9

OTHER

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Index							
Bloomberg Commodity	1.9	13.3	21.1	45.6	3.9	2.4	(4.4)
Wilshire US REIT	3.1	12.8	22.8	37.5	10.1	6.4	9.4
CS Leveraged Loans	0.4	1.4	3.5	11.7	4.4	5.0	4.5
Alerian MLP	5.2	21.2	47.8	64.0	(1.1)	(2.0)	1.3
Regional Index							
JPM EMBI Global Div	0.7	4.1	(0.7)	7.5	6.7	4.9	5.7
JPM GBI-EM Global Div	(1.2)	3.5	(3.4)	6.6	4.1	3.2	0.5
Hedge Funds							
HFRI Composite	0.4	4.0	10.0	27.4	8.7	7.9	5.1
HFRI FOF Composite	0.3	2.7	4.7	18.1	6.2	6.1	3.8
Currency (Spot)							
Euro	(3.0)	0.9	(3.1)	5.6	0.5	1.3	(2.0)
Pound Sterling	(2.8)	0.1	1.1	11.8	1.5	0.7	(1.5)
Yen	(1.4)	(0.4)	(7.0)	(2.8)	(0.1)	(1.6)	(3.1)

Source: Morningstar, HFRI, as of 6/30/21

Definitions

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

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

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

NAHB Housing Market Index – *the housing market index is a weighted average of separate diffusion induces 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 "(Good-Poor + 100)/2" to the present and future sales series and "(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

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: Portfolio Return - [Risk-free Rate + Portfolio Beta x (Market Return - 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: Portfolio Excess Return / 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.

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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

August 24, 2021 Agenda Item 6.4

TO: Board of Retirement

FROM: Doris Ng, Investment Analyst

SUBJECT: Report on Fixed Income Manager Annual Reviews

Recommendation
Accept the reports on the annual reviews of SamCERA's opportunistic credit and private credit bond managers.

Background
On July 29th, SamCERA staff and consultant held annual review meetings virtually with our two opportunistic and private credit bond managers, PIMCO and Beach Point. On August 10th, SamCERA staff and consultant also held an annual review meeting virtually with our private credit manager, Blackrock.

Each meeting lasted approximately 1.5-2 hours, and consisted of a firm/organizational update, investment process review, performance review and attribution, and current positioning/market outlook.

Discussion
On July 29th, we reviewed two investment strategies with PIMCO. First, we reviewed PIMCO's Diversified Income strategy, which is a multi-sector approach that diversifies globally across different public credit sectors based on relative value. The strategy has the flexibility to invest across a broad spectrum of public credit, including investment grade, high yield, emerging markets, other non-core credit sectors and currencies.

Next, we reviewed the PIMCO Private Income strategy, which is an opportunistic global private credit strategy that invests across private residential, commercial, corporate, and specialty finance markets. The strategy utilizes both top-down sector relative value and bottom-up security selection.

Lastly, we reviewed Beach Point's Select Fund strategy, which focuses on mid-market, off-the-run, complex and less-liquid securities. The strategy invests across the capital structure in distressed/opportunistic securities, event-driven bonds, bank debt and credit-informed equities with a North American and European focus. The firm noted one addition to the team.

On August 10th, we reviewed two direct lending strategies, TCP Direct Lending Fund VIII and Blackrock Direct Lending Fund IX, with Blackrock. Both direct lending funds are private investment funds that invest in privately-originated, performing senior secured debt in middle-market companies, with a value-oriented approach. The firm noted a departure last December 2020 and an upcoming retirement at the end of this year.

There were no significant concerns identified during the portfolio reviews. Attached you will find meeting notes from Verus summarizing the findings from these annual reviews.

Attachments

A. PIMCO Diversified Income Fund Annual Review Meeting Notes
B. PIMCO Private Income Fund Annual Review Meeting Notes (Confidential)
C. Beach Point Annual Review Meeting Notes (Confidential)
D. TCP-Blackrock Direct Lending Annual Review Meeting Notes (Confidential)

Date of meeting: 7/29/2021
Location: Zoom call

Manager Representative(s)

Brian Leach (Senior Strategist)
Summer Jarrett (Account Management)
Leah Pepper (Account Management)
Kevin Gray (Account Management)

Verus Representative(s)

Margaret Jadallah
Joe Abdou

Client Representative(s)

Mike Coultrip (CIO), Doris Ng (Analyst), Lili Dames (Analyst)

Account Assets
$134 million (6/30/21)

