



# Notice of Public Meeting

## The Board of Retirement

of the San Mateo County Employees' Retirement Association will meet on  
**Tuesday, August 25, 2020, at 10:00 A.M.**

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

### To Join the Meeting

- To join the meeting via video conference, click here: <https://zoom.us/j/96106349286>
- To join the meeting via telephone, dial: (669) 900-9128, and enter Meeting ID: 961 0634 9286

### Public Comment During the Meeting

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

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

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

### Public Comment Prior to the Meeting

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

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

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

- 1. Call to Order, Roll Call and Miscellaneous Business**
  - 1.1 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 28, 2020
- 4. Approval of the Consent Agenda\***

4.1 Disability Retirements (1) <ul style="list-style-type: none"><li>• Rosa Marcello</li></ul>	4.10 Approval of Resolutions that define Comp Earnable and Pensionable Comp
4.2 Survivor Death Benefits	4.11 Approval of Resolution Amending Regulations of Board of Retirement
4.3 Service Retirements	4.12 Acceptance of Semi-Annual Compliance Certification Statements for Period Ended June 30, 2020
4.4 Continuances	
4.5 Deferred Retirements	
4.6 Member Account Refunds	

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- 4.7 Member Account Rollovers
- 4.8 Member Account Redeposits
- 4.9 Acceptance of Trustees' Reports of Educational Activities
- 4.13 Report on Preliminary Financial Statements for the Fiscal Year Ended June 30, 2020
- 4.14 Report on Budget-to-Actual for the Fiscal Year Ended June 30, 2020

### 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, 2020
- 6.2 Report on Quarterly Investment Performance Report for Period Ended June 30, 2020
- 6.3 Report on Fixed Income Manager Annual Reviews
- 6.4 Report on SamCERA's Securities Lending Program
- 6.5 Report on SamCERA's Risk Dashboard as of June 30, 2020
- 6.6 Approval of Proposed Alternative Investment (to be heard in closed session)
- 6.7 Report on Absolute Return Search

### 7. Board & Management Support

- 7.1 Approval to Reschedule the Regular September Meeting of the Board of Retirement
- 7.2 Approval of Voting Delegate for the SACRS Board of Directors Election

### 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- Oral Report on California Supreme Court decision in *Alameda County Deputy Sheriff's Assoc. et al., v. Alameda County Employees' Retirement Assn., et al.*

**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 6.6*)

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

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

Giusto, Gerald	July 8, 2020	SMMC
Sternberg, Irvin	July 16, 2020	Probation
Tan, Lourdes	July 20, 2020	Children's Protective Services
Ekhardt, Jeffrey	July 23, 2020	Sheriff's
Daw, Margaret	July 28, 2020	Social Services
Bottimore, Karlene	July 29, 2020	Library
McHenry, Caroline	August 2, 2020	Human Resources
Allee, Andrew	August 3, 2020	Child Support Services
Brinkman, John	August 6, 2020	Probation
Lenci, Alfredina	August 7, 2020	Crystal Springs Rehab Center
Collado, Dora	August 7, 2020	Human Services
Bergman, William	August 8, 2020	Controller's
Goad, Roger	August 9, 2020	Sheriff's

# Notice of Public Meeting

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Scott Hood, Chief Executive Officer

Posted: August 19, 2020

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

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


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

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

August 25, 2020

Agenda Item 1.1

**TO:** Board of Retirement

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

**SUBJECT:** Announcement of Appointment of Board Committees

**Committee Appointments**

Mr. David appoints the following standing committee assignments for FY 2020-2021 as follows:

- Audit Committee- Robert Raw, Kurt Hoefer and Alma Salas, Chair
- Investment Committee- Ben Bowler, Katherine O'Malley, Susan Lee and Mark Battey, 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 28, 2020 – REGULAR BOARD MEETING MINUTES

**2007.1 Call to Order, Roll Call and Miscellaneous Business**

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

**Roll Call:**

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

Absent: None.

Alternates present: Susan Lee and Alma Salas.

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

Consultants and speakers: Nick Collier and Craig Glyde (Milliman, Inc.); Graham Schmidt and Anne Harper (Cheiron); Joe Abdou and Margaret Jadallah (Verus).

- 2007.1.1 Election of Board Officers:** Ms. O'Malley, Chair of the Ad Hoc Nominating Committee reported to the Board that the committee, consisting of Mr. Battey, Mr. Raw and herself, discussed candidates for the officer positions. They recommended the following slate of officers for the term ending June 30, 2021: Al David, Chair; Robert Raw, Vice-chair; and Katherine O'Malley, Secretary. There were no other nominations made.

**Action:** Mr. Hackleman moved to approve the nominations of Al David, Chair; Robert Raw, Vice-chair; and Katherine O'Malley, Secretary. The motion was seconded by Mr. Battey and carried with a vote of 9-0, with trustees Arnott, Battey, Bowler, David, Hackleman, Hoefer, O'Malley, Raw and Tashman; none opposed.

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

- 2007.1.2 Announcement of Appointment of Board Committees:** Mr. David announced that he will provide the Board committees for FY 20-21 at the August Board meeting.

- 2007.2.1 Oral Communications from the Board:** Mr. Raw commented on an article in the Wall Street Journal pertaining to ransomware.

- 2007.2.2 Oral Communications from the Public:** Mr. David asked if there was any public comment from those individuals participating on the telephone or via Zoom and Ms. Trujillo reported that there were no public comments submitted by the public for today's meeting.

- 2007.3.1 Approval of Regular Board Meeting Minutes from June 2, 2020:** Mr. David asked if there were any changes or corrections, or objections, to the meeting minutes from the Board meeting held on June 2, 2020.

**Action:** Mr. Hoefer moved to approve the minutes from the Board meeting on June 2, 2020. The motion was seconded by Ms. Arnott and carried with a vote of 8-0, with trustees Arnott, Battey, Bowler, David, Hackleman, Hoefer, O'Malley and Raw all in favor; Mr. Tashman abstained; none opposed.

2007.4.0 **Approval of the Consent Agenda:** Mr. David asked if there were any items to be removed for discussion from the Consent Agenda. No items were removed.

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

2007.4.1 **Disability Retirements:** None.

2007.4.2 **Survivor Death Benefits:** None.

2007.4.3 **Service Retirements:**

<b>Name</b>	<b>Effective Retirement Date</b>	<b>Department</b>
Abrams, Emina	April 1, 2020	Deferred - Superior Court
Aguirre-Alberto, Sylvia	May 23, 2020	Deferred – Probation
Boesseneker, Mark	May 15, 2020	Def'd from District Attorney's Office
Carlos, Hector	May 1, 2020	Planning
Dunbar-Street, Linda	May 21, 2020	Deferred - Superior Court
Fernandez, Irene	May 1, 2020	Aging & Adult Services
Galassi, Patrick	April 25, 2020	Information Services Dept (Plan 3)
Grado, Ronald	April 29, 2020	Dept. of Public Works
Javier, Maristella	May 31, 2020	Def'd – Human Services Agency
Lynch, Angela	May 12, 2020	Deferred - Probation
Marion, William	May 26, 2020	Already Retired - Plan 3 Portion
Melendez, Reina	April 11, 2020	San Mateo County Health
Mullane, Jenell	May 30, 2020	Superior Court
O'Laughlin, Leroy	May 16, 2020	Sheriff's Office
Ramirez, Luz	March 28, 2020	Public Health
Torrea, Nora	May 16, 2020	San Mateo County Health
Trujillo, Miguel	May 2, 2020	Deferred - Environmental Health
Vermillion, David	April 8, 2020	Sheriff's
Vitalicio, Gloria	May 1, 2020	San Mateo County Health

2007.4.4 **Continuances:**

<b>Survivor's Name</b>	<b>Beneficiary of:</b>
Boyle, James	Boyle, Gretchann
Doran, Merlanne	Doran, John
Gates, Angelika	Gates, David
Hoover, Perry	Hoover, Dorothy
Moore, Dorothy	Moore, Joseph
Rojas, Marcia	Rojas, Donald

2007.4.5 **Deferred Retirements:**

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

<b>Name</b>	<b>Retirement Plan Type</b>
Menjivar, Ana	G4, Vested
Meola, Kathryn	G2, Vested - Reciprocity
Morris, Geoffrey	S7, Vested - Auto Defer - Code 31700
Reyes, Katherine	G4, Vested - Auto Defer - Code 31700
Wendler, Michael	G4, Vested
Wright, Jason	G7, Non-vested - Reciprocity

2007.4.6 **Member Account Refunds:**

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

<b>Name</b>	<b>Retirement Plan Type</b>
Dickinson, Rebecca	G7, Non-vested
Ferreyra, Timothy	G7, Non-vested
Guereca, Sandra	G5, Vested
Hawkins, Ofelia	G4, Non-vested
Lycett, Blake	S5, Vested
Reilly, Julie (FBO: Silva, Jody)	G4, Vested
Senger, Carolyn	G7, Non-vested
Wonacott, Kathleen	G7, Non-vested

2007.4.7 **Member Account Rollovers:**

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

<b>Name</b>	<b>Retirement Plan Type</b>
Abenojar, Jimmark	G4, Non-vested
Bahrami, Sanaz	G7, Non-vested
Cecil, Cameron	G7, Non-vested
Council, Katherine (QDRO)	S4, Non-vested
Senger, Carolyn	G7, Non-vested

2007.4.8 **Member Account Redeposits:**

<b>Name</b>	<b>Retirement Plan Type</b>
Biggs, Arter	G7, Non-vested

2007.4.9 **Acceptance of Trustees' Reports of Educational Activities:** None.

2007.5.1 **Consideration of Agenda Items, if any, Removed from the Consent Agenda:** None.

2007.5.2 **Acceptance of Milliman Inc.'s Investigation of Experience July 1, 2017 – April 30, 2020:** Mr. Collier and Mr. Glyde of Milliman, Inc. presented the triennial Investigation of Experience Report and answered questions from the Board. This item was for discussion only; and with no objections, this report was accepted.

2007.5.3 **Acceptance of Cheiron Inc's Actuarial Audit of Experience Study July 1, 2017 – April 30, 2010:** Mr. Schmidt, of Cheiron, discussed their findings and observations from the audit of Milliman's Experience Study. He reported that the assumptions recommended by Milliman were all reasonable to use in SamCERA's actuarial valuation and provided potential considerations for future studies. This item was for discussion only; and with no objections, this report was accepted.

2007.5.4 **Approval of Resolution Adopting Recommended Changes to Assumptions Based on Milliman's Investigation of Experience, July 1, 2017 – April 30, 2020:** Following the discussion of items 5.2 and 5.3, the Board took the following action:

**Action:** Mr. Hackleman motioned to approve the resolution adopting recommended changes to the assumptions based on Milliman's Investigation of Experience for July 1, 2017 - April 30, 2020. The motion was seconded by Mr. Hoefer and carried by a vote of 9-0, with trustees Arnott, Battey, Bowler, David, Hackleman, Hoefer, O'Malley, Raw and Tashman all in favor; none opposed.

The Board was adjourned for a short break at 11:15 a.m. and reconvened into open session at 11:20 a.m.

2007.6.1 **Report on Preliminary Monthly Portfolio Performance Report for the Period Ended June 30, 2020:** Mr. Coultrip reported that SamCERA's net preliminary return for June was 1.8% bringing the preliminary trailing twelve month return ending June 2020 to 0.70% net. This item was informational and for discussion only, no action was taken.

2007.6.2 **Report on Core Equity and Low Volatility Equity Manager Annual Reviews:** Ms. Ng reviewed the meeting notes of the annual review of SamCERA's core equity manager, D.E. Shaw, and low volatility equity managers, Acadian and PanAgora held on May 21<sup>st</sup> via teleconference. The discussion included a firm/organizational update, investment process review, performance review and attribution, and current positioning/market outlook. There were no significant concerns identified during the portfolio reviews. This item was informational and for discussion only, no action was taken.

2007.6.3 **Report on International Equity Manager Annual Reviews:** Ms. Ng reviewed the meeting notes of the annual review of SamCERA's international equity managers, Baillie Gifford and Mondrian held on June 4<sup>th</sup> via teleconference. The discussion included a firm/organizational update, investment process review, performance review and attribution, and current positioning/market outlook. There were no significant concerns identified during the portfolio reviews. This item was informational and for discussion only, no action was taken.

2007.6.4 **Approval of Resolution Amending the Investment Policy Statement:** Ms. Ng discussed the proposed changes to the Investment Policy Statement with the Board.

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

2007.6.5 **Approval to Change FIAM Core Bond and QMA Small-Cap Equity to Separate Account Structure:** Mr. Coultrip discussed staff's recommendation to change the FIAM Core Bond and QMA Small-Cap from commingled fund to separate account structure. He also discussed how the transition will provide more customization of investment guidelines, along with real-time visibility into account holdings and performance, which will help in managing the plan especially in times of market volatility.

**Action:** Mr. Hackleman motioned to approve staff's recommendation to change FIAM Core Bond and QMA Small-Cap from commingled fund to separate account structure. The motion was seconded by



Mr. Battey and carried by a vote of 9-0, with trustees Arnott, Battey, Bowler, David, Hackleman, Hoefler, O'Malley, Raw and Tashman all in favor; none opposed.

2007.7.1 **Surplus Property Policy:** Mr. Hood provided an overview of the County's Surplus Property Program and discussed SamCERA's proposed Surplus Property Policy.

**Action:** Mr. Hackleman motioned to approve the resolution adopting a Surplus Property Policy for SamCERA. The motion was seconded by Mr. Raw and carried by a vote of 9-0, with trustees Arnott, Battey, Bowler, David, Hackleman, Hoefler, O'Malley, Raw Tashman and all in favor; none opposed.

2007.8.1 **Chief Executive Officer's Report:** Mr. Hood reported that staff is continuing to work from home, hold weekly check-ins and execute all required business functions. He mentioned the Day Of folder can now be found in Dropbox. Mr. Hood reported that the remaining CALAPRS courses for the year are expected to be online and that he has signed up for the online SACRS UC Berkeley Course. Mr. Hood mentioned a few agenda items for next month's Board meeting including the financial and budget report and the recommendation to change the September Board meeting to the 29<sup>th</sup> providing additional time for staff, Milliman and Cheiron to complete the Actuarial Valuation Report.

2007.8.2 **Assistant Executive Officer's Report:** Ms. Smith shared that SamCERA's auditor, Brown Armstrong, is currently conducting their interim audit and reported no significant findings based on their audit so far. Ms. Trujillo informed Board members about upcoming educational events.

2007.8.3 **Chief Investment Officer's Report:** Mr. Coultrip reported staff will be holding annual manager reviews on Thursday, August 6<sup>th</sup> with PIMCO at 8:00 a.m. and Beach Point at 10:00 a.m. via Zoom. Mr. Coultrip added that staff will be conducting additional manager reviews on Tuesday, August 11<sup>th</sup> with Templeton at 8:00 a.m. and FIAM at 9:30 a.m. Mr. Coultrip also reported that staff and Verus have been researching absolute return manager prospects and have four upcoming video review calls and expect to present a recommendation to the Board within the next two months.

2007.8.4 **Chief Legal Counsel's Report:** None.

2007.10 **Adjournment:** Mr. David adjourned the meeting at 12:10 p.m. in memory of the deceased members listed below.

Doran, John	May 14, 2020	Sheriff's
Dorris, Jimmy Lee	May 20, 2020	Sheriff's
Whitmer, Irene	May 22, 2020	Sheriff's
McNary, Darlene	May 23, 2020	Social Services
Engeli, Miriam	May 20, 2020	DAO
Hernandez, Frank	May 24, 2020	Probation
Pagmanua, Roberto	May 30, 2020	Planning
Kauscha, Theresa	June 2, 2020	SMMC
Nygren, Marilyn	June 6, 2020	Courts
Skalisky, Beverly	June 16, 2020	ISD
Grover, Maureen	June 24, 2020	ACRE
Mendoza, Charles	June 29, 2020	ISD
Tomita, Helen	July 8, 2020	Health and Welfare
Seager, Linda	July 11, 2020	Social Services

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Al David  
Board Chair

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

August 25, 2020

Agenda Items 4.1- 4.9

**TO:** Board of Retirement

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



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

**4.1 Disability Retirements**

- a) The Board find that **Rosa Marcello** (1) is permanently incapacitated from the performance of her usual and customary duties as a Child Support Supervisor, (2) find that her disability was not a result of an injury/illness arising out of and in the course of her employment, (3) deny her application for a service-connected disability and (4) grant her a non-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:

<b>Name</b>	<b>Effective Retirement Date</b>	<b>Department</b>
Buchanan, Susan	June 13, 2020	Superior Court
Buscher, Karin	June 27, 2020	San Mateo County Health
Compton, Louise	June 20, 2020	Deferred - Behavioral Health
Gantert, Lance	June 14, 2020	San Mateo County Health
Gouig, Christine	June 23, 2020	Deferred - Dept of Housing
Meola, Kathryn	June 6, 2020	Deferred - Superior Court
Mercader, Adoraction	July 1, 2020	Aging & Adult Services
Rivers, Dorie	June 20, 2020	Def'd - San Mateo County Health
Rocha, Edmundo	June 11, 2020	Deferred - Sheriff's Office
Tealer, Dennis	June 26, 2020	Sheriff's Office
Toussaint, Annette	June 27, 2020	Deferred - Superior Court

#### 4.4 Continuances

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

<b>Survivor's Name</b>	<b>Beneficiary of:</b>
Skalisky, Lloyd	Skalisky, Beverly

#### 4.5 Deferred Retirements

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

<b>Name</b>	<b>Retirement Plan Type</b>
Arellano, Jessica	P4, Vested - Auto Defer - Code 31700
Bonilla-Bolanos, Jannet	G7, Non-vested - Reciprocity
Duvall, Stephen	S4, Vested
Eusebio, Mary Grace	G5, Vested - Reciprocity
Goethals, Joseph	G5, Vested
Herzberg, Samuel	G2, Vested
Hoang, Jennifer	G7, Non-vested - Reciprocity
Holt, Rachel	G4, Vested - Reciprocity
Lui, Chun	G7, Non-vested - Reciprocity
Maddux, Stormy	G4, Vested - Reciprocity
Shimmers, Lexington	G5, Vested - Auto Defer - Code 31700
Stiving, Nicole	G7, Vested
Swigart, Michael	G7, Non-vested - Reciprocity
Tramble, Jermond	S7, Non-vested - Reciprocity
Vargas, Luis	G5, Vested - Reciprocity
Westrick, Kimberly	G7, Non-vested - Reciprocity

#### 4.6 Member Account Refunds

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

<b>Name</b>	<b>Retirement Plan Type</b>
Hartman, Maureen (FBO: Fernandez, Elizabeth)	G1, Vested
Hartman, Maureen (FBO: Hartman, Kristine)	G1, Vested
Hartman, Maureen (FBO: Quadt, Alyce)	G1, Vested
Kantamani, Shashi	G7, Non-vested
Ogunnupe, Ayesha	G7, Non-vested

**4.7 Member Account Rollovers**

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

<b>Name</b>	<b>Retirement Plan Type</b>
Bonhagen, Anna	G7, Non-vested
Moran, Sonia	G7, Non-vested

**4.8 Member Account Redeposits**

None.

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

None.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

August 25, 2020

Agenda Item 4.10

**TO:** Board of Retirement

**FROM:** Gladys Smith, Assistant Executive Officer



**SUBJECT:** Resolutions Defining Compensation Earnable and Pensionable Compensation

**Recommendation**

Approve an amendment to the (1) Resolution defining Compensation Earnable, pursuant to Government Code §31461 for members who are not subject to Government Code §7522.34 and (2) the Resolution defining Pensionable Compensation for members who are subject to Government Code §7522.34 to include as a non-pensionable earning the following code:

**Automated Timekeeping System (ATKS) and Workday**

<b>Code</b>	<b>Earning Description</b>
042	Mandatory Time Off Unpaid

**Background**

Depending upon a member's date of hire and other factors, a member is either subject to Government Code §31461 in the County Employees Retirement Law ("CERL") or §7522.34 of the Public Employees' Pension Reform Act (PEPRA). Under CERL, compensation earnable is used: (1) to calculate final compensation in order to determine a member's pension benefit and (2) to calculate the ongoing contributions to be paid by the member and the employer. For the PEPRA members, "pensionable compensation" is used for the same purposes. The Board determines which elements of compensation are to be included in pensionable earnings.

**Discussion**

As a result of the recently adopted state budget, which included reductions primarily caused by the COVID-19 pandemic, the San Mateo County Superior Court will be undertaking mandatory time off (furloughs) as a partial solution to the estimated budget reductions. Employees on mandatory time off will not be working or paid on those days. The attached resolutions each rescind the previous resolution and add the new pay code to the updated applicable resolution.

**Attachments**

- Resolution Defining Compensation Earnable pursuant to Government Code §31461
- Resolution Defining Pensionable Compensation pursuant to Government Code §7522.34

**SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**

**RESOLUTION 2020-\_\_**

***RESOLUTION DEFINING COMPENSATION EARNABLE  
PURSUANT TO GOVERNMENT CODE §31461 FOR MEMBERS  
WHO ARE NOT SUBJECT TO GOVERNMENT CODE §7522.34.***

**WHEREAS**, for those current members who became active members prior to January 1, 2013, and those members who became active members on or after January 1, 2013, but who are not subject to Government Code §7522.34 of the California Public Employees’ Pension Reform Act, the determination of compensation earnable for remuneration earned by those members is governed by Government Code §31461; and

**WHEREAS**, Government Code §31461 provides that compensation earnable by a member means the average compensation as determined by the Board, for the period under consideration upon the basis of the average number of days ordinarily worked by persons in the same grade or class of positions during the period, and at the same rate of pay; and

**WHEREAS**, Government Code §31461 provides that this Board determine which items of remuneration earned by members shall constitute “compensation earnable”; and

**WHEREAS**, the Board has reviewed the current pay items and has determined which of those items are to be included in “compensation earnable” and which items are not to be included; and

**WHEREAS**, it is necessary for this Board from time to time to amend its determinations of compensation earnable due to changes in the compensation schedules of SamCERA employers or changes in the law and the County of San Mateo just notified this Board that when it upgraded its payroll system to Workday, some of the pay codes designations were changed; Therefore, be it

**RESOLVED**, that Resolution number 2020-06 is rescinded, and pursuant to Government Code §31461 as interpreted by the courts, the Board hereby makes the following determinations to be effective September 1, 2020, as to what is included in “compensation earnable” and items of remuneration that are not included:

1. Compensation earnable shall include:

Pay Code	Description
001	Regular hours worked
001-G	Regular hours worked (grace paid)
001-M	Regular hours worked (mandatory meeting)
001-T	Regular hours worked (training)
001-TW	Regular hours worked (telecom)
006	Sheriff’s 84/12 Plan
00680	84/12 Plan (Sheriff)
010	Release time with pay
011	Night shift differential-com dispatch
013	Night shift differential

Pay Code	Description
014	Special night shift differential
015	Special duty hours
016	Inspection/Testing/Repair with a Certification
019	Charge nurse shift differential
020	Split shift
021-L1	Bilingual pay
021-L2	Bilingual pay
022	Staffing differential
023	Weekend pay
027	On-call hours
033	Bomb squad (flight/observer/pilot)
035	Sick leave with pay
035B	Sick Leave Supplemental Pay
036	Sick leave with pay (work-related injury)
041	Vacation hours with pay
041-A	X-Vacation hours with pay
041B	Vacation Supplemental pay
041H	Vacation hours with pay on holiday
043	Holiday hours regular pay
043CNA	Holiday premium for PT CNA
044	Holiday worked at 1.5
045	Holiday hours worked at straight time
045-P	Holiday hours worked at straight time
045O	Holiday hours worked at straight time-overflow
048	Accumulated holiday hours taken
048-A	X-Accumulated holiday hours taken
048B	Accumulated Holiday Supplemental pay
048H	Holiday hours taken on holiday
052	Comp time hours used
052-A	X-Comp/Admin Leave Hours Used
052B	Comp Time Supplemental pay
052H	Comp time hours used on holiday
054	Administrative leave
055	Jury duty with pay
056	Military-leave with pay
057	Education leave with pay
058	Other leave with pay
059	Disability leave with pay
064	Management overtime used
080	Uniform/tool allowance
080A	Uniform/tool allowance annual
081	Transportation allowance

Pay Code	Description
087	Bi-weekly special pay
088	Miscellaneous special pay
090	Voluntary time off used
093	Furlough w/o pay used with payment of contributions
1TW	Regular hours teleworked
102	Annual in-service management administrative leave cash-outs
104	LTC shift differential
104B	LTC shift differential adjustment
110	Compulsory time off
112	Bereavement leave
127	On-call days/hours – Post 2012
131	Winter Recess HRs Regular Pay
133	Accumulated Winter Recess Hrs Taken
313	LC4850 night shift differential
315	LC4850 special duty
359	LC4850 disability with pay
502	Admin leave cash out w/1-time deferred comp
557	Educational lv with pay
635	Emergency Sick Leave
636	Emergency FMLA Paid
641	Essential Worker COVID19 Leave
827	Special on call
306	LC4850WC 84/12 plan shf
30680	LC4850WC 84/12 plan shf

2. Compensation earnable, at a minimum, shall not include, in any case, the following pay items.

A. The following pay codes are not included:

Pay Code	Description
007	EH. relief nurse shift differential
009	E.H. relief nurse shift differential
025	Call back pay
025-P	Call back pay (premium)
025S	Call back pay SART nurses
025-S	Call back pay SART nurses
026	Part-time double shift differential
028	On call EH. relief nurse
029	Part-time double shift differential
037	Layoff sick leave
040	Terminal vacation
042	Mandatory time off unpaid
046	Holiday hours accrued
046CNA	Holiday premium hours accrued for PT CNA



Pay Code	Description
046-P	Holiday hours accumulated at straight time
047	Holiday hours accrued at 1.5
049	Terminal holiday pay
050	Terminal compensatory pay
051	Comp Time Earned at 1.5
051-P	Premium portion for call back
053	Comp time earned at straight time
060	Absent without leave
061	Leave without pay
061-A	X-Leave without pay
062	Disability leave without pay
063	Terminal MOT Pay
065	Overtime training hours
066	Overtime at time and one-half
069	Overtime special duty desk officer
069-P	Overtime special duty desk officer
070	Overtime special duty
073	Overtime special duty night shift
075	Overtime night shift premium hours
076	Rest period differential
079	Overtime special shift differential
083	Worker's compensation payment
084	Employee incentives
085	Disability payment
086	Taxable benefits-DP
089	Relocation Allowance
091	Terminal VTO pay
096	County Deferred Comp Contribution
097	Miscellaneous terminal pay
101	LTD payments
103	FMLA earnings
105	Miscellaneous subsidies
106	FSLA adjustments
106 80	FSLA adjustment for 84/12
106 980-P1	FSLA adjustment 9/80 period 1
106 980-P2	FSLA adjustment 9/80 period 2
107	Overtime at straight time
108	Comp hours earned at straight time (OT)
111	Terminal compulsory time off
125	Call back pay st.
132	Winter Recess Hours Accrued
134	Terminal Winter Recess Pay

Pay Code	Description
203	Wellness Dividend
225	Call back pay flat rate
383	LC4850 worker's compensation payment
637	Emergency FMLA Unpaid
637M	Emergency FMLA Unpaid
640	Terminal EW COVID19 Leave
642	Essential Worker Onsite
642M	Essential Worker Onsite Memo Note
803	SART nurses meeting/service-flat rate
804	SART nurses training and education-flat rate
P25	Call in phone

B. Payments associated with the provision of insurance benefits, or other third-party payments such as professional membership dues, that are not received in cash by a member.

C. Payments by a SamCERA employer of member-required contributions to the retirement system under Government Code sections 31581.1, 31630, 31639.85 or under a memorandum of understanding (MOU) between members (or their representatives) and the SamCERA employer.

3. Pursuant to Government Code §31461(b) compensation earnable, shall not include in any case the following:

A. Any compensation determined by the Board to have been paid to enhance a member's retirement benefit under that system. That compensation may include:

(1) Compensation that had previously been provided in kind to the member by the employer or paid directly by the employer to a third party other than the retirement system for the benefit of the member, and which was converted to and received by the member in the form of a cash payment in the final average salary period.

(2) Any one-time or ad hoc payment made to a member, but not to all similarly situated members in the member's grade or class.

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

B. Payments for unused vacation, annual leave, personal leave, sick leave, or compensatory time off, however denominated, whether paid in a lump sum or otherwise, in an amount that exceeds that which may be earned and payable in each 12-month period during the final average salary period, regardless of when reported or paid.

C. Payments for additional services rendered outside of normal working hours, whether paid in a lump sum or otherwise.

D. Payments made at the termination of employment, except those payments that do not exceed what is earned and payable in each 12-month period during the final average salary period, regardless of when reported or paid.

4. Pursuant to Government Code §31641(c), the terms listed above in paragraph 3 are intended to be consistent with and not in conflict with the holdings in *Salus v. San Diego County Employees Retirement Association* (2004) 117 Cal.App.4th 734 and *In re Retirement Cases* (2003)110 Cal.App.4th 426.

**BE IT FURTHER RESOLVED**, that the above listed determinations by the Board of what is included or not included in compensation earnable, shall be in effect until such time as action taken by the Board or action by the Legislature or the Courts as a matter of law requires a different determination.

\* \* \* \* \*

*Regularly passed and adopted, by the San Mateo County Employees' Retirement Association, Board of Retirement, on August 25, 2020.*

*Ayes, Trustees:*

*Noes, Trustees:*

*Absent, Trustees:*

*Abstain, Trustees:*

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*Katherine O'Malley, Board Secretary*  
*SamCERA*

**SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**

**RESOLUTION 2020-\_\_\_**

**RESOLUTION DEFINING PENSIONABLE COMPENSATION  
PURSUANT TO GOVERNMENT CODE §7522.34 FOR MEMBERS  
WHO ARE NOT SUBJECT TO GOVERNMENT CODE §31461**

**WHEREAS**, for those members who became active members on or after January 1, 2013, and who are subject to the California Public Employees' Pension Reform Act contained in Government Code §7522 et seq., the determination of their pensionable compensation is governed by Government Code §7522.34; and

**WHEREAS**, the pensionable compensation for those employee members who are subject to Government Code §7522.34 shall be the normal monthly rate of pay or base pay of the member paid in cash to similarly situated members of the same group or class of employment for services rendered on a full-time basis during normal working hours, pursuant to publicly available pay schedules; and

**WHEREAS**, the Board has reviewed the current pay items and has determined which of those items are to be included in "pensionable compensation" and which items are not to be included; and

**WHEREAS**, it will be necessary for this Board, from time to time, to amend its determinations of pensionable compensation due to changes made by SamCERA employers in their compensation schedules as well as changes in the law; Therefore, be it;

**RESOLVED**, Resolution number 2020-08 is rescinded, and pursuant to Government Code §7522.34 as interpreted by the courts, the Board hereby makes the following determinations to be effective September 1, 2020, as to what is included in "pensionable compensation" and items of remuneration that are not included:

1. Pensionable compensation shall include:

Pay Code	Description
001	Regular hours worked
001-G	Regular hours worked (grace paid)
001-M	Regular hours work (mandatory meeting)
001-T	Regular hours worked (training)
001-TW	Regular hours worked (telecom)
006	Sheriff's 84/12 Plan
00680	84/12 Plan (Sheriff)
010	Release time with pay
011	Night shift differential-com dispatch
013	Night shift differential
014	Special night shift differential
015	Special duty hours
016	Inspection/Testing/Repair with a Certification

Pay Code	Description
019	Charge nurse shift differential
020	Split shift
021-L1	Bilingual pay
021-L2	Bilingual pay
022	Staffing differential
023	Weekend pay
033	Bomb squad (flight/observer/pilot)
035	Sick leave with pay
035B	Sick Leave Supplemental Pay
036	Sick leave with pay (work-related injury)
041	Vacation hours with pay
041-A	X-Vacation hours with pay
041B	Vacation Supplemental pay
041H	Vacation hours with pay on holiday
043	Holiday hours regular pay
043CNA	Holiday premium for PT CNA
044	Holiday worked at 1.5
045	Holiday hours worked at straight time
045-P	Holiday hours worked at straight time
048	Accumulated holiday hours taken
048-A	X-Accumulated holiday hours taken
048B	Accumulated Holiday Supplemental pay
048H	Holiday hours taken on holiday
052	Comp time hours used
052-A	X-Comp/Admin leave hours used
052B	Comp Time Supplemental pay
052H	Comp time hours used on holiday
054	Administrative leave
055	Jury duty with pay
056	Military leave with pay
057	Educational leave with pay
058	Other leave with pay
059	Disability leave with pay
064	Management overtime used
087	Bi-weekly special pay
090	Voluntary time off used
093	Furlough w/o pay used with payment of contributions
1TW	Regular Hours Teleworked
104	LTC shift differential
104B	LTC shift differential adjustment
110	Compulsory time off
112	Bereavement leave
131	Winter Recess HRs Regular Pay

Pay Code	Description
133	Accumulated Winter Recess Hrs Taken
313	LC4850 night shift differential
315	LC4850 special duty
359	LC4850 disability with pay
557	Educational lv with pay
635	Emergency Sick Leave
636	Emergency FMLA Paid
641	Essential Worker COVID19 Leave
30680	LC4850WC 84/12 plan shf

2. Pensionable compensation, at a minimum, shall not include, in any case, the following payitems.  
A. The following pay codes are not included:

Pay Code	Description
007	E.H. relief nurse shift differential
009	E.H. relief nurse shift differential
025	Call back pay
025-P	Call back pay (premium)
025S	Call back pay SART nurses
025-S	Call back pay SART nurses
026	Part-time double shift differential
027	On-call hours
028	On call E.H. relief nurse
029	Part-time double shift differential
037	Layoff sick leave
040	Terminal vacation
042	Mandatory time off unpaid
045O	Holiday hours worked at straight time-overflow
046	Holiday hours accrued
046CNA	Holiday premium hours accrued for PT CNA
046-P	Holiday hours accumulated at straight time
047	Holiday hours accrued at 1.5
049	Terminal holiday pay
050	Terminal compensatory pay
051	Comp Time Earned at 1.5
051-P	Premium portion for call back
053	Comp time earned at straight time
060	Absent without leave
061	Leave without pay
061-A	X-Leave without pay
062	Disability leave without pay
063	Terminal MOT Pay
065	Overtime training hours
066	Overtime at time and one-half

Pay Code	Description
069	Overtime special duty desk officer
069-P	Overtime for mandatory meeting
070	Overtime special duty
073	Overtime special duty night shift
075	Overtime night shift premium hours
076	Rest period differential
079	Overtime special shift differential
080	Uniform/tool allowance
080A	Uniform/tool allowance annual
081	Transportation allowance
083	Worker's compensation payment
084	Employee incentives
085	Disability payment
086	Taxable benefits-DP
088	Miscellaneous special pay
089	Relocation Allowance
091	Terminal VTO pay
096	County Deferred Comp Contribution
097	Miscellaneous terminal pay
101	LTD payments
102	Annual in-service mgmt administrative leave cash-outs
103	FMLA earnings
105	Miscellaneous subsidies
106	FSLA adjustments
106 80	FSLA adjustment for 84/12
106 980-P1	FSLA adjustment 9/80 period 1
106 980-P2	FSLA adjustment 9/80 period 2
107	Overtime at straight time
108	Comp hours earned at straight time (OT)
111	Terminal compulsory time off
125	Call back pay st.
127	On-call days/hours – Post 2012
132	Winter Recess Hours Accrued
134	Terminal Winter Recess Pay
203	Wellness Dividend
225	Call back pay flat rate
383	LC4850 worker's compensation payment
502	Admin leave cash out w/1-time deferred comp
637	Emergency FMLA Unpaid
637M	Emergency FMLA Unpaid
640	Terminal EW COVID19 Leave
642	Essential Worker Onsite
642M	Essential Worker Onsite Memo Note
803	SART nurses meeting/service flat rate

Pay Code	Description
804	SART nurses training and education flat rate
827	Special on call
P25	Call in phone

- B. Pursuant to Government Code §7522.34, pensionable compensation does not include the following:
- 1) Any compensation determined by the Board to have been paid to increase a member's retirement benefit.
  - 2) Compensation that had previously been provided in kind to the member by the employer or paid directly by the employer to a third party other than the retirement system for the benefit of the member and which was converted to and received by the member in the form of a cash payment. Any one-time or ad hoc payments made to a member.
  - 3) Severance or any other payment that is granted or awarded to a member in connection with or in anticipation of a separation from employment but is received by the member while employed.
  - 4) Payments for unused vacation, annual leave, personal leave, sick leave, or compensatory time off, however denominated, whether paid in a lump sum or otherwise, regardless of when reported or paid.
  - 5) Payments for additional services rendered outside of normal working hours, whether paid in a lump sum or otherwise.
  - 6) Any employer-provided allowance, reimbursement, or payment, including, but not limited to, one made for housing, vehicle, or uniforms.
  - 7) Compensation for overtime work, other than as defined in Section 207(k) of Title 29 of the United States Code.
  - 8) Employer contributions to deferred compensation or defined contribution plans.
  - 9) Any bonus paid in addition to the compensation described in subdivision (a) of Government Code §7522.34.
  - 10) Any other form of compensation the Board determines is inconsistent with the requirements of subdivision §7522.34 (a).
  - 11) Any other form of compensation that this Board determines should not be pensionable compensation.
3. Pursuant to Government Code §7522.10, whenever pensionable compensation, as defined in §7522.34, is used in the calculation of a benefit, the pensionable compensation shall be subject to the monetary limitations set forth in subdivision §7522.10.

**BE IT FURTHER RESOLVED**, that the above listed determinations by the Board of what is included or not included in pensionable compensation, shall be in effect until such time as this Board, the Legislature, or the Courts take action that as a matter of law requires a different determination.



\* \* \* \* \*

*Regularly passed and adopted, by the San Mateo County Employees' Retirement Association, Board of Retirement, on August 25, 2020.*

*Ayes, Trustees:*

*Noes, Trustees:*

*Absent, Trustees:*

*Abstain, Trustees:*

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*Katherine O'Malley  
Board Secretary SamCERA*

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION  
Board of Retirement

August 25, 2020

Agenda Item 4.11

**TO:** Board of Retirement

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

**SUBJECT:** Amendments to Regulations in Article VIII Internal Revenue Compliance

**Recommendation**

Approve a resolution amending Regulation Sections 8.4 (E)(5)(b), 8.4(F)(1)(a), 8.4(G)(4), and 8.4 (H)(4) regarding Required Minimum Distributions and Sections 8.10 (A) and 8.10 (B) Regarding Normal Retirement Ages in Article VIII Internal Revenue Compliance.

**Background**

On March 4, 2015, the Board submitted its request to the Internal Revenue Service ("IRS") for a determination that SamCERA meets the applicable requirements of the Internal Revenue Code (the "IRC"). As part of that submission, SamCERA gave our plan documents, including the Board's tax regulations. On August 16, 2016, the IRS issued SamCERA a favorable determination letter. In 2019, the IRC was amended, and the Board's tax regulations need to be amended as well.

**Discussion**

Prior to 2019, IRC § 401(a)(9) required members who reach age 70.5 who left active service and kept their contributions on deposit and surviving spouses who reach age 70.5 who have contributions on deposit to begin taking a Requirement Minimum Distributions (RMD) from their account by April 1 of the year after they reach 70.5. That IRC section now provides that for these members or surviving spouses who reach age 70.5 in 2020 or later must take their first RMD by April 1 of the year after they reach 72. The proposed changes to Section 8.4 mirror the amendments to IRC § 401(a)(9).

It also amends Section 8.10 regarding Normal Retirement Ages to add a reference to the California Public Employees' Pension Reform Act of 2013 (PEPRA) for those members that are subject to PEPRA, as the eligibility age to receive benefits differs to that under the County Employees Retirement Law. There is no substantive change to the regulation; it still provides that the normal retirement ages are 60 for General members and 53 for Safety members. These normal retirement ages are based upon SamCERA's calculation of the average actual retirement ages of members and was reviewed by SamCERA's actuary when originally adopted.

**Attachment**

Resolution Amending Regulation Sections 8.4 (E)(5)(b), 8.4(F)(1)(a), 8.4(G)(4), and 8.4 (H)(4) regarding Required Minimum Distributions and Sections 8.10 (A) and 8.10 (B) Regarding Normal Retirement Ages In Article VIII Internal Revenue Compliance

**BOARD OF RETIREMENT**

**SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION**

**RESOLUTION AMENDING REGULATION SECTIONS 8.4 (E)(5)(b), 8.4(F)(1)(a), 8.4(G)(4),  
8.4 (H)(4) REGARDING REQUIRED MINIMUM DISTRIBUTIONS  
AND SECTIONS 8.10 (A) AND 8.10 (B) REGARDING NORMAL RETIREMENT AGES IN  
ARTICLE VIII INTERNAL REVENUE COMPLIANCE**

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

**WHEREAS**, SamCERA complies with the requirements of the Internal Revenue Code of 1986 (the "Code") and the Treasury regulations issued thereunder, as amended or replaced from time to time; and

**WHEREAS**, on March 4, 2015, the Board of Retirement submitted to the Internal Revenue Service ("IRS") a request for a favorable determination that SamCERA meets the applicable requirements of the Code; and

**WHEREAS**, the plan documents, including Regulations of SamCERA Board of Retirement, were submitted for review with SamCERA's determination letter application; and on August 16, 2016, the IRS issued SamCERA a favorable determination letter; and

**WHEREAS**, Article VIII Internal Revenue Compliance contains regulations in Section 8.4 which address Required Minimum Distributions ("RMD"), which reflect the existing practices of SamCERA with respect to the minimum distribution requirements under section 401(a)(9) of the Code and these regulations are intended to be in accordance with the Code and the applicable Treasury regulations; and

**WHEREAS**, section 401(a)(9) of the Code previously provided that deferred members and surviving spouses, needed to take their first RMD by April 1 after turning age 70.5. That section now provides that for members and surviving spouses who reach age 70.5 in 2020 or later must take their first RMD by April 1 of the year after they reach 72; and

**WHEREAS**, this Board desires to amend the regulations to be in conformity with this change to the Code; and

**WHEREAS**, the Board desires to also amend Section 8.10 regarding Normal Retirement Age to add a reference to the California Public Employees' Pension Reform Act of 2013 (PEPRA) for those members that are subject to PEPRA;

**NOW THEREFORE, IT IS HEREBY DETERMINED AND ORDERED** that the Regulations of the Board of Retirement are amended to read as set forth below; and

**BE IT FURTHER RESOLVED** that the amendments shall become effective after their approval by the Board of Supervisors.

Regulation 8.4 (E)(5)(b) of Article VIII is amended to read:

**b. Spouse is Not the Sole Beneficiary.** When the Member's surviving Spouse is not the sole beneficiary then the period certain may not exceed the period established under the Uniform Lifetime Table contained in Treasury regulations section 1.401(a)(9)-9 for the calendar year that contains the Annuity Starting Date. If the Member is younger than age 72 in that year, then the distribution period for the Member is the distribution period for age 72 increased by the difference between 72 and the age of the Member in the year of the Annuity Starting Date. Also see below regarding Designated Beneficiaries.

Regulation 8.4 (F)(1)(a) of Article VIII is amended to read:

**a. Spouse is the Sole Designated Beneficiary.** If the Member's sole Designated Beneficiary is the Member's surviving Spouse, then, except as provided in paragraph (e) of this subsection 1, distributions to the surviving Spouse must begin by December 31 of the calendar year immediately following the calendar year in which the Member died or, if later, by December 31 of the calendar year in which the Member would have reached age 72.

Regulation 8.4 (G)(4) of Article VIII is amended to read:

**4. Reciprocal Member.** Under a good faith interpretation of the Code and Treasury regulations section 1.401(a)(9)-6, and taking into account the vested rights in retirement benefits created by the California Constitution, if a deferred Member is a current employee and a member of another retirement system with which SamCERA has reciprocity under California law, then for purposes of determining the Required Beginning Date under SamCERA the Member shall be treated as a current employee of a SamCERA employer and as such, as if he or she had not retired, even if he or she has attained age 72.

Regulation 8.4 (H)(4) of Article VIII is amended to read:

**4. Required Beginning Date.** "Required Beginning Date" means April 1 of the calendar year following the later of the calendar year in which the Member attains age 72 or the calendar year in which the Member retires.

Regulation 8.10 Normal Retirement Ages, subdivisions (A) and (B) of Article VIII are amended to read:

**A. General Members.** The normal retirement age for general members shall be the later of age 60 or the age at which the member is entitled to receive a monthly retirement allowance under the County Employees Retirement Law of 1937 contained in Government Code sections 31450 et seq. or the California Public Employees' Pension Reform Act of 2013 contained in Government Code section 7522 et seq., as applicable. Normal retirement age is not later than age 70.

**B. Safety Members.** The normal retirement age for safety members shall be the later of age 53 or the age at which the member is entitled to receive a monthly retirement allowance under the County Employees Retirement Law of 1937 contained in Government Code sections 31450 et seq. or the California Public

Employees' Pension Reform Act of 2013 contained in Government Code section 7522 et seq., as applicable. Normal retirement age is not later than age 70.

\* \* \* \* \*

*Regularly passed and adopted, by the San Mateo County Employees' Retirement Association, Board of Retirement, on August 25, 2020.*

*Ayes, Trustees:*

*Noes, Trustees:*

*Absent, Trustees:*

*Abstain, Trustees:*

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*Katherine O'Malley, Board Secretary  
SamCERA*

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

August 25, 2020

Agenda Item 4.12

**TO:** Board of Retirement

**FROM:** Doris Ng, Retirement Investment Analyst 

**SUBJECT:** Semi-Annual Compliance Certification Statement for Period Ended June 30, 2020

**Recommendation**

Accept the semi-annual Compliance Certification Statement for SamCERA's non-alternative investment managers, as of June 30, 2020.

**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 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.

The attached Compliance Certification Statements were not received in time to be included in the mailing for the July Board meeting.

**Discussion**

The attached Compliance Certification Statements report that SamCERA's investment managers, BlackRock and PIMCO, were in compliance with SamCERA's Investment Policy as of June 30, 2020. There were no reported significant developments in portfolio construction, investment approach, firm ownership or organizational structure of concern. 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 6-2020

Compliance Certification Statements (3)

- A. Domestic Equity: BlackRock
- B. Fixed Income: BlackRock, PIMCO

## Compliance Certification Statement Matrix – June 30, 2020

Investment Manager	Mandate	General Compliance Issues	Derivative Instruments	Investment Manager Guidelines	Mandate Specific
<b>Domestic Equity</b>					
<b>BlackRock Russell 1000</b>		<ul style="list-style-type: none"> <li>May 2020-PNC exited full invmnt in Blackrock via secondary offering. Blackrock also repurchased stock from PNC.</li> <li>June 2020- Consolidated active portf mgmt. functions under new unit-Portfolio Mgmt Grp. No change to portf mngr responsibilities.</li> </ul>	No Concerns	No Concerns	Largest single security Microsoft 5.27% Largest single industry Information Technology 27.97%
<b>Fixed Income</b>					
<b>BlackRock Intermediate Government Bond Index</b>		<ul style="list-style-type: none"> <li>May 2020-PNC exited full invmnt in Blackrock via secondary offering. Blackrock also repurchased stock from PNC.</li> </ul>	Not Applicable	No Concerns	No Concerns

## Compliance Certification Statement Matrix – June 30, 2020

Investment Manager	Mandate	General Compliance Issues	Derivative Instruments	Investment Manager Guidelines	Mandate Specific
		<ul style="list-style-type: none"> <li>June 2020- Consolidated active portf mgmt. functions under new unit-Portfolio Mgmt Grp. No change to portf mngr responsibilities.</li> </ul>			
<b>PIMCO (Diversified Income Fund)</b>		<ul style="list-style-type: none"> <li>Feb 2020-Ed Devlin, Hd of Canadian PM to retire by end of June 2020</li> <li>Jan 2020-Matthieu Louanges, MD and account mngr in Munich office, announced departure in March 2020</li> <li>Jan 2020-Akinori Matsui, MD and Hd of Japan to retire March 2020</li> </ul>	No Concerns	No Concerns	No Concerns

3 Total | 3 Completed



## ***BlackRock Russell 1000 Index – June 30, 2020***

### ***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](mailto:Investments@samcera.org)) by **Monday, July 13, 2020**.

### **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 is an independent, publicly traded company, with no single majority shareholder and over two-thirds of its Board of Directors consisting of independent directors. As of 31 March 2020, The PNC Financial Services Group, Inc. ("PNC") held 22.0% of BlackRock's voting common stock and 22.4% of BlackRock's capital stock, which includes outstanding common and nonvoting preferred stock.

On 11 May 2020, BlackRock announced the commencement of a secondary offering of its common stock through which PNC would exit its full investment in BlackRock. BlackRock also announced on 11 May 2020 that it intended to repurchase \$1.1 billion of common stock directly from PNC immediately following the close of the secondary offering.

On 15 May 2020, PNC completed the secondary offering and BlackRock completed the share repurchase. As a result, PNC no longer owns any shares of BlackRock's capital stock, other than 500,000 shares that PNC has stated it intends to contribute to The PNC Foundation. The press release announcing the completion of the secondary offering can be found here: <https://www.blackrock.com/corporate/newsroom/press-releases/article/corporate-one/press-releases/blackrock-completes-secondary-offering-of-common-stock>

### **Organizational Changes**

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.

On 30 June 2020, we announced a realignment to the structure of our investment platform. We brought together under a single organization our active portfolio management functions in our newly constituted Portfolio Management Group ("PMG"), which stands alongside EII, BlackRock Alternative

Investors, Global Trading & TRIM, and the BlackRock Investment Institute and BlackRock Sustainable Investing as our Investment Departments. Rich Kushel, Senior Managing Director, expanded his responsibilities and took on the role of Head of PMG, having served as a key architect of some of our most impactful transformations – factors, sustainable investing, and our whole portfolio approach. There is no impact to portfolio manager responsibilities.

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**

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

BlackRock 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 BlackRock’s ability to manage its clients’ assets. Please refer to BlackRock’s Form ADV and SEC disclosures for additional information on regulatory matters concerning including BlackRock Institutional Trust Company or BlackRock as a whole. The recent fines related to BlackRock, Inc. or including BlackRock Institutional Trust Company’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.

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On 11 September 2012, the UK Financial Services Authority (“FSA”) issued a Final Notice against BlackRock Investment Management (UK) Limited (“BIMUK”), following a settlement agreement reached between the FSA and BIMUK. The FSA found that BIMUK had breached certain provisions of the FSA’s Client Money Rules and Principles, during the period 1 October 2006 to 31 March 2010, by not having trust letters in place for client money placed on money market deposit and not having adequate systems and controls for the identification and protection of client money in this respect. BIMUK agreed to a settlement payment of GBP 9,533,100 for the breach, which it had self-reported to the FSA in April 2010. The FSA final order acknowledged that no client of BIMUK (or BlackRock or any related affiliate) suffered any harm and that BIMUK had remedied the situation and put in place robust systems and controls relating to client money protection.

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U.S. Department of Labor (“DOL”) to reimburse clients \$2,661,513 in connection with certain trades the DOL alleged violated Title I of the Employee Retirement Income Security Act (“ERISA”). BFM also agreed to pay to the DOL a \$266,151 penalty.

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On 16 September 2014, BlackRock Institutional Trust Company, N.A. entered into an agreement with the SEC to resolve allegations relating to three alleged violations of an SEC regulation prohibiting short sales of an equity security during the restricted period preceding a public offering. The three trades at issue occurred in 2010 and 2011. As part of the approximately \$1.7 million settlement, BTC agreed to disgorge profits from each of the violations and to pay interest and a civil penalty. BTC also agreed to cease and desist from any future violations of the rule in question.

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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 including BlackRock Institutional Trust Company's investment management responsibilities.

4. Have proxy ballots been voted in accordance with the best economic interest of *SamCERA*?  
 **Yes** /  **No: Please explain.**
5. Has the firm's insurance coverage been sustained?  
 **Yes** /  **No: Please explain.**

### **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.

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 invested, a small amount of spendable cash is retained to minimize trading and transactions costs. Skillful cash management and cash equitization are critical to minimizing the potential impact of cash drag and ensure tight tracking to the benchmark.

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

- 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?

**Managing Counterparty Credit Risk**

BlackRock's philosophy is to manage counterparty credit risk conservatively. As such, the firm actively monitors counterparty credit risk exposures globally and evaluates counterparty credit quality on a continuous basis. We believe that our policies and procedures for counterparty risk management are robust and thorough.

In 2005, BlackRock established the Counterparty & Concentration Risk Group, a dedicated team of professionals that leads the global process for managing counterparty risk. The Group is responsible for managing credit risk in all trading relationships with counterparties and to that end coordinates with Credit Research, Investment Strategies, Trading & Liquidity Strategies, Legal & Compliance, Operations, and data integrity functions across the organization. The Group monitors and assesses counterparty exposures arising from both bilateral and centrally-cleared products that include derivatives, mortgage TBAs, foreign exchange, financing trades (repo and securities lending), equities, fixed income securities and other forward-settling transactions. Reporting is generated to show aggregate risk exposures by counterparty and by portfolio.

The Counterparty & Concentration Risk Group developed the firm-wide Counterparty Credit Policies and Procedures, and is responsible for implementing, updating and enforcing them, as follows:

- Assess prospective trading counterparty creditworthiness and approve counterparties;
- Measure and monitor credit exposure to each counterparty, broken out by asset classes;
- Monitor financial performance of counterparties in order to establish, confirm, or adjust exposures as needed;
- Monitor levels of exposure by product, by tenor, and by counterparty, and provide feedback to Trading & Liquidity Strategies when aggregate exposures warrant; and
- Provide guidance and supervision of credit issues for ISDA and other transaction documentation.

The firm has Credit Alert Procedures which serve as a guideline for the action and interaction of key BlackRock constituencies in the case of a counterparty related "credit event." These procedures specifically contemplate the coordination among the Counterparty & Concentration Risk, Investment Strategies, Trading & Liquidity Strategies, Legal, and Operations groups in order to facilitate BlackRock's ability to make timely and informed decisions following the recognition of credit concerns. The major aspects addressed include fact finding, communication, liquidation and close-out, and key roles and responsibilities.

**BlackRock's Counterparty Approval Process**

BlackRock focuses primarily on counterparty credit risk and counterparty reputation risk.

Counterparty credit risk is the potential loss that BlackRock clients' accounts or BlackRock accounts could incur if a counterparty is unable to perform on its trading commitments. Reputation risk is defined as the risk to earnings or capital arising from negative public opinion. The process by which we select broker/dealer counterparties for transaction purposes is outlined below.

*Determine the nature of the proposed transaction activity:*

What are the securities to be traded? What is the expected volume by security?

*Determine the settlement and delivery procedure:*

How is our client going to receive monetary compensation in exchange for delivering the particular security in question? If the client is going to receive securities, how is the counterparty going to deliver those securities? Is settlement through an established clearing platform or is there also a physical settlement? From a delivery risk perspective, we view DTC and Fed settlement along with settlement through several other established trading and clearing platforms to be of limited risk. We view settlement via other methodologies as bearing potentially significant risk, and generally limit such activity to investment grade counterparty groupings. OTC derivatives are transacted with major global financial institutions.

*Determine if the proposed counterparty settles transactions "directly" or uses a correspondent:*

Most "agency" counterparties utilize correspondents to clear securities for them. If they do so, who are they using? On what basis are they clearing, fully disclosed or otherwise? BlackRock will only accept clearing correspondents that are well-capitalized, well-established, and possess a favorable reputation in the marketplace.

*Settlement risk tolerance levels:*

BlackRock has established certain tolerance levels for aggregate exposure to settlement risk, defined as a credit balance on all trades outstanding but not settled. The level reflects our settlement risk tolerance per counterparty and is monitored by BlackRock's Counterparty & Concentration Risk Group on a daily basis. If the threshold is exceeded, the trade details are reviewed in concert with the counterparty's financial strength in order to determine if any intervention is required.

*Financial review:*

Our view is that the level and trend of excess regulatory capital, as shown in the financial information, is a key barometer of the financial strength of our trading counterparty. Most brokerage firms are required to calculate and report this figure to regulatory authorities on a periodic basis. We are directly interested in ensuring that the process is maintained.

As previously stated, non-investment grade counterparties are required to clear through well-established clearing correspondents and are generally limited to short settlement trades. Updated regulatory financial filings are reviewed on an ongoing basis. Major financial institutions are additionally monitored as part of BlackRock's internal credit research process and via alert portfolios with market data service providers.

### **Counterparty Exposure Monitoring**

BlackRock prefers to have multiple counterparties for liquidity, risk management, and best execution purposes. The counterparties with which we trade must have broad market coverage. Positions are marked-to-market on a regular basis and exposure to each counterparty is monitored. Transaction documentation is implemented where appropriate to minimize exposure to individual counterparties.

To monitor post-trade counterparty risk, BlackRock has implemented a strong technological infrastructure and proprietary internal review processes. BlackRock also has a number of reporting tools on the Aladdin platform that allow us to manage counterparty exposure, balancing net exposures to our different counterparties. Where necessary, credit risk exposure to counterparties can be adjusted, both at the individual portfolio level and at the aggregate firm-wide level.

### **Country Risk**

Members of the Counterparty & Concentration Risk Group are active participants in BlackRock's Global Country Operating Risk Committee. The Committee includes participants from Legal & Compliance, Business Operations, Fund Services, Product Tax, and Risk & Quantitative Analysis, along with representation from each of the Investment groups.

This Committee meets regularly to consider, inter alia, the legal status, ownership and official recognition of exchanges and clearing houses, trading and settlement practices and procedures and BlackRock's ability to track trades from execution to settlement in the various trading markets. For markets where direct local access to exchanges is deemed to present inappropriately high risks for client portfolios, a range of restrictions may be applied.

- 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.

- 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 invested, a small amount of spendable cash is retained to minimize trading and transactions costs. Skillful cash management and cash equitization are critical to minimizing the potential impact of cash drag and ensure tight tracking to the benchmark.

- 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)**

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

<i>Common Stock</i>	<i>99.33%</i>
<i>Preferred Stock</i>	<i>0%</i>
<i>Convertible Securities</i>	<i>0%</i>
<i>Cash &amp; Equivalents</i>	<i>0.67%</i>

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

<i>Large-Cap</i>	<i>66.05%</i>
<i>Mid-Cap</i>	<i>27.31%</i>
<i>Small-Cap</i>	<i>6.64%</i>

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. **0%**
4. Does the portfolio invest in emerging and/or frontier markets?  Yes /  No
- a) If **Yes**, please specify the percentage(s) of the portfolio invested in emerging and/or frontier markets.
5. 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. **Microsoft 5.27%**
6. 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 27.97%**  
**Financial Service 17.48%**  
**Consumer Discretionary 15.71%**

Signed by:



Signature

Anthony Freitas, Managing Director

Print Name

Dated: 7/20/2020

Name of Firm: BlackRock



## ***BlackRock Intermediate Government Bond Index – June 30, 2020***

### ***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](mailto:Investments@samcera.org)) by **Monday, July 13, 2020**.

#### **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 is an independent, publicly traded company, with no single majority shareholder and over two-thirds of its Board of Directors consisting of independent directors. As of 31 March 2020, The PNC Financial Services Group, Inc. ("PNC") held 22.0% of BlackRock's voting common stock and 22.4% of BlackRock's capital stock, which includes outstanding common and nonvoting preferred stock.

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Investing as our Investment Departments. Rich Kushel, Senior Managing Director, expanded his responsibilities and took on the role of Head of PMG, having served as a key architect of some of our most impactful transformations – factors, sustainable investing, and our whole portfolio approach. There is no impact to portfolio manager responsibilities.

**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**

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#### **4. 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**

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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? N/A  
 **Yes** /  **No: Please explain.**
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.

- 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?

#### Managing Counterparty Credit Risk

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In 2005, BlackRock established the Counterparty & Concentration Risk Group, a dedicated team of professionals that leads the global process for managing counterparty risk. The Group is responsible for managing credit risk in all trading relationships with counterparties and to that end coordinates with Credit Research, Investment Strategies, Trading & Liquidity Strategies, Legal & Compliance, Operations, and data integrity functions across the organization. The Group monitors and assesses counterparty exposures arising from both bilateral and centrally-cleared products that include derivatives, mortgage TBAs, foreign exchange, financing trades (repo and securities lending), equities, fixed income securities and other forward-settling transactions. Reporting is generated to show aggregate risk exposures by counterparty and by portfolio.

The Counterparty & Concentration Risk Group developed the firm-wide Counterparty Credit Policies and Procedures, and is responsible for implementing, updating and enforcing them, as follows:

- Assess prospective trading counterparty creditworthiness and approve counterparties;
- Measure and monitor credit exposure to each counterparty, broken out by asset classes;
- Monitor financial performance of counterparties in order to establish, confirm, or adjust exposures as needed;
- Monitor levels of exposure by product, by tenor, and by counterparty, and provide feedback to Trading & Liquidity Strategies when aggregate exposures warrant; and
- Provide guidance and supervision of credit issues for ISDA and other transaction documentation.

The firm has Credit Alert Procedures which serve as a guideline for the action and interaction of key BlackRock constituencies in the case of a counterparty related "credit event." These procedures specifically contemplate the coordination among the Counterparty & Concentration Risk, Investment Strategies, Trading & Liquidity Strategies, Legal, and Operations groups in order to facilitate BlackRock's ability to make timely and informed decisions following the recognition of credit concerns. The major aspects addressed include fact finding, communication, liquidation and close-out, and key roles and responsibilities.

#### BlackRock's Counterparty Approval Process

BlackRock focuses primarily on counterparty credit risk and counterparty reputation risk.

Counterparty credit risk is the potential loss that BlackRock clients' accounts or BlackRock accounts could incur if a counterparty is unable to perform on its trading commitments. Reputation risk is defined as the risk to earnings or capital arising from negative public opinion. The process by which we select broker/dealer counterparties for transaction purposes is outlined below.

*Determine the nature of the proposed transaction activity:*

What are the securities to be traded? What is the expected volume by security?

*Determine the settlement and delivery procedure:*

How is our client going to receive monetary compensation in exchange for delivering the particular security in question? If the client is going to receive securities, how is the counterparty going to deliver those securities? Is settlement through an established clearing platform or is there also a physical settlement? From a delivery risk perspective, we view DTC and Fed settlement along with settlement through several other established trading and clearing platforms to be of limited risk. We view settlement via other methodologies as bearing potentially significant risk, and generally limit such activity to investment grade counterparty groupings. OTC derivatives are transacted with major global financial institutions.

*Determine if the proposed counterparty settles transactions "directly" or uses a correspondent:*

Most "agency" counterparties utilize correspondents to clear securities for them. If they do so, who are they using? On what basis are they clearing, fully disclosed or otherwise? BlackRock will only accept clearing correspondents that are well-capitalized, well-established, and possess a favorable reputation in the marketplace.

*Settlement risk tolerance levels:*

BlackRock has established certain tolerance levels for aggregate exposure to settlement risk, defined as a credit balance on all trades outstanding but not settled. The level reflects our settlement risk tolerance per counterparty and is monitored by BlackRock's Counterparty & Concentration Risk Group on a daily basis. If the threshold is exceeded, the trade details are reviewed in concert with the counterparty's financial strength in order to determine if any intervention is required.

*Financial review:*

Our view is that the level and trend of excess regulatory capital, as shown in the financial information, is a key barometer of the financial strength of our trading counterparty. Most brokerage firms are required to calculate and report this figure to regulatory authorities on a periodic basis. We are directly interested in ensuring that the process is maintained.

As previously stated, non-investment grade counterparties are required to clear through well-established clearing correspondents and are generally limited to short settlement trades. Updated regulatory financial filings are reviewed on an ongoing basis. Major financial institutions are additionally monitored as part of BlackRock's internal credit research process and via alert portfolios with market data service providers.

### **Counterparty Exposure Monitoring**

BlackRock prefers to have multiple counterparties for liquidity, risk management, and best execution purposes. The counterparties with which we trade must have broad market coverage. Positions are marked-to-market on a regular basis and exposure to each counterparty is monitored. Transaction documentation is implemented where appropriate to minimize exposure to individual counterparties.

To monitor post-trade counterparty risk, BlackRock has implemented a strong technological infrastructure and proprietary internal review processes. BlackRock also has a number of reporting tools on the Aladdin platform that allow us to manage counterparty exposure, balancing net exposures to our different counterparties. Where necessary, credit risk exposure to counterparties can be adjusted, both at the individual portfolio level and at the aggregate firm-wide level.

### **Country Risk**

Members of the Counterparty & Concentration Risk Group are active participants in BlackRock's Global Country Operating Risk Committee. The Committee includes participants from Legal & Compliance, Business Operations, Fund Services, Product Tax, and Risk & Quantitative Analysis, along with representation from each of the Investment groups.

This Committee meets regularly to consider, inter alia, the legal status, ownership and official recognition of exchanges and clearing houses, trading and settlement practices and procedures and BlackRock's ability to track trades from execution to settlement in the various trading markets. For markets where direct local

access to exchanges is deemed to present inappropriately high risks for client portfolios, a range of restrictions may be applied.

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.
8. 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.**
2. Has the firm engaged in short selling, use of leverage or margin and/or investments in commodities?  **Yes: Please explain.** /  **No N/A**

### **Domestic Fixed Income Portfolios**

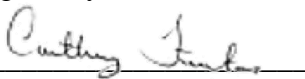
1. State the percentage of the portfolio held in each of the following types of securities

<i>Certificates of Deposit</i>	<i>%</i>
<i>Commercial Paper</i>	<i>%</i>
<i>Other high grade short-term securities</i>	<i>%</i>

<i>U.S. Government &amp; Agency securities</i>	<i>100%</i>
<i>Corporate Bonds</i>	<i>%</i>
<i>Mortgage and asset-backed securities</i>	<i>%</i>
<i>Yankee bond securities</i>	<i>%</i>
<i>Other (please specify)</i>	<i>%</i>

2. Is the firm monitoring the country, currency, sector and security selection risks associated with its portfolio?  **Yes** /  **No: Please explain**

Signed by:

  
\_\_\_\_\_  
Signature

Anthony Freitas, Managing Director

\_\_\_\_\_  
Print Name

Dated: 7/20/2020

Name of Firm: BlackRock



## ***PIMCO Diversified Income Fund – June 30, 2020***

### ***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](mailto:Investments@samcera.org)) by **Monday, July 13, 2020.**

*The Fund you are invested in is an investment company registered under the Investment Company Act of 1940 ("1940 Act"), which prohibits selective disclosure of information to some investors and not to others. Therefore, we cannot respond directly to your inquiry. For additional information please reference the attached compliance letter, Fund Prospectus and Statement of Additional Information.*

#### **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**

**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.**

*Please refer to the attached Diversified Income Fund Annual Report.*

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.**

*Please refer to the attached Diversified Income Fund Annual Report.*

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?

*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's Use of Derivatives.*

8. 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.**
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.*

### **Domestic Fixed Income Portfolios**

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

<i>Treasury</i>	<i>%</i>
<i>Agency</i>	<i>%</i>
<i>Inflation-Linked</i>	<i>%</i>
<i>Mortgage-Backed</i>	<i>%</i>
<i>Asset-Backed</i>	<i>%</i>
<i>Investment-Grade Credit</i>	<i>%</i>
<i>High-Yield Credit</i>	<i>%</i>
<i>Bank Loan</i>	<i>%</i>
<i>Non-US</i>	<i>%</i>
<i>EM Government</i>	<i>%</i>
<i>EM Local Currency</i>	<i>%</i>
<i>EM Corporate</i>	<i>%</i>
<i>Cash &amp; Equivalents</i>	<i>%</i>

Total	%
-------	---

*Please reference the attached Bond Statistics Report.*

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

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

*Please reference the attached Holdings Report.*

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 3/31/2020, the Fund represented 0.27% of the Firm assets.*

*As of 3/31/2020, SamCERA's investment represented 3.38% of Fund assets.*

Signed by: 

Dated:  
7/13/2020

Name of Firm:  
PIMCO

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

August 25, 2020

Agenda Item 4.13

**TO:** Board of Retirement

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

**SUBJECT:** Preliminary Financial Statements for the Fiscal Year Ended June 30, 2020

**Recommendation**

Accept the Preliminary Financial Statements for the Fiscal Year Ended June 30, 2020.

**Background**

The preliminary financial statements provide information on SamCERA's financial position as of June 30, 2020, and its operating results for the fiscal year ended June 30, 2020.

The *Statement of Fiduciary Net Position* (balance sheet) provides a snapshot of the account balance as of June 30, 2020. 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 SamCERA 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, 2020. "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, and administrative, information technology and other expenses.

**Summary**

SamCERA's financial position improved slightly over the fiscal year just ended. Its net position increased by \$86 million, or 2%, to \$4.8 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, 2020. Its assets and liabilities as of June 30, 2020, were compared to those as of June 30, 2019, to reflect changes over the fiscal year. Significant changes are discussed on the following pages.

**Statement of Fiduciary Net Position**

	Preliminary	Actual	Increase (Decrease)	
	June 30, 2020	June 30, 2019	Amount	Percentage
<b>ASSETS:</b>				
Cash and Cash Equivalents	\$ 107,927,660	\$ 33,102,412	\$ 74,825,248	226% (a)
Cash Management Overlay	54,095,321	48,011,505	6,083,816	13% (b)
Securities Lending Cash Collateral	2,423,778	403,093	2,020,685	501% (c)
Subtotal - Cash and Other Cash Related Activities	164,446,759	81,517,010	82,929,749	102%
Receivables				
Contributions	12,376,867	10,300,002	2,076,865	20%
Due from Broker for Investments Sold	43,980,792	6,640,025	37,340,767	562%
Investment Income	4,849,687	6,292,641	(1,442,954)	-23%
Securities Lending Income	2,752	12,614	(9,862)	-78%
Other Receivable	95,420	95,566	(146)	0%
Subtotal - Receivables	61,305,518	23,340,848	37,964,670	163% (d)
Prepaid Expense	7,669	11,669	(4,000)	-34%
Investments at Fair Value				
Equity	1,905,814,961	1,847,846,613	57,968,348	3%
Fixed Income	1,431,632,675	999,477,347	432,155,328	43% (e)
Alternatives	586,113,328	579,774,460	6,338,868	1%
Risk Parity	-	389,039,081	(389,039,081)	-100% (e)
Inflation Hedge	704,843,726	809,138,278	(104,294,552)	-13% (f)
Subtotal - Investment at Fair Value	4,628,404,690	4,625,275,779	3,128,911	0%
Fixed Assets, Net	5,209,398	5,979,197	(769,799)	-13%
<b>TOTAL ASSETS</b>	<b>4,859,374,034</b>	<b>4,736,124,503</b>	<b>123,249,531</b>	<b>3%</b>
<b>LIABILITIES:</b>				
Payable - Investment Management Fees	2,046,356	2,213,009	(166,653)	-8%
Due to Broker for Investments Purchased	43,981,967	9,060,929	34,921,038	385% (g)
Securities Lending Cash Collateral - Due to Borrowers	2,423,778	405,367	2,018,411	498% (h)
Other	1,350,434	1,335,263	15,171	1%
<b>TOTAL LIABILITIES</b>	<b>49,802,535</b>	<b>13,014,568</b>	<b>36,787,967</b>	<b>283%</b>
<b>NET POSITION RESTRICTED FOR PENSIONS</b>	<b>\$ 4,809,571,499</b>	<b>\$ 4,723,109,935</b>	<b>\$ 86,461,564</b>	<b>2%</b>

**Assets.** SamCERA's total assets increased by \$123 million, or 3%, due primarily to the following:

- a) Cash and cash equivalents increased by \$75 million. Before the fiscal year-end, \$33 million was received from the sale of stocks; \$20 million was held by investment managers in two separate fixed income accounts; and \$4 million was held in a terminated risk parity account which will be released upon the performance of a contractual obligation. The remaining increase was from operation and investment and will be used to meet ongoing needs.
- b) Cash management overlay increased by \$6 million. In fiscal year 2018-19, SamCERA started ramping up its currency hedge program, a financial trading strategy designed to mitigate the financial impact from exchange rate fluctuations or volatility for investments in international assets. Approximately \$7 million was added to the program this year as variation margin to complete the implementation. This amount was partially offset by a decrease of \$1 million in the cash overlay account.

- c) Securities lending cash collateral increased by \$2 million. Two new fixed income investment managers were hired during the fiscal year. The securities on loan for these two separate fixed income accounts required cash collateral from borrowers as opposed to non-cash collateral.
- d) Receivables overall increased by \$38 million. Outstanding receivables were considerably higher than last year due to the timing difference between trade and settlement date.
- e) Investments in fixed income increased by \$432 million whereas investments in risk parity decreased by \$389 million. After the latest Asset Liability Study was completed in September 2019, the Board adopted a new target allocation policy to remove risk parity from its portfolio and reallocate the assets to fixed income. The intent was to achieve a desired balance between risk and investment return. The change caused a significant increase in fixed income investments and a complete elimination of risk parity accounts in the investment portfolio.
- f) Investments in inflation hedge decreased by \$104 million. SamCERA terminated its investment in the Cushing master limited partnership (MLP) strategy, which resulted in an approximately \$75 million change year over year. The Board also decreased its target policy allocation to public real assets from 6% to 4% by making a partial redemption from the State Street Global Advisors (SSGA) Public Real Asset strategy. The overall decrease was partially offset by increased investments in real estate and private real asset funds.

**Liabilities.** SamCERA's total liabilities increased by \$37 million, or 283%. Significant changes are discussed below.

- g) Due to Brokers for Investments increased by \$35 million, primarily due to the timing difference between the trade and settlement date.
- h) Securities Lending Cash Collateral Due to Borrowers increased by \$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, 2020, 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

	<u>Preliminary</u>	<u>Actual</u>	<u>Increase (Decrease)</u>		
	<u>2,020</u>	<u>2,019</u>	<u>Amount</u>	<u>Percentage</u>	
<b>ADDITIONS:</b>					
Contributions					
Employee Contribution	\$70,630,765	\$67,695,627	\$ 2,935,138	4%	(a)
Employer Contribution	198,582,998	194,830,054	3,752,944	2%	(b)
Employer Supplemental Contribution - CSCA	-	50,668,357	(50,668,357)	-100%	(c)
Subtotal - Contributions	<u>269,213,763</u>	<u>313,194,038</u>	<u>(43,980,275)</u>	-14%	
Investment Income					
Interest and Dividends	74,684,544	71,800,374	2,884,170	4%	(d)
Net Appreciation (Depreciation) in fair value of investments	34,311,617	242,168,364	(207,856,747)	-86%	(e)
Less: Investment Expense	(37,668,940)	(42,376,557)	4,707,617	-11%	(f)
Subtotal - Investment Income	<u>71,327,221</u>	<u>271,592,181</u>	<u>(200,264,960)</u>	-74%	
Securities Lending Income					
Earnings	35,620	88,955	(53,335)	-60%	
Rebate	16,474	13,108	3,366	26%	
Fees	(14,741)	(36,070)	21,329	-59%	
Subtotal - Securities Lending Income	<u>37,353</u>	<u>65,993</u>	<u>(28,640)</u>	-43%	
Other Additions	155,562	33,309	122,253	367%	(g)
<b>Total Additions</b>	<b><u>340,733,899</u></b>	<b><u>584,885,521</u></b>	<b><u>(244,151,622)</u></b>	-42%	
<b>DEDUCTIONS:</b>					
Benefits					
Service Retirement Allowance	212,632,930	196,874,097	15,758,833	8%	(h)
Disability Retirement Allowance	27,601,908	25,211,881	2,390,027	9%	(i)
Servivor, death and other benefits	1,790,029	1,528,066	261,963	17%	
Subtotal - Benefits	<u>242,024,867</u>	<u>223,614,044</u>	<u>18,410,823</u>	8%	
Refund of Member Contributions	3,796,276	3,601,328	194,948	5%	
Administrative Expenses	6,371,363	6,026,464	344,899	6%	
Information Technology Expenses	2,079,829	2,495,264	(415,435)	-17%	(j)
<b>Total Deductions</b>	<b><u>254,272,335</u></b>	<b><u>235,737,100</u></b>	<b><u>18,535,235</u></b>	8%	
<b>Net Income</b>	<b><u>86,461,564</u></b>	<b><u>349,148,421</u></b>	<b><u>(262,686,857)</u></b>	-75%	
<b>NET POSITION RESTRICTED FOR PENSIONS:</b>					
Beginning of year	4,723,109,935	4,373,961,514	349,148,421	8%	
End of Year	<b><u>4,809,571,499</u></b>	<b><u>4,723,109,935</u></b>	<b><u>86,461,564</u></b>	2%	



**Additions.** Total additions to the Retirement Fund during the year were \$341 million, which was \$244 million, or 42% lower than last fiscal year. Significant changes are discussed below.

- a) Supplemental contribution was \$51 million lower than last fiscal year. According to the Memorandum of Understanding between the County and SamCERA, the County can make supplemental contributions to accelerate the payoff of its unfunded liability at its discretion. There were no supplemental contributions received from the County this year.
- b) Net appreciation in fair value of investments was \$208 million lower than last fiscal year. The investment return from the entire portfolio this year was adversely affected by the financial impact from COVID-19 and general manager underperformance in certain investments.
- c) Investment expense was \$5 million lower than last fiscal year, partially due to lower performance fees in alternatives and partially due to the terminations of investment managers assigned to manage risk parity funds.

**Deductions.** Total deductions from the Retirement Fund during the fiscal year was \$254 million, which was \$19 million, or 8%, higher than last fiscal year. Significant changes are explained below.

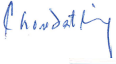



- d) Benefits were \$18 million higher than last fiscal year. The increase was mainly due to the annual cost of living adjustment and an increase in the number of retirees receiving pension benefits.
- e) Information technology expenses were \$0.4 million lower than last year. The latest upgrade to the pension administration system software started in October 2018 and was fully completed in August 2019 with the majority of the expenses incurred in fiscal year 2018-19.

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

August 25, 2020

Agenda Item 4.14

**TO:** Board of Retirement

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

**SUBJECT:** Preliminary Report on Budget-to-Actual for the Fiscal Year Ended June 30, 2020

**Recommendation**

Accept the Preliminary Report on Budget-to-Actual for the fiscal year ended June 30, 2020.

**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 2019-20 was well managed.

**Administrative Budget.** About 89% of the administrative budget (or \$6.3 million) was used during fiscal year 2019-20. This was a good indicator that expenses were properly managed and controlled. The following table summarizes all administrative expenses with explanations as to why the actual results of certain items significantly differ from the projected outcomes.

	<u>Budget FY 19-20</u>	<u>Actual FY 19-20</u>	<u>% of Budget Used</u>	<u>Under Budget</u>	<u>Under Budget %</u>	
<b>Salaries and Benefits</b>						
Salaries	\$ 3,569,155	\$ 3,396,186	95%	\$ 172,969	5%	
Benefits	<u>1,702,352</u>	<u>1,695,435</u>	100%	<u>6,917</u>	0%	
<b>Total Salaries and Benefits</b>	<b><u>5,271,507</u></b>	<b><u>5,091,621</u></b>	<b>97%</b>	<b><u>179,886</u></b>	<b>3%</b>	
<b>Services and Supplies</b>						
Board Expenses	10,000	5,200	52%	4,800	48%	
Insurance	80,000	72,100	90%	7,900	10%	
Medical Record and Hearing Services	75,000	15,170	20%	59,830	80%	(a)
Member Education	63,750	52,716	83%	11,034	17%	(b)
Education and Conference	148,320	84,243	57%	64,077	43%	(c)
Transportation and Lodging	117,350	69,989	60%	47,361	40%	(c)
Property and Equipment	33,000	19,073	58%	13,927	42%	(d)
General Office Supplies	34,000	22,626	67%	11,374	33%	(e)
Postage and Printing	28,000	20,808	74%	7,192	26%	
Leased Facilities	583,728	442,918	76%	140,810	24%	(f)
County Services	393,363	295,095	75%	98,268	25%	(g)
Audit Services	58,000	45,628	79%	12,372	21%	(h)
Other Administration	120,000	22,668	19%	97,332	81%	(i)
<b>Total Services and Supplies</b>	<b><u>1,744,511</u></b>	<b><u>1,168,234</u></b>	<b>67%</b>	<b><u>576,277</u></b>	<b>33%</b>	
<b>Total</b>	<b><u>\$7,016,018</u></b>	<b><u>\$6,259,855</u></b>	<b>89%</b>	<b><u>\$756,163</u></b>	<b>11%</b>	

**Salaries and Benefits** – Total expenses were \$5.1 million, which was closely in line with our expectations.

**Services and Supplies** – Total expenses were \$1.2 million, which was about two-thirds of the budget. The following are the areas in which the actual expenses were significantly below budget:

- a) *Medical Record and Hearing Services*. Throughout the year, only a handful of members applying for disability were sent for an independent medical evaluation based on medical advisor’s recommendation. In addition, only one formal hearing was held for a disability case.
- b) *Member Education*. Members are offered with an array of training classes to enhance their financial knowledge in retirement planning from Financial Knowledge Network, a provider specialized in financial education. The payments from “no show” registrants slightly offset the actual expenses.
- c) *Education and Conference and Transportation and Lodging*. Because of the COVID-19 pandemic, all off-site training and conferences were either canceled or conducted online once the Shelter-in-Place order took effect. This switch significantly reduced the spending on training, conferences, and related traveling expenses.

- d) *Property and Equipment.* Besides planned purchases, each year budgets are appropriated to meet unforeseen needs for acquiring or replacing office furniture and equipment. The actual needs turned out to be far below anticipated.
- e) *General Office Supplies.* Staff has been working remotely from home since the Shelter-in-Place order was initiated in late March to mitigate exposure to COVID-19. This measure reduced the usage of general office supplies to nearly zero in the 4<sup>th</sup> quarter of the fiscal year.
- f) *Leased Facilities.* SamCERA entered into a new lease agreement with Shore Center Owner LLC in 2019 for a term of eight years. As part of the exchange, SamCERA received a monthly rent credit of \$51,234 for the first three months of year 2020.
- g) *County Services.* To support its operation, SamCERA employs services from various County departments such as Election, Human Resources, Health Services, and Information Services. This year's budget allocated for election stayed intact in the absence of election activities, the budget appropriated for disability medical examination fell short of projections, and the budget designated for unforeseen needs remained untouched.
- h) *Audit Services.* Under the contract with Brown Armstrong Accountancy Corporation, SamCERA agrees to reimburse traveling and lodging expenses incurred by auditors while conducting fieldwork on-site. In response to the pandemic COVID-19, this year's interim audit was conducted remotely reducing the overall billable amount.
- i) *Other Administration.* A budget of \$100,000 under Other Administration was intended to cover legal services from an outside tax attorney whenever applicable. There was no need for such services this fiscal year.

**Technology Expenses.** About 67% of the budget were used during the fiscal year. Below is a summary of all technology expenses along with explanations for the significant variances.

	<u>Budget FY 19-20</u>	<u>Actual FY 19-20</u>	<u>% of Budget Used</u>	<u>Under Budget</u>	<u>Under Budget %</u>	
Computer Equipment and Software	\$ 100,000	\$ 71,734	72%	\$ 28,266	28%	(a)
Software License Maintenance - IT Infrastructure	1,307,340	1,013,677	78%	293,663	22%	(b)
Server - IT Infrastructure	100,000	69,667 *	70%	30,333	30%	(a)
Contract IT Services - IT Infrastructure	405,500	154,952	38%	250,548	62%	(c)
Technology Research and Development	50,000	-	0%	50,000	100%	(d)
<b>Total</b>	<b><u>\$1,962,840</u></b>	<b><u>\$1,310,030</u></b>	67%	<b><u>\$652,810</u></b>	33%	

\* A server of \$68,197 was capitalized and reported under fixed assets on financial reports for the period ended June 30, 2020.

- a) *Computer Equipment and Software and Server for IT Infrastructure.* Spending on these areas was below budget as the need for acquisition or replacement of computer equipment fell short of expectations.

- b) *Software License Maintenance for IT Infrastructure.* Majority of the budget for this item were for the pre-purchase of 2,500 service hours from Vitech (vendor of the Pension Administration Software System) to support post-implementation services in years to come. The bulk pre-purchase allowed SamCERA to complete the purchase at a discount. As a result, the actual spending was far less than anticipated.
- c) *Contract IT Services for IT Infrastructure.* Certain projects which required consulting services were put on hold due to COVID-19 closure. In addition, the consulting contract amount for the new mobile app development was moderately lower than anticipated.
- d) *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 exploit the resources allocated for R&D as priorities were given to increasing needs for IT support since teleworking became a norm amid the pandemic.

**Professional Services Expenses.** For the fiscal year ended June 30, 2020, the actual professional service expenses totaled \$28 million, or 64.2 basis points (or one hundredth of one percent) of the total fund. Overall expenses were below projections. Below is a summary of professional services expenses incurred during the fiscal year.