Product Description

PIMCO's Diversified Income (DI) Fund is a multi-sector strategy that invests across a broad spectrum of global credit market sectors, including investment grade and high yield corporate debt, as well as emerging markets. The allocation among these will vary based on PIMCO's assessment of global trends and relative valuations. This active and dynamic approach allows for increased responsiveness in asset allocation to changing economic and market conditions while remaining anchored by PIMCO's investment process and longer-term orientation. The ability to invest globally helps to improve diversification and may allow investors to benefit from differences in business cycles across regions and credit quality trends across credit sectors. PIMCO's DI investment strategy seeks to provide high yield-like returns with lower volatility against a blended index (1/3 Bloomberg Barclays Global Agg Credit ex-EM; 1/3 BofA Merrill Lynch BB-B rated Developed Markets High Yield; 1/3 JPMorgan EMBI Global). The fund allows for a duration band of 3-8 years. The team focuses its investments into these groups: credit strategies (investment grade, high yield, emerging markets and non-core credits including MBS, municipals and other govt-related sectors); duration strategies (U.S. and non-U.S. duration) and currencies (tactical non-USD exposure).

Meeting Notes

Organization

The firm's total assets under management as of 6/30/21 were $2.2 trillion. Over the last year, PIMCO has been working with clients to implement new strategies that will benefit from the current market environment. As a result there has been significant interest in the Diversified Income Fund. As of June 30, 2021, Diversified Income strategy assets were approximately $34 billion. DI fund assets were $5.4 billion.

Investment Team

Diversified Income accounts are managed by a team of portfolio managers averaging 20 years of experience. The team includes senior portfolio managers Daniel Ivascyn, Alfred Murata, Eve Tournier, and Sonali Pier. Lead portfolio manager Dan Ivascyn ultimately has the final decision-making authority. There were no team departures over the past year. Portfolio managers are responsible for positioning and trades within their portfolios and work in conjunction with investment grade credit, emerging markets, high yield and mortgage-backed securities teams in constructing portfolios.

Investment Strategy

PIMCO's approach to managing the Diversified Income strategy is driven by the same key principles that are applied to all credit portfolios managed at the firm. PIMCO's global approach to investing and top-down macroeconomic research gives the team insights into managing in a multi-sector credit framework. The team's philosophy is driven by three main principles: 1) flexible and tactical allocation across global credit sectors in an effort to identify dislocations in relative value, 2) adding value through the combination of bottom-up fundamental credit research with top-down macroeconomic analysis, and 3) diversifying sources of risk and return in an attempt to avoid large drawdowns, which can result in attractive risk-adjusted returns over a long-term investment horizon.

PIMCO's process is a combination of top-down macroeconomic insights coupled with bottom-up fundamental research. The DI portfolio management team, structured in a generalist/specialist model, is responsible for coordinating a global investment process to ensure consistency across portfolios. The team works closely with the investment grade credit, emerging markets, high yield and mortgage-backed securities teams in constructing portfolios. PIMCO's portfolio risk management team enforces internal investment committee-defined targets and limits and partners with portfolio managers to provide analysis and insights on portfolio construction, stress tests, potential drawdowns and other market risks. PIMCO uses an integrated approach to assessing ESG risks in the portfolio, striving to consider and model all possible variables that could potentially impact a bond's future value.

This is a best-ideas portfolio seeking the most attractive risk-adjusted returns globally and across asset classes while mitigating market volatility. Over time performance attribution should come 10-20% from macro decisions, 30-40% from sector decisions and 30-40% from bottom up decisions.

Performance & Positioning

As of June 30, 2021, SamCERA's DI portfolio outperformed its custom benchmark since inception (5.1% net vs. 4.99% for the blended benchmark; inception date 8/2017). The PIMCO DI Index is comprised of 1/3 Bloomberg Barclays Global Agg Credit ex-EM; 1/3 BofA Merrill Lynch BB-B rated Developed Markets High Yield; 1/3 JPMorgan EMBI Global. The portfolio is 2/3^{rds} US focused, and that has benefited the strategy as US High Yield was being compensated more than Europe HY.

Currently PMs are cautious on Industrials in investment grade and high yield credit. They are also underweight China based on valuations. Currently the portfolio is more risk on. They believe carry in most assets are good and defaults will remain low for the foreseeable future. The strategy is also underweight emerging markets. While they expect the vaccine rollout to continue, they can't underwrite how long it will take and when EM economies will recover. Tourism recovery and commodities are still a big question in emerging markets.