<b>Investment Management &amp; Other Professional Services</b>				
<b>Service</b>	<b>Actual Fee (bps)</b>	<b>Projected Fee FY 19-20</b>	<b>Actual Fee FY 19-20</b>	<b>Under (Over) Budget</b>
Investment Management	59.9	\$ 26,878,320	\$ 16,412,120	39%
Other Professional Services	4.3	960,000	1,024,713	-7%
<b>TOTAL</b>	<b>64.2</b>	<b>\$ 27,838,320</b>	<b>\$ 17,436,833</b>	<b>37%</b>

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

<b>Investment Management Services</b>				
<b>Investment</b>	<b>Actual Fee (bps)</b>	<b>Projected Fee FY 19-20</b>	<b>Actual Fee FY 19-20</b>	<b>Under (Over) Budget</b>
Total Public Equity	41.6	\$ 5,209,089	\$ 3,965,082	24% (a)
Total Fixed Income	65.7	4,526,646	4,705,144	-4%
Total Risk Parity	52.3	1,436,836	1,057,423	26% (b)
Total Alternative Assets	83.0	10,773,698	2,431,443	77% (c)
Total Inflation Hedge	112.4	4,747,051	3,960,868	17% (d)
Total Cash Overlay	12.9	185,000	292,160	-58% (e)
<b>TOTAL</b>	<b>59.9</b>	<b>\$ 26,878,320</b>	<b>\$ 16,412,120</b>	<b>39%</b>

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

- a) *Public Equity.* The management fees for Public Equity were under budget due to the overestimation of one U.S. equity fund.

- b) *Risk Parity*. To balance risk, investment return, and complexity of the portfolio, the Board decided to remove Risk Parity from the target allocation policy. The redeployment of Risk Parity funds commenced in February 2020 and completed in May 2020. As a result, the projected annual management fees were not fully depleted.
- c) *Alternative Assets*. Due to the overestimation of performance fees for hedge funds and private equity funds, the actual fees were far below anticipated.
- d) *Inflation Hedge*. Total fees were under budget primarily due to overestimating management fees for private real assets and performance fees for one fund.
- e) *Cash Overlay*. The overall management fee was over budget since SamCERA implemented a new program, the *currency overlay*, that was not accounted for in the budget process. The currency overlay program is designed to mitigate the financial impact on an investment portfolio from exchange rate fluctuations when investing in international assets that are denominated in a foreign currency.

Other professional service fees, which are primarily based on contractual agreements, were mostly in line with expectations. The triennial experience study, which began in May 2020 and completed in July 2020, were simultaneously performed by Milliman and Cherion. The budget for this study was included in fiscal year 2020-21 rather than fiscal year 2019-20. The budget overrun was due to the fees paid to Milliman and Cherion for the services performed through year-end.

<b>Other Professional Services</b>					
<b>Contractor</b>	<b>Service</b>	<b>Actual Fee (bps)</b>	<b>Projected Fee FY 19-20</b>	<b>Actual Fee FY 19-20</b>	<b>Under (Over) Budget</b>
Milliman Inc.	Actuarial Consulting	0.6	\$ 100,000	\$ 142,790	-43%
Cherion Inc.	Actuarial Audit Consulting	0.1	-	35,318	N/A
Verus Investments	Investment Consulting	2.1	510,000	494,241	3%
Northern Trust	Custodian	1.5	350,000	352,364	-1%
	<b>TOTAL</b>	<b>4.3</b>	<b>\$ 960,000</b>	<b>\$ 1,024,713</b>	<b>-7%</b>

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

August 25, 2020

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, 2020

**Recommendation**

Accept the preliminary performance report dated July 31, 2020.

**Background**

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

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

**Discussion**

The fund's net preliminary return for July was 3.7%, bringing the preliminary trailing twelve-month net return ending July 2020 to 2.7%. The preliminary twelve-month net return is below SamCERA's Plan Benchmark return of 5.0% and SamCERA's Actuarial Assumed Earnings Rate of 6.5%.

Global markets continued their risk-on rally on the back of unprecedented monetary and fiscal stimulus. The U.S. equity market (measured by the S&P 500 Index) was up 5.6% (+2.4% YTD). Small-cap stocks were up 2.8% (-10.6% YTD). International markets were also higher on the month. Developed international equity (as measured by MSCI EAFE) was up 2.3% (-9.3% YTD), while emerging markets were up 8.9% (-1.7% YTD).

The advance estimate for second quarter real GDP growth declined at an annual rate of -32.9% in the second quarter. To put this historical decline in context, the worst annualized quarterly decline during the Global Financial Crisis was -8.4% in the 4<sup>th</sup> quarter of 2008. Outside of the GDP report, economic data continued to slowly improve in July from low levels. The ISM Manufacturing Index increased the most since March 2019, while the U.S. labor market continued healing as the U.S. unemployment rate fell from 11.1% in June to 10.2% in July.

The general U.S. fixed income market was higher by 1.5%, as credit spreads narrowed and interest rates were lower across the yield curve. The 10-year U.S. Treasury yield was lower by 13 basis points during the month and ended at 0.53% by month-end. High Yield returns were up 4.7% as credit spreads narrowed.

**Attachments**

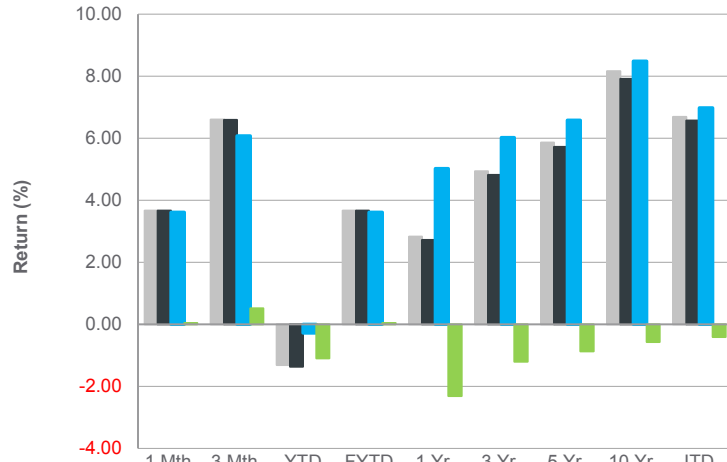
Northern Trust Monthly Preliminary Performance Report  
Verus Capital Market Update



# San Mateo County Composite Return Summary July 31, 2020

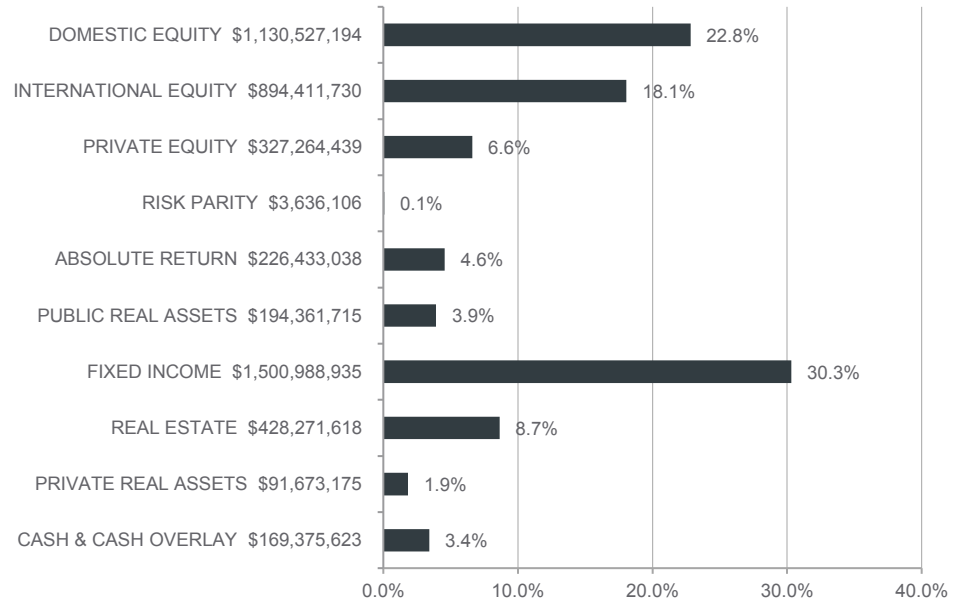


**Total Fund Performance**

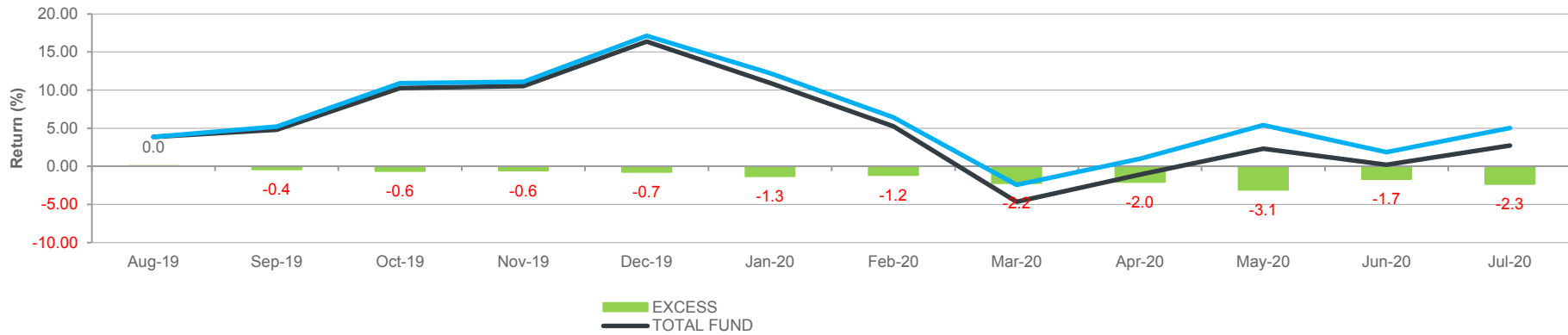


	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	10 Yr.	ITD
TOTAL FUND - Gross	3.7	6.6	-1.3	3.7	2.8	4.9	5.9	8.2	6.7
TOTAL FUND - Net	3.7	6.6	-1.4	3.7	2.7	4.8	5.7	7.9	6.6
SAMCERA PLAN BENCHMARK	3.6	6.1	-0.3	3.6	5.0	6.0	6.6	8.5	7.0
Excess (Net)	0.0	0.5	-1.1	0.0	-2.3	-1.2	-0.9	-0.6	-0.4

**Asset Allocation**

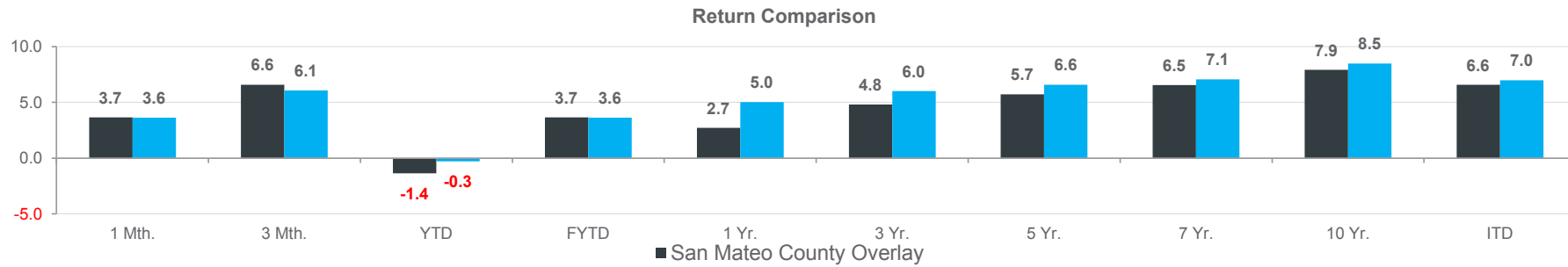


**Rolling Month End Annual Returns**



# San Mateo County Composite Return Summary

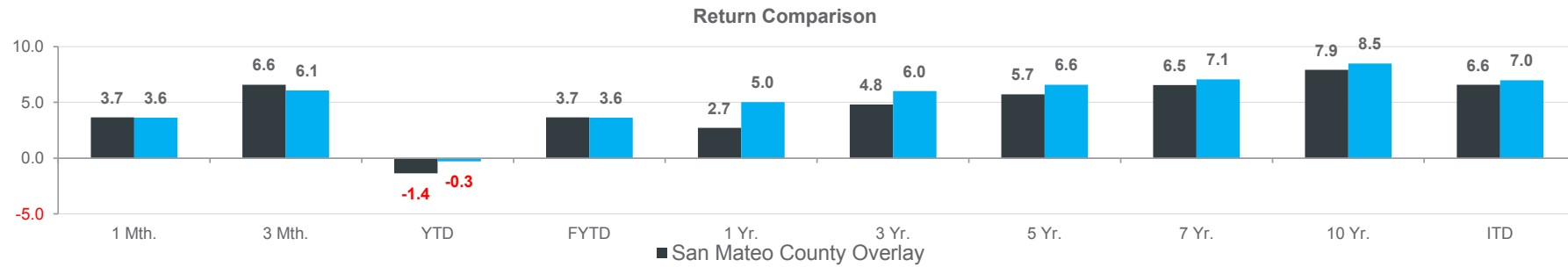
July 31, 2020



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	4,950,044,380	3.7	6.6	-1.4	3.7	2.7	4.8	5.7	6.5	7.9	6.6
Samcera Total Plan Benchmark		3.6	6.1	-0.3	3.6	5.0	6.0	6.6	7.1	8.5	7.0
Excess		0.0	0.5	-1.1	0.0	-2.3	-1.2	-0.9	-0.5	-0.6	-0.4
San Mateo Ex-Clifton Overlay	4,930,970,839	3.7	6.5	-1.4	3.7	2.7	4.7	5.6	6.4	7.9	6.5
Samcera Total Plan Benchmark		3.6	6.1	-0.3	3.6	5.0	6.0	6.6	7.1	8.5	7.0
Excess		0.0	0.4	-1.1	0.0	-2.4	-1.3	-1.0	-0.6	-0.6	-0.5
Total Equity	2,024,938,924	4.4	12.5	-3.0	4.4	4.7	6.3	7.3	8.1	9.8	7.6
Samcera Total Equity Benchmark		4.5	12.5	-2.2	4.5	6.1	6.8	8.3	9.2	10.7	8.3
Excess		-0.0	-0.1	-0.9	-0.0	-1.3	-0.5	-1.0	-1.1	-0.9	-0.6
Fixed Income	1,500,988,935	1.6	4.0	3.8	1.6	5.8	4.5	4.7	4.5	5.0	5.6
Samcera Fixed Income Benchmark		2.4	4.5	5.7	2.4	8.7	5.5	4.9	4.3	4.1	5.2
Excess		-0.8	-0.5	-2.0	-0.8	-2.9	-0.9	-0.2	0.2	0.9	0.4
Risk Parity	3,636,106	0.0	0.0	-8.5	0.0	-5.0	3.6	4.6	5.4	--	5.4
Samcera Risk Parity Benchmark		4.1	9.4	2.1	4.1	8.0	6.5	7.4	8.0	--	8.4
Excess		-4.1	-9.4	-10.6	-4.1	-13.0	-2.9	-2.8	-2.6	--	-2.9

# San Mateo County Composite Return Summary

July 31, 2020



Composite Returns (Net of Manager Fees)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
Alternatives	553,697,477	11.5	5.0	8.1	11.5	6.6	7.3	6.9	6.8	-2.5	-1.0
Samcera Alternatives Benchmark		6.8	-3.9	1.8	6.8	4.4	8.2	8.1	7.8	9.2	7.7
Excess		4.6	8.9	6.4	4.6	2.2	-0.9	-1.2	-1.0	-11.6	-8.7
Inflation Hedge	714,306,507	1.3	-0.5	-10.7	1.3	-8.9	-0.8	--	--	--	3.0
SamCERA Inflation Hedge Index		1.9	0.9	-5.8	1.9	-2.7	2.6	--	--	--	4.5
Excess		-0.6	-1.4	-4.9	-0.6	-6.2	-3.3	--	--	--	-1.4
Cash	169,375,623	0.2	0.3	0.6	0.2	1.0	1.0	0.9	0.8	0.7	1.9
Samcera Cash Benchmark		0.0	0.0	0.6	0.0	1.5	1.7	1.2	0.9	0.6	1.8
Excess		0.1	0.2	-0.0	0.1	-0.5	-0.7	-0.3	-0.1	0.1	0.0

# San Mateo County Composite Return Summary

July 31, 2020



Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
Total Equity	2,024,938,924	4.4	12.5	-3.0	4.4	4.7	6.3	7.3	8.1	9.8	7.6
Samcera Total Equity Benchmark		4.5	12.5	-2.2	4.5	6.1	6.8	8.3	9.2	10.7	8.3
Excess		-0.0	-0.1	-0.9	-0.0	-1.3	-0.5	-1.0	-1.1	-0.9	-0.6
Domestic Equity	1,130,527,194	5.2	12.2	-1.0	5.2	6.8	9.6	9.8	10.6	12.6	8.7
Samcera Dom. Equity Benchmark		5.7	13.9	2.0	5.7	10.9	11.4	10.8	11.5	13.5	9.2
Excess		-0.4	-1.7	-3.0	-0.4	-4.1	-1.7	-1.0	-1.0	-0.9	-0.5
Large Cap Equity	1,054,051,853	5.3	12.0	0.4	5.3	8.4	10.8	10.8	11.6	13.2	9.5
Russell 1000		5.9	13.9	2.9	5.9	12.0	12.0	11.3	12.1	13.9	9.9
Excess		-0.5	-1.9	-2.5	-0.5	-3.7	-1.3	-0.5	-0.5	-0.6	-0.4
Blackrock Russell 1000	538,200,790	5.9	14.0	3.0	5.9	12.2	12.1	--	--	--	13.2
Russell 1000		5.9	13.9	2.9	5.9	12.0	12.0	--	--	--	13.1
Excess		0.0	0.1	0.2	0.0	0.2	0.0	--	--	--	0.1
DE Shaw Commingled Fund	159,822,565	5.4	11.8	-0.3	5.4	8.6	10.4	10.9	--	--	10.8
Russell 1000		5.9	13.9	2.9	5.9	12.0	12.0	11.3	--	--	10.8
Excess		-0.5	-2.1	-3.2	-0.5	-3.4	-1.6	-0.4	--	--	-0.0
Acadian US MGD V-SL	174,185,449	3.9	7.5	-6.3	3.9	-0.7	--	--	--	--	11.8
Russell 1000		5.9	13.9	2.9	5.9	12.0	--	--	--	--	21.4
Excess		-1.9	-6.4	-9.2	-1.9	-12.8	--	--	--	--	-9.6
Panagora Defuseq -SL	181,843,048	5.1	10.0	-4.0	5.1	1.4	--	--	--	--	15.8
Russell 1000		5.9	13.9	2.9	5.9	12.0	--	--	--	--	21.4
Excess		-0.7	-3.9	-6.8	-0.7	-10.6	--	--	--	--	-5.6
Domestic Equity Overlay	1,274,610	6.0	23.6	--	6.0	--	--	--	--	--	23.6
ICE BofAML US 3-Month Treasury Bill		0.0	0.0	--	0.0	--	--	--	--	--	0.0
Excess		6.0	23.6	--	6.0	--	--	--	--	--	23.6
Small Cap Equity	75,200,731	3.8	13.4	-18.2	3.8	-12.1	-2.3	0.8	2.7	7.7	5.2
Russell 2000		2.8	13.3	-10.6	2.8	-4.6	2.7	5.1	6.6	10.1	7.1
Excess		1.0	0.1	-7.7	1.0	-7.5	-5.0	-4.3	-3.8	-2.3	-2.0

# San Mateo County Composite Return Summary

July 31, 2020



Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
QMA US Small Cap	75,200,731	3.8	13.4	-18.2	3.8	-12.1	-2.3	--	--	--	2.6
Russell 2000		2.8	13.3	-10.6	2.8	-4.6	2.7	--	--	--	6.1
Excess		1.0	0.1	-7.7	1.0	-7.5	-5.0	--	--	--	-3.5
International Equity	894,411,730	3.4	12.8	-5.4	3.4	2.3	2.3	3.9	4.5	5.0	5.3
SamCERA Custom Hedge Intl		3.0	10.8	-7.1	3.0	0.3	1.4	3.4	3.9	4.7	4.7
Excess		0.4	2.0	1.7	0.4	2.0	1.0	0.6	0.6	0.3	0.5
Baillie Gifford	309,549,508	6.4	22.0	7.4	6.4	18.8	8.5	8.5	8.2	--	8.9
MSCI ACWI ex USA Growth		6.8	17.2	4.2	6.8	13.6	7.6	7.3	7.1	--	--
Excess		-0.4	4.9	3.2	-0.4	5.2	1.0	1.2	1.0	--	--
Blackrock MSCI ACWI ex US IMI	305,002,138	4.4	--	--	4.4	--	--	--	--	--	1.0
MS AC WidxUS IMI Nt		4.5	--	--	4.5	--	--	--	--	--	1.3
Excess		-0.1	--	--	-0.1	--	--	--	--	--	-0.3
Mondrian Investment Partners	275,349,659	3.3	9.0	-16.4	3.3	-8.3	-2.4	0.2	2.0	3.5	4.1
MSCI ACWI xUSA Value		2.2	8.5	-17.4	2.2	-10.9	-3.9	-0.1	1.1	2.6	3.8
Excess		1.1	0.5	1.0	1.1	2.6	1.5	0.3	0.9	0.9	0.3
EV Parametric EM	0	--	--	--	--	--	--	--	--	--	--
MSCI Emerging Markets GD		--	--	--	--	--	--	--	--	--	--
Excess		--	--	--	--	--	--	--	--	--	--
Currency Hedge Futures	316,909,674	3.7	5.1	--	3.7	--	--	--	--	--	5.1
ICE BofAML US 3-Month Treasury Bill		0.0	0.0	--	0.0	--	--	--	--	--	0.0
Excess		3.7	5.1	--	3.7	--	--	--	--	--	5.1
Currency Hedge Futures Offsets	316,909,674	0.0	0.0	--	0.0	--	--	--	--	--	0.0
ICE BofAML US 3-Month Treasury Bill		0.0	0.0	--	0.0	--	--	--	--	--	0.0
Excess		-0.0	-0.0	--	-0.0	--	--	--	--	--	-0.0
International Equity Overlay	4,510,425	10.3	23.8	--	10.3	--	--	--	--	--	23.8
ICE BofAML US 3-Month Treasury Bill		0.0	0.0	--	0.0	--	--	--	--	--	0.0
Excess		10.3	23.8	--	10.3	--	--	--	--	--	23.8

# San Mateo County Composite Return Summary

July 31, 2020



Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
Fixed Income	1,500,988,935	1.6	4.0	3.8	1.6	5.8	4.5	4.7	4.5	5.0	5.6
Samcera Fixed Income Benchmark		2.4	4.5	5.7	2.4	8.7	5.5	4.9	4.3	4.1	5.2
Excess		-0.8	-0.5	-2.0	-0.8	-2.9	-0.9	-0.2	0.2	0.9	0.4
Core Fixed Income	1,019,386,884	1.6	4.0	6.6	1.6	9.1	5.1	4.7	4.6	4.7	5.5
BBG Barclays US Aggregate		1.5	2.6	7.7	1.5	10.1	5.7	4.5	4.2	3.9	5.2
Excess		0.2	1.4	-1.1	0.2	-1.0	-0.6	0.2	0.4	0.8	0.3
FIAM Core Bond	269,315,853	2.0	4.9	9.0	2.0	11.7	6.4	5.2	4.8	4.7	5.2
BBG Barclays US Aggregate		1.5	2.6	7.7	1.5	10.1	5.7	4.5	4.2	3.9	4.7
Excess		0.5	2.3	1.3	0.5	1.5	0.7	0.7	0.7	0.8	0.5
Western Total Return	171,430,718	2.3	7.4	2.1	2.3	5.9	3.9	4.6	--	--	4.6
BBG Barclays US Aggregate		1.5	2.6	7.7	1.5	10.1	5.7	4.5	--	--	4.5
Excess		0.8	4.8	-5.6	0.8	-4.3	-1.8	0.2	--	--	0.2
Blackrock Inter Gov	140,661,509	0.3	0.7	6.3	0.3	7.8	4.3	--	--	--	4.0
BBG Barclays US Aggregate		1.5	2.6	7.7	1.5	10.1	5.7	--	--	--	5.6
Excess		-1.2	-1.9	-1.4	-1.2	-2.4	-1.4	--	--	--	-1.6
DoubleLine	221,008,962	1.8	3.8	--	1.8	--	--	--	--	--	5.4
BBG Barclays US Aggregate		1.5	2.6	--	1.5	--	--	--	--	--	3.8
Excess		0.3	1.2	--	0.3	--	--	--	--	--	1.6
NISA Core Bond	205,855,685	1.5	3.1	--	1.5	--	--	--	--	--	3.1
BBG Barclays US Aggregate		1.5	2.6	--	1.5	--	--	--	--	--	2.6
Excess		0.0	0.5	--	0.0	--	--	--	--	--	0.5
Core Fixed Income Overlay	11,114,156	0.6	1.2	--	0.6	--	--	--	--	--	1.2
ICE BofAML US 3-Month Treasury Bill		0.0	0.0	--	0.0	--	--	--	--	--	0.0
Excess		0.6	1.2	--	0.6	--	--	--	--	--	1.2
Opportunistic Credit	481,602,051	1.5	4.2	-1.8	1.5	-0.5	3.4	5.2	5.5	7.7	8.1
BB Barc BA Intermediate HY Ind		4.3	8.7	3.4	4.3	7.1	5.5	6.0	5.8	6.7	7.3
Excess		-2.9	-4.5	-5.2	-2.9	-7.7	-2.1	-0.8	-0.3	0.9	0.8

# San Mateo County Composite Return Summary

July 31, 2020



Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
Pimco Private Income	37,495,209	0.0	-5.9	-4.3	0.0	-1.4	--	--	--	--	-1.1
BB Barc BA Intermediate HY Ind		4.3	8.7	3.4	4.3	7.1	--	--	--	--	8.0
Excess		-4.3	-14.5	-7.7	-4.3	-8.6	--	--	--	--	-9.1
AG CREDIT SOL FU LP	10,867,096	0.0	-8.1	6.2	0.0	--	--	--	--	--	6.2
BB Barc BA Intermediate HY Ind		4.3	8.7	3.4	4.3	--	--	--	--	--	3.4
Excess		-4.3	-16.7	2.9	-4.3	--	--	--	--	--	2.9
AG CSF ANX DISLOC FD	13,250,000	0.0	0.0	--	0.0	--	--	--	--	--	0.0
BB Barc BA Intermediate HY Ind		4.3	8.7	--	4.3	--	--	--	--	--	14.9
Excess		-4.3	-8.6	--	-4.3	--	--	--	--	--	-14.9
AG Opportunistic Whole Loan	3,063,365	0.0	-24.2	-22.3	0.0	-14.5	8.3	8.2	--	--	6.2
BB Barc BA Intermediate HY Ind		4.3	8.7	3.4	4.3	7.1	5.5	6.0	--	--	5.3
Excess		-4.3	-32.9	-25.7	-4.3	-21.7	2.8	2.2	--	--	0.8
Angelo Gordon	368,962	0.0	-16.3	-14.3	0.0	-5.3	15.0	11.6	11.7	--	11.7
BB Barc BA Intermediate HY Ind		4.3	8.7	3.4	4.3	7.1	5.5	6.0	5.8	--	5.6
Excess		-4.3	-25.0	-17.6	-4.3	-12.5	9.5	5.6	5.9	--	6.0
Blackrock Direct Lending Feede	3,495,374	0.0	-0.5	-7.5	0.0	-7.5	--	--	--	--	-6.4
BB Barc BA Intermediate HY Ind		4.3	8.7	3.4	4.3	7.1	--	--	--	--	8.9
Excess		-4.3	-9.2	-10.8	-4.3	-14.6	--	--	--	--	-15.3
Beach Point Select Fund	72,964,674	0.0	7.0	-2.8	0.0	-0.3	4.0	5.9	--	--	6.4
BB Barc BA Intermediate HY Ind		4.3	8.7	3.4	4.3	7.1	5.5	6.0	--	--	5.7
Excess		-4.3	-1.6	-6.1	-4.3	-7.5	-1.5	-0.1	--	--	0.7
Brigade Cap Mngmt	87,223,006	3.5	12.1	-3.7	3.5	-4.1	0.5	3.6	3.3	5.3	5.3
BB Barc BA Intermediate HY Ind		4.3	8.7	3.4	4.3	7.1	5.5	6.0	5.8	6.7	6.7
Excess		-0.9	3.5	-7.1	-0.9	-11.2	-5.0	-2.3	-2.4	-1.5	-1.5
White Oak Yield Spec	31,881,588	0.0	-0.9	1.4	0.0	4.5	5.1	--	--	--	--
BB Barc BA Intermediate HY Ind		4.3	8.7	3.4	4.3	7.1	5.5	--	--	--	6.0
Excess		-4.3	-9.5	-1.9	-4.3	-2.7	-0.4	--	--	--	--

# San Mateo County Composite Return Summary

July 31, 2020



Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
PIMCO Div. Income Fund	128,925,721	3.0	7.6	2.1	3.0	4.4	5.1	--	--	--	5.1
BB Barc BA Intermediate HY Ind		4.3	8.7	3.4	4.3	7.1	5.5	--	--	--	5.5
Excess		-1.3	-1.1	-1.3	-1.3	-2.7	-0.4	--	--	--	-0.4
TCP Direct Lending VIII	33,317,990	0.0	2.9	0.4	0.0	2.5	5.0	--	--	--	--
BB Barc BA Intermediate HY Ind		4.3	8.7	3.4	4.3	7.1	5.5	--	--	--	6.5
Excess		-4.3	-5.8	-3.0	-4.3	-4.6	-0.5	--	--	--	--
Franklin Templeton	58,749,065	0.3	-1.9	-7.3	0.3	-10.7	-2.1	0.2	0.9	--	2.4
BB Barclays Multiverse Index		3.3	4.9	5.9	3.3	7.5	4.2	4.3	2.9	--	2.8
Excess		-2.9	-6.8	-13.2	-2.9	-18.2	-6.3	-4.0	-2.0	--	-0.4
Risk Parity	3,636,106	0.0	0.0	-8.5	0.0	-5.0	3.6	4.6	5.4	--	5.4
Samcera Risk Parity Benchmark		4.1	9.4	2.1	4.1	8.0	6.5	7.4	8.0	--	8.4
Excess		-4.1	-9.4	-10.6	-4.1	-13.0	-2.9	-2.8	-2.6	--	-2.9
AQR Global Risk III	1,300	0.0	0.0	-11.1	0.0	-7.2	3.1	3.9	4.1	--	4.5
Samcera Risk Parity Benchmark		4.1	9.4	2.1	4.1	8.0	6.5	7.4	8.0	--	8.4
Excess		-4.1	-9.4	-13.2	-4.1	-15.1	-3.4	-3.5	-3.9	--	-3.9
Panagora	3,634,806	0.0	0.0	-5.2	0.0	-2.4	4.3	5.3	--	--	5.4
Samcera Risk Parity Benchmark		4.1	9.4	2.1	4.1	8.0	6.5	7.4	--	--	7.1
Excess		-4.1	-9.4	-7.3	-4.1	-10.3	-2.2	-2.0	--	--	-1.8
Alternatives	553,697,477	11.5	5.0	8.1	11.5	6.6	7.3	6.9	6.8	-2.5	-1.0
Samcera Alternatives Benchmark		6.8	-3.9	1.8	6.8	4.4	8.2	8.1	7.8	9.2	7.7
Excess		4.6	8.9	6.4	4.6	2.2	-0.9	-1.2	-1.0	-11.6	-8.7
Private Equity	327,264,439	20.0	8.3	26.2	20.0	25.9	21.7	17.4	18.3	--	-11.5
Samcera PE Benchmark		13.3	-9.6	-0.5	13.3	1.9	9.5	11.1	12.7	--	14.7
Excess		6.7	17.8	26.7	6.7	24.0	12.2	6.4	5.6	--	-26.2
Absolute Return	226,433,038	1.4	1.5	-11.0	1.4	-13.6	-7.6	-2.8	0.1	--	0.6
Samcera LIBOR + 4%		0.3	1.0	2.9	0.3	5.4	5.8	5.3	5.0	--	4.8
Excess		1.0	0.5	-13.9	1.0	-19.1	-13.5	-8.1	-4.9	--	-4.2



# San Mateo County Composite Return Summary

July 31, 2020



Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
AQR Delta XN	5,036,239	0.0	-5.4	-27.0	0.0	-31.6	-16.8	-8.7	-4.3	--	-2.7
Samcera LIBOR + 4%		0.3	1.0	2.9	0.3	5.4	5.8	5.3	5.0	--	4.8
Excess		-0.3	-6.4	-29.9	-0.3	-37.1	-22.6	-14.0	-9.2	--	-7.5
Aberdeen Std GARS	77,632,145	2.9	5.4	3.2	2.9	5.2	2.5	--	--	--	1.5
Samcera LIBOR + 4%		0.3	1.0	2.9	0.3	5.4	5.8	--	--	--	5.3
Excess		2.5	4.4	0.3	2.5	-0.3	-3.3	--	--	--	-3.8
Graham Global Investment	72,465,607	0.0	0.9	--	0.0	--	--	--	--	--	-3.4
Samcera LIBOR +4%		0.3	1.0	--	0.3	--	--	--	--	--	2.4
Excess		-0.3	-0.2	--	-0.3	--	--	--	--	--	-5.8
PIMCO MAARS Fund L.P.	71,299,046	1.5	3.2	--	1.5	--	--	--	--	--	3.4
Samcera LIBOR +4%		0.3	1.0	--	0.3	--	--	--	--	--	1.5
Excess		1.1	2.2	--	1.1	--	--	--	--	--	1.9
Inflation Hedge	714,306,507	1.3	-0.5	-10.7	1.3	-8.9	-0.8	--	--	--	3.0
SamCERA Inflation Hedge Index		1.9	0.9	-5.8	1.9	-2.7	2.6	--	--	--	4.5
Excess		-0.6	-1.4	-4.9	-0.6	-6.2	-3.3	--	--	--	-1.4
Real Estate	428,271,618	0.2	-3.0	0.4	0.2	2.4	5.6	--	--	--	6.9
Samcera NCREIF ODCE EW (gross)		0.0	-1.3	-0.4	0.0	2.6	6.0	--	--	--	6.5
Excess		0.2	-1.7	0.7	0.2	-0.1	-0.4	--	--	--	0.4
Invesco Core Real Estate	263,266,166	0.8	-4.5	-0.9	0.8	1.0	5.2	6.8	8.7	10.6	7.4
Samcera NCREIF ODCE EW (gross)		0.0	-1.3	-0.4	0.0	2.6	6.0	7.6	9.3	10.9	7.4
Excess		0.8	-3.3	-0.5	0.8	-1.6	-0.8	-0.8	-0.5	-0.3	-0.0
Invesco US Val IV	14,581,505	-4.5	-4.5	0.6	-4.5	5.7	9.9	--	--	--	10.8
Samcera NCREIF ODCE EW (gross)		0.0	-1.3	-0.4	0.0	2.6	6.0	--	--	--	7.4
Excess		-4.5	-3.3	1.0	-4.5	3.1	3.9	--	--	--	3.4
PGIM Real Estate US Debt Fund	85,089,899	0.0	0.9	3.4	0.0	5.1	4.9	--	--	--	4.8
Samcera NCREIF ODCE EW (gross)		0.0	-1.3	-0.4	0.0	2.6	6.0	--	--	--	5.8
Excess		0.0	2.2	3.8	0.0	2.5	-1.1	--	--	--	-1.0

# San Mateo County Composite Return Summary

July 31, 2020

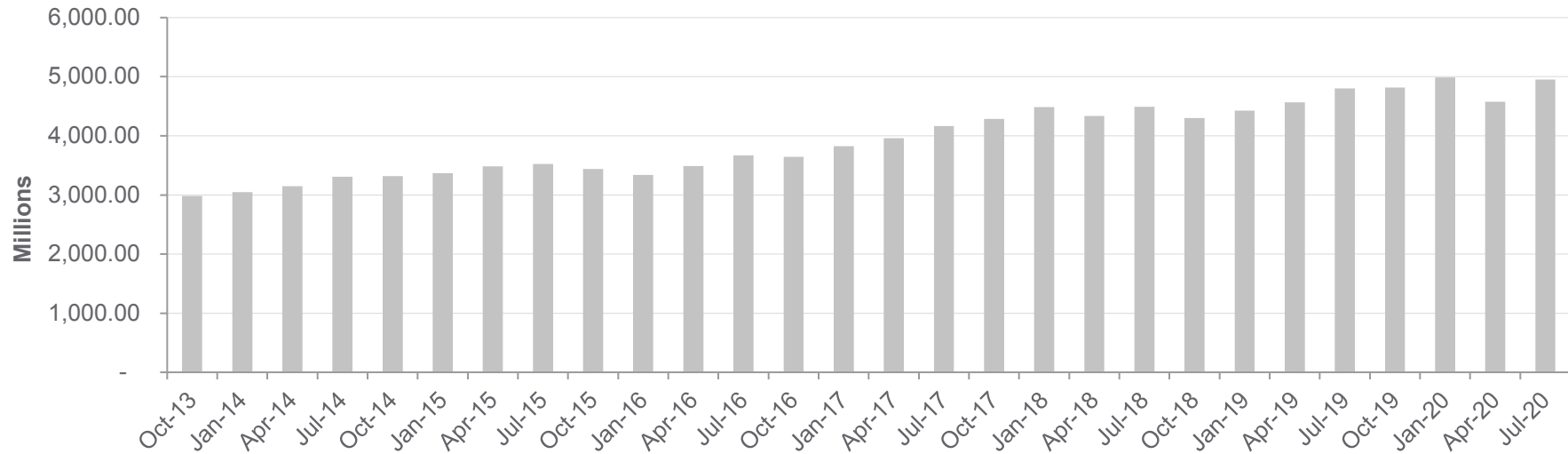


Composite Returns (NET)	Market Value (\$)	1 Mth.	3 Mth.	YTD	FYTD	1 Yr.	3 Yr.	5 Yr.	7 Yr.	10 Yr.	ITD
Invesco US VAL V	14,928,799	-3.8	-3.8	1.6	-3.8	7.8	--	--	--	--	2.0
Samcera NCREIF ODCE EW (gross)		0.0	-1.3	-0.4	0.0	2.6	--	--	--	--	--
Excess		-3.8	-2.6	2.0	-3.8	5.3	--	--	--	--	--
Harrison Street Core Property	50,405,248	-0.3	-0.1	0.8	-0.3	--	--	--	--	--	0.8
Samcera NCREIF ODCE EW (gross)		0.0	-1.3	-0.4	0.0	--	--	--	--	--	-0.4
Excess		-0.3	1.2	1.2	-0.3	--	--	--	--	--	1.2
Public Real Assets	194,361,715	4.2	7.1	-24.4	4.2	-22.2	-7.0	--	--	--	--
SamCera Liquid Real Asset Inde		4.2	8.7	-14.2	4.2	-10.0	-1.5	--	--	--	3.3
Excess		-0.0	-1.6	-10.2	-0.0	-12.2	-5.4	--	--	--	--
SSGA CST REAL ASSET NL	194,361,715	4.2	7.2	-14.7	4.2	-10.7	-2.0	--	--	--	--
SamCera Liquid Real Asset Inde		4.2	8.7	-14.2	4.2	-10.0	-1.5	--	--	--	1.6
Excess		-0.0	-1.5	-0.5	-0.0	-0.7	-0.5	--	--	--	--
Private Real Assets	91,673,175	0.5	-3.3	-4.6	0.5	-5.5	-5.6	--	--	--	5.5
SamCERA Private Real Asset Idx		5.1	-10.0	-8.1	5.1	-7.5	0.8	--	--	--	3.9
Excess		-4.6	6.8	3.5	-4.6	2.0	-6.4	--	--	--	1.7
Cash Overlay	19,073,542	0.1	0.2	--	0.1	--	--	--	--	--	0.2
ICE BofAML US 3-Month Treasury Bill		0.0	0.0	--	0.0	--	--	--	--	--	0.0
Excess		0.1	0.1	--	0.1	--	--	--	--	--	0.1
General Account	83,072,256	0.0	0.1	0.5	0.0	1.4	1.8	1.3	1.0	0.8	2.0
Transition Account	5,027	--	--	--	--	--	--	--	--	--	--
County Treasury Pool	43,973,698	0.2	0.2	1.0	0.2	1.7	1.8	1.4	1.2	1.1	2.6
Currency Hedge Cash Overlay	23,251,100	0.0	0.1	--	0.0	--	--	--	--	--	0.1
San Mateo County Overlay	4,950,044,380	3.7	6.6	-1.4	3.7	2.7	4.8	5.7	6.5	7.9	6.6
Samcera Total Plan Benchmark		3.6	6.1	-0.3	3.6	5.0	6.0	6.6	7.1	8.5	7.0
Excess		0.0	0.5	-1.1	0.0	-2.3	-1.2	-0.9	-0.5	-0.6	-0.4

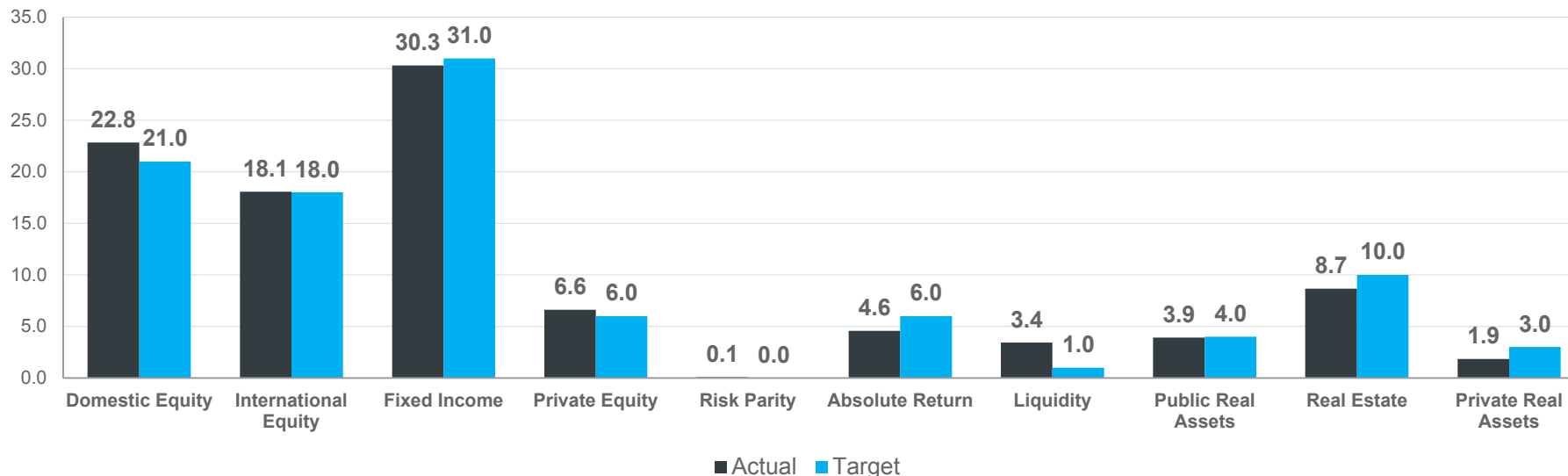
**Record of Asset Growth**

	Three Months	One Year
<b>TOTAL FUND</b>		
Beginning Market Value	4,578,378,139	4,801,649,101
Contributions	400,939,605	549,240,564
Withdrawals	-330,276,771	-528,446,943
Income Received	16,859,307	60,721,642
Gain/Loss	285,001,609	68,713,355
Ending Market Value	4,950,044,380	4,950,044,380

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

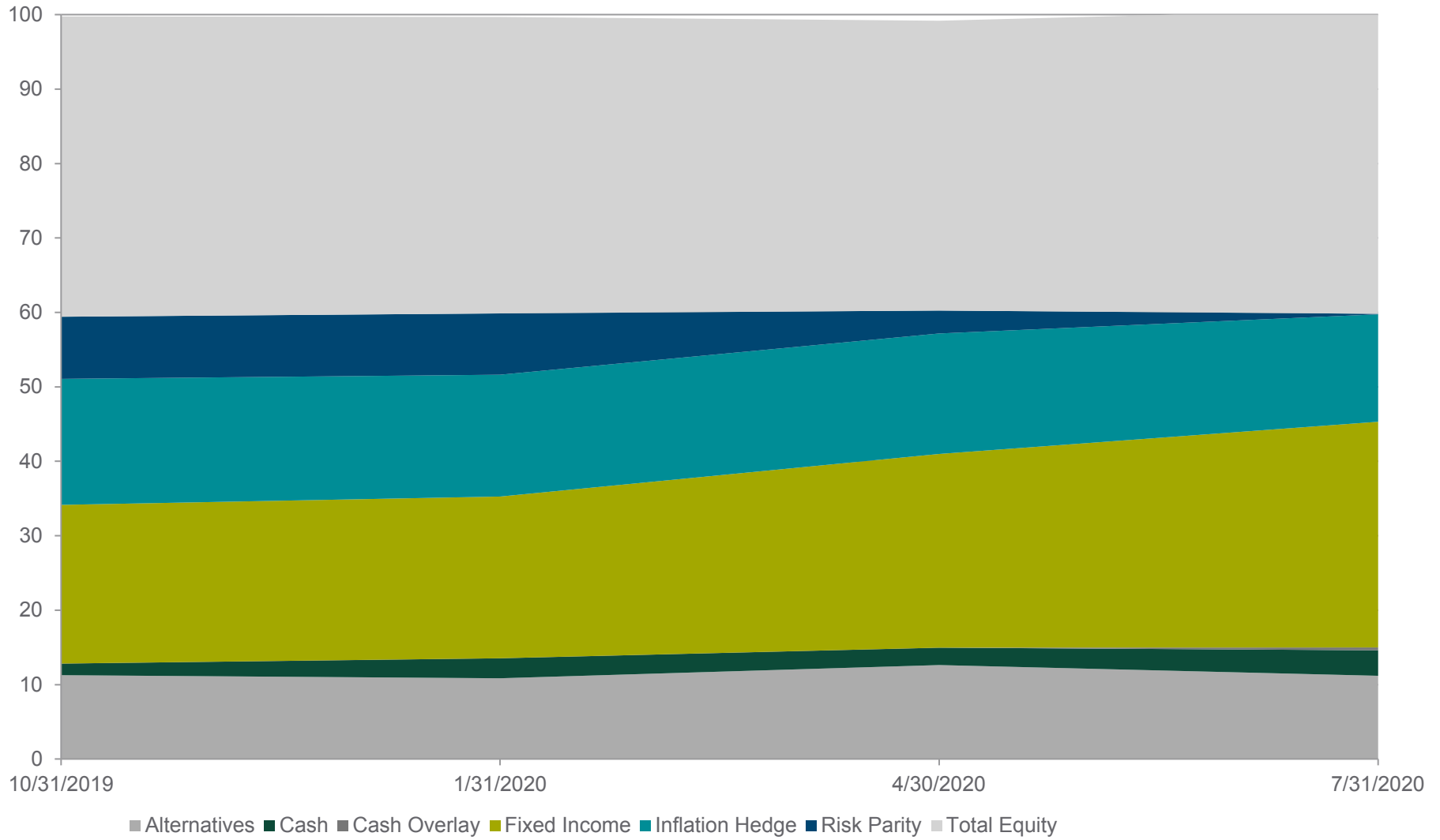


Actual vs Target Weights

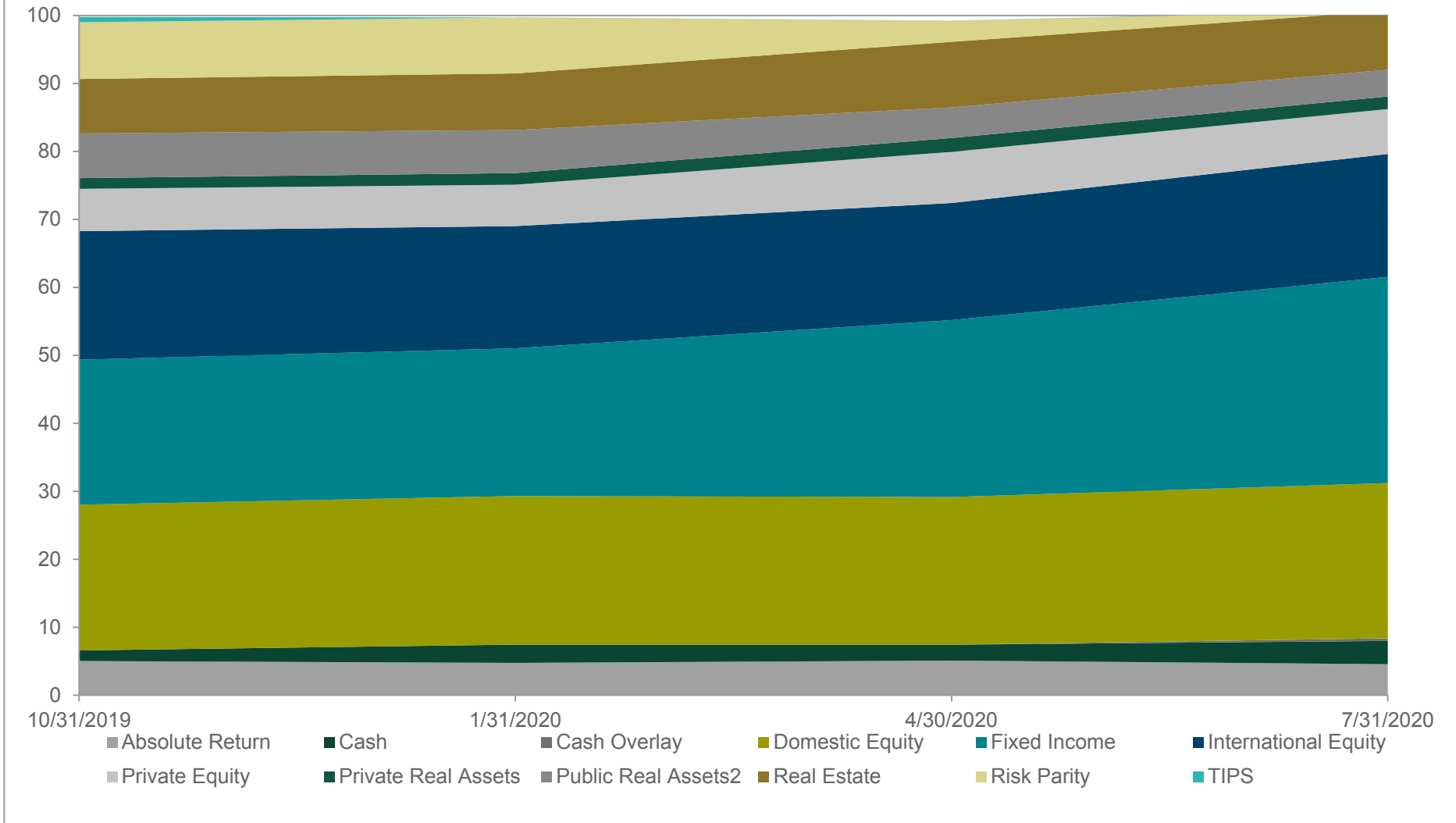


	Min	Actual	Target	Deviation	Max
<b>Domestic Equity</b>	19.0	22.8	21.0	1.8	23.0
<b>International Equity</b>	16.0	18.1	18.0	0.1	20.0
<b>Fixed Income</b>	29.0	30.3	31.0	-0.7	33.0
<b>Private Equity</b>	4.0	6.6	6.0	0.6	8.0
<b>Risk Parity</b>	0.0	0.1	0.0	0.1	0.0
<b>Absolute Return</b>	4.0	4.6	6.0	-1.4	8.0
<b>Liquidity</b>	0.0	3.4	1.0	2.4	2.0
<b>Public Real Assets</b>	2.0	3.9	4.0	-0.1	6.0
<b>Real Estate</b>	8.0	8.7	10.0	-1.3	12.0
<b>Private Real Assets</b>	1.0	1.9	3.0	-1.1	5.0

Asset Allocation over Time



### Sub-Asset Class Allocation Over Time



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**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**

JULY 2020  
Capital Markets Update



# Market commentary

## U.S. ECONOMICS

- Year-over-year U.S. GDP growth fell from +0.3% to -9.5% in Q2. Sharp contractions in personal consumption, gross private domestic investment, and exports resulted in the largest ever quarterly contraction in GDP. On a quarterly annualized basis, GDP plunged -32.9%. For comparison, the worst annualized quarterly decline during the Global Financial Crisis was -8.4% back in Q4 of 2008.
- The ISM Services PMI increased from 57.1 in June to 58.1 in July, its highest level since February 2019. Since bottoming at 41.8 in April, the indicator has recovered significantly. It will be interesting to see if the services sector activity can continue to recover if states' re-opening progress is bogged down by increases in case growth.
- The U.S. added 1.8 million to non-farm payrolls in July, better than economists' expectations of 1.4 million jobs. The U.S. unemployment rate fell from 11.1% in June to 10.2% in July.

## U.S. EQUITIES

- The S&P 500 Index advanced again in July and returned 5.6%. The S&P 500 Price Index closed the month at 3,271. The index closed the month 115 points below the 52-week high, seemingly undeterred by increasing U.S.- Chinese tensions and global COVID-19 cases.
- The S&P 500 Index finished the month with a forward price-to-earnings ratio of 22.0x, which was above both the five-year average (17.0x) as well as the ten-year average (15.3x).
- According to FactSet, in July analysts increased Q3 bottom-up EPS estimates for S&P 500 companies by 1.1%. The increase marked the first time since April 2008 that bottom-up EPS estimates were revised higher in the first month after quarter-end.

## U.S. FIXED INCOME

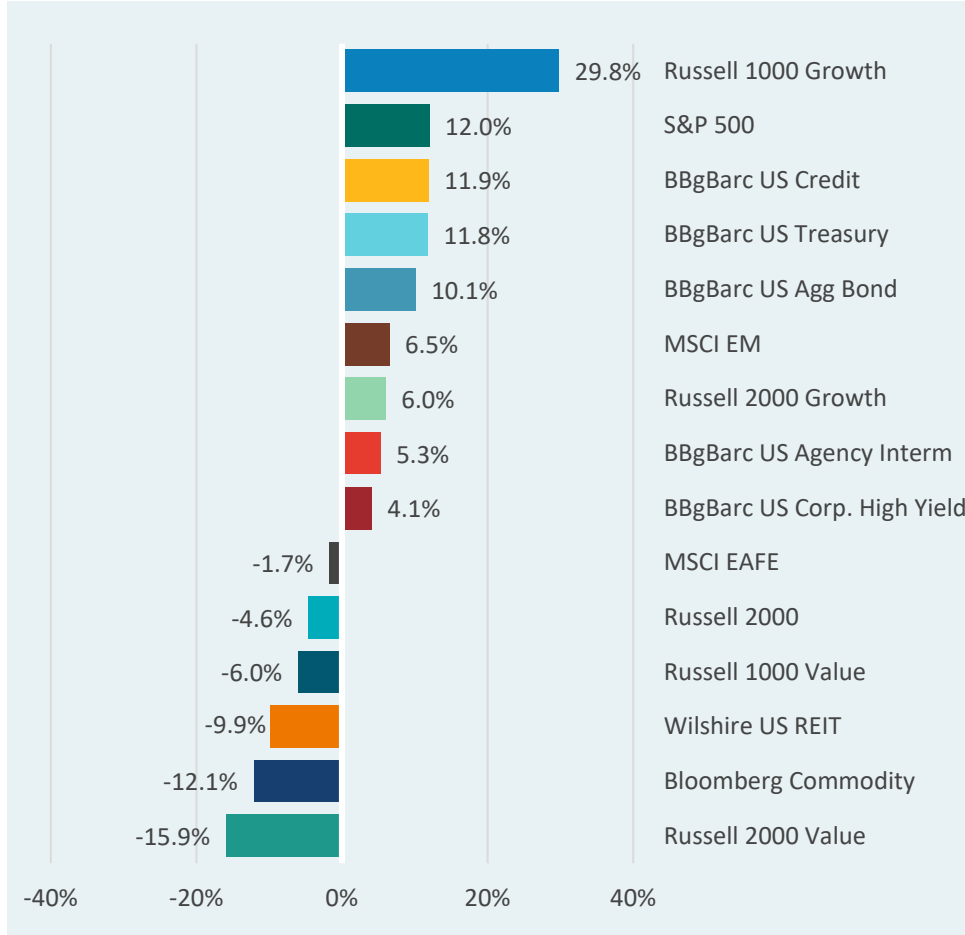
- The Federal Reserve left the range for federal funds unchanged at 0.00-0.25% - where they have been since March 15<sup>th</sup>. The Fed offered little guidance as to the path forward for interest rates and stated that the path of the economy will depend on the virus.
- The Federal Open Market Committee decided that it would extend dollar liquidity swap lines and temporary repo-operations through at least March 31<sup>st</sup>, 2021, to further ensure U.S. dollar liquidity.
- Further economic relief is being ironed out by the Senate. Democrats proposed a \$3.5 trillion 'Heroes Act' and Republicans later proposed a \$1 trillion 'Heals Act'. A decision has yet to have been made as additional unemployment benefits expired at the end of July.

## INTERNATIONAL MARKETS

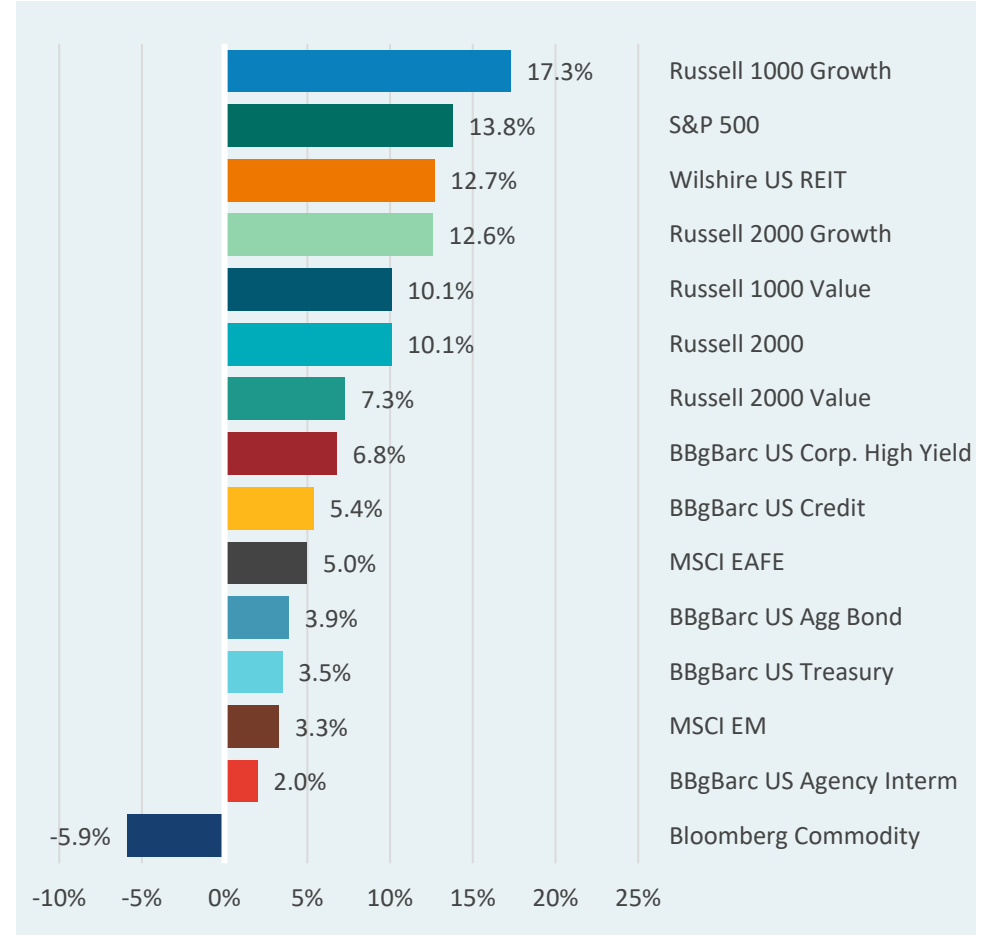
- Relations between China and the developed world further deteriorated. The U.S. shut down the Chinese consulate in Houston over allegations of espionage. Additionally, the U.S. Navy sent a destroyer near the Spratly Islands in the South China Sea, disputing China's maritime territorial claims.
- Chinese GDP grew +3.2% year-over-year in the 2<sup>nd</sup> quarter, beating analyst expectations for a +2.4% growth rate. The rebound in the economy was powered by a revival in export orders as well as building projects.
- Eurozone gross domestic product contracted at an annualized quarterly pace of -12.1% in Q2, in line with expectations. Year-over-year, the contraction in output (-15.0%) was slightly larger than analysts had anticipated (-14.5%).

# 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 7/31/20

Source: Morningstar, as of 7/31/20

# U.S. large cap equities

- The S&P 500 Index continued to climb in July and returned 5.6%. By month-end, the index had regained all losses over the year-to-date, and was only 3.4% below the all-time-high level set on February 19<sup>th</sup>.
- According to FactSet, as of month end, 63% of S&P 500 companies had reported earnings, and 84% of those companies had reported positive earnings surprise. At the sector level, the Information Technology and Materials had the highest percentage of earnings beats (94%), while Real Estate and Energy had the lowest percentage of earnings beats (63%).
- The S&P 500 Index shrugged off concerns of continued COVID-19 case growth and posted a strong return in July. Ten of the eleven major sectors contributed positively to returns. The Consumer Discretionary (+9.0%) led the gains for the overall index.
- The CBOE VIX Index of implied volatility moved lower over the course of the month. Between June 30<sup>th</sup> and July 31<sup>st</sup>, the index fell from 30.4 to 24.5. While still elevated relative to longer-term history, the VIX ended the month at its lowest level since before the outbreak of the pandemic in the United States in February.

**S&P 500 PRICE INDEX**



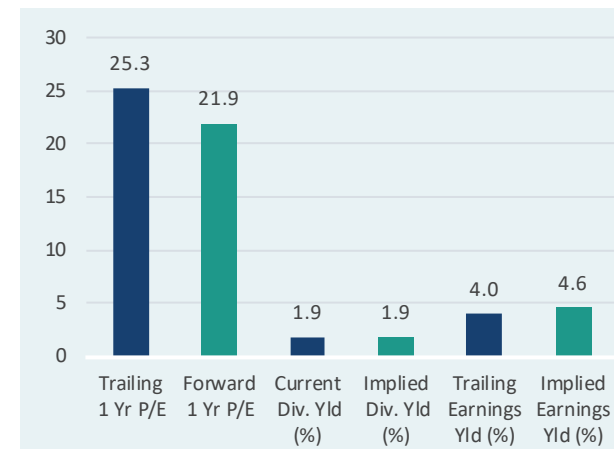
Source: Bloomberg, as of 7/31/20

**IMPLIED VOLATILITY (VIX INDEX)**



Source: CBOE, as of 7/31/20

**S&P 500 VALUATION SNAPSHOT**

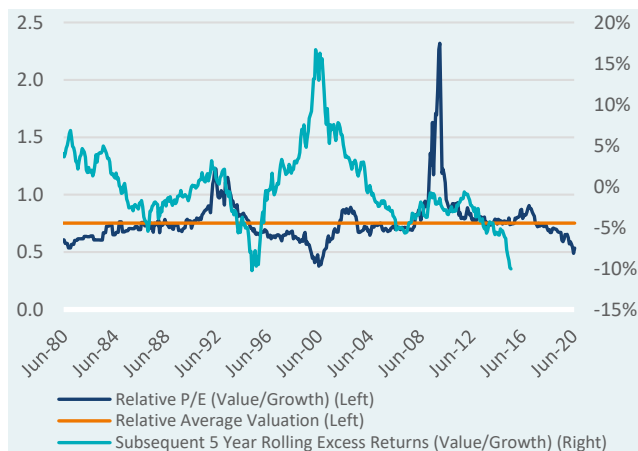


Source: Bloomberg, as of 7/31/20

# Domestic equity size and style

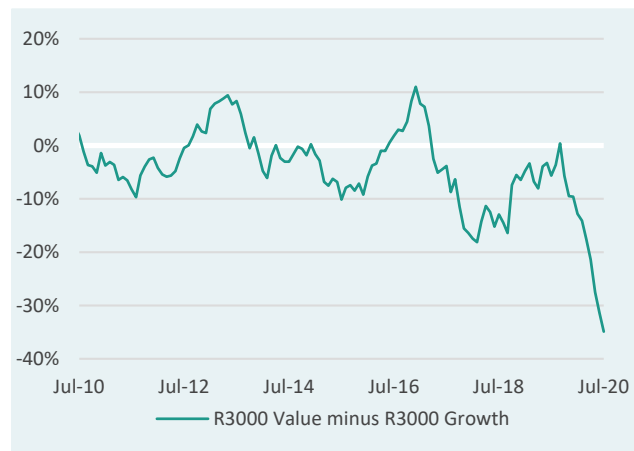
- Growth stocks beat value stocks for the 10th consecutive month as the Russell 3000 Growth Index (+7.4%) outperformed the Russell 3000 Value Index (+3.8%). Growth companies were propelled forward by better-than-expected earnings from mega-cap technology stocks during the month.
- Economic data-sensitive cyclicals outperformed the less-sensitive defensive stocks again this month. The MSCI USA Cyclicals - Defensives Total Return Spread Index returned +2.6%.
- Large-caps (Russell 1000 Index +5.9%) outperformed small-cap equities (Russell 2000 Index +2.8%) during the month. Large-cap stocks' outperformance over small-cap stocks was supported by several impressive Q2 2020 earnings reports released by tech companies such as Apple with high index weights.
- Momentum factor investing—a strategy of buying stocks that have performed well and selling underperformers—continued to outpace the broader market. The S&P 500 Momentum Index outperformed the S&P 500 Index by +2.3% in July.

**VALUE VS. GROWTH RELATIVE VALUATIONS**



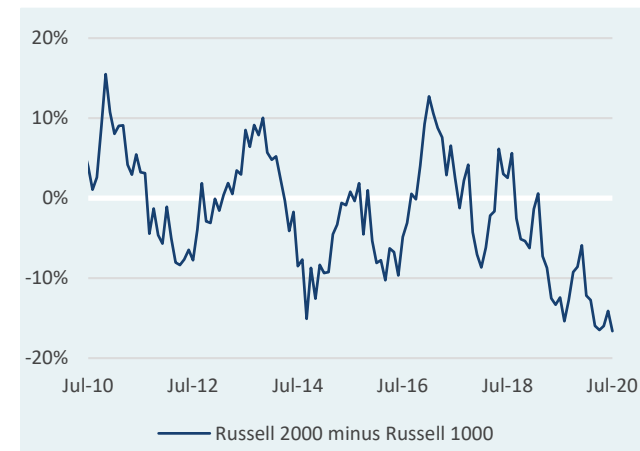
Source: Russell, Bloomberg, as of 7/31/20

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



Source: FTSE, Bloomberg, as of 7/31/20

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

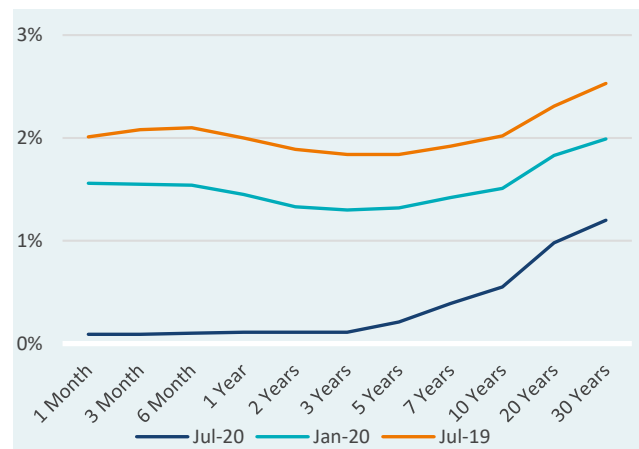


Source: FTSE, Bloomberg, as of 7/31/20

# Fixed income

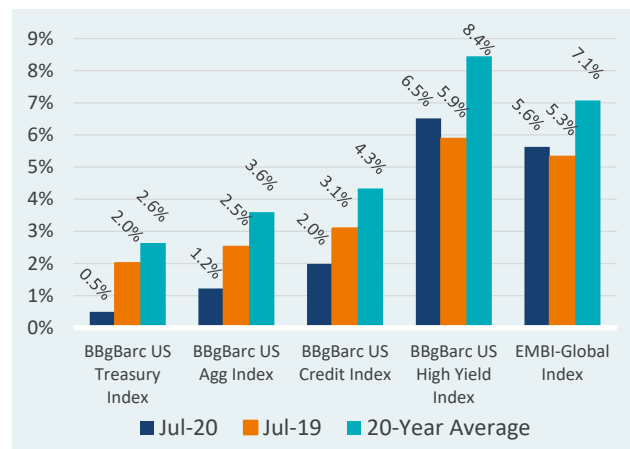
- Within the U.S. fixed income market, high yield fixed income (BBgBarc US Corp. High Yield +4.7%) and long-duration Treasuries (BBgBarc US Treasury Long +4.2%) were the top performers as high yield credit spreads compressed from 6.26% to 4.88% and yields on the long end of the curve fell 21 basis points.
- Speculation that the U.S. fiscal and monetary policy response will eventually lead to a reflation in growth and inflation expectations resulted in increasingly negative real yields and supported a weaker U.S. dollar. The Bloomberg Dollar Spot Index fell -3.9% in July.
- Global risky credit performed well again in July. Hard-currency denominated emerging market debt (JPM EMBI Global Diversified Index) returned +3.7% and outperformed local-currency denominated emerging market debt (J.P. Morgan GBI-EM +3.0%).
- The ten-year breakeven inflation rate, the gap between nominal and inflation-linked debt yields, rose to 1.6%, up from 0.5% in March. Ten-year real yields dropped from -0.68% to -1.03%.

U.S. TREASURY YIELD CURVE



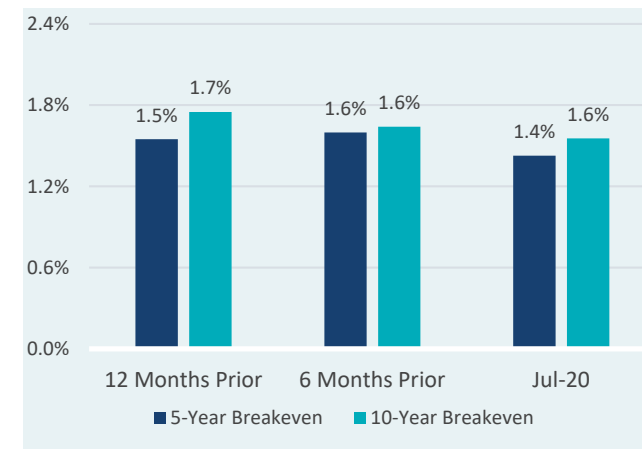
Source: Bloomberg, as of 7/31/20

NOMINAL YIELDS



Source: Morningstar, as of 7/31/20

BREAKEVEN INFLATION RATES

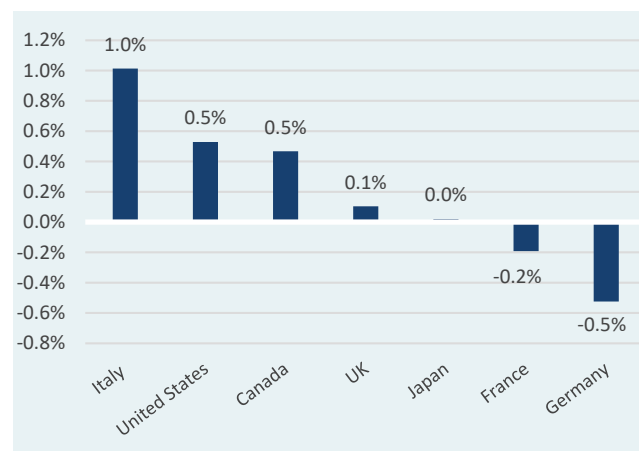


Source: Bloomberg, as of 7/31/20

# Global markets

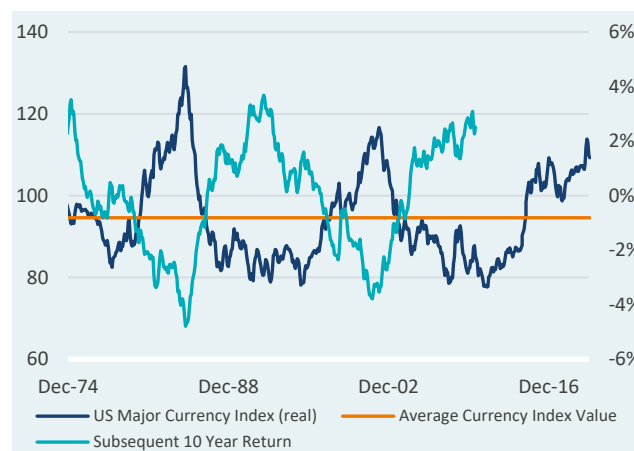
- The pound rallied +6.2% against the U.S. dollar in July, resulting in currency tailwinds for unhedged U.S. investors in U.K. equities. The MSCI United Kingdom Index returned +1.4% while the index hedged to U.S. dollars, returned -4.9%.
- Emerging market equities (MSCI EM +8.9%) outperformed both US equities (Russell 3000 +5.7%) and international developed equities (MSCI EAFE +2.3%). Within the MSCI EM Index, Latin American companies (MSCI EM Latin America +10.9%) outperformed Asian companies in U.S. dollar terms (MSCI EM Asia +9.7%).
- The European Commission approved a €750 billion fiscal support package (\$857 billion) financed by joint debt issuance to help buffer European economies from COVID-19 impacts. Of the €750 billion, €390 billion will be allocated in the form of grants, and the remaining €360 billion will be distributed as loans.
- The Euro appreciated 5.3% against the U.S. dollar in July, marking its biggest monthly gain since September 2010. Many investors viewed the European Commission’s decision to joint-finance a fiscal support package as short-term euro-positive.

**GLOBAL SOVEREIGN 10-YEAR YIELDS**



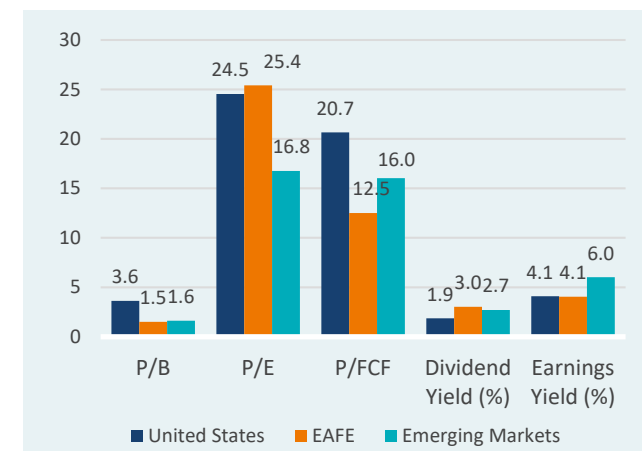
Source: Bloomberg, as of 7/31/20

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



Source: Federal Reserve, as of 7/31/20

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



Source: Bloomberg, as of 7/31/20

# Commodities

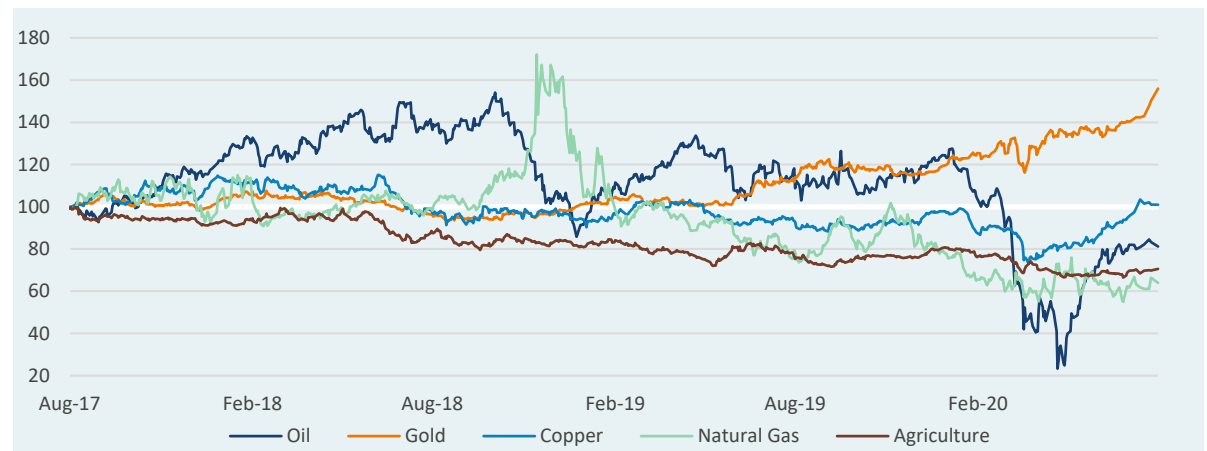
- The Bloomberg Commodity Index returned +5.7% in July. Precious Metals (+12.7%) and Industrial Metals (+7.0%), which combine to account for roughly 35% of the overall Bloomberg Commodity Index, led the advance.
- Precious metals spot prices surged in the month of July as U.S. dollar weakness persisted. Spot gold prices appreciated +10.9% in the month to \$1976/ounce. The price of silver appreciated 34.0% to over \$24/ounce, supported by supply-side concerns as some of the largest-producing countries faced COVID-19-related labor force disruptions.
- Softs advanced +9.5% in July. The price of coffee appreciated by 17.5% over the month to \$1.216/pound. Supply concerns drove up prices as Brazil remains one of the countries hardest hit by the coronavirus pandemic.
- Lumber futures due for delivery in September advanced +35.7% in the month of July. According to the National Association of Home Builders, homebuilder sentiment jumped 14 points to 72 in July supporting strong demand for lumber, while existing home inventory remained lean. Further, mills cut production across the country in wake of COVID, choking off the supply of processed timber.

## INDEX AND SECTOR PERFORMANCE

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
Bloomberg Commodity	5.7	5.7	(14.8)	(12.1)	(5.1)	(4.5)	(5.9)
Bloomberg Agriculture	2.5	2.5	(12.1)	(6.8)	(10.0)	(7.0)	(5.0)
Bloomberg Energy	2.1	2.1	(45.2)	(44.7)	(15.1)	(16.0)	(15.9)
Bloomberg Grains	(0.7)	(0.7)	(13.6)	(11.3)	(10.7)	(9.2)	(5.7)
Bloomberg Industrial Metals	7.0	7.0	(2.0)	(1.3)	(0.5)	2.9	(3.3)
Bloomberg Livestock	5.5	5.5	(30.7)	(32.0)	(13.7)	(9.7)	(5.9)
Bloomberg Petroleum	2.8	2.8	(48.4)	(45.0)	(11.9)	(12.8)	(11.3)
Bloomberg Precious Metals	12.7	12.7	28.2	36.8	13.7	10.8	3.9
Bloomberg Softs	9.5	9.5	(8.4)	0.6	(10.3)	(4.4)	(6.4)

Source: Morningstar, as of 7/31/20

## COMMODITY PERFORMANCE



Source: Bloomberg, as of 7/31/20

# Appendix



# Periodic table of returns

BEST ↑

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	YTD	5-Year	10-Year
Large Cap Growth	38.7	66.4	31.8	14.0	25.9	56.3	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	13.3	31.7	37.3	6.7	36.4	18.3	16.8	17.3
US Bonds	27.0	43.1	22.8	8.4	10.3	48.5	22.2	21.4	26.9	16.2	1.4	37.2	26.9	7.8	18.1	38.8	13.2	5.7	21.3	30.2	1.9	31.4	7.7	11.3	13.9
Large Cap Equity	20.3	33.2	12.2	7.3	6.7	47.3	20.7	20.1	23.5	15.8	-6.5	34.5	24.5	2.6	17.9	34.5	13.0	0.9	17.3	25.0	0.0	28.5	2.9	7.5	12.6
60/40 Global Portfolio	19.3	27.3	11.6	3.3	1.6	46.0	18.3	14.0	22.2	11.8	-21.4	32.5	19.2	1.5	17.5	33.5	11.8	0.6	12.1	22.2	-1.5	26.5	2.1	6.8	10.1
Cash	16.2	26.5	7.0	2.8	1.0	39.2	16.5	7.5	18.4	11.6	-25.9	28.4	16.8	0.4	16.4	33.1	6.0	0.0	11.8	21.7	-3.5	25.5	0.4	6.3	10.1
Small Cap Growth	8.7	21.3	4.1	-2.4	-6.0	29.9	14.3	6.3	15.5	10.3	-33.8	23.3	16.1	-2.1	15.3	23.3	4.9	-0.8	11.2	14.6	-6.0	22.4	0.3	6.1	9.7
Real Estate	15.6	24.3	6.0	2.5	-5.9	30.0	14.5	7.1	16.6	10.9	-28.9	27.2	16.7	0.1	16.3	32.5	5.6	-0.4	11.3	17.1	-4.8	22.0	-0.3	5.4	7.3
Emerging Markets Equity	4.9	20.9	-3.0	-5.6	-11.4	29.7	12.9	5.3	15.1	7.0	-35.6	20.6	15.5	-2.9	14.6	12.1	4.2	-1.4	8.0	13.7	-8.3	18.6	-1.7	5.1	6.6
Hedge Funds of Funds	1.2	13.2	-7.3	-9.1	-15.5	25.2	11.4	4.7	13.3	7.0	-36.8	19.7	13.1	-4.2	11.5	11.0	3.4	-2.5	7.1	7.8	-9.3	18.4	0.5	4.5	5.0
International Equity	-2.5	11.4	-7.8	-9.2	-15.7	23.9	9.1	4.6	10.4	5.8	-37.6	18.9	10.2	-5.5	10.5	9.0	2.8	-3.8	5.7	7.7	-11.0	8.7	-9.3	2.2	3.9
Small Cap Equity	-5.1	7.3	-14.0	-12.4	-20.5	11.6	6.9	4.6	9.1	4.4	-38.4	11.5	8.2	-5.7	4.8	0.1	0.0	-4.4	2.6	7.0	-11.2	7.8	-10.6	2.1	3.3
Large Cap Value	-6.5	4.8	-22.4	-19.5	-21.7	9.0	6.3	4.2	4.8	-0.2	-38.5	5.9	6.5	-11.7	4.2	-2.0	-1.8	-7.5	1.0	3.5	-12.9	7.7	-12.9	1.9	2.9
Commodities	-25.3	-0.8	-22.4	-20.4	-27.9	4.1	4.3	3.2	4.3	-1.6	-43.1	0.2	5.7	-13.3	0.1	-2.3	-4.5	-14.9	0.5	1.7	-13.8	6.4	-14.8	1.1	0.6
Small Cap Value	-27.0	-1.5	-30.6	-21.2	-30.3	1.0	1.4	2.4	2.1	-9.8	-53.2	-16.9	0.1	-18.2	-1.1	-9.5	-17.0	-24.7	0.3	0.9	-14.6	2.1	-21.9	-4.5	-5.9

↓ WORST

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

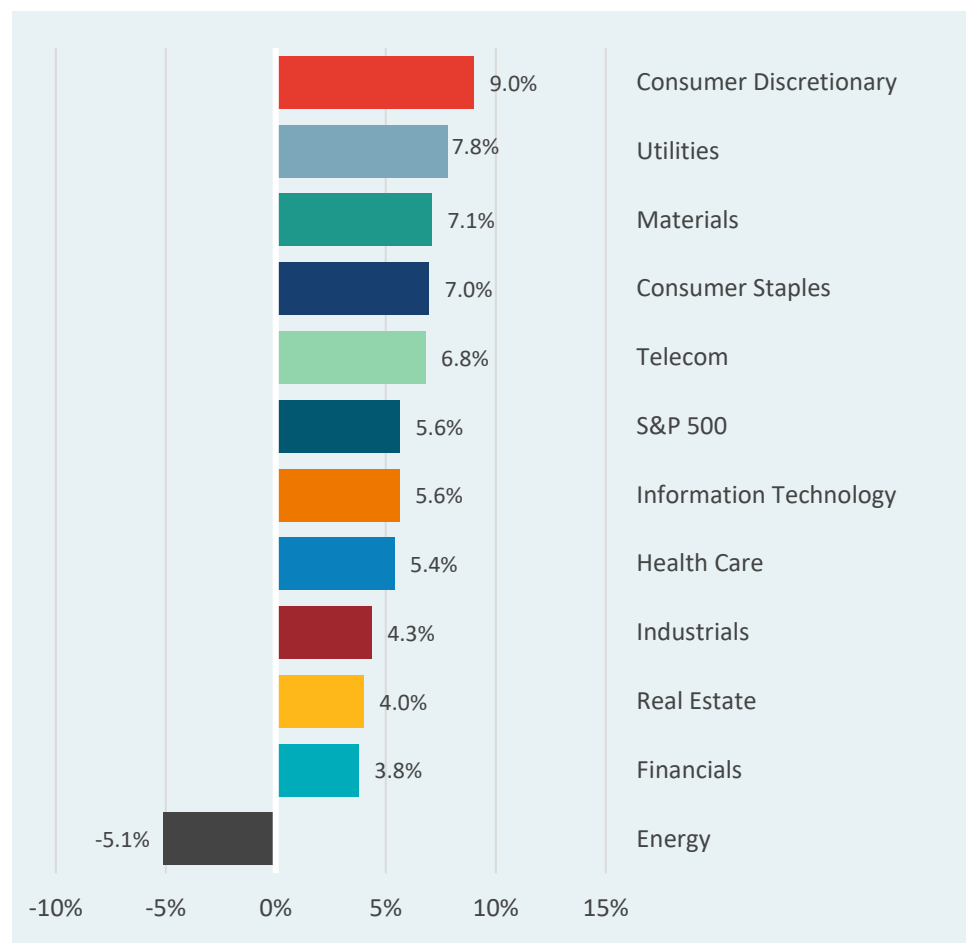
- Small Cap Growth
- International Equity
- Emerging Markets Equity
- US Bonds
- Cash

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

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

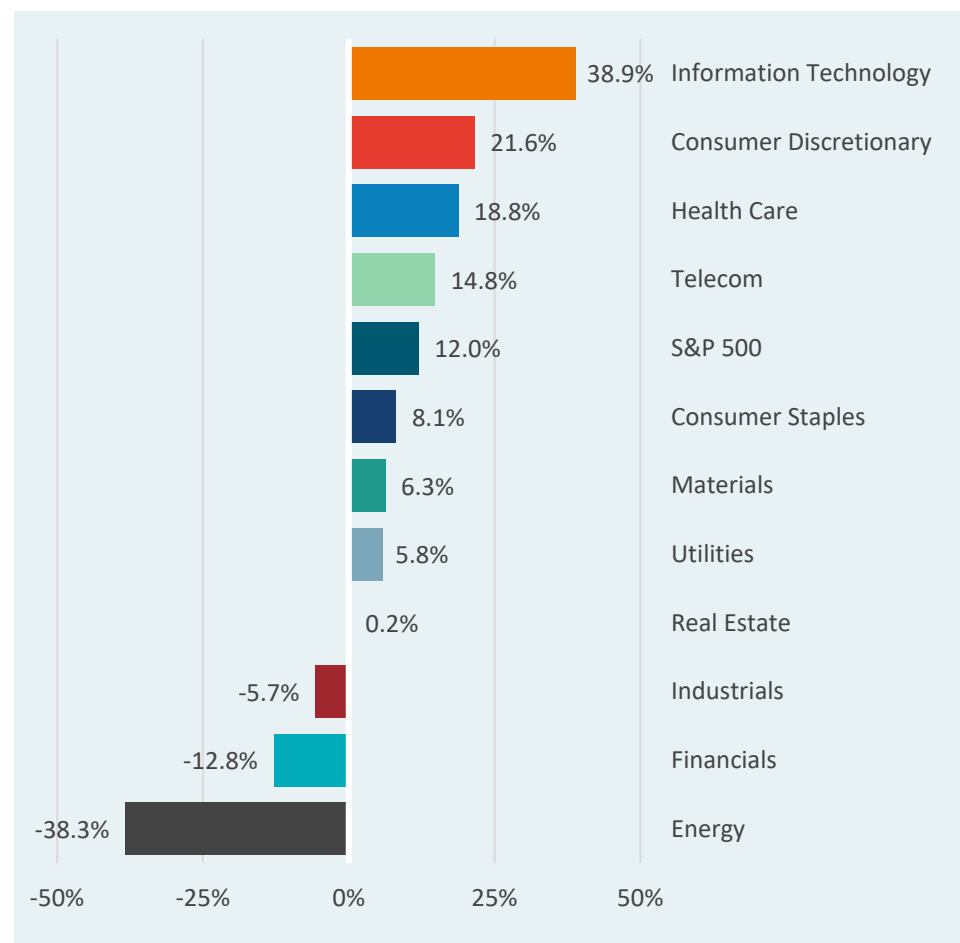
# S&P 500 sector returns

QTD



Source: Morningstar, as of 7/31/20

ONE YEAR ENDING JULY



Source: Morningstar, as of 7/31/20

# Detailed index returns

## DOMESTIC EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Core Index</b>							
S&P 500	5.6	5.6	2.4	12.0	12.0	11.5	13.8
S&P 500 Equal Weighted	4.8	4.8	(6.4)	0.6	6.5	8.0	12.4
DJ Industrial Average	2.5	2.5	(6.1)	0.8	9.0	11.1	12.5
Russell Top 200	5.9	5.9	5.3	15.8	13.8	12.6	14.5
Russell 1000	5.9	5.9	2.9	12.0	12.0	11.3	13.9
Russell 2000	2.8	2.8	(10.6)	(4.6)	2.7	5.1	10.1
Russell 3000	5.7	5.7	2.0	10.9	11.4	10.9	13.6
Russell Mid Cap	5.9	5.9	(3.8)	2.0	7.3	7.8	12.2
<b>Style Index</b>							
Russell 1000 Growth	7.7	7.7	18.3	29.8	20.9	16.8	17.3
Russell 1000 Value	4.0	4.0	(12.9)	(6.0)	2.7	5.4	10.1
Russell 2000 Growth	3.4	3.4	0.3	6.0	8.8	7.5	12.6
Russell 2000 Value	2.1	2.1	(21.9)	(15.9)	(3.9)	2.2	7.3

## INTERNATIONAL EQUITY

<b>Broad Index</b>							
MSCI ACWI	5.3	5.3	(1.3)	7.2	7.0	7.4	8.9
MSCI ACWI ex US	4.5	4.5	(7.0)	0.7	1.4	3.2	4.5
MSCI EAFE	2.3	2.3	(9.3)	(1.7)	0.6	2.1	5.0
MSCI EM	8.9	8.9	(1.7)	6.5	2.8	6.1	3.3
MSCI EAFE Small Cap	3.4	3.4	(10.2)	0.4	0.4	4.3	7.5
<b>Style Index</b>							
MSCI EAFE Growth	4.5	4.5	0.8	9.2	6.6	5.9	7.4
MSCI EAFE Value	0.2	0.2	(19.1)	(12.3)	(5.4)	(1.9)	2.5
<b>Regional Index</b>							
MSCI UK	1.4	1.4	(22.2)	(15.0)	(4.3)	(2.5)	2.9
MSCI Japan	(1.6)	(1.6)	(8.6)	1.3	1.7	3.0	5.6
MSCI Euro	3.7	3.7	(9.5)	(2.1)	(0.9)	1.6	4.1
MSCI EM Asia	9.7	9.7	5.8	16.9	5.4	8.4	6.2
MSCI EM Latin American	10.9	10.9	(28.1)	(25.2)	(6.5)	0.6	(3.9)

## FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
BBgBarc US TIPS	2.3	2.3	8.4	10.4	5.7	4.2	3.7
BBgBarc US Treasury Bills	0.0	0.0	0.7	1.5	1.8	1.2	0.7
BBgBarc US Agg Bond	1.5	1.5	7.7	10.1	5.7	4.5	3.9
<b>Duration</b>							
BBgBarc US Treasury 1-3 Yr	0.1	0.1	3.1	4.4	2.7	1.9	1.3
BBgBarc US Treasury Long	4.2	4.2	26.3	30.5	13.8	9.4	8.2
BBgBarc US Treasury	1.1	1.1	10.0	11.8	5.9	4.1	3.5
<b>Issuer</b>							
BBgBarc US MBS	0.2	0.2	3.7	5.4	3.9	3.1	3.0
BBgBarc US Corp. High Yield	4.7	4.7	0.7	4.1	4.5	5.9	6.8
BBgBarc US Agency Interm	0.2	0.2	3.9	5.3	3.3	2.4	2.0
BBgBarc US Credit	3.1	3.1	8.0	11.9	7.0	6.1	5.4

## OTHER

<b>Index</b>							
Bloomberg Commodity	5.7	5.7	(14.8)	(12.1)	(5.1)	(4.5)	(5.9)
Wilshire US REIT	4.4	4.4	(14.2)	(9.9)	1.3	5.7	12.7
CS Leveraged Loans	1.9	1.9	(3.0)	(1.2)	2.5	4.6	5.0
Alerian MLP	(3.6)	(3.6)	(40.5)	(45.8)	(19.5)	(13.9)	(2.4)
<b>Regional Index</b>							
JPM EMBI Global Div	3.7	3.7	0.8	3.0	4.6	6.0	6.0
JPM GBI-EM Global Div	3.0	3.0	(4.1)	(0.8)	1.4	3.5	1.4
<b>Hedge Funds</b>							
HFRI Composite	3.2	3.2	(0.4)	2.2	2.8	3.1	3.9
HFRI FOF Composite	2.8	2.8	0.5	2.4	2.6	1.9	2.9
<b>Currency (Spot)</b>							
Euro	5.3	5.3	5.3	6.2	0.1	1.4	(1.0)
Pound	6.2	6.2	(0.9)	7.2	(0.2)	(3.4)	(1.8)
Yen	2.0	2.0	2.8	2.7	1.5	3.2	(2.0)

Source: Morningstar, as of 7/31/20

# Detailed private market returns

## Comparison to public market index returns

Private Equity Pooled IRRs	1 Year	3 Year	5 Year	10 Year
Global Private Equity FoFs & Secondary Funds	4.9	10.8	9.3	11.6
Global Private Equity Direct Funds *	3.6	12.2	11.4	13.5
U.S. Private Equity Direct Funds *	4.7	12.7	11.5	14.7
Europe Private Equity Direct Funds *	3.6	14.9	14.8	12.1
Asia Private Equity Direct Funds *	2.3	9.7	9.5	12.0

Public Index Time-weighted Returns	1 Year	3 Year	5 Year	10 Year
MSCI World	(10.4)	1.9	3.2	6.6
S&P 500	(7.0)	5.1	6.7	10.5
MSCI Europe	(15.5)	(2.3)	(1.3)	2.5
MSCI AC Asia Pacific	(12.1)	0.1	1.1	3.4

Private Real Estate Pooled IRRs	1 Year	3 Year	5 Year	10 Year
U.S. All Private Real Estate	0.1	6.7	8.6	12.6

Public Index Time-weighted Returns	1 Year	3 Year	5 Year	10 Year
FTSE NAREIT Equity REIT	(21.3)	(3.1)	(0.3)	7.4

Private Credit Pooled IRRs	1 Year	3 Year	5 Year	10 Year
U.S. All Private Debt **	(5.9)	4.0	5.5	9.4

Public Index Time-weighted Returns	1 Year	3 Year	5 Year	10 Year
S&P / LSTA U.S. Leveraged Loan 100 Index	(5.1)	0.5	1.6	3.2

Private Real Assets Pooled IRRs	1 Year	3 Year	5 Year	10 Year
Global Nature Resources ***	(28.3)	(8.7)	(5.2)	(0.1)
Global Infrastructure	2.4	8.7	10.6	9.3

Public Index Time-weighted Returns	1 Year	3 Year	5 Year	10 Year
S&P Global Natural Resources	(30.0)	(6.4)	(2.7)	(2.2)
S&P Global Infrastructure	(21.1)	(3.2)	(0.4)	4.2

Source: Pooled IRRs are from Thompson Reuters C/A and Time-weighted Returns are from Investment Metrics, as of March 31<sup>st</sup>, 2020. All returns in U.S. dollars.

\* Includes Buyout, Growth Equity and Venture Capital.

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

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

# Notices & disclosures

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

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

August 25, 2020

Agenda Item 6.2

**TO:** Board of Retirement

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



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

**Recommendation**

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

**Discussion**

The 2nd quarter net total return for the SamCERA portfolio was +8.3%, which was 30 bps higher than the +8.0% policy benchmark return. As can be seen on Page 20 and 21, alternatives (private equity) and private real assets were the main contributors of performance, while risk parity and public equity were the main detractors.

For the Fiscal Year ending June 30, 2020, the net total return for the SamCERA portfolio was -0.2%, which was 180 bps lower than the +1.6% policy benchmark return. Absolute return was the main detractor, followed by public equity and inflation hedge, while private equity was the primary contributor to performance.

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

**Attachment**

Verus Quarterly Performance Report Ending 6/30/2020



**PERSPECTIVES  
THAT DRIVE  
ENTERPRISE  
SUCCESS**



**PERIOD ENDING: JUNE 30, 2020**

Investment Performance Review for

**San Mateo County Employees' Retirement Association**

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VERUSINVESTMENTS.COM

SEATTLE 206-622-3700

LOS ANGELES 310-297-1777

SAN FRANCISCO 415-362-3484

PITTSBURGH 412-784-6678

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Market Environment

TAB I

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Alternatives

TAB VI

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Total Fund

TAB II

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Inflation Hedge

TAB VII

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US Equity

TAB III

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Appendix

TAB VIII

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International Equity

TAB IV

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Fixed Income

TAB V



# 2<sup>nd</sup> quarter summary

## THE ECONOMIC CLIMATE

- U.S. GDP grew at a 0.3% rate year-over-year in Q1 (-5.0% quarterly annualized rate). The slowdown was broad-based, as consumer purchases slowed, businesses cut back investment, inventories were drawn down, and exports weakened. Q2 GDP growth forecasts suggest a severe contraction of -35%, though estimates vary widely.
- The U.S. labor market experienced a historic shock in Q2, as unemployment jumped from 4.4% in March to 14.7% in April, then recovered partially to 11.1% in June. Recent labor market data have beat expectations materially, but the severity of the shock is notable. A majority of the unemployed have reported their job losses as temporary. It will be important to watch what portion of these losses are indeed temporary rather than permanent.

## PORTFOLIO IMPACTS

- Most major equity benchmarks are within 15% of all-time highs, despite major damage that COVID-19 has inflicted on the global economy. Some of this damage has been mitigated by government support, but some damage is likely yet to be felt.
- U.S. core inflation fell steeply from 2.1% in March to 1.2% in June, while food prices have risen. COVID-19 has led to a significant rise in at-home meal preparation (greater demand for certain items), while reportedly negatively impacting food processing facilities (less supply).

## THE INVESTMENT CLIMATE

- The Federal Reserve continued to roll out the litany of support programs that were announced in the first quarter. The Fed's balance sheet grew from \$5.3 trillion to \$7.1 trillion over the second quarter.
- Moves in the CBOE VIX Index moderated in June. The long-term average of the index is near 19. It has remained above that level since February, reaching a high point of 85 on March 18th, and closing June at 30.
- The Fed expanded the list of eligible securities for purchase to include corporate debt. While the Fed will primarily target investment grade debt securities, it will also buy some non-investment grade debt from "fallen angels" which were investment-grade prior to the pandemic.

## ASSET ALLOCATION ISSUES

- U.S. equities delivered an incredible comeback, following a sudden and significant sell-off in March. The S&P 500 rallied +20.5% in the second quarter, bringing year-to-date performance to -3.1%, and positive +7.5% over the past twelve months.
- The U.S. dollar weakened in Q2, falling -2.3%. The market recovery (less demand for safe-haven currencies) and materially lower U.S. interest rates (less attractive U.S. dollar) have likely contributed to depreciation.

A mildly underweight risk stance appears appropriate in today's environment

We remain watchful of the COVID-19 second wave and its impact on economic reopening

# U.S. economics summary

- U.S. GDP grew at a 0.3% rate year-over-year in Q1 (-5.0% quarterly annualized rate). The slowdown was broad-based, as consumer purchases slowed, businesses cut back investment, inventories were drawn down, and exports weakened. Q2 GDP growth forecasts suggest a severe contraction of -35%, though estimates vary widely.
- As of June 29<sup>th</sup> there were 34 states with a transmission rate of COVID-19 above 1.0, an indication that the virus continues to spread exponentially. Southern states and Sun Belt states are in retreat—taking lockdown steps reminiscent of March and April—only weeks after governors began to reopen their economies.
- The U.S. labor market experienced a historic shock in Q2 as unemployment jumped from 4.4% in March to 14.7% in April, then recovered partially to 11.1% in June.
- U.S. core inflation exhibited a steep drop from 2.1% in March to 1.2% in June. Headline inflation also slowed from 1.5% to 0.6%, pushed lower by the recent decline in energy prices. On the other hand, food prices have been rising—specifically meats, poultry, fish and eggs—due in large part to interruptions at processing plants.
- The Bloomberg Consumer Comfort Index experienced a dramatic weakening year-to-date, falling from a near-record high of 67.3 in late January to 34.7 in May, then ending June at 43.3.
- It has been reported that 8.6% of all mortgages in the U.S. are in forbearance. To put this number into perspective, during the 2008-2009 housing crisis the mortgage default rate reached approximately 10%. If a large portion of loans in forbearance later face foreclosure, this could put significant pressure on the housing market.

	Most Recent	12 Months Prior
GDP (YoY)	(9.5%) 6/30/20	2.0% 6/30/19
Inflation (CPI YoY, Core)	1.2% 5/31/20	2.0% 5/31/19
Expected Inflation (5yr-5yr forward)	1.5% 6/30/20	1.8% 6/30/19
Fed Funds Target Range	0% – 0.25% 6/30/20	2.25% – 2.50% 6/30/19
10 Year Rate	0.7% 6/30/20	2.0% 6/30/19
U-3 Unemployment	11.1% 6/30/20	3.7% 6/30/19
U-6 Unemployment	18.0% 6/30/20	7.2% 6/30/19

# International economics summary

— In Q1, most international economies began contracting in what will likely turn out to be a global recession. The steady and stable economic expansion in recent years has shifted suddenly with the onset of COVID-19. The IMF now expects 2020 global GDP to fall -4.9%, followed by a +5.4% recovery in 2021.

— Policymakers in Brussels achieved unanimous approval on a €750 billion stimulus package to help support an economic recovery within the European Union. After much debate, officials decided to distribute €390 billion in the form of grants to member states hardest hit by the pandemic (Italy/Spain), and the other €360 in low-interest, non-concessionary loans for members of the bloc.

— U.S.-China relations were further strained Q2. The Trump administration placed restrictions on U.S. exports to Hong Kong in response to a Chinese law which

effectively tightens control over the territory. The restrictions apply to only 2.2% of U.S. exports, but sanctions on China could unravel an already fragile agreement between the two global powers. U.S.-China tensions have been escalating and will warrant close monitoring in the coming months.

— Headline consumer prices fell materially over the second quarter as spending at brick-and-mortar stores, restaurants, and bars weakened alongside the implementation of social distancing controls. Continued broad-based price declines could soon lead to deflation risks for many economies.

— Since hitting lows of -304.6 in early May, the Citi Eurozone Economic Surprise Index rallied back to -99.8, indicating that economic data have been improving relative to median economist estimates. Continued relative strengthening could be supportive to the equity market.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	(9.5%) <i>6/30/20</i>	0.1% <i>5/31/20</i>	11.1% <i>6/30/20</i>
Eurozone	(3.1%) <i>3/31/20</i>	0.3% <i>6/30/20</i>	7.4% <i>5/31/20</i>
Japan	(1.7%) <i>3/31/20</i>	0.3% <i>6/30/20</i>	2.9% <i>5/31/20</i>
BRICS Nations	(4.1%) <i>3/31/20</i>	4.9% <i>3/31/20</i>	5.1% <i>3/31/20</i>
Brazil	(0.3%) <i>3/31/20</i>	1.9% <i>5/31/20</i>	12.9% <i>5/31/20</i>
Russia	1.6% <i>3/31/20</i>	2.9% <i>5/31/20</i>	6.1% <i>5/31/20</i>
India	4.7% <i>12/31/19</i>	5.8% <i>3/31/20</i>	8.5% <i>12/31/17</i>
China	(6.8%) <i>3/31/20</i>	2.4% <i>5/31/20</i>	3.7% <i>3/31/20</i>

# Equity environment

- U.S. equities delivered an incredible comeback, following the sudden sell-off in March. The S&P 500 rallied +20.5% in Q2, bringing year-to-date performance to -3.1%, and positive +7.5% over the past twelve months. International developed equities (MSCI EAFE +12.9% QTD, -5.1% YoY) and emerging market equities (MSCI EM +18.1% QTD, -3.4% YoY) lagged the domestic market.
- Most major equity benchmarks are within 15% of all-time highs, despite major damage that COVID-19 has inflicted on the global economy. Some of this damage has been mitigated by government support, but some damage is likely yet to be felt.
- According to FactSet, the estimated S&P 500 year-over-year decline in earnings for Q2 is -43.8%. This would mark the largest decline in earnings since Q4 2008 (-69.1%).
- Moves in the CBOE VIX Index moderated in June. The long-term average of the index is near 19. It has remained above that level since February, reaching a high point of 85.0 on March 18th, and closing June at 30.4.
- The U.S. dollar weakened in Q2, falling -2.3% according to the Bloomberg Dollar Spot Index. The market recovery (less demand for save-haven currencies) and materially lower U.S. interest rates (less attractive U.S. Dollar) have likely contributed to the move.
- Growth stocks beat value stocks for the ninth consecutive month. The Russell 1000 Growth Index (+27.8%) outperformed the Russell 1000 Value Index (+14.3%). Sector performance disparity continues to impact the behavior of value. While energy delivered outsized returns relative to the overall index, other value-tilted sectors such as utilities and financials delivered poor performance.

	QTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (S&P 500)	20.5%		7.5%	
US Small Cap (Russell 2000)	25.4%		(6.6%)	
US Large Value (Russell 1000 Value)	14.3%		(8.8%)	
US Large Growth (Russell 1000 Growth)	27.8%		23.3%	
International Large (MSCI EAFE)	14.9%	12.9%	(5.1%)	(2.1%)
Eurozone (Euro Stoxx 50)	20.1%	17.8%	(6.4%)	(2.7%)
U.K. (FTSE 100)	9.0%	9.2%	(15.9%)	(12.2%)
Japan (NIKKEI 225)	17.9%	18.2%	6.6%	9.0%
Emerging Markets (MSCI Emerging Markets)	18.1%	16.6%	(3.4%)	1.7%

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 6/30/20

# Domestic equity

U.S. equities delivered an incredible comeback, following the sudden and significant sell-off in March. The S&P 500 rallied +20.5% in the second quarter, bringing the year-to-date performance to -3.1%, and positive +7.5% over the past year.

While the Consumer Discretionary (+32.9%) and IT (+30.5%) sectors did post outsized performance, participation in the rebound was broad-based and not confined to mega-cap tech names such as Amazon. The S&P 500 Equal-Weighted Index outperformed the S&P 500 Index by 1.2%.

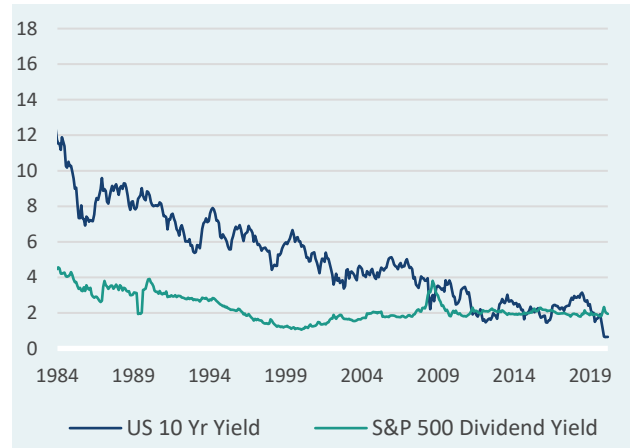
U.S. Treasury yields have moved closer to zero in 2020, which has reignited an ongoing discussion around the extent to which this dynamic will affect the equity market. We believe that the recent decline in interest rates should foundationally have a lifting effect on the value of equities, all else equal, since the value of a stock equals the present value of all future cash flows from that stock (lower interest rates result in higher present values). Generationally-low interest rates also create difficulties in holding higher quality fixed income due to inherent drag on portfolio performance. This potentially puts pressure on investors to make larger allocations to risky assets.

**S&P 500**



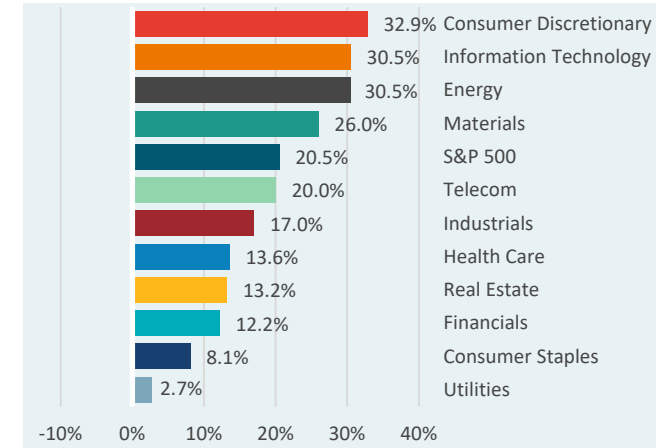
Source: Standard & Poor's, as of 6/30/20

**DIVIDEND YIELD VS BOND YIELD**



Source: Standard & Poor's, as of 6/30/20

**Q2 SECTOR PERFORMANCE**



Source: Standard & Poor's, as of 6/30/20

# Domestic equity size & style

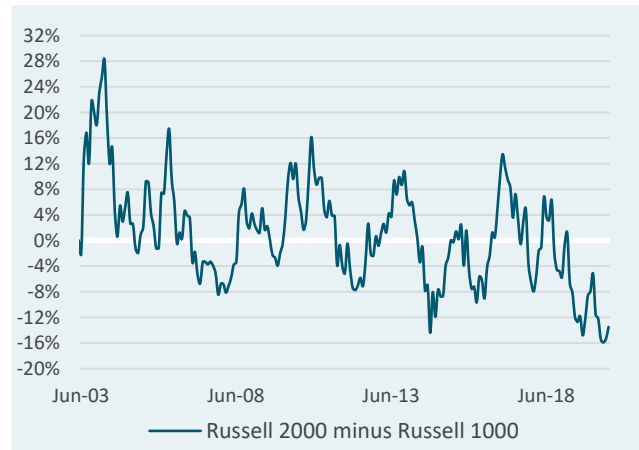
Growth stocks beat value stocks for the ninth consecutive month. The Russell 1000 Growth Index (+27.8%) outperformed the Russell 1000 Value Index (+14.3%). Small stocks beat large during the quarter (Russell 2000 +25.4%, Russell 1000 +21.8%), but continue to lag significantly over the longer-term.

Sector performance disparity continues to impact the behavior of value. While energy (+32.6%) delivered outsized returns over the quarter relative to the overall index (+21.8%), other value-tilted sectors such as financials (+16.3%), consumer staples (+9.0%), and utilities (+4.0%)

presented a drag on overall index performance.

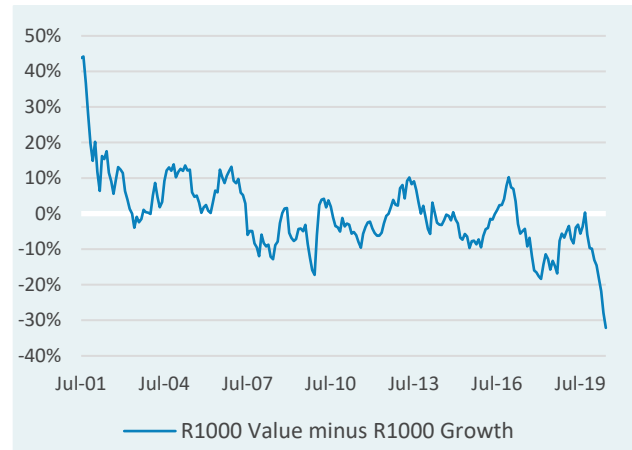
We believe it is extremely difficult to successfully make short-term bets on style factors. Factor performance can be incredibly noisy and vulnerable to sector randomness. Value has become historically cheap, to arguably attractive levels, though a catalyst for a value turnaround is not yet evident. We are watching closely the developments in this space to identify potential opportunities. However, we continue to believe that consistent long-term exposure to the value factor is an ideal implementation approach for most investors, most of the time.

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



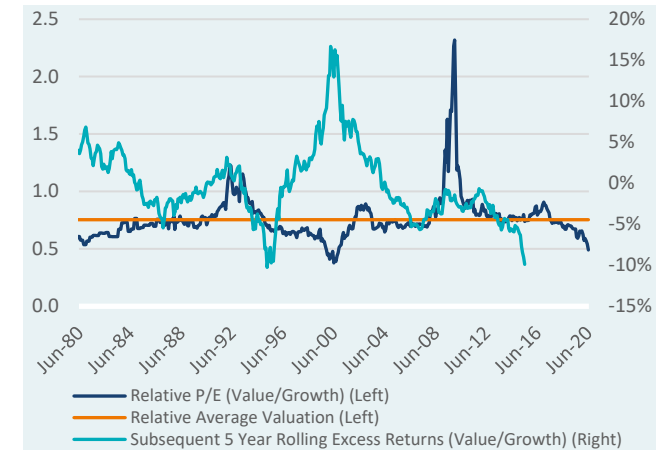
Source: FTSE, as of 6/30/20

**VALUE VS GROWTH (YOY)**



Source: FTSE, as of 6/30/20

**VALUE APPEARS HISTORICALLY CHEAP**



Source: Russell, Bloomberg, as of 6/30/20

# International developed equity

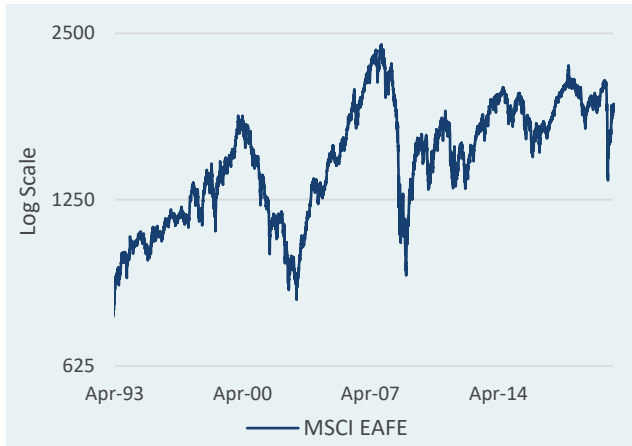
Equity markets around the world delivered a surprisingly strong recovery in the second quarter, rising between 12% to 20%. U.K. equities have lagged, only rising +7.8% over the quarter and remained down -23.3% over the year-to-date. Eurozone equities were among the top performers (MSCI Euro +19.6%). However, international equities lagged domestic markets (S&P 500 +20.5%).

On a one-year basis, the volatility of currency markets detracted from the performance of investors with unhedged currency exposure. Investors in international developed

equities lost -3.0% due to currency movement (MSCI EAFE), and investors in emerging markets lost -5.1% (MSCI EM).

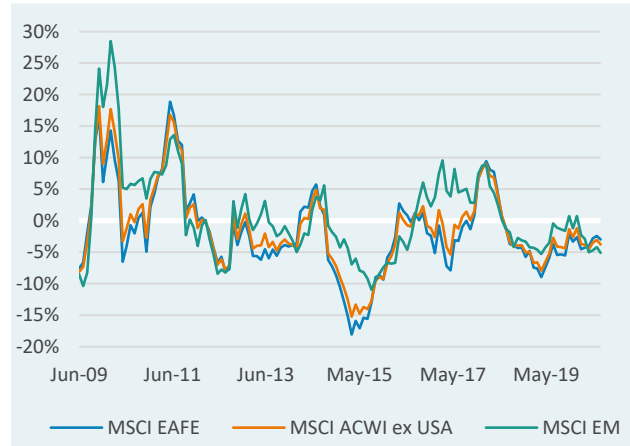
Earnings have fallen materially while equity prices recovered much of their losses. These two effects have led to a significant jump in equity valuations. This dynamic is not uncommon in environments where investors “look to the other side” of a crisis and generally expect tough conditions to be short-lived. With that said, if earnings do not recover to prior levels in a timely manner, investors may begin to question elevated multiples.

**INTERNATIONAL DEVELOPED EQUITIES**



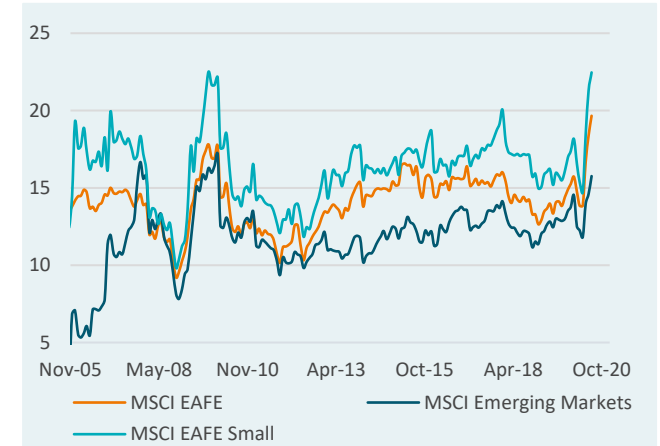
Source: MSCI, as of 6/30/20

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



Source: MSCI, as of 6/30/20

**FORWARD P/E**



Source: MSCI, as of 6/30/20

# Emerging market equity

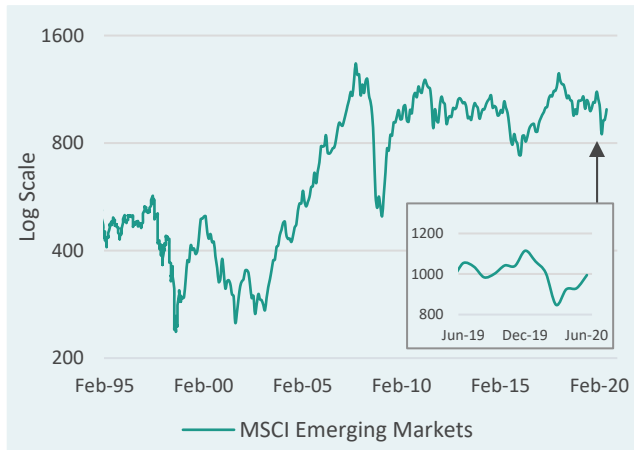
Emerging market equities (MSCI EM +18.1%) underperformed U.S. (S&P 500 +20.5%) while outperforming international developed equities (MSCI EAFE +14.9%) over the quarter. Within the emerging market complex, Latin American equities outperformed Asia over the quarter (MSCI EM Latin American +19.1% vs. MSCI EM Asia +17.8%) but underperformed year-to-date (-35.2% vs. -3.5%).

Low inflation in emerging economies may allow central banks more room to maneuver relative to developed economies with regard to the use of monetary policy in

encouraging economic growth during the global slowdown.

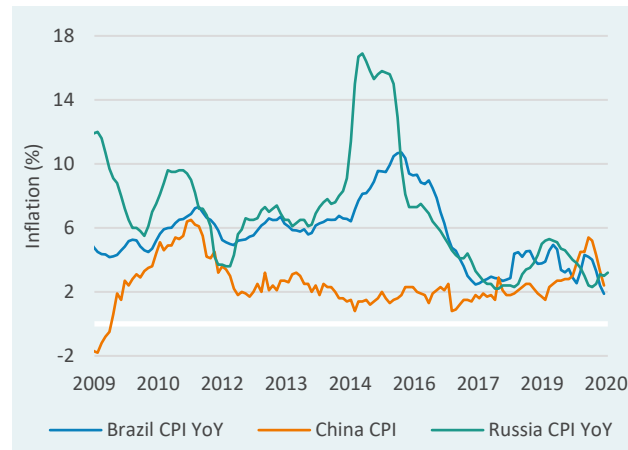
Emerging currencies appreciated in Q2, which was additive to performance (MSCI EM Unhedged +18.1%, MSCI EM Hedged +16.6%). The significant depreciation of the Brazilian real and Turkish lira provided material headwinds for the performance of U.S. investors who have unhedged exposure to emerging markets. On the other hand, the Russian ruble saw large gains as the currency benefitted from rising oil prices.

## EMERGING MARKET EQUITY



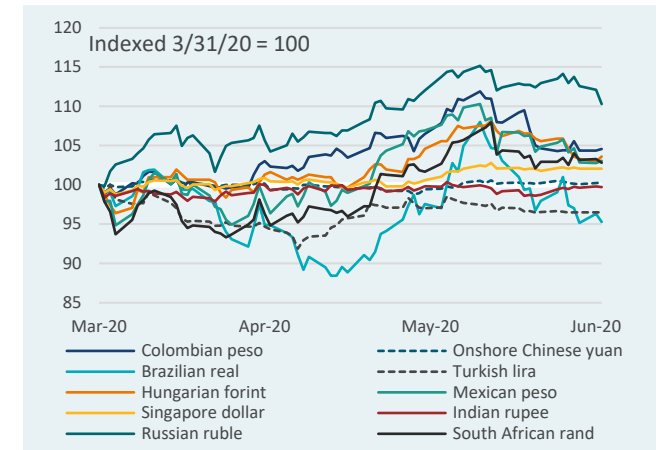
Source: MSCI, as of 6/30/20

## INFLATION (YOY)



Source: Bloomberg, as of 6/30/20

## J.P. MORGAN EMCI CONSTITUENTS (VS. USD)



Source: Bloomberg, as of 6/30/20



# Interest rate environment

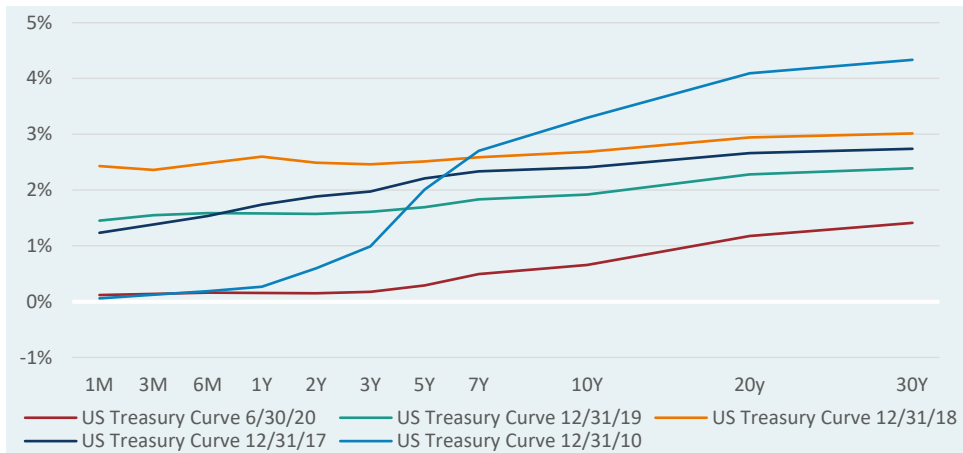
- The Federal Reserve continued to roll out the litany of support programs it announced in the first quarter. The Fed’s balance sheet grew from \$5.3 trillion to \$7.1 trillion over the second quarter.
- It appears the Federal Reserve may implement a yield curve control policy as a component of its policy toolkit. At the June Fed meeting, officials acknowledged that while setting intermediate-term yield caps may help strengthen short-term rate guidance, they remained concerned about several potential implications of beginning down that path.
- The Fed also expanded the list of eligible securities for purchase through its Primary and Secondary Market Credit Facilities to include corporate debt, either directly through companies or through exchange-traded funds. The Fed indicated that it would primarily target investment grade debt securities, and that it would also purchase certain non-investment grade debt from “fallen angels” which held investment-grade debt ratings prior to the pandemic.
- The European Central Bank increased the size of its Pandemic Emergency Purchase Programme from the initial €750 billion to a total of €1.35 trillion. The ECB will now be able to deploy the funds in a “flexible manner over time, across asset classes and among jurisdictions” through June 2021, which may help reduce borrowing costs.
- Real yields continued to decline around the globe as nominal sovereign bond yields were largely unchanged and longer-term inflation expectations recovered.
- Emerging market debt yields fell considerably in the second quarter, likely supported by disinflationary effects of the sell-off in commodities which emboldened central bankers to adopt more accommodative policy.

Area	Short Term (3M)	10-Year
United States	0.13%	0.66%
Germany	(0.56%)	(0.46%)
France	(0.52%)	(0.11%)
Spain	(0.49%)	0.46%
Italy	(0.29%)	1.26%
Greece	0.32%	1.20%
U.K.	0.01%	0.17%
Japan	(0.17%)	0.02%
Australia	0.21%	0.87%
China	1.74%	2.84%
Brazil	2.04%	6.83%
Russia	4.57%	5.92%

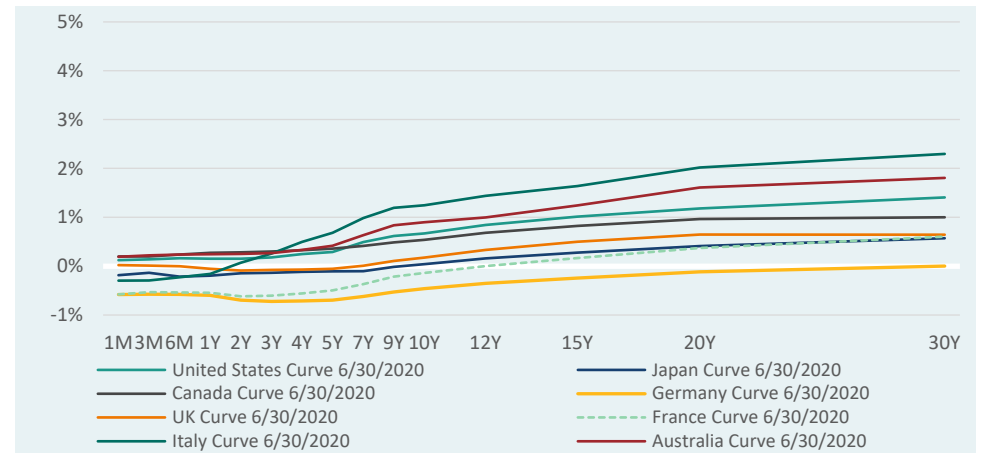
Source: Bloomberg, as of 6/30/20

# Yield environment

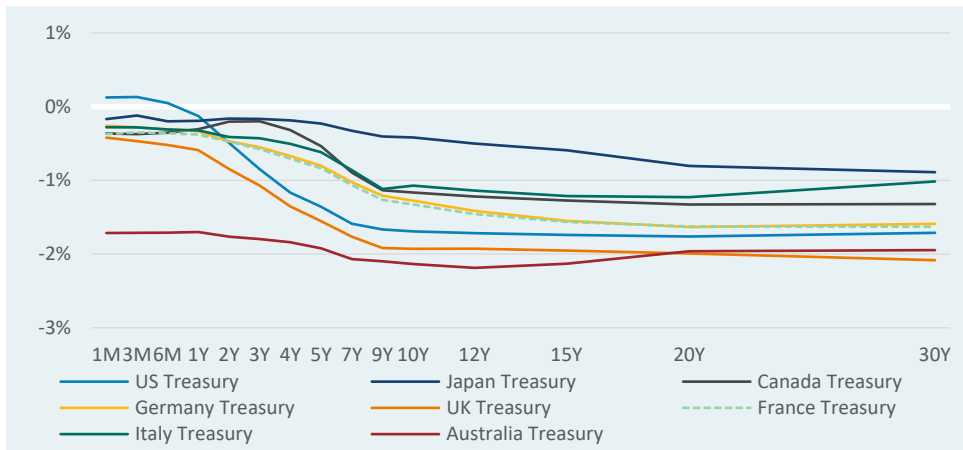
## U.S. YIELD CURVE



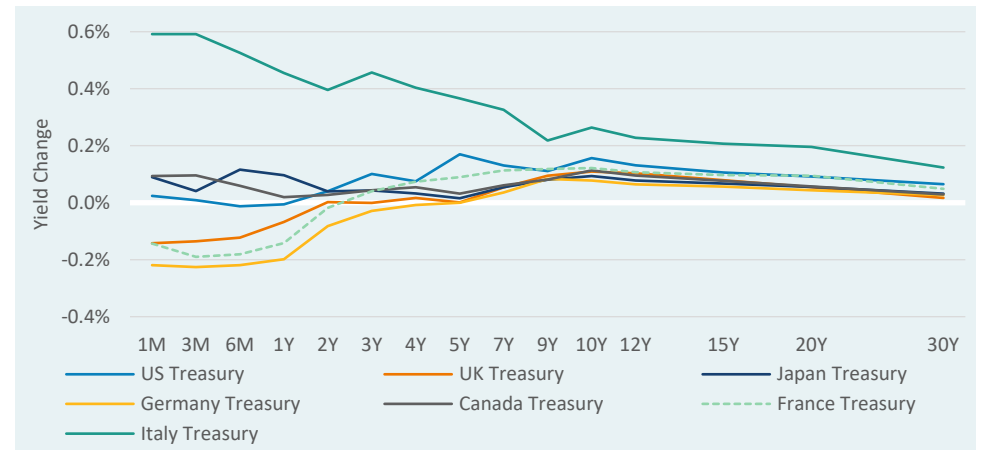
## GLOBAL GOVERNMENT YIELD CURVES



## YIELD CURVE CHANGES OVER LAST FIVE YEARS



## IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 6/30/20

# Currency

The U.S. dollar weakened in the second quarter, falling -2.3% according to the Bloomberg Dollar Spot Index. The dollar fell -2.4% against the Euro, appreciated +0.4% against the British pound, and fell -0.1% relative to the Japanese yen. The market recovery (less demand for safe-haven currencies) and materially lower U.S. interest rates (less attractive U.S. dollar) have likely contributed to the move lower.

As the euro strengthened in Q2, some currency analysts have adopted a more optimistic view on the common currency. Improved macroeconomic conditions relative to the United

States, the potential implications of a strong cyclical rebound, as well as the ECB's apparent unwillingness to push rates much lower below 0%, may be leading to euro appreciation.

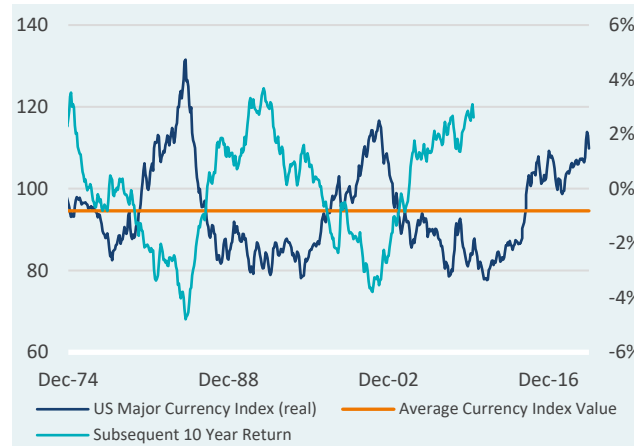
The MSCI Currency Factor Mix Index, constructed as a combination of individual currency factor indices (carry, value, momentum) declined 1.7% in Q2. The momentum factor (-7.8%) drove declines in the overall index as the U.S. dollar began to weaken relative to other major currency pairs following a period of strong appreciation.

**BLOOMBERG DOLLAR SPOT INDEX**



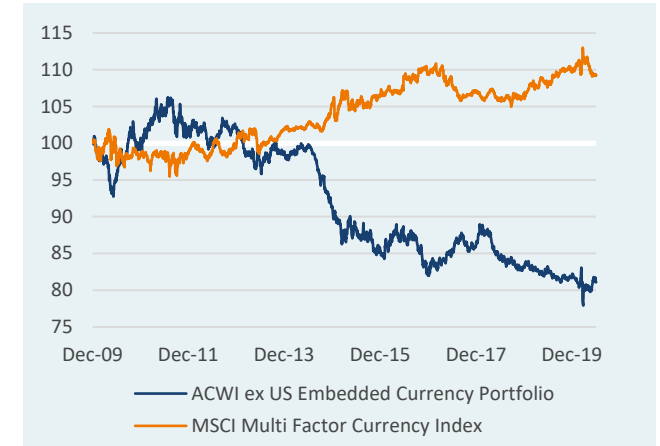
Source: Bloomberg, as of 6/30/20

**USD CURRENCY LEVEL & SUBSEQUENT RETURN**



Source: Federal Reserve, as of 6/30/20

**EMBEDDED CURRENCY VS CURRENCY BETA**



Source: MSCI, Bloomberg, as of 6/30/20

- The Total Fund, net of manager fees, returned 8.3% in the second quarter of 2020 and in the ranked 77<sup>th</sup> percentile among other public plans greater than \$1 billion (median of 10.1%). It exceeded the policy index return of 8.0%. The Total Fund ex Overlay returned 8.2% for the quarter. The Total Fund one-year return of -0.2% lagged the policy index return of 1.6% and ranked in the 79<sup>th</sup> percentile of its peer universe. The three-year return of 3.9% (87<sup>th</sup> percentile) lagged the median large public plan (5.0%) and the policy index (5.3%).
  
- Second quarter results were enhanced by the following factors:
  1. Baillie Gifford gained 25.7% outperformed the MSCI ACWI ex US (16.3%). The strategy benefited from the online revolution and evolution of consumer behavior to online retail. Their investments in companies in these sectors contributed to their outperformance.
  2. Western TRU had a strong recovery gaining 9.3%. Their credit allocation contributed to the outperformance as confidence came back to markets and spreads tightened. This was a stark contrast to Q1 when widening spreads hurt Western TRU.
  
- Second quarter results were hindered by the following factors:
  1. Acadian Managed Vol gained 14.6% and PanAgora (15.5%) trailing the Russell 1000 (21.8%). Both low volatility managers had lower allocations to information technology which led the gains during the recovery.
  2. Private Equity lost -2.7% (the lagged returns are from Q1,) however they outperformed the private equity benchmark which lost -19.7%.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: June 30, 2020

	3 Mo (%)	Rank *	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Total Fund**</b>	<b>8.3</b>	<b>77</b>	<b>-5.4</b>	<b>77</b>	<b>-0.2</b>	<b>79</b>	<b>2.6</b>	<b>76</b>	<b>3.9</b>	<b>87</b>	<b>4.9</b>	<b>72</b>	<b>8.0</b>	<b>38</b>
<i>Policy Index<sup>1</sup></i>	8.0	78	-4.0	44	1.6	36	4.1	29	5.3	33	5.9	31	8.6	20
<i>InvMetrics Public DB &gt; \$1B Net Median</i>	10.1		-4.3		1.3		3.3		5.0		5.4		7.8	
<b>Total Fund ex Overlay</b>	<b>8.2</b>	<b>78</b>	<b>-5.3</b>	<b>76</b>	<b>-0.1</b>	<b>78</b>	<b>2.5</b>	<b>76</b>	<b>3.9</b>	<b>87</b>	<b>4.9</b>	<b>80</b>	<b>7.9</b>	<b>42</b>
<i>Policy Index<sup>1</sup></i>	8.0	78	-4.0	44	1.6	36	4.1	29	5.3	33	5.9	31	8.6	20
<i>InvMetrics Public DB &gt; \$1B Net Median</i>	10.1		-4.3		1.3		3.3		5.0		5.4		7.8	
<b>Public Equity</b>	<b>18.5</b>	<b>91</b>	<b>-7.6</b>	<b>59</b>	<b>0.5</b>	<b>60</b>	<b>2.7</b>	<b>67</b>	<b>5.3</b>	<b>70</b>	<b>6.3</b>	<b>69</b>	<b>10.0</b>	<b>61</b>
<i>Blended Public Equity Index<sup>1</sup></i>	19.3	74	-6.3	39	2.1	37	3.5	52	6.2	49	6.8	46	10.4	54
<i>InvMetrics All DB Total Eq Net Median</i>	20.4		-7.1		1.3		3.6		6.1		6.8		10.5	
<b>US Equity</b>	<b>19.8</b>	<b>88</b>	<b>-6.5</b>	<b>69</b>	<b>2.3</b>	<b>65</b>	<b>4.9</b>	<b>64</b>	<b>8.1</b>	<b>61</b>	<b>8.5</b>	<b>57</b>	<b>12.7</b>	<b>50</b>
<i>Blended US Equity Index<sup>1</sup></i>	22.0	42	-3.5	21	6.5	14	7.7	13	10.0	16	9.9	17	13.6	13
<i>Russell 3000</i>	22.0	42	-3.5	21	6.5	14	7.7	13	10.0	16	10.0	12	13.7	10
<i>InvMetrics All DB US Eq Net Median</i>	21.8		-5.5		3.2		5.6		8.6		8.8		12.6	
<b>Large Cap Equity</b>	<b>19.4</b>	<b>54</b>	<b>-5.3</b>	<b>48</b>	<b>3.7</b>	<b>50</b>	<b>6.8</b>	<b>47</b>	<b>9.5</b>	<b>41</b>	<b>10.0</b>	<b>36</b>	<b>13.4</b>	<b>38</b>
<i>Russell 1000</i>	21.8	37	-2.8	39	7.5	37	8.7	38	10.6	36	10.5	33	14.0	30
<i>eV US Large Cap Equity Net Median</i>	19.8		-5.7		3.5		6.2		8.1		8.4		12.5	
<i>Acadian US MGD V</i>	14.6	89	-9.8	87	-2.5	92	--	--	--	--	--	--	--	--
<i>BlackRock Russell 1000</i>	21.8	24	-2.8	30	7.5	23	8.8	26	10.7	22	--	--	--	--
<i>DE Shaw</i>	20.2	44	-5.4	55	4.4	47	5.4	67	9.4	36	10.2	22	14.1	12
<i>PanAgora Defuseq</i>	15.5	83	-8.7	84	-2.7	93	--	--	--	--	--	--	--	--
<i>Russell 1000</i>	21.8	24	-2.8	31	7.5	24	8.7	26	10.6	22	10.5	18	14.0	12
<i>eV US Large Cap Core Equity Net Median</i>	19.6		-5.1		3.9		6.6		8.7		8.8		12.8	

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

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

1. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: June 30, 2020

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Small Cap Equity</b>	<b>24.5</b>	<b>52</b>	<b>-21.2</b>	<b>75</b>	<b>-14.6</b>	<b>70</b>	<b>-11.1</b>	<b>77</b>	<b>-3.2</b>	<b>74</b>	<b>0.2</b>	<b>82</b>	<b>8.4</b>	<b>75</b>
<i>Russell 2000</i>	25.4	48	-13.0	46	-6.6	44	-5.0	47	2.0	44	4.3	46	10.5	46
<i>eV US Small Cap Equity Net Median</i>	25.0		-14.9		-9.8		-5.3		0.9		3.7		10.1	
<b>QMA US Small Cap</b>	<b>24.5</b>	<b>50</b>	<b>-21.2</b>	<b>95</b>	<b>-14.6</b>	<b>90</b>	<b>-11.1</b>	<b>92</b>	<b>-3.2</b>	<b>93</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Russell 2000</i>	25.4	44	-13.0	45	-6.6	44	-5.0	45	2.0	41	4.3	52	10.5	52
<i>eV US Small Cap Core Equity Net Median</i>	24.3		-14.1		-8.6		-5.3		1.4		4.3		10.5	
Domestic Equity Overlay	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>International Equity</b>	<b>16.8</b>	<b>81</b>	<b>-8.8</b>	<b>28</b>	<b>-1.6</b>	<b>28</b>	<b>0.0</b>	<b>20</b>	<b>2.1</b>	<b>25</b>	<b>3.3</b>	<b>25</b>	<b>5.4</b>	<b>56</b>
<i>Blended International Equity Index<sup>1</sup></i>	15.9	89	-9.8	37	-3.1	42	-1.4	42	1.6	35	2.9	31	5.6	52
<i>MSCI EAFE Gross</i>	15.1	93	-11.1	63	-4.7	71	-1.6	46	1.3	42	2.5	43	6.2	25
<i>InvMetrics All DB ex-US Eq Net Median</i>	18.6		-10.6		-3.8		-1.8		1.0		2.4		5.6	
<b>Developed Markets</b>	<b>15.6</b>	<b>85</b>	<b>-11.2</b>	<b>60</b>	<b>-3.5</b>	<b>53</b>	<b>-1.1</b>	<b>49</b>	<b>1.4</b>	<b>54</b>	<b>2.9</b>	<b>51</b>	<b>5.5</b>	<b>73</b>
<i>MSCI ACWI ex USA Gross</i>	16.3	70	-10.8	56	-4.4	57	-1.3	50	1.6	51	2.7	53	5.5	76
<i>InvMetrics All DB Dev Mkt ex-US Eq Net Median</i>	17.1		-10.0		-2.7		-1.6		1.7		2.9		6.3	
Baillie Gifford	25.7	38	0.9	34	12.3	21	6.2	28	7.3	48	7.1	48	--	--
<i>MSCI ACWI ex US<sup>1</sup></i>	16.3	95	-10.8	96	-4.4	97	-1.3	93	1.6	95	2.7	95	--	--
<i>MSCI ACWI ex US Growth<sup>1</sup></i>	19.2	76	-2.4	58	6.1	56	4.6	42	6.4	59	6.0	62	--	--
<i>eV ACWI ex-US Growth Equity Net Median</i>	24.4		-1.3		7.1		3.8		7.2		7.0		8.3	
Mondrian	11.1	92	-19.1	53	-12.9	64	-5.6	25	-2.6	37	-0.1	39	4.2	54
<i>MSCI ACWI ex USA Value Gross</i>	13.0	71	-19.2	54	-14.8	73	-7.4	40	-3.4	42	-0.7	57	3.4	71
<i>MSCI ACWI ex USA Gross</i>	16.3	22	-10.8	3	-4.4	7	-1.3	6	1.6	6	2.7	11	5.5	21
<i>eV ACWI ex-US Value Equity Net Median</i>	14.2		-19.0		-11.7		-8.4		-4.1		-0.4		4.4	
BlackRock MSCI ACWI EX-US IMI <sup>1</sup>	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>MSCI ACWI ex USA IMI</i>	17.0	52	-11.2	77	-4.7	78	-2.3	78	1.0	78	2.3	77	5.1	79
<i>eV ACWI ex-US All Cap Core Eq Net Median</i>	17.0		-8.5		-1.9		-0.1		2.9		3.1		6.6	

\* Funded June 2020.

1. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: June 30, 2020

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Emerging Markets</b>	<b>21.7</b>	<b>28</b>	<b>-15.7</b>	<b>78</b>	<b>-12.8</b>	<b>87</b>	<b>-5.1</b>	<b>81</b>	<b>-2.5</b>	<b>80</b>	<b>0.1</b>	<b>90</b>	<b>--</b>	<b>--</b>
<i>MSCI Emerging Markets Gross</i>	18.2	77	-9.7	35	-3.0	31	-0.7	31	2.3	18	3.2	26	3.6	27
<i>InvMetrics All DB Emg Mkt Eq Net Median</i>	20.0		-10.9		-5.1		-2.0		-0.1		1.8		2.3	
Int'l Equity Currency Overlay	--	--	--	--	--	--	--	--	--	--	--	--	--	--
International Equity Overlay	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<b>Fixed Income</b>	<b>4.6</b>	<b>69</b>	<b>1.7</b>	<b>80</b>	<b>4.4</b>	<b>74</b>	<b>5.6</b>	<b>72</b>	<b>4.0</b>	<b>68</b>	<b>4.3</b>	<b>36</b>	<b>4.9</b>	<b>26</b>
<i>Blended Fixed Income Index<sup>1</sup></i>	5.1	55	3.2	62	6.4	53	7.5	32	4.9	36	4.5	31	4.0	61
<i>InvMetrics All DB Total Fix Inc Net Median</i>	5.4		4.3		6.6		6.7		4.5		4.1		4.2	
<b>Core Fixed</b>	<b>4.3</b>	<b>--</b>	<b>5.1</b>	<b>--</b>	<b>7.7</b>	<b>--</b>	<b>7.3</b>	<b>--</b>	<b>4.7</b>	<b>--</b>	<b>4.4</b>	<b>--</b>	<b>4.5</b>	<b>--</b>
<i>BBgBarc US Aggregate TR</i>	2.9	--	6.1	--	8.7	--	8.3	--	5.3	--	4.3	--	3.8	--
BlackRock Intermediate Govt	0.7	78	5.9	48	7.2	53	6.7	53	4.3	48	--	--	--	--
<i>BBgBarc US Govt Int TR</i>	0.5	87	5.8	50	7.0	55	6.6	55	4.1	51	3.0	59	2.5	72
<i>BBgBarc US Aggregate TR</i>	2.9	1	6.1	44	8.7	33	8.3	18	5.3	21	4.3	1	3.8	3
<i>eV US Government Fixed Inc Net Median</i>	1.0		5.7		7.5		7.0		4.1		3.6		3.1	
DoubleLine*	3.3	46	--	--	--	--	--	--	--	--	--	--	--	--
<i>BBgBarc US Aggregate TR</i>	2.9	51	6.1	1	8.7	1	8.3	1	5.3	1	4.3	9	3.8	52
<i>eV US Securitized Fixed Inc Net Median</i>	2.9		1.5		2.9		4.0		3.5		3.3		4.2	
FIAM Bond	5.8	12	6.9	21	9.9	14	8.9	17	5.9	9	4.9	10	4.6	16
NISA Core Bond**	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>BBgBarc US Aggregate TR</i>	2.9	93	6.1	47	8.7	45	8.3	49	5.3	50	4.3	60	3.8	72
<i>eV US Core Fixed Inc Net Median</i>	4.4		6.1		8.6		8.3		5.3		4.4		4.1	
Western TRU	9.3	1	-0.4	99	3.5	99	4.8	99	2.9	99	--	--	--	--
<i>3-Month Libor Total Return USD</i>	0.1	99	0.5	99	1.5	99	2.1	99	2.0	99	1.5	99	0.9	99
<i>BBgBarc US Aggregate TR</i>	2.9	93	6.1	47	8.7	45	8.3	49	5.3	50	4.3	60	3.8	72
<i>eV US Core Fixed Inc Net Median</i>	4.4		6.1		8.6		8.3		5.3		4.4		4.1	
Core Fixed Income Overlay	--	--	--	--	--	--	--	--	--	--	--	--	--	--

\* Funded March 2020.

\*\* Funded May 2020.

1. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: June 30, 2020

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Opportunistic Credit</b>	<b>5.3</b>	<b>--</b>	<b>-4.7</b>	<b>--</b>	<b>-2.0</b>	<b>--</b>	<b>2.1</b>	<b>--</b>	<b>2.8</b>	<b>--</b>	<b>4.6</b>	<b>--</b>	<b>7.9</b>	<b>--</b>
<i>BBgBarc BA Intermediate HY<sup>1</sup></i>	10.1	--	-0.9	--	3.2	--	6.3	--	4.3	--	5.1	--	5.4	--
AG CSF Annex Dislocation Fund*	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>BBgBarc BA Intermediate HY</i>	10.1	--	-0.9	--	3.2	--	6.3	--	4.3	--	5.1	--	5.4	--
Angelo Gordon Opportunistic*	7.4	--	-18.6	--	-14.1	--	-2.0	--	6.2	--	6.8	--	--	--
Angelo Gordon STAR*	11.4	--	-1.5	--	2.7	--	11.7	--	14.4	--	11.9	--	--	--
<i>BBgBarc US Aggregate TR</i>	2.9	--	6.1	--	8.7	--	8.3	--	5.3	--	4.3	--	3.8	--
Angelo Gordon Credit Solutions*	0.0	99	-18.7	99	--	--	--	--	--	--	--	--	--	--
<i>BBgBarc BA Intermediate HY</i>	10.1	28	-0.9	4	3.2	3	6.3	2	4.3	4	5.1	9	5.4	81
<i>eV US High Yield Fixed Inc Net Median</i>	9.2		-4.0		-0.6		3.0		2.8		4.0		6.2	
Beach Point Select	8.7	63	-5.2	74	-0.5	49	2.3	66	3.9	11	5.9	3	--	--
<i>BBgBarc BA Intermediate HY</i>	10.1	28	-0.9	4	3.2	3	6.3	2	4.3	4	5.1	9	5.4	81
<i>eV US High Yield Fixed Inc Net Median</i>	9.2		-4.0		-0.6		3.0		2.8		4.0		6.2	
Brigade Capital	10.5	23	-9.8	99	-7.3	99	-2.5	99	-0.3	99	2.5	97	--	--
<i>BBgBarc BA Intermediate HY</i>	10.1	28	-0.9	4	3.2	3	6.3	2	4.3	4	5.1	9	5.4	81
50% Barclays HY/ 50% Bank Loan	9.9	31	-4.3	55	-1.1	61	2.3	66	2.7	52	3.9	59	5.5	81
<i>eV US High Yield Fixed Inc Net Median</i>	9.2		-4.0		-0.6		3.0		2.8		4.0		6.2	
PIMCO Diversified	7.1	84	-0.7	4	2.1	9	6.0	2	--	--	--	--	--	--
<i>Blended PIMCO Diversified Index<sup>1</sup></i>	9.3	46	-0.6	3	3.0	4	6.4	2	4.3	4	5.1	9	5.9	62
<i>BBgBarc BA Intermediate HY</i>	10.1	28	-0.9	4	3.2	3	6.3	2	4.3	4	5.1	9	5.4	81
<i>eV US High Yield Fixed Inc Net Median</i>	9.2		-4.0		-0.6		3.0		2.8		4.0		6.2	
Franklin Templeton	0.0	99	-5.7	89	-7.7	99	-1.2	98	-1.6	99	0.4	97	--	--
<i>BBgBarc Multiverse TR</i>	3.7	87	2.5	34	3.8	42	4.9	45	3.7	42	3.6	54	3.0	72
<i>eV All Global Fixed Inc Net Median</i>	8.3		0.3		2.6		4.3		3.3		3.8		4.2	

\* Preliminary return as of 06/30/2020.

\* Funded April 2020.

1. See Appendix for Benchmark History.



Total Fund  
Performance Summary (Net of Fees)

Period Ending: June 30, 2020

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Private Credit</b>	<b>1.3</b>	<b>--</b>	<b>-2.3</b>	<b>--</b>	<b>1.3</b>	<b>--</b>	<b>4.4</b>	<b>--</b>	<b>5.2</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Cliffwater Direct Lending Index*</i>	-4.8	--	-9.4	--	-6.1	--	0.9	--	3.5	--	5.3	--	8.5	--
<i>Blackrock DL Feeder IX-U+*</i>	0.0	99	--	--	--	--	--	--	--	--	--	--	--	--
<i>Cliffwater Direct Lending Index</i>	-4.8	99	-9.4	99	-6.1	98	0.9	87	3.5	20	5.3	7	8.5	1
<i>eV US High Yield Fixed Inc Net Median</i>	9.2		-4.0		-0.6		3.0		2.8		4.0		6.2	
<i>PIMCO Private Income*</i>	0.0	99	-8.6	98	-3.8	89	--	--	--	--	--	--	--	--
<i>BBgBarc BA Intermediate HY</i>	10.1	28	-0.9	4	3.2	3	6.3	2	4.3	4	5.1	9	5.4	81
<i>Cliffwater Direct Lending Index</i>	-4.8	99	-9.4	99	-6.1	98	0.9	87	3.5	20	5.3	7	8.5	1
<i>eV US High Yield Fixed Inc Net Median</i>	9.2		-4.0		-0.6		3.0		2.8		4.0		6.2	
<i>TCP Direct Lending VIII*</i>	4.2	97	1.9	1	4.8	1	6.5	1	6.4	1	--	--	--	--
<i>White Oak Yield*</i>	0.0	99	-0.9	4	2.7	5	4.9	13	5.0	2	--	--	--	--
<i>Cliffwater Direct Lending Index</i>	-4.8	99	-9.4	99	-6.1	98	0.9	87	3.5	20	5.3	7	8.5	1
<i>eV US High Yield Fixed Inc Net Median</i>	9.2		-4.0		-0.6		3.0		2.8		4.0		6.2	
<b>Risk Parity</b>	<b>3.1</b>	<b>--</b>	<b>-9.4</b>	<b>--</b>	<b>-5.0</b>	<b>--</b>	<b>2.6</b>	<b>--</b>	<b>3.9</b>	<b>--</b>	<b>4.3</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Blended Risk Parity Index<sup>1</sup></i>	12.4	--	-1.6	--	4.6	--	6.0	--	6.4	--	6.9	--	--	--
<b>Alternatives</b>	<b>-1.3</b>	<b>--</b>	<b>-3.1</b>	<b>--</b>	<b>2.5</b>	<b>--</b>	<b>3.6</b>	<b>--</b>	<b>3.3</b>	<b>--</b>	<b>5.1</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Blended Alternatives Index<sup>1</sup></i>	-9.6	--	-4.7	--	0.0	--	4.6	--	6.4	--	6.5	--	--	--
<b>Private Equity** **</b>	<b>-2.7</b>	<b>33</b>	<b>4.7</b>	<b>7</b>	<b>16.9</b>	<b>4</b>	<b>15.9</b>	<b>4</b>	<b>13.7</b>	<b>17</b>	<b>14.4</b>	<b>9</b>	<b>--</b>	<b>--</b>
<i>Blended Private Equity Index<sup>1</sup></i>	-19.7	99	-11.8	95	-6.1	86	2.4	75	6.0	76	8.8	51	14.5	6
<i>InvMetrics All DB Private Eq Net Median</i>	-5.4		-3.3		2.0		6.5		8.8		8.9		10.2	
<b>Hedge Fund/Absolute Return</b>	<b>0.8</b>	<b>83</b>	<b>-11.6</b>	<b>84</b>	<b>-12.7</b>	<b>88</b>	<b>-9.3</b>	<b>89</b>	<b>-7.5</b>	<b>93</b>	<b>-2.4</b>	<b>81</b>	<b>--</b>	<b>--</b>
<i>Libor 1 month +4%</i>	1.1	82	2.3	10	5.4	11	5.9	6	5.8	9	5.3	5	4.8	21
<i>InvMetrics All DB Hedge Funds Net Median</i>	7.2		-5.0		-1.4		0.6		2.1		1.7		3.8	

\* Preliminary return as of 06/30/2020.

\* Funded March 2020.

\*\* Returns are one-quarter lag.

\*\* Excludes EnCap Energy Capital Fund and Sheridan Production Partners.

1. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: June 30, 2020

	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
AQR DELTA XN	-6.1	97	-27.8	98	-30.8	99	-22.0	99	-16.7	99	-8.2	98	--	--
Aberdeen Standard GARS	2.6	66	-0.1	38	2.8	35	3.5	32	1.7	54	--	--	--	--
Graham Quant Macro*	2.8	66	--	--	--	--	--	--	--	--	--	--	--	--
PIMCO MAARS Fund LP***	--	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>Libor 1 month +4%</i>	1.1	71	2.3	28	5.4	26	5.9	21	5.8	21	5.3	26	4.8	48
<i>eV Alt All Multi-Strategy Median</i>	6.0		-2.5		-0.4		1.1		2.3		2.6		4.5	
<b>Inflation Hedge</b>	<b>0.1</b>	<b>--</b>	<b>-12.5</b>	<b>--</b>	<b>-10.5</b>	<b>--</b>	<b>-4.2</b>	<b>--</b>	<b>-0.7</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>	<b>--</b>
<i>Blended Inflation Hedge Index<sup>1</sup></i>	-0.4	--	-9.2	--	-6.7	--	-1.1	--	1.6	--	--	--	--	--
<b>Real Estate</b>	<b>-2.9</b>	<b>99</b>	<b>-1.6</b>	<b>74</b>	<b>2.4</b>	<b>41</b>	<b>4.7</b>	<b>34</b>	<b>5.7</b>	<b>30</b>	<b>7.3</b>	<b>24</b>	<b>10.7</b>	<b>6</b>
NCREIF ODCE	-1.6	85	-0.6	54	2.2	47	4.3	46	5.7	32	7.3	21	10.8	5
<i>InvMetrics All DB Real Estate Pub Net Median</i>	-0.4		-0.4		1.8		4.2		5.2		6.4		9.6	
Harrison Street Core Property**	-0.3	--	--	--	--	--	--	--	--	--	--	--	--	--
<i>NCREIF ODCE</i>	-1.6	--	-0.6	--	2.2	--	4.3	--	5.7	--	7.3	--	10.8	--
Invesco	-4.5	--	-3.0	--	1.1	--	3.8	--	5.2	--	6.8	--	10.5	--
<i>NCREIF ODCE</i>	-1.6	--	-0.6	--	2.2	--	4.3	--	5.7	--	7.3	--	10.8	--
Invesco US Val IV	-4.5	--	-3.9	--	4.3	--	8.1	--	9.3	--	--	--	--	--
<i>NCREIF ODCE</i>	-1.6	--	-0.6	--	2.2	--	4.3	--	5.7	--	7.3	--	10.8	--
<i>NCREIF ODCE + 2%</i>	-1.1	--	0.4	--	4.3	--	6.4	--	7.8	--	9.4	--	13.0	--
Invesco US Val V	-4.3	--	-3.3	--	2.1	--	--	--	--	--	--	--	--	--
<i>NCREIF ODCE</i>	-1.6	--	-0.6	--	2.2	--	4.3	--	5.7	--	7.3	--	10.8	--
<i>NCREIF ODCE + 2%</i>	-1.1	--	0.4	--	4.3	--	6.4	--	7.8	--	9.4	--	13.0	--
PGIM RE US Debt Fund	0.9	--	2.0	--	5.0	--	5.9	--	--	--	--	--	--	--
<i>NCREIF ODCE</i>	-1.6	--	-0.6	--	2.2	--	4.3	--	5.7	--	7.3	--	10.8	--

\* Funded February 2020.

\*\* Funded January 2020.

\*\*\* Funded April 2020.

1. See Appendix for Benchmark History.

Total Fund  
Performance Summary (Net of Fees)

Period Ending: June 30, 2020

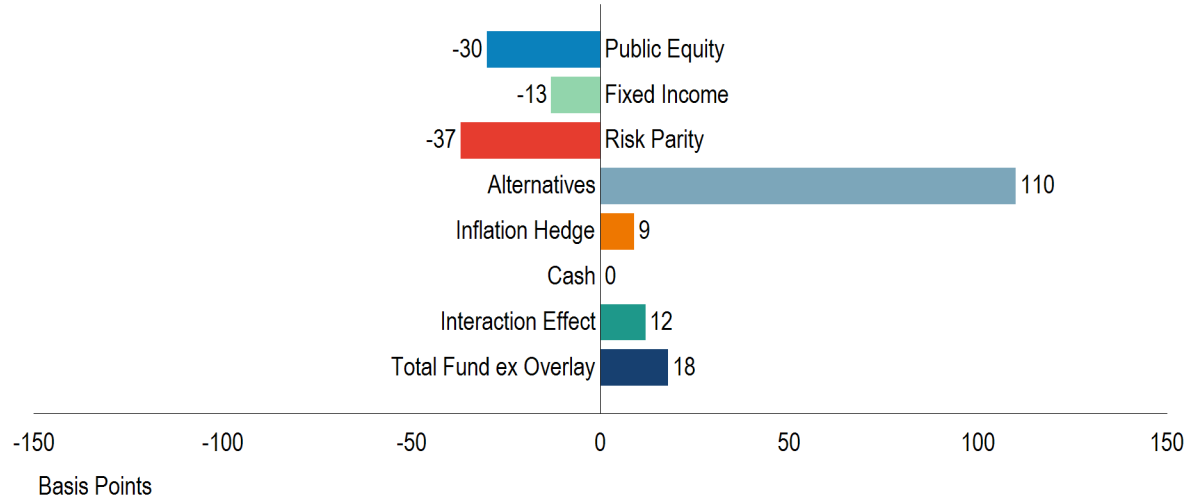
	3 Mo (%)	Rank	YTD (%)	Rank	1 Yr (%)	Rank	2 Yrs (%)	Rank	3 Yrs (%)	Rank	5 Yrs (%)	Rank	10 Yrs (%)	Rank
<b>Private Real Asset**</b>	-8.1	--	-7.5	--	-8.1	--	-7.1	--	-6.7	--	2.9	--	--	--
<i>Blended Private Real Asset Index<sup>1</sup></i>	-30.1	--	-25.5	--	-24.8	--	-10.1	--	-6.2	--	-1.6	--	--	--
<i>Blended Secondary CA Private RA Index<sup>1</sup></i>	-13.0	--	-12.7	--	-13.8	--	-5.2	--	-0.1	--	2.5	--	--	--
<b>Public Real Assets</b>	11.7	--	-26.3	--	-25.4	--	-14.0	--	-6.6	--	--	--	--	--
<i>Blended Public Real Asset Index<sup>1</sup></i>	12.7	--	-17.8	--	-15.3	--	-7.5	--	-2.0	--	1.4	--	--	--
SSgA Custom Real Asset	11.7	--	-17.9	--	-15.4	--	-7.5	--	-2.0	--	--	--	--	--
<i>SSgA Custom Real Asset Index<sup>1</sup></i>	12.7	--	-17.8	--	-15.3	--	-7.5	--	-2.0	--	--	--	--	--
<b>Cash</b>	0.1	--	0.4	--	0.9	--	1.1	--	1.1	--	1.1	--	0.9	--
<i>91 Day T-Bills</i>	0.0	--	0.4	--	1.3	--	1.8	--	1.7	--	1.1	--	0.6	--
General Account	0.4	--	0.8	--	1.9	--	3.6	--	3.3	--	2.6	--	1.5	--
Treasury & LAIF	0.5	--	0.7	--	2.2	--	2.9	--	3.0	--	2.1	--	1.5	--
<i>91 Day T-Bills</i>	0.0	--	0.4	--	1.3	--	1.8	--	1.7	--	1.1	--	0.6	--
Currency Hedge Cash Overlay	--	--	--	--	--	--	--	--	--	--	--	--	--	--
Cash Overlay	--	--	--	--	--	--	--	--	--	--	--	--	--	--

\*\* Returns are one-quarter lag.

1. See Appendix for Benchmark History.

Total Fund ex Overlay  
Performance Attribution

Period Ending: June 30, 2020

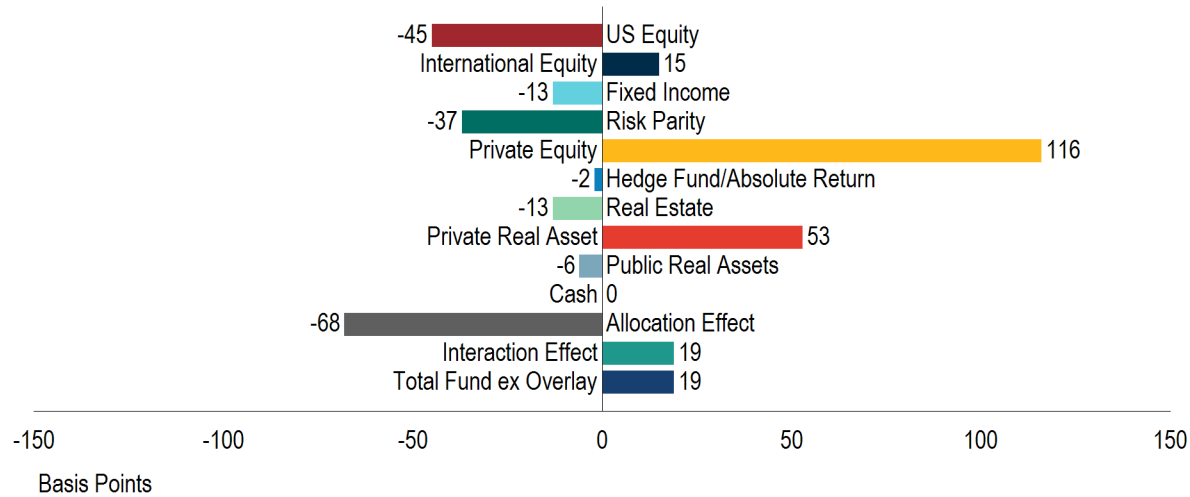


	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction *	Total Effects
Public Equity	18.49%	19.29%	-0.80%	-0.30%	-0.12%	0.01%	-0.42%
Fixed Income	4.58%	5.10%	-0.52%	-0.13%	-0.01%	0.02%	-0.12%
Risk Parity	3.10%	12.40%	-9.31%	-0.37%	-0.09%	0.14%	-0.32%
Alternatives	-1.27%	-9.62%	8.35%	1.10%	-0.08%	-0.03%	1.00%
Inflation Hedge	0.07%	-0.40%	0.47%	0.09%	0.09%	-0.02%	0.16%
Cash	0.12%	0.03%	0.09%	0.00%	-0.12%	0.00%	-0.12%
<b>Total</b>	<b>8.18%</b>	<b>8.00%</b>	<b>0.18%</b>	<b>0.38%</b>	<b>-0.32%</b>	<b>0.12%</b>	<b>0.18%</b>

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

Total Fund ex Overlay  
Performance Attribution

Period Ending: June 30, 2020

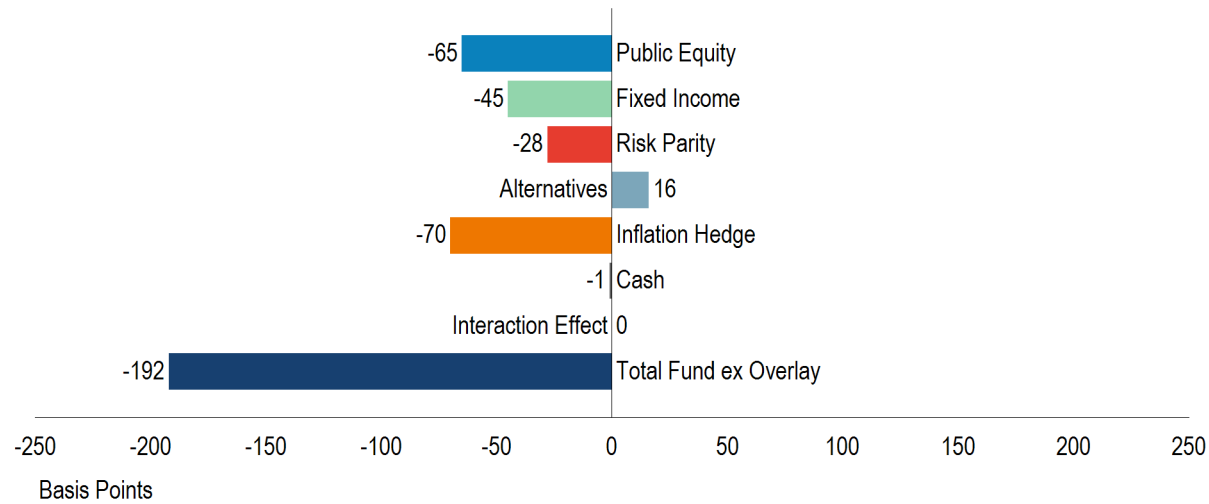


	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction * Effects	Total Effects
US Equity	19.83%	22.03%	-2.20%	-0.45%	-0.06%	0.00%	-0.51%
International Equity	16.80%	15.93%	0.87%	0.15%	-0.05%	-0.02%	0.08%
Fixed Income	4.58%	5.10%	-0.52%	-0.13%	-0.01%	0.02%	-0.12%
Risk Parity	3.10%	12.40%	-9.31%	-0.37%	-0.09%	0.14%	-0.32%
Private Equity	-2.67%	-19.74%	17.07%	1.16%	-0.24%	0.07%	1.00%
Hedge Fund/Absolute Return	0.79%	1.07%	-0.28%	-0.02%	0.03%	0.00%	0.01%
Real Estate	-2.95%	-1.55%	-1.40%	-0.13%	-0.06%	-0.01%	-0.20%
Private Real Asset	-8.07%	-30.09%	22.02%	0.53%	0.00%	-0.03%	0.50%
Public Real Assets	11.65%	12.74%	-1.08%	-0.06%	-0.08%	0.02%	-0.12%
Cash	0.12%	0.03%	0.09%	0.00%	-0.12%	0.00%	-0.12%
<b>Total</b>	<b>8.20%</b>	<b>8.00%</b>	<b>0.19%</b>	<b>0.68%</b>	<b>-0.68%</b>	<b>0.19%</b>	<b>0.19%</b>

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

Total Fund ex Overlay  
Performance Attribution (1 Year)

Period Ending: June 30, 2020

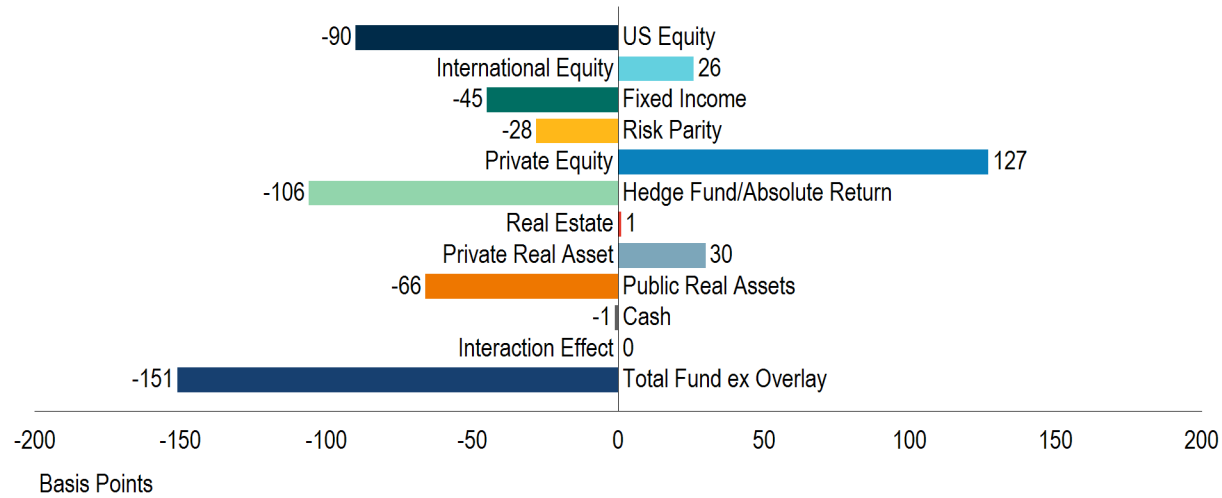


	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction *	Total Effects
Public Equity	0.52%	2.12%	-1.60%	-0.65%	0.00%	0.00%	-0.65%
Fixed Income	4.39%	6.44%	-2.05%	-0.45%	0.00%	0.00%	-0.45%
Risk Parity	-5.02%	4.65%	-9.67%	-0.28%	0.00%	0.00%	-0.28%
Alternatives	2.48%	-0.02%	2.50%	0.16%	0.00%	0.00%	0.16%
Inflation Hedge	-10.46%	-6.69%	-3.77%	-0.70%	0.00%	0.00%	-0.70%
Cash	0.92%	1.30%	-0.38%	-0.01%	0.00%	0.00%	-0.01%
<b>Total</b>	<b>-0.14%</b>	<b>1.78%</b>	<b>-1.92%</b>	<b>-1.92%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>-1.92%</b>

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

Total Fund ex Overlay  
Performance Attribution (1 Year)

Period Ending: June 30, 2020



	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction *	Total Effects
US Equity	2.28%	6.53%	-4.25%	-0.90%	0.00%	0.00%	-0.90%
International Equity	-1.59%	-3.10%	1.52%	0.26%	0.00%	0.00%	0.26%
Fixed Income	4.39%	6.44%	-2.05%	-0.45%	0.00%	0.00%	-0.45%
Risk Parity	-5.02%	4.65%	-9.67%	-0.28%	0.00%	0.00%	-0.28%
Private Equity	16.93%	-6.13%	23.06%	1.27%	0.00%	0.00%	1.27%
Hedge Fund/Absolute Return	-12.72%	5.40%	-18.12%	-1.06%	0.00%	0.00%	-1.06%
Real Estate	2.44%	2.23%	0.21%	0.01%	0.00%	0.00%	0.01%
Private Real Asset	-8.15%	-24.83%	16.68%	0.30%	0.00%	0.00%	0.30%
Public Real Assets	-25.35%	-15.31%	-10.05%	-0.66%	0.00%	0.00%	-0.66%
Cash	0.92%	1.30%	-0.38%	-0.01%	0.00%	0.00%	-0.01%
<b>Total</b>	<b>-0.14%</b>	<b>1.37%</b>	<b>-1.51%</b>	<b>-1.51%</b>	<b>0.00%</b>	<b>0.00%</b>	<b>-1.51%</b>

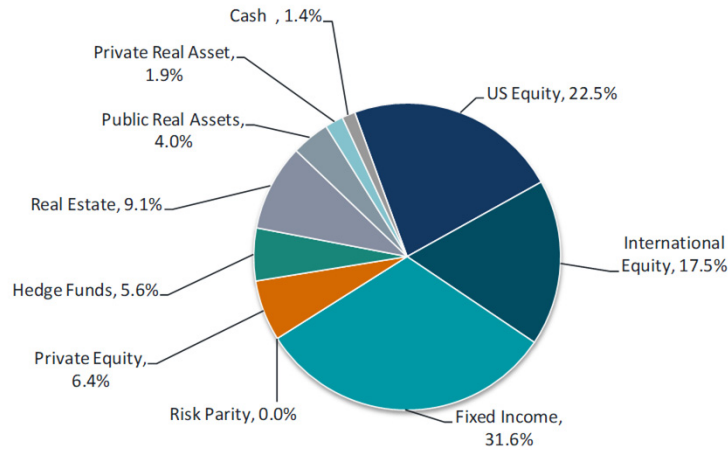
Attribution does not include the impact of the Parametric Minneapolis strategy.  
\* Interaction Effects include Residual Effects.

# Total Fund

## Asset Allocation Analysis

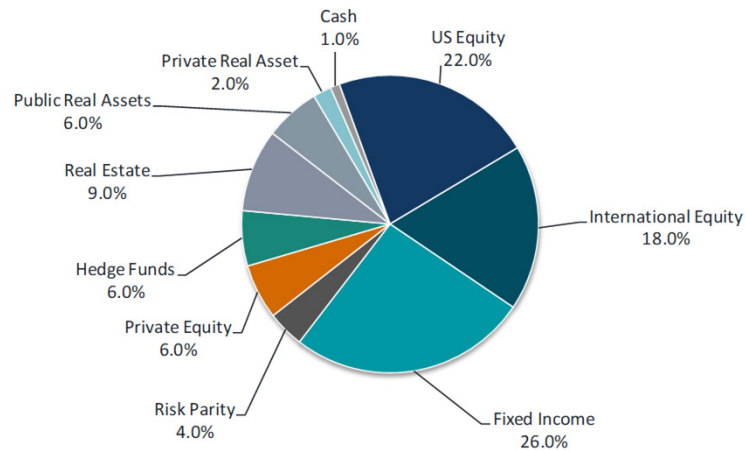
Period Ending: June 30, 2020

Current w/ Overlay



ASSET ALLOCATION	MARKET VALUE W/ OVERLAY	W/ OVERLAY	W/O OVERLAY
US Equity	1,049,072,354	22.5%	22.4%
International Equity	817,163,787	17.5%	17.6%
Fixed Income	1,475,210,140	31.6%	30.8%
Risk Parity	0	0.0%	0.0%
Private Equity	298,746,088	6.4%	6.4%
Hedge Funds	259,097,759	5.6%	5.6%
Real Estate	425,695,843	9.1%	9.1%
Public Real Assets	186,589,155	4.0%	4.0%
Private Real Asset	90,431,259	1.9%	1.9%
Cash	64,624,264	1.4%	2.2%
<b>TOTAL</b>	<b>4,666,630,649</b>	<b>100.0%</b>	<b>100.0%</b>

Target

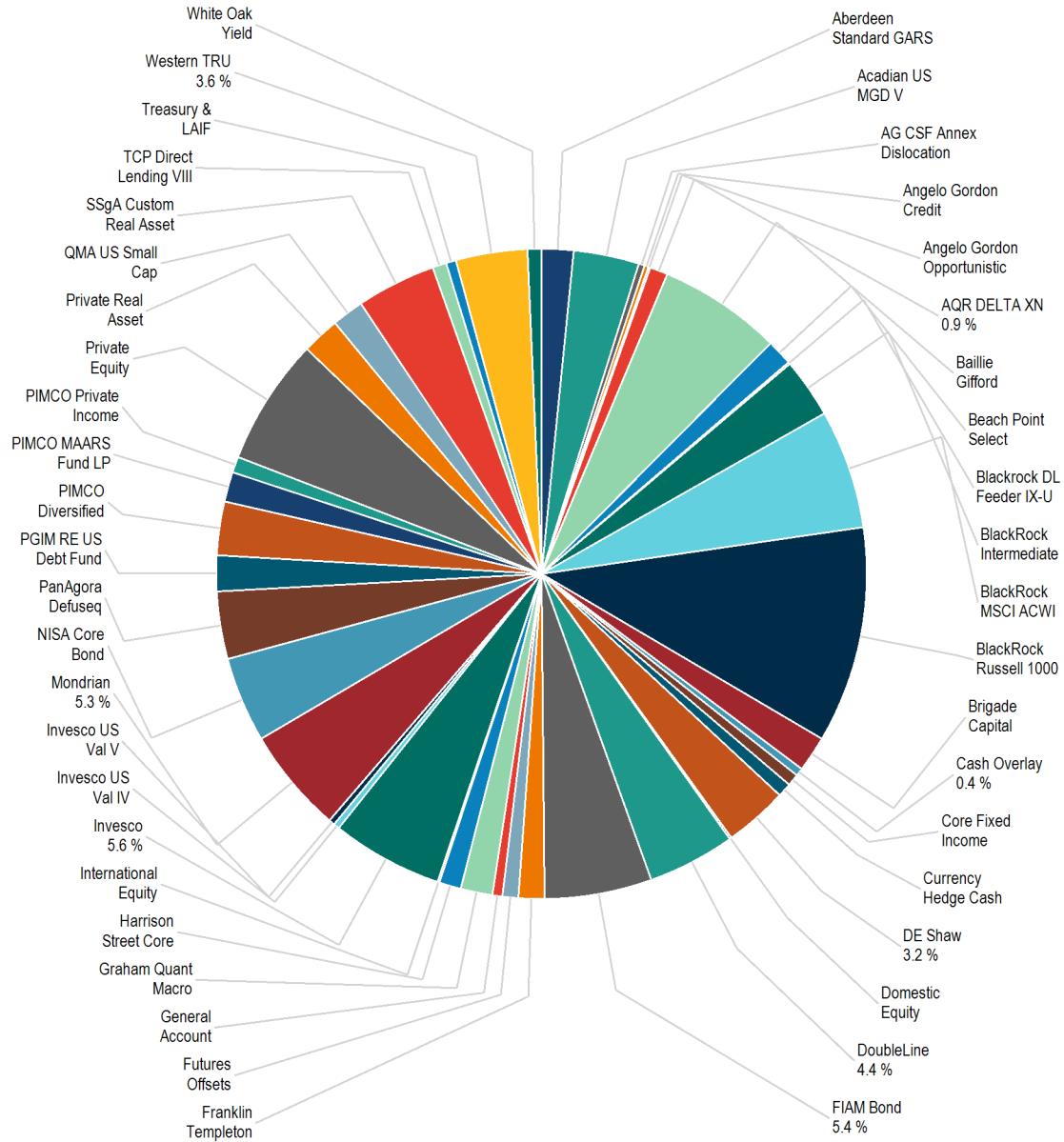


ASSET ALLOCATION	W/ OVERLAY	TARGET	DIFF
US Equity	22.5%	22.0%	0.5%
International Equity	17.5%	18.0%	-0.5%
Fixed Income	31.6%	26.0%	5.6%
Risk Parity	0.0%	4.0%	-4.0%
Private Equity	6.4%	6.0%	0.4%
Hedge Funds	5.6%	6.0%	-0.4%
Real Estate	9.1%	9.0%	0.1%
Public Real Assets	4.0%	6.0%	-2.0%
Private Real Asset	1.9%	2.0%	-0.1%
Cash	1.4%	1.0%	0.4%
<b>TOTAL</b>	<b>100.0%</b>	<b>100.0%</b>	<b>0.0%</b>



# Total Fund Manager Allocation Analysis

Period Ending: June 30, 2020



	Actual	Actual
Aberdeen Standard GARS	\$75,460,730	2%
Acadian US MGD V	\$152,777,264	3%
AG CSF Annex Dislocation Fund	\$13,250,000	0%
Angelo Gordon Credit Solutions	\$10,962,280	0%
Angelo Gordon Opportunistic	\$3,290,565	0%
Angelo Gordon STAR	\$2,177,589	0%
AQR DELTA XN	\$40,903,083	1%
Baillie Gifford	\$290,983,967	6%
Beach Point Select	\$62,964,674	1%
Blackrock DL Feeder IX-U	\$3,495,374	0%
BlackRock Intermediate Govt	\$140,187,907	3%
BlackRock MSCI ACWI EX-US IMI	\$282,258,931	6%
BlackRock Russell 1000	\$508,417,716	11%
Brigade Capital	\$84,304,302	2%
Cash Overlay	\$18,405,614	0%
Core Fixed Income Overlay	\$29,206,922	1%
Currency Hedge Cash Overlay	\$34,693,639	1%
DE Shaw	\$151,663,091	3%
Domestic Equity Overlay	\$6,281,160	0%
DoubleLine	\$207,139,743	4%
FIAM Bond	\$254,181,628	5%
Franklin Templeton	\$58,546,690	1%
Futures Offsets (SMCE02001)	-\$39,560,063	-1%
General Account	\$25,631,312	1%
Graham Quant Macro	\$72,465,450	2%
Harrison Street Core Property	\$50,001,859	1%
International Equity Overlay	\$4,071,981	0%
Invesco	\$263,266,557	6%
Invesco US Val IV	\$14,581,505	0%
Invesco US Val V	\$12,756,030	0%
Mondrian	\$246,820,176	5%
NISA Core Bond	\$202,783,331	4%
PanAgora Defuseq	\$158,230,591	3%
PGIM RE US Debt Fund	\$85,089,892	2%
PIMCO Diversified	\$125,154,334	3%
PIMCO MAARS Fund LP	\$70,268,496	2%
PIMCO Private Income	\$37,495,209	1%
Private Equity	\$298,746,088	6%
Private Real Asset	\$90,431,259	2%
QMA US Small Cap	\$72,448,674	2%
SSgA Custom Real Asset	\$186,589,155	4%
TCP Direct Lending VIII	\$34,077,448	1%
Transition Account	\$5,026	0%
Treasury & LAIF	\$24,213,009	1%
Western TRU	\$167,628,873	4%
White Oak Yield	\$31,881,588	1%
<b>Total</b>	<b>\$4,666,630,649</b>	<b>100%</b>

**Statistics Summary**

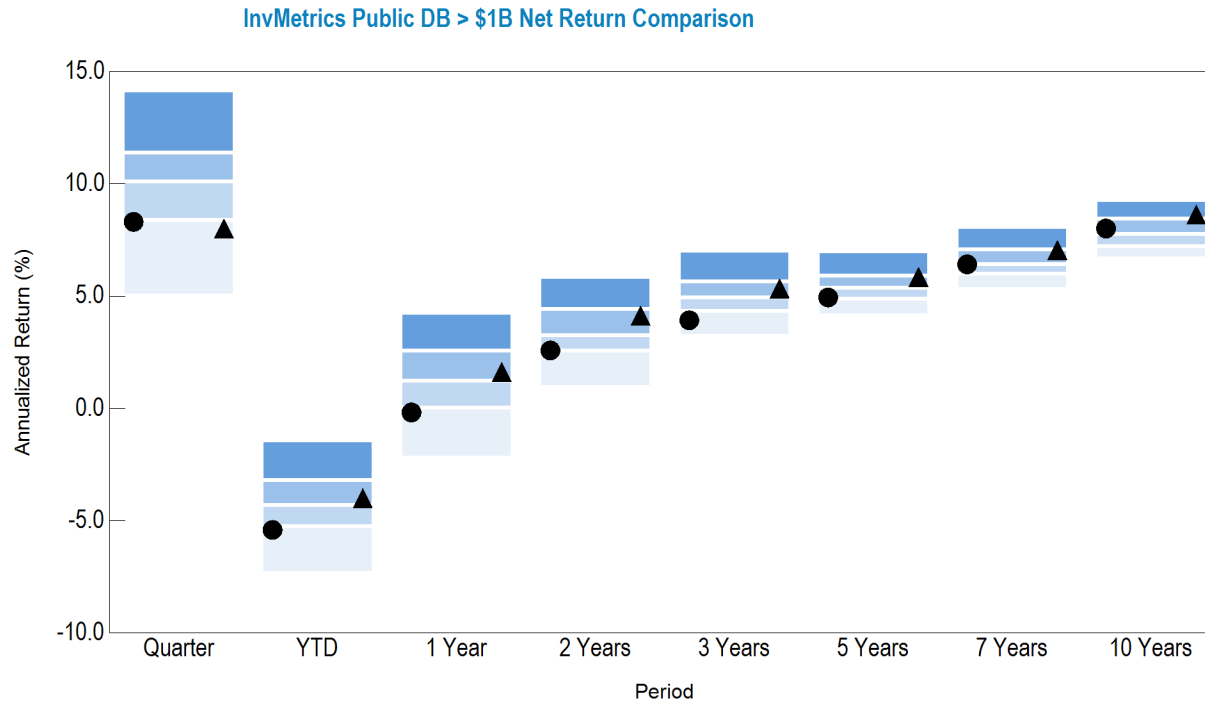
**3 Years**

	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank	Tracking Error	Tracking Error Rank
Total Fund	3.9%	87	8.8%	42	0.3	85	-0.9	83	1.6%	61
Policy Index	5.3%	33	8.6%	31	0.4	31	--	--	0.0%	1
InvMetrics Public DB > \$1B Net Median	5.0%	--	9.3%	--	0.4	--	-0.3	--	1.4%	--

**Statistics Summary**

**5 Years**

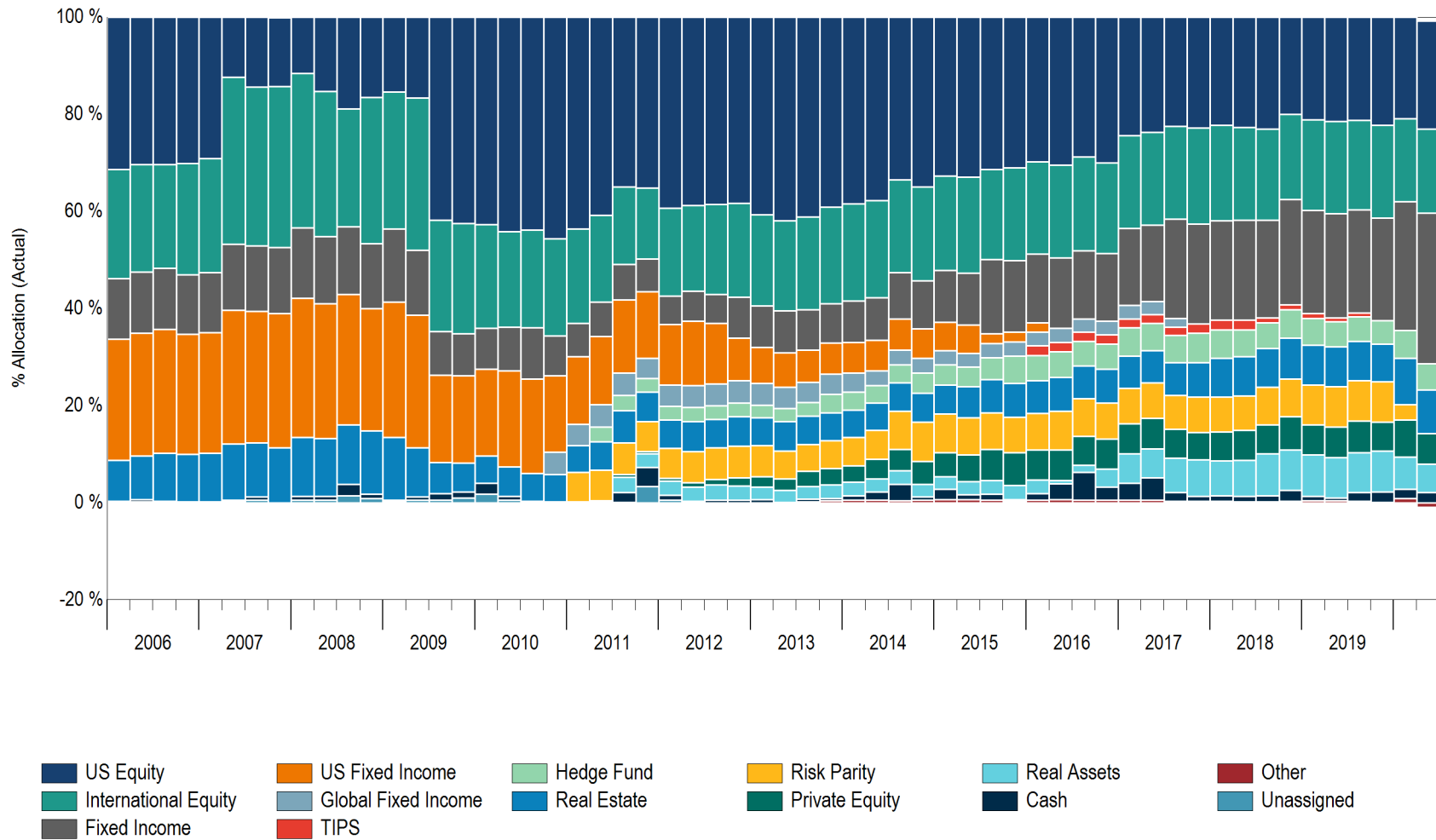
	Anlzd Return	Anlzd Return Rank	Anlzd Standard Deviation	Anlzd Standard Deviation Rank	Sharpe Ratio	Sharpe Ratio Rank	Information Ratio	Information Ratio Rank	Tracking Error	Tracking Error Rank
Total Fund	4.9%	72	8.0%	43	0.5	60	-0.6	79	1.5%	58
Policy Index	5.9%	31	8.0%	43	0.6	36	--	--	0.0%	1
InvMetrics Public DB > \$1B Net Median	5.4%	--	8.3%	--	0.5	--	-0.3	--	1.3%	--



	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
<b>Return (Rank)</b>								
5th Percentile	14.2	-1.5	4.2	5.8	7.0	7.0	8.1	9.3
25th Percentile	11.4	-3.2	2.6	4.4	5.7	5.9	7.1	8.5
Median	10.1	-4.3	1.3	3.3	5.0	5.4	6.4	7.8
75th Percentile	8.4	-5.2	0.0	2.6	4.4	4.9	6.0	7.2
95th Percentile	5.0	-7.3	-2.2	1.0	3.2	4.2	5.3	6.7
# of Portfolios	71	71	71	71	71	70	68	64
● Total Fund	8.3 (77)	-5.4 (77)	-0.2 (79)	2.6 (76)	3.9 (87)	4.9 (72)	6.4 (52)	8.0 (38)
▲ Policy Index	8.0 (78)	-4.0 (44)	1.6 (36)	4.1 (29)	5.3 (33)	5.9 (31)	7.1 (27)	8.6 (20)

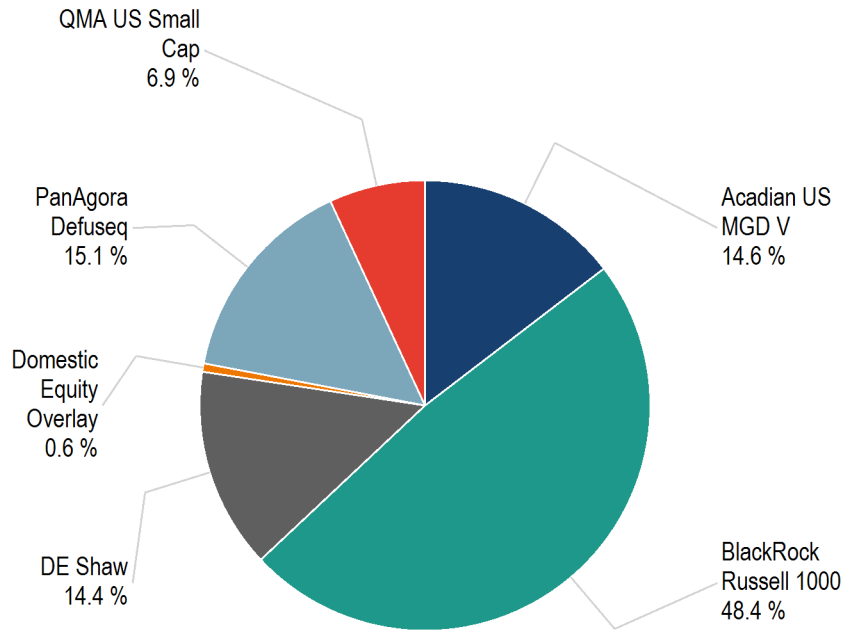
Total Fund  
Asset Allocation History

Period Ending: June 30, 2020



US Equity  
 Manager Allocation Analysis

Period Ending: June 30, 2020



	Actual \$	Actual %	Manager Contribution to Excess Return %
Acadian US MGD V	\$152,777,264	14.6%	-1.1%
BlackRock Russell 1000	\$508,417,716	48.4%	0.0%
DE Shaw	\$151,663,091	14.4%	-0.2%
PanAgora Defuseq	\$158,230,591	15.1%	-0.9%
QMA US Small Cap	\$72,448,674	6.9%	-0.1%
Domestic Equity Overlay	\$6,281,160	0.6%	0.0%
Actual vs. Policy Weight Difference			0.1%
<b>Total</b>	<b>\$1,049,818,495</b>	<b>100.0%</b>	<b>-2.2%</b>

**Statistics Summary**

**3 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
US Equity	8.1%	17.4%	0.4	-1.7	1.1%
Blended US Equity Index	10.0%	17.7%	0.5	--	0.0%
Russell 3000	10.0%	17.7%	0.5	--	0.0%

Statistics Summary

3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Large Cap Equity	9.5%	16.7%	0.5	-0.9	1.3%
Russell 1000	10.6%	17.4%	0.5	--	0.0%
BlackRock Russell 1000	10.7%	17.4%	0.5	0.7	0.0%
Russell 1000	10.6%	17.4%	0.5	--	0.0%
DE Shaw	9.4%	17.2%	0.4	-0.5	2.4%
Russell 1000	10.6%	17.4%	0.5	--	0.0%
Small Cap Equity	-3.2%	24.8%	-0.2	-1.5	3.6%
Russell 2000	2.0%	22.9%	0.0	--	0.0%
QMA US Small Cap	-3.2%	24.8%	-0.2	-1.5	3.6%
Russell 2000	2.0%	22.9%	0.0	--	0.0%

**Statistics Summary**

**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
US Equity	8.5%	15.1%	0.5	-1.3	1.0%
Blended US Equity Index	9.9%	15.4%	0.6	--	0.0%
Russell 3000	10.0%	15.4%	0.6	0.5	0.4%

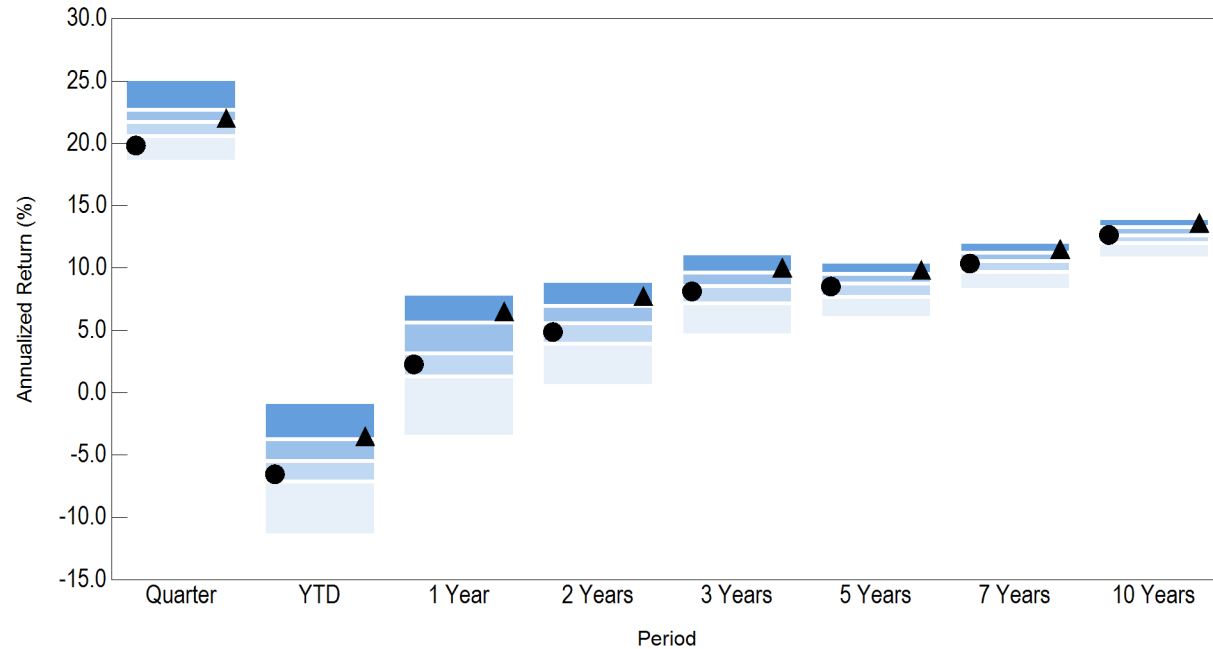


**Statistics Summary**

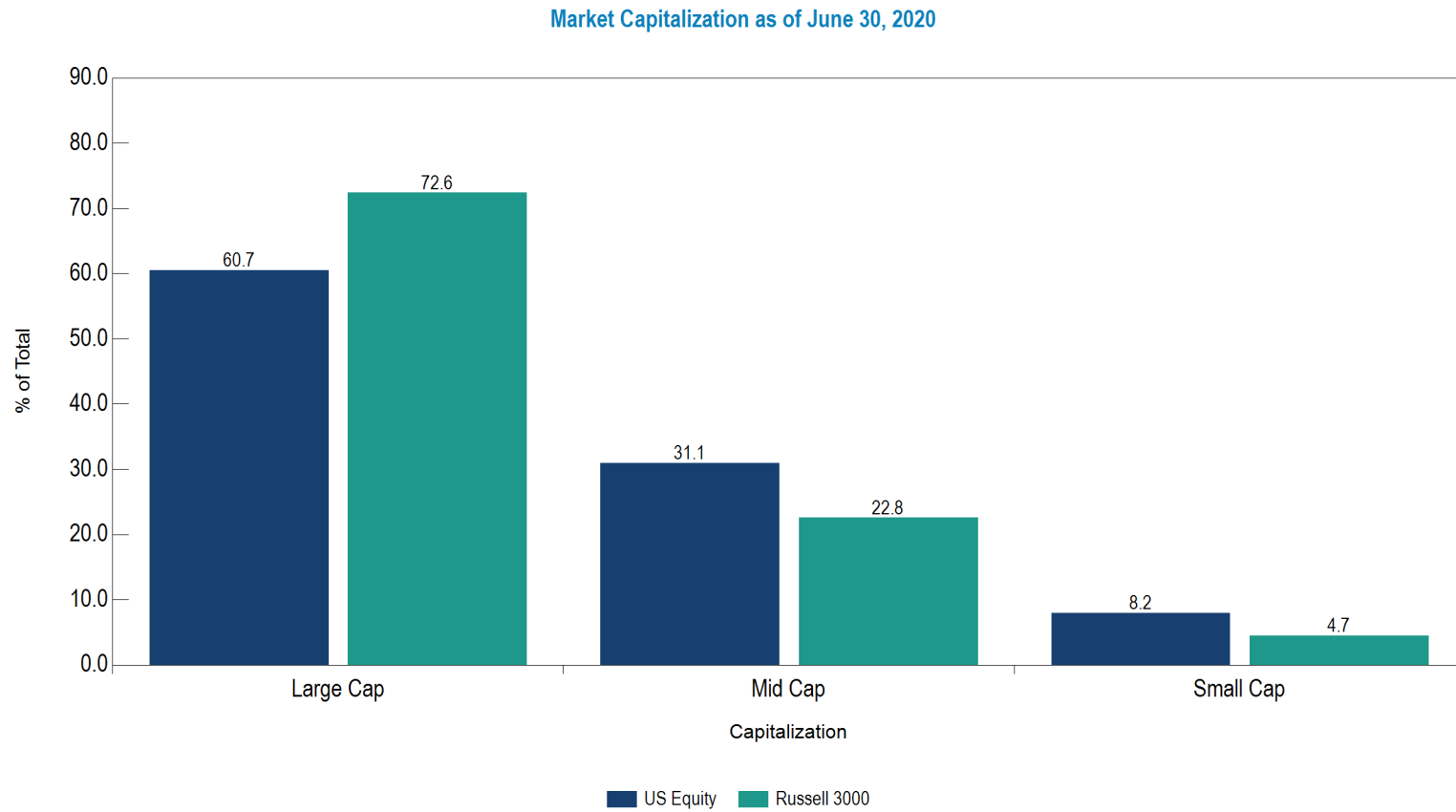
**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Large Cap Equity	10.0%	14.7%	0.6	-0.4	1.4%
Russell 1000	10.5%	15.1%	0.6	--	0.0%
DE Shaw	10.2%	15.0%	0.6	-0.1	2.2%
Russell 1000	10.5%	15.1%	0.6	--	0.0%
Small Cap Equity	0.2%	21.4%	0.0	-1.2	3.4%
Russell 2000	4.3%	20.3%	0.2	--	0.0%

InvMetrics All DB US Eq Net Return Comparison



	Return (Rank)							
	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	25.1	-0.8	7.9	8.9	11.2	10.5	12.1	14.0
25th Percentile	22.7	-3.7	5.7	7.0	9.6	9.5	11.3	13.3
Median	21.8	-5.5	3.2	5.6	8.6	8.8	10.6	12.6
75th Percentile	20.6	-7.1	1.3	4.0	7.2	7.7	9.7	12.0
95th Percentile	18.6	-11.4	-3.5	0.6	4.6	6.0	8.3	10.8
# of Portfolios	574	574	574	569	556	527	490	377
● US Equity	19.8 (88)	-6.5 (69)	2.3 (65)	4.9 (64)	8.1 (61)	8.5 (57)	10.4 (58)	12.7 (50)
▲ Blended US Equity Index	22.0 (42)	-3.5 (21)	6.5 (14)	7.7 (13)	10.0 (16)	9.9 (17)	11.5 (15)	13.6 (13)



See appendix for the market capitalization breakpoints.

Characteristics

	Portfolio	Russell 3000
Number of Holdings	2,989	3,009
Weighted Avg. Market Cap. (\$B)	238.1	309.4
Median Market Cap. (\$B)	2.7	1.4
Price To Earnings	20.8	22.4
Price To Book	3.7	4.0
Price To Sales	2.3	2.5
Return on Equity (%)	19.5	19.5
Yield (%)	1.9	1.7
Beta (holdings; domestic)	1.0	1.0

Top Holdings

MICROSOFT CORP	3.9%
APPLE INC	3.6%
AMAZON.COM INC	2.6%
JOHNSON & JOHNSON	1.2%
ALPHABET INC	1.1%
FACEBOOK INC	1.1%
VERIZON COMMUNICATIONS INC	1.0%
PROCTER & GAMBLE CO (THE)	1.0%
JPMORGAN CHASE & CO	0.9%
VISA INC	0.8%

Best Performers

	Return %
NOVAVAX INC (NVAX)	513.8%
REMARK HOLDINGS INC (MARK)	500.8%
CARPARTS.COM INC (PRTS)	394.9%
CAMPING WORLD HOLDINGS INC (CWH)	380.5%
MACROGENICS INC (MGNX)	379.7%
LOVESAC CO (THE) (LOVE)	349.9%
FASTLY INC (FSLY)	348.5%
MICHAELS COS INC (THE) (MIK)	336.4%
MERSANA THERAPEUTICS INC (MRSN)	301.4%
QEP RESOURCES INC (QEP)	285.7%

Worst Performers

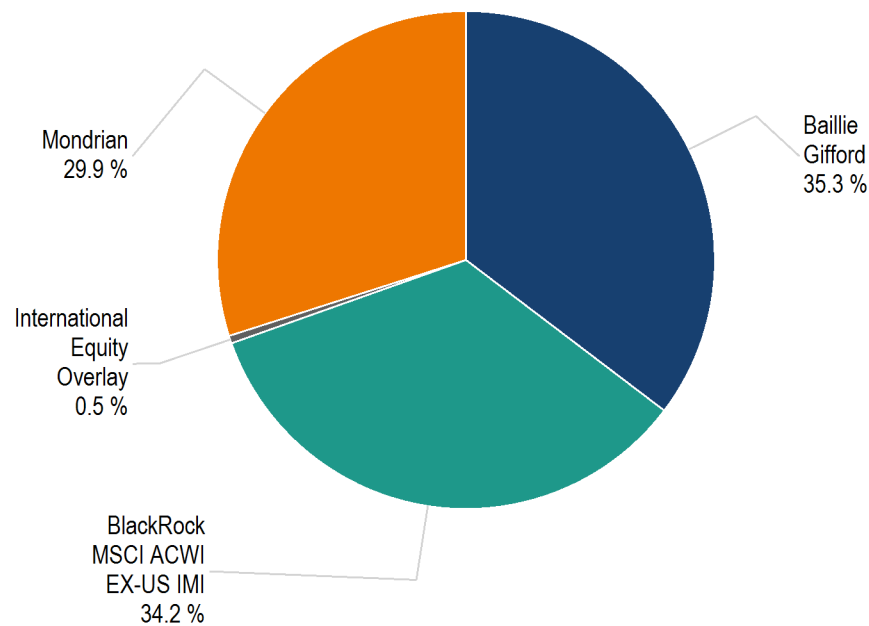
	Return %
DIAMOND OFFSHORE DRILLING INC. (DOFSQ)	-86.0%
CHESAPEAKE ENERGY CORP (CHKAQ)	-85.8%
PYXUS INTERNATIONAL INC (PYXSQ)	-84.9%
STAGE STORES INC (SSINQ)	-80.7%
HERTZ GLOBAL HOLDINGS INC (HTZ)	-77.2%
VIVUS INC (VVUSQ)	-77.2%
UNIT CORP (UNTCQ)	-72.5%
EXTRACTION OIL & GAS INC (XOGAQ)	-71.3%
MILLENDO THERAPEUTICS INC (MLND)	-66.7%
INTELSAT SA (INTEQ)	-64.7%

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%	36.2%	31.7%	2.1%	2.5%			
Materials	0.0%	0.0%	0.0%	0.0%	26.2%	26.1%	3.3%	2.6%			
Industrials	0.1%	0.1%	0.0%	0.0%	19.3%	18.0%	8.1%	8.9%			
Consumer Discretionary	-0.4%	-0.4%	0.0%	0.0%	33.9%	37.4%	9.9%	10.1%			
Consumer Staples	-0.1%	0.1%	-0.2%	0.0%	9.7%	8.3%	8.8%	7.1%			
Health Care	0.0%	0.0%	0.0%	0.0%	16.8%	16.7%	15.8%	15.5%			
Financials	0.3%	0.3%	0.1%	0.0%	15.0%	12.7%	10.7%	11.5%			
Information Technology	-0.7%	-0.5%	-0.3%	0.1%	29.9%	31.7%	21.7%	24.6%			
Communication Services	-0.3%	-0.3%	0.0%	0.0%	17.5%	21.0%	9.8%	9.9%			
Utilities	-0.6%	-0.1%	-0.5%	0.0%	0.8%	2.7%	6.0%	3.5%			
Real Estate	0.0%	-0.1%	0.0%	0.0%	12.2%	13.5%	3.5%	3.9%			
Cash	0.0%	0.0%	0.0%	0.0%	0.0%	--	0.2%	0.0%			
Unclassified	0.0%	0.0%	0.0%	0.0%	20.1%	22.0%	0.1%	0.0%			
<b>Portfolio</b>	<b>-1.6%</b>	<b>=</b>	<b>-0.7%</b>	<b>+</b>	<b>-1.0%</b>	<b>+</b>	<b>0.0%</b>	<b>20.3%</b>	<b>22.0%</b>	<b>100.0%</b>	<b>100.0%</b>

U.S. Effective Style Map





	Actual \$	Actual %	Manager Contribution to Excess Return %
Baillie Gifford	\$290,983,967	35.3%	5.0%
Mondrian	\$246,820,176	29.9%	-0.9%
BlackRock MSCI ACWI EX-US IMI	\$282,258,931	34.2%	0.0%
Int'l Equity Currency Overlay	\$0	0.0%	0.0%
International Equity Overlay	\$4,071,981	0.5%	0.0%
Actual vs. Policy Weight Difference			-3.2%
<b>Total</b>	<b>\$824,135,055</b>	<b>100.0%</b>	<b>0.9%</b>

Statistics Summary

3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
International Equity	2.1%	15.2%	0.0	0.3	1.4%
Blended International Equity Index	1.6%	15.4%	0.0	--	0.0%
Developed Markets	1.4%	15.8%	0.0	-0.1	2.2%
MSCI ACWI ex USA Gross	1.6%	15.9%	0.0	--	0.0%
Baillie Gifford	7.3%	17.0%	0.3	1.0	5.8%
MSCI ACWI ex US	1.6%	15.9%	0.0	--	0.0%
Mondrian	-2.6%	16.8%	-0.3	0.4	2.3%
MSCI ACWI ex USA Value Gross	-3.4%	17.4%	-0.3	--	0.0%
Emerging Markets	-2.5%	19.5%	-0.2	-0.9	5.5%
MSCI Emerging Markets Gross	2.3%	18.5%	0.0	--	0.0%

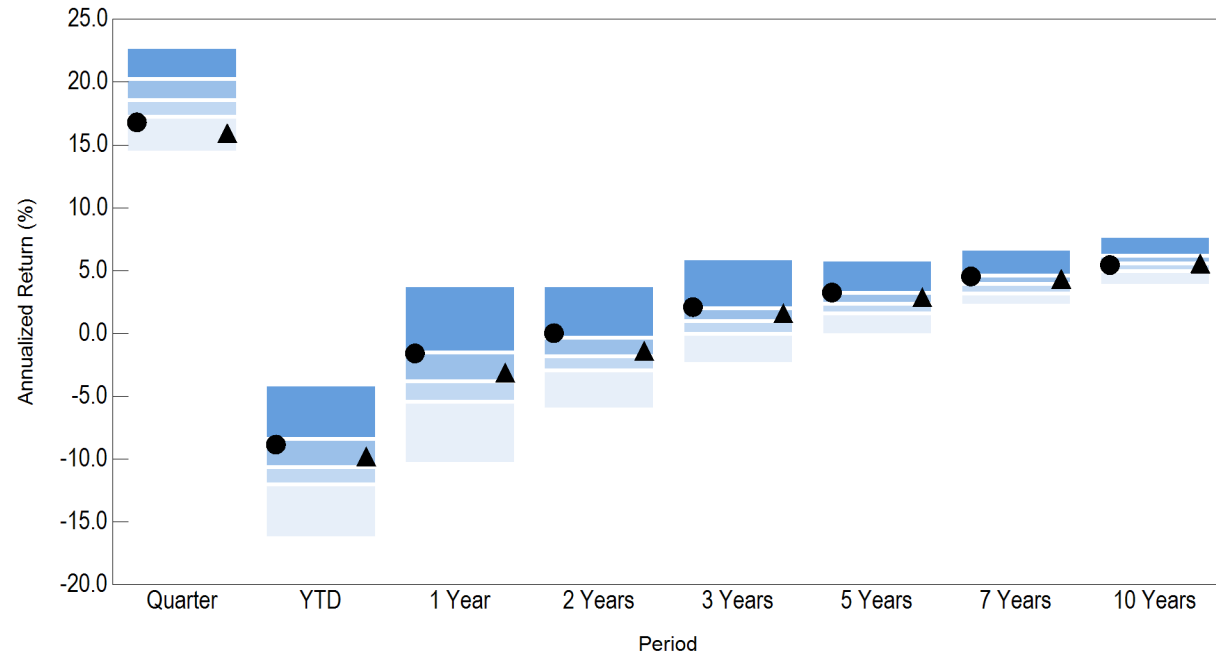


Statistics Summary

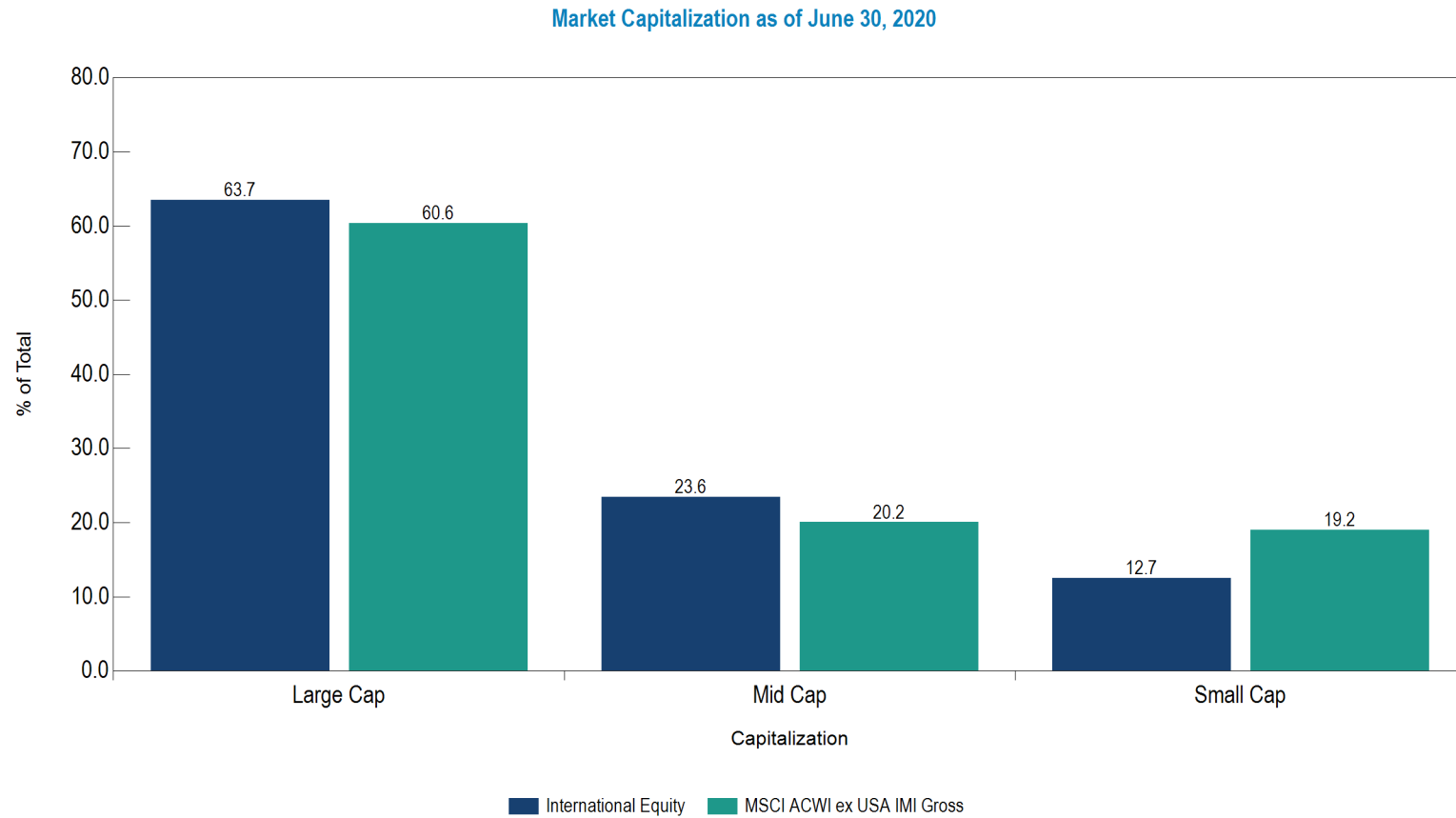
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
International Equity	3.3%	14.4%	0.1	0.2	1.7%
Blended International Equity Index	2.9%	14.5%	0.1	--	0.0%
Developed Markets	2.9%	14.8%	0.1	0.1	2.3%
MSCI ACWI ex USA Gross	2.7%	14.9%	0.1	--	0.0%
Baillie Gifford	7.1%	16.2%	0.4	0.8	5.3%
MSCI ACWI ex US	2.7%	14.9%	0.1	--	0.0%
Mondrian	-0.1%	15.2%	-0.1	0.1	4.0%
MSCI ACWI ex USA Value Gross	-0.7%	16.1%	-0.1	--	0.0%
Emerging Markets	0.1%	18.0%	-0.1	-0.6	5.0%
MSCI Emerging Markets Gross	3.2%	17.9%	0.1	--	0.0%

InvMetrics All DB ex-US Eq Net Return Comparison



	Return (Rank)							
	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	22.8	-4.1	3.8	3.8	5.9	5.9	6.7	7.7
25th Percentile	20.3	-8.4	-1.5	-0.3	2.1	3.3	4.7	6.2
Median	18.6	-10.6	-3.8	-1.8	1.0	2.4	4.0	5.6
75th Percentile	17.3	-12.0	-5.4	-2.9	0.0	1.6	3.2	5.0
95th Percentile	14.4	-16.2	-10.3	-6.0	-2.4	-0.1	2.2	3.8
# of Portfolios	379	379	378	376	363	341	313	238
● International Equity	16.8 (81)	-8.8 (28)	-1.6 (28)	0.0 (20)	2.1 (25)	3.3 (25)	4.5 (28)	5.4 (56)
▲ Blended International Equity Index	15.9 (89)	-9.8 (37)	-3.1 (42)	-1.4 (42)	1.6 (35)	2.9 (31)	4.4 (34)	5.6 (52)



See appendix for the market capitalization breakpoints.

Characteristics

	Portfolio	MSCI ACWI ex USA IMI Gross
Number of Holdings	6,484	6,439
Weighted Avg. Market Cap. (\$B)	62.6	69.5
Median Market Cap. (\$B)	2.2	1.5
Price To Earnings	17.7	16.2
Price To Book	2.9	2.7
Price To Sales	1.3	1.3
Return on Equity (%)	13.1	13.5
Yield (%)	2.5	2.8
Beta (holdings; global)	1.0	0.9

Top Holdings

SHOPIFY INC	1.8%
ALIBABA GROUP HOLDING LTD	1.6%
UNITED OVERSEAS BANK LTD	1.1%
ASML HOLDING NV	1.1%
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	1.1%
SANOFI	1.0%
TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD	0.9%
COMPAGNIE DE SAINT GOBAIN SA	0.9%
TENCENT HOLDINGS LTD	0.9%
GLAXOSMITHKLINE PLC	0.9%

Best Performers

	Return %
ONENESS BIOTECH CO LTD	927.0%
DOOSAN FUEL CELL CO LTD	528.2%
GMO CLOUD KK	500.0%
SUPERMAX CORP BERHAD	377.2%
ZIP CO LTD	271.2%
SASOL LTD	268.0%
AFTERPAY LTD	264.9%
VODAFONE IDEA LIMITED	242.6%
ALTEOGEN INC	228.9%
ANGES MG (J:ANGE)	223.7%

Worst Performers

	Return %
WIRECARD AG	-93.6%
NOVA GROUP HOLDINGS LTD	-92.8%
CHINA METAL RESOURCES UTILIZATION LTD	-82.7%
PT NUSANTARA PROPERTI INTERNATIONAL TBK	-72.6%
NORWEGIAN AIR SHUTTLE (N:NAS)	-67.3%
GENFIT (F:GNFT)	-61.8%
PT PELAYARAN TAMARIN SAMUDRA TBK	-59.4%
AVIANCA HOLDINGS SA	-56.6%
NORSTAR HOLDINGS INC	-55.5%
BUMRUNGRAD HOSPITAL PUBLIC CO LTD	-50.1%

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

	Attribution Effects				Returns		Sector Weights				
	Total Effects	Selection Effect	Allocation Effect	Interaction Effects	Portfolio	Benchmark	Portfolio	Benchmark			
Energy	-0.1%	-0.1%	0.1%	-0.1%	8.4%	12.4%	3.6%	4.5%			
Materials	-0.6%	-0.3%	-0.2%	-0.1%	21.9%	27.3%	4.5%	7.3%			
Industrials	0.4%	0.3%	0.0%	0.1%	20.9%	18.4%	13.3%	12.4%			
Consumer Discretionary	0.6%	0.5%	0.0%	0.0%	24.7%	20.5%	12.4%	11.7%			
Consumer Staples	-0.1%	-0.1%	0.0%	-0.1%	9.6%	10.9%	10.1%	10.1%			
Health Care	-0.1%	-0.1%	0.0%	0.0%	16.4%	17.3%	10.9%	10.3%			
Financials	-0.2%	-0.3%	0.2%	-0.1%	10.1%	12.2%	14.7%	18.2%			
Information Technology	0.4%	0.4%	0.0%	-0.1%	29.7%	26.0%	10.3%	10.4%			
Communication Services	0.3%	0.2%	0.0%	0.0%	21.7%	18.5%	7.6%	7.1%			
Utilities	0.1%	0.1%	0.0%	0.0%	14.1%	12.7%	3.1%	3.7%			
Real Estate	0.2%	0.0%	0.2%	-0.1%	10.2%	9.4%	1.7%	4.2%			
Cash	-1.2%	0.0%	-1.2%	0.0%	0.0%	--	7.7%	0.0%			
Unclassified	0.0%	0.0%	0.0%	0.0%	-4.9%	17.2%	0.0%	0.0%			
<b>Portfolio</b>	<b>-0.5%</b>	<b>=</b>	<b>0.7%</b>	<b>+</b>	<b>-0.9%</b>	<b>+</b>	<b>-0.3%</b>	<b>16.7%</b>	<b>17.2%</b>	<b>100.0%</b>	<b>100.0%</b>

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

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>Europe</b>									
Austria	20.9%	14.5%	0.1%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Belgium	13.5%	14.1%	0.3%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%
Czech Republic*	22.7%	23.4%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Denmark	18.0%	19.9%	0.9%	1.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Finland	21.4%	22.4%	0.7%	0.7%	0.0%	0.0%	0.0%	0.0%	0.0%
France	19.1%	16.8%	5.7%	6.6%	0.1%	0.0%	0.0%	0.0%	0.1%
Germany	34.2%	27.8%	6.7%	5.4%	0.3%	0.1%	0.0%	0.1%	0.6%
Greece*	20.0%	16.6%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Hungary*	11.6%	14.6%	0.1%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
Ireland	20.1%	20.4%	0.6%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Italy	14.4%	17.3%	1.6%	1.6%	0.0%	0.0%	0.0%	0.0%	0.0%
Luxembourg	9.2%	17.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Netherlands	22.2%	25.8%	2.7%	2.6%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Norway	15.4%	21.3%	0.2%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Poland*	29.5%	23.0%	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%
Portugal	-1.2%	13.5%	0.5%	0.1%	0.0%	0.0%	0.0%	-0.1%	-0.1%
Russia*	22.0%	19.3%	0.8%	0.8%	0.1%	0.0%	0.0%	0.0%	0.0%
Spain	5.3%	10.5%	1.8%	1.7%	-0.1%	0.0%	0.0%	0.0%	-0.1%
Sweden	22.3%	23.5%	3.1%	2.2%	0.0%	0.0%	0.1%	0.0%	0.0%
Switzerland	12.2%	12.3%	5.2%	6.8%	0.0%	0.1%	0.0%	0.0%	0.0%
United Kingdom	14.2%	10.0%	11.2%	9.9%	0.4%	-0.1%	0.0%	0.1%	0.4%

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

	Returns and Weights				Attribution Effects				Total Effects	
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect		
<b>AsiaPacific</b>										
Australia	27.3%	31.8%	2.9%	4.0%	-0.1%	0.0%	-0.2%	0.0%	-0.3%	
China*	15.0%	14.7%	4.4%	10.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Hong Kong	8.4%	9.5%	4.7%	2.4%	0.0%	-0.1%	0.0%	0.0%	-0.2%	
India*	22.5%	22.3%	2.5%	2.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
Indonesia*	26.8%	26.2%	0.4%	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	
Japan	11.6%	11.8%	20.1%	18.4%	0.0%	-0.1%	0.0%	0.0%	-0.1%	
Korea*	26.5%	20.5%	1.7%	3.3%	0.2%	-0.1%	0.0%	-0.1%	0.0%	
Malaysia*	14.1%	16.4%	0.6%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	
New Zealand	44.2%	27.3%	0.4%	0.2%	0.0%	0.0%	0.0%	0.0%	0.1%	
Pakistan*	19.7%	15.7%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Philippines*	20.2%	19.7%	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
Singapore	5.1%	12.0%	2.3%	0.9%	-0.1%	-0.1%	0.0%	-0.1%	-0.2%	
Taiwan*	19.6%	23.4%	2.2%	3.6%	-0.1%	-0.1%	-0.1%	0.0%	-0.2%	
Thailand*	14.6%	27.6%	0.3%	0.6%	-0.1%	0.0%	0.0%	0.0%	-0.1%	
<b>Americas</b>										
Argentina*	18.1%	35.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	
Brazil*	8.6%	23.8%	1.2%	1.4%	-0.2%	0.0%	0.0%	0.0%	-0.2%	
Canada	95.5%	23.3%	1.2%	6.3%	4.8%	-0.1%	-0.3%	-3.9%	0.5%	
Chile*	20.3%	18.6%	0.3%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	
Colombia*	11.2%	10.3%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
Mexico*	10.1%	11.8%	0.8%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	
Peru*	5.0%	9.9%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	
United States	48.9%	21.6%	1.3%	0.0%	0.0%	0.1%	0.0%	0.3%	0.4%	

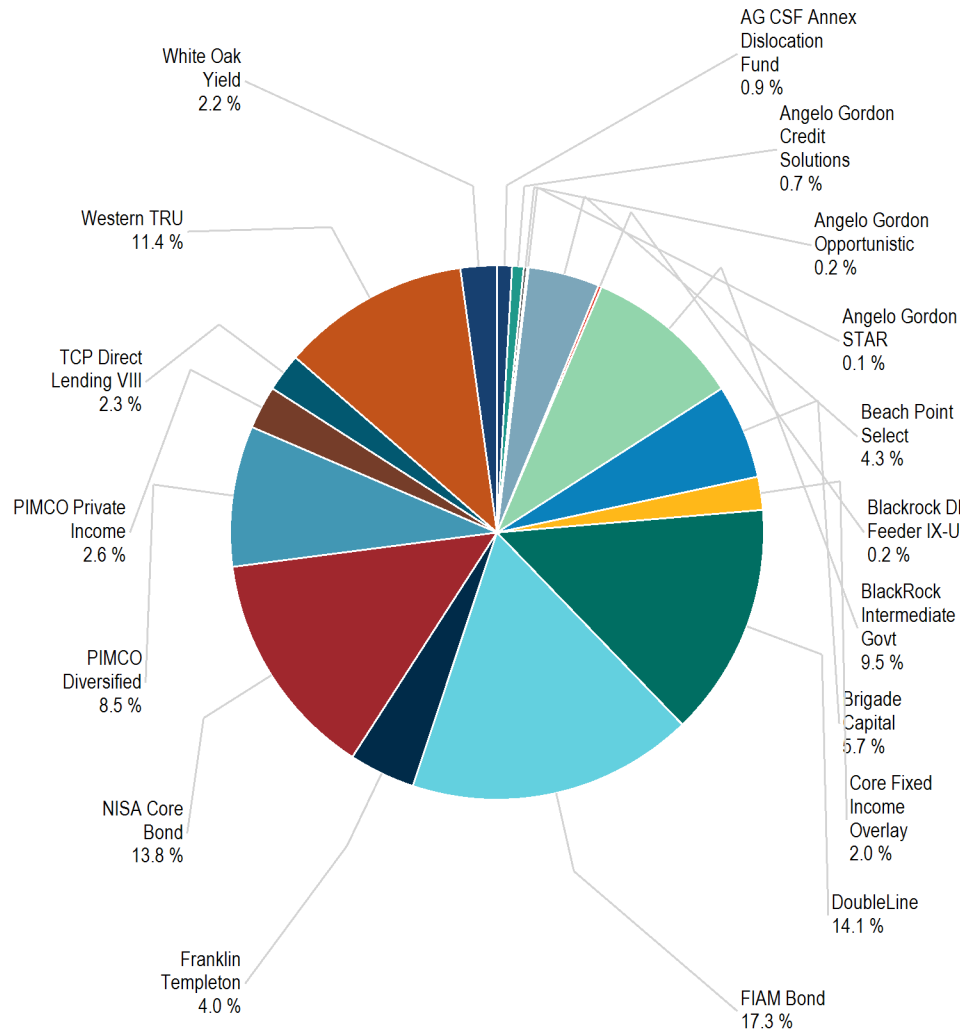
Int'l Equity Performance Attribution vs. MSCI ACWI ex USA IMI Gross

	Returns and Weights				Attribution Effects				Total Effects
	Manager Return	Index Return	Manager Weight	Index Weight	Selection Effect	Allocation Effect	Currency Effect	Interaction Effect	
<b>Other</b>									
Egypt*	10.4%	10.8%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Israel	9.9%	15.1%	0.1%	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%
Kuwait**	17.3%	15.5%	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Qatar*	10.9%	8.8%	0.2%	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
Romania**	17.5%	17.7%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Saudi Arabia*	--	14.2%	0.0%	0.7%	--	0.0%	0.0%	--	0.0%
South Africa*	25.9%	27.6%	1.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Turkey*	27.9%	23.1%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
United Arab Emirates*	18.3%	17.0%	0.2%	0.1%	0.0%	0.0%	0.0%	0.0%	0.0%
<b>Totals</b>									
Americas	40.0%	22.4%	5.2%	8.6%	1.8%	-0.2%	-0.3%	-0.7%	0.7%
Europe	18.9%	16.8%	42.5%	41.9%	0.9%	0.0%	0.0%	0.0%	0.9%
Asia/Pacific	14.5%	16.6%	42.8%	46.8%	-0.7%	0.0%	-0.3%	0.1%	-0.9%
Other	21.4%	19.0%	1.8%	2.8%	0.1%	0.0%	0.0%	0.0%	0.0%
Cash	0.0%	--	7.7%	0.0%	0.0%	-1.2%	0.0%	0.0%	-1.2%
<b>Total</b>	<b>16.7%</b>	<b>17.2%</b>	<b>100.0%</b>	<b>100.0%</b>	<b>2.0%</b>	<b>-1.3%</b>	<b>-0.6%</b>	<b>-0.7%</b>	<b>-0.5%</b>
<b>Totals</b>									
Developed	18.0%	16.6%	74.2%	73.4%	1.5%	0.0%	-0.5%	0.0%	1.0%
Emerging*	18.6%	18.9%	18.0%	26.6%	-0.1%	-0.2%	-0.1%	0.0%	-0.4%
Frontier**	17.3%	--	0.2%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Cash	0.0%	--	7.7%	0.0%	0.0%	-1.2%	0.0%	0.0%	-1.2%



# Fixed Income Manager Allocation Analysis

Period Ending: June 30, 2020



	Actual \$	Actual %	Manager Contribution to Excess Return %
AG CSF Annex Dislocation Fund	\$13,250,000	0.9%	0.0%
Angelo Gordon Credit Solutions	\$10,962,280	0.7%	-0.1%
Angelo Gordon Opportunistic	\$3,290,565	0.2%	0.0%
Angelo Gordon STAR	\$2,177,589	0.1%	0.0%
Beach Point Select	\$62,964,674	4.3%	-0.1%
Blackrock DL Feeder IX-U	\$3,495,374	0.2%	0.0%
BlackRock Intermediate Govt	\$140,187,907	9.5%	0.0%
Brigade Capital	\$84,304,302	5.7%	0.0%
DoubleLine	\$207,139,743	14.1%	0.1%
FIAM Bond	\$254,181,628	17.3%	0.6%
Franklin Templeton	\$58,546,690	4.0%	-0.2%
NISA Core Bond	\$202,783,331	13.8%	0.0%
PIMCO Diversified	\$125,154,334	8.5%	-0.2%
PIMCO Private Income	\$37,495,209	2.6%	-0.2%
TCP Direct Lending VIII	\$34,077,448	2.3%	0.3%
Western TRU	\$167,628,873	11.4%	1.0%
White Oak Yield	\$31,881,588	2.2%	0.1%
Core Fixed Income Overlay	\$29,206,922	2.0%	0.0%
Actual vs. Policy Weight Difference			-2.0%
<b>Total</b>	<b>\$1,468,728,457</b>	<b>100.0%</b>	<b>-0.5%</b>

Fixed Income  
Risk vs. Return (3 Years)

Period Ending: June 30, 2020

Statistics Summary

3 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Fixed Income	4.0%	3.3%	0.7	-0.5	1.6%
Blended Fixed Income Index	4.9%	3.8%	0.9	--	0.0%
Core Fixed	4.7%	2.7%	1.1	-0.4	1.5%
BBgBarc US Aggregate TR	5.3%	3.3%	1.1	--	0.0%
BlackRock Intermediate Govt	4.3%	2.5%	1.0	3.1	0.1%
BBgBarc US Govt Int TR	4.1%	2.6%	0.9	--	0.0%
FIAM Bond	5.9%	3.7%	1.1	0.4	1.5%
BBgBarc US Aggregate TR	5.3%	3.3%	1.1	--	0.0%
Western TRU	2.9%	6.5%	0.2	0.1	6.5%
3-Month Libor Total Return USD	2.0%	0.2%	1.7	--	0.0%
Opportunistic Credit	2.8%	6.4%	0.2	-0.4	3.7%
BBgBarc BA Intermediate HY	4.3%	7.5%	0.4	--	0.0%
Angelo Gordon Opportunistic	6.2%	17.5%	0.3	0.0	17.4%
BBgBarc US Aggregate TR	5.3%	3.3%	1.1	--	0.0%
Angelo Gordon STAR	14.4%	12.1%	1.1	0.8	12.1%
BBgBarc US Aggregate TR	5.3%	3.3%	1.1	--	0.0%
Beach Point Select	3.9%	8.2%	0.3	-0.1	3.9%
BBgBarc BA Intermediate HY	4.3%	7.5%	0.4	--	0.0%
Brigade Capital	-0.3%	11.5%	-0.2	-0.7	6.4%
BBgBarc BA Intermediate HY	4.3%	7.5%	0.4	--	0.0%
Franklin Templeton	-1.6%	7.0%	-0.5	-0.7	7.7%
BBgBarc Multiverse TR	3.7%	4.0%	0.5	--	0.0%

**Statistics Summary**

**3 Years**

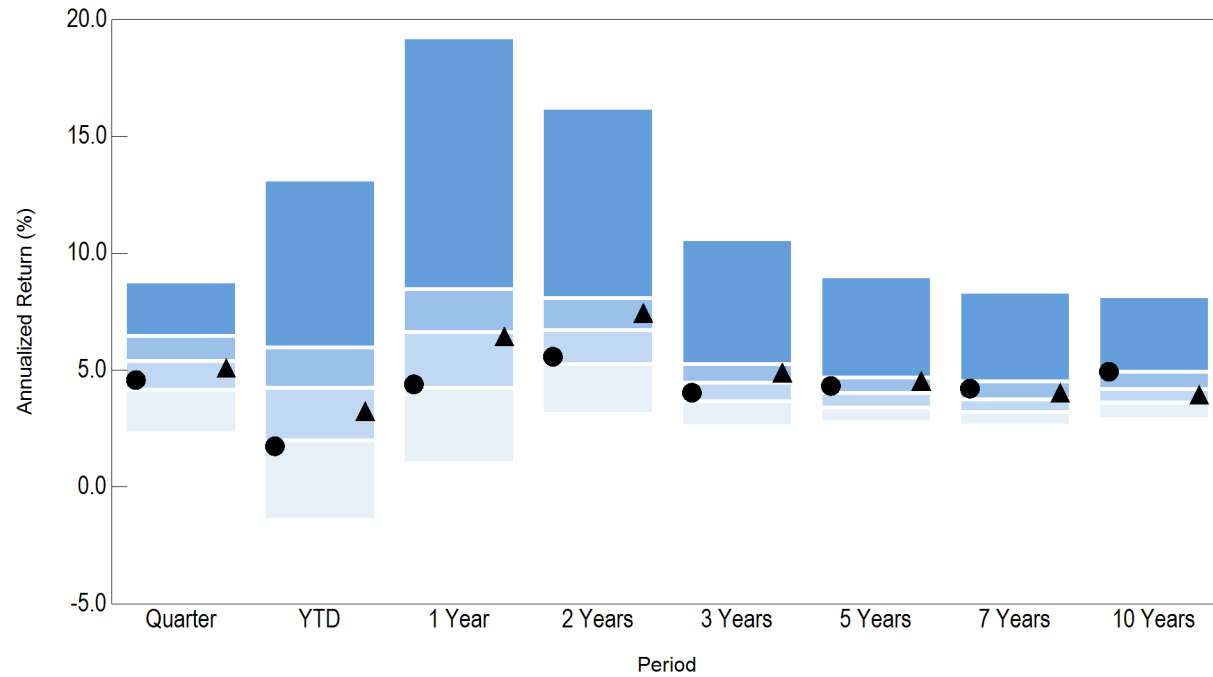
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Private Credit	5.2%	3.3%	1.1	0.4	4.1%
Cliffwater Direct Lending Index	3.5%	5.5%	0.3	--	0.0%
TCP Direct Lending VIII	6.4%	3.2%	1.5	0.5	5.7%
Cliffwater Direct Lending Index	3.5%	5.5%	0.3	--	0.0%
White Oak Yield	5.0%	3.5%	1.0	0.3	4.3%
Cliffwater Direct Lending Index	3.5%	5.5%	0.3	--	0.0%

Statistics Summary

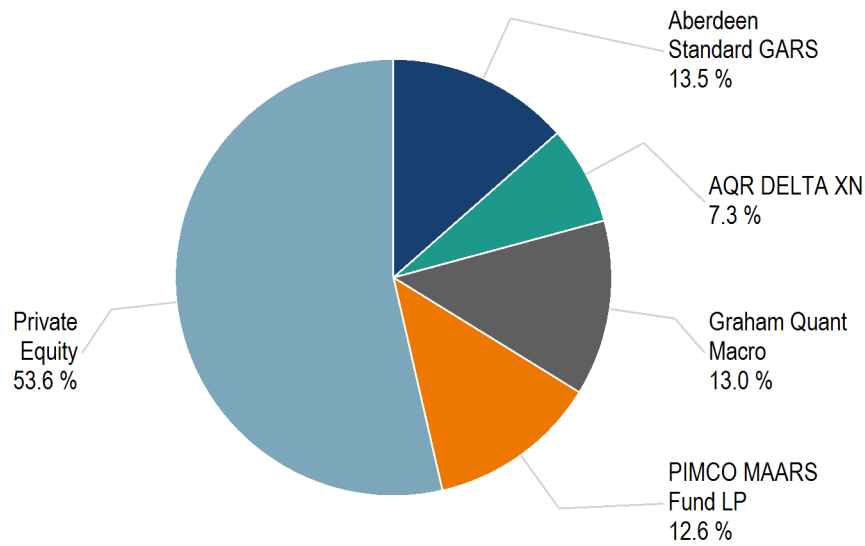
5 Years

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Fixed Income	4.3%	3.2%	1.0	-0.1	2.0%
Blended Fixed Income Index	4.5%	3.5%	1.0	--	0.0%
Core Fixed	4.4%	2.7%	1.2	0.0	1.8%
BBgBarc US Aggregate TR	4.3%	3.1%	1.0	--	0.0%
FIAM Bond	4.9%	3.4%	1.1	0.5	1.4%
BBgBarc US Aggregate TR	4.3%	3.1%	1.0	--	0.0%
Opportunistic Credit	4.6%	5.7%	0.6	-0.1	3.5%
BBgBarc BA Intermediate HY	5.1%	6.5%	0.6	--	0.0%
Angelo Gordon Opportunistic	6.8%	13.9%	0.4	0.2	14.0%
BBgBarc US Aggregate TR	4.3%	3.1%	1.0	--	0.0%
Angelo Gordon STAR	11.9%	10.1%	1.1	0.7	10.3%
BBgBarc US Aggregate TR	4.3%	3.1%	1.0	--	0.0%
Beach Point Select	5.9%	7.0%	0.7	0.2	3.5%
BBgBarc BA Intermediate HY	5.1%	6.5%	0.6	--	0.0%
Brigade Capital	2.5%	10.3%	0.1	-0.4	6.0%
BBgBarc BA Intermediate HY	5.1%	6.5%	0.6	--	0.0%
Franklin Templeton	0.4%	7.1%	-0.1	-0.4	8.5%
BBgBarc Multiverse TR	3.6%	4.6%	0.5	--	0.0%

InvMetrics All DB Total Fix Inc Net Return Comparison



	Return (Rank)							
	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	8.8	13.1	19.2	16.2	10.6	9.0	8.4	8.2
25th Percentile	6.5	6.0	8.5	8.1	5.3	4.7	4.5	5.0
Median	5.4	4.3	6.6	6.7	4.5	4.1	3.8	4.2
75th Percentile	4.2	2.0	4.3	5.3	3.7	3.4	3.2	3.6
95th Percentile	2.3	-1.4	1.0	3.1	2.6	2.8	2.6	2.9
# of Portfolios	335	335	335	331	320	302	284	219
● Fixed Income	4.6 (69)	1.7 (80)	4.4 (74)	5.6 (72)	4.0 (68)	4.3 (36)	4.2 (33)	4.9 (26)
▲ Blended Fixed Income Index	5.1 (55)	3.2 (62)	6.4 (53)	7.5 (32)	4.9 (36)	4.5 (31)	4.0 (37)	4.0 (61)



	Actual \$	Actual %	Manager Contribution to Excess Return %
AQR DELTA XN	\$40,903,083	7.3%	-1.3%
Aberdeen Standard GARS	\$75,460,730	13.5%	0.2%
Graham Quant Macro	\$72,465,450	13.0%	0.2%
PIMCO MAARS Fund LP	\$70,268,496	12.6%	0.0%
Private Equity	\$298,746,088	53.6%	9.8%
Actual vs. Policy Weight Difference			-0.6%
<b>Total</b>	<b>\$557,843,847</b>	<b>100.0%</b>	<b>8.3%</b>

Statistics Summary

3 Years

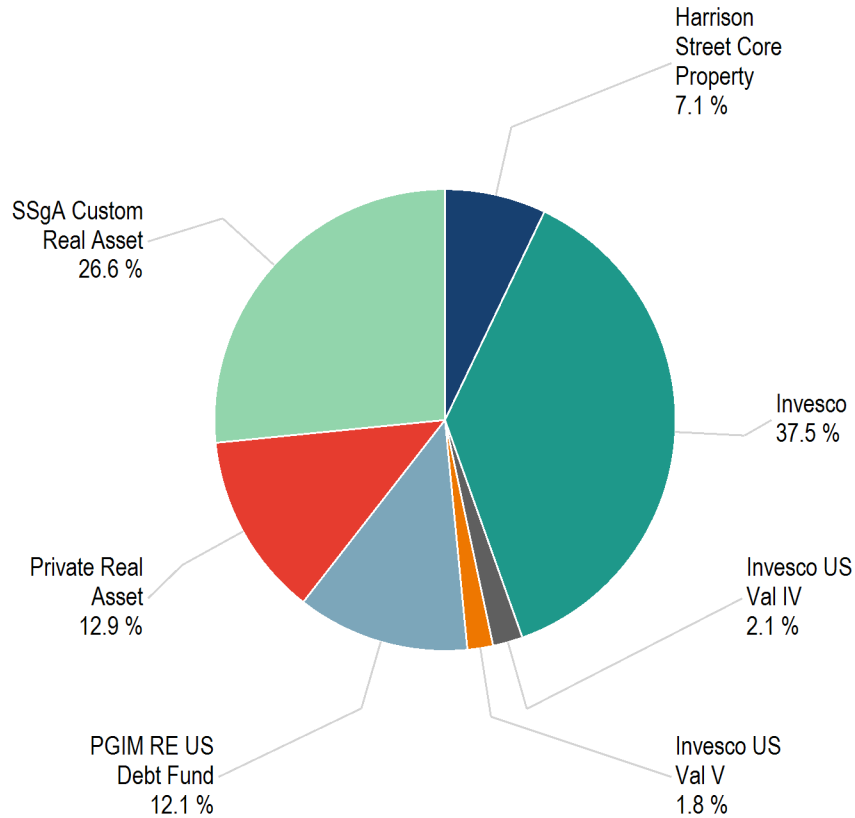
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Alternatives	3.3%	7.3%	0.2	-0.3	9.5%
Blended Alternatives Index	6.4%	8.0%	0.6	--	0.0%
Private Equity	13.7%	11.7%	1.0	0.5	16.6%
Blended Private Equity Index	6.0%	15.9%	0.3	--	0.0%
Hedge Fund/Absolute Return	-7.5%	6.7%	-1.4	-2.0	6.7%
Libor 1 month +4%	5.8%	0.2%	21.5	--	0.0%
AQR DELTA XN	-16.7%	11.0%	-1.7	-2.0	11.0%
Libor 1 month +4%	5.8%	0.2%	21.5	--	0.0%
Aberdeen Standard GARS	1.7%	4.5%	0.0	-0.9	4.6%
Libor 1 month +4%	5.8%	0.2%	21.5	--	0.0%

**Statistics Summary**

**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Alternatives	5.1%	6.7%	0.6	-0.2	8.5%
Blended Alternatives Index	6.5%	7.2%	0.7	--	0.0%
Private Equity	14.4%	10.8%	1.2	0.4	15.3%
Blended Private Equity Index	8.8%	14.0%	0.5	--	0.0%
Hedge Fund/Absolute Return	-2.4%	6.0%	-0.6	-1.3	6.1%
Libor 1 month +4%	5.3%	0.2%	17.5	--	0.0%
AQR DELTA XN	-8.2%	9.6%	-1.0	-1.4	9.6%
Libor 1 month +4%	5.3%	0.2%	17.5	--	0.0%





	Actual \$	Actual %	Manager Contribution to Excess Return %
Harrison Street Core Property	\$50,001,859	7.1%	0.1%
Invesco	\$263,266,557	37.5%	-1.1%
Invesco US Val IV	\$14,581,505	2.1%	-0.1%
Invesco US Val V	\$12,756,030	1.8%	0.0%
PGIM RE US Debt Fund	\$85,089,892	12.1%	0.3%
Private Real Asset	\$90,431,259	12.9%	3.0%
SSgA Custom Real Asset	\$186,589,155	26.6%	-0.3%
Actual vs. Policy Weight Difference			-1.4%
<b>Total</b>	<b>\$702,716,258</b>	<b>100.0%</b>	<b>0.5%</b>

Statistics Summary

3 Years

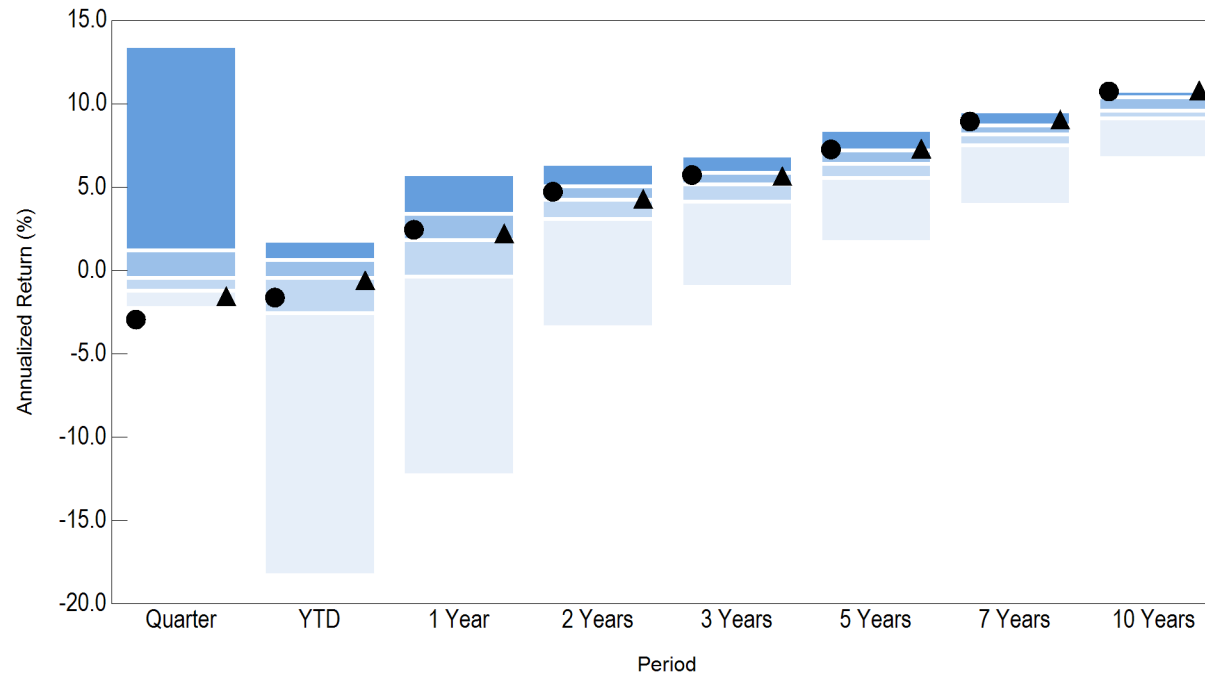
	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error
Inflation Hedge	-0.7%	6.8%	-0.4	-1.0	2.4%
Blended Inflation Hedge Index	1.6%	5.7%	0.0	--	0.0%
Real Estate	5.7%	3.6%	1.1	0.1	1.1%
NCREIF ODCE	5.7%	3.0%	1.3	--	0.0%
Invesco	5.2%	4.2%	0.8	-0.3	1.9%
NCREIF ODCE	5.7%	3.0%	1.3	--	0.0%
Invesco US Val IV	9.3%	6.3%	1.2	0.9	4.0%
NCREIF ODCE	5.7%	3.0%	1.3	--	0.0%
Private Real Asset	-6.7%	9.0%	-0.9	0.0	18.0%
Blended Private Real Asset Index	-6.2%	17.4%	-0.5	--	0.0%
Public Real Assets	-6.6%	19.0%	-0.4	-1.0	4.4%
Blended Public Real Asset Index	-2.0%	15.7%	-0.2	--	0.0%
SSgA Custom Real Asset	-2.0%	15.5%	-0.2	0.0	0.8%
SSgA Custom Real Asset Index	-2.0%	15.7%	-0.2	--	0.0%

**Statistics Summary**

**5 Years**

	Anlzd Return	Anlzd Standard Deviation	Sharpe Ratio	Information Ratio	Tracking Error Rank
Real Estate	7.3%	3.8%	1.6	0.0	35
NCREIF ODCE	7.3%	3.6%	1.7	--	1
Invesco	6.8%	4.2%	1.4	-0.3	--
NCREIF ODCE	7.3%	3.6%	1.7	--	--
Private Real Asset	2.9%	21.9%	0.1	0.2	--
Blended Private Real Asset Index	-1.6%	13.6%	-0.2	--	--

InvMetrics All DB Real Estate Pub Net Return Comparison



	Return (Rank)							
	Quarter	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
5th Percentile	13.4	1.8	5.7	6.4	6.9	8.4	9.5	10.8
25th Percentile	1.2	0.7	3.4	5.1	5.9	7.2	8.7	10.4
Median	-0.4	-0.4	1.8	4.2	5.2	6.4	8.2	9.6
75th Percentile	-1.2	-2.5	-0.3	3.1	4.2	5.6	7.5	9.1
95th Percentile	-2.2	-18.3	-12.3	-3.4	-1.0	1.7	4.0	6.8
# of Portfolios	96	96	96	92	88	87	80	64
● Real Estate	-2.9 (99)	-1.6 (74)	2.4 (41)	4.7 (34)	5.7 (30)	7.3 (24)	8.9 (17)	10.7 (6)
▲ NCREIF ODCE	-1.6 (85)	-0.6 (54)	2.2 (47)	4.3 (46)	5.7 (32)	7.3 (21)	9.1 (14)	10.8 (5)

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

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

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

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

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

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

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

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

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

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

## **AQR Capital Management - AQR Delta**

The AQR DELTA Fund aims to deliver efficient exposure to a well-diversified portfolio of hedge fund strategies, including Convertible Arbitrage, Event Driven, Fixed Income Relative Value, Equity Market Neutral, Long/Short Equity, Dedicated Short Bias, Global Macro, Managed Futures, and Emerging Markets. The Delta Fund’s approach is to capture and deliver the “hedge fund risk premiums” that explain much of the returns of each of these strategies by building bottom-up positions in each strategy. AQR’s research has demonstrated that many hedge funds use similar strategies to generate returns. These strategies are often well-known, widely understood and share common exposures. AQR’s experience and research suggests much of the insight underlying these strategies - as well as a meaningful portion of their returns - can be captured using a dynamic, disciplined investment approach. Just as the equity risk premium can explain a large portion of the returns from equity investing, hedge fund risk premiums can explain the returns from hedge fund investing. Importantly, while compensation for equity risk is dependent on economic growth, hedge fund risk premiums are largely unrelated to economic activity, and thus provide attractive diversification properties.

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

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

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

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

## **BlackRock – Intermediate Government Index**

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

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

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

## **BlackRock – Russell 1000 Index**

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

## **BlackRock – Direct Lending Fund**

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

## **Brigade – Opportunistic Credit**

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

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

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

## **DoubleLine – Securitized Income**

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

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

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



## **Graham – Quant Macro Fund**

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

## **Harrison Street Core Property**

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

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

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

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

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

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

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

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

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

## **NISA – Core Bond**

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

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

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

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

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

## **PIMCO Diversified**

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

## **PIMCO – MAARS**

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

## **PIMCO Private Income Fund**

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

## **PGIM RE Debt**

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

# Policy Index and Benchmark History

Period Ending: June 30, 2020

Total Plan Policy Index	As of									
	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%
60/40 MSCI World/BBgBarc Global Aggregate (RP)	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%
91 Day T-Bills	1.0%	1.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Aggregate	18.0%	14.0%	14.0%	14.0%	14.0%	14.0%	14.0%	14.0%	12.0%	10.0%
BBgBarc BA Intermediate HY	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%
BBgBarc Credit BAA	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%	3.0%	3.0%
BBgBarc TIPS	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%
Citigroup non-US WGBl	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%
Blended Public Real Asset	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%
Blended Private Real Asset	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	8.0%	7.0%	5.0%
Labor +4% (HF)	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	6.0%	5.0%
MSCI ACWI ex-US	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI ACWI ex-US IMI 100% Hedged (Net)	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%	19.0%	19.0%
MSCI ACWI ex-US IMI (Net)	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%
NCREIF ODCE	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%
Russell 1000	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%
Russell 2000	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Russell 3000	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%	7.0%	7.0%	7.0%
Russell 3000 +3% 1Q Lag (PE)	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%
	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 WGBl	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%
Labor +4% (HF)	5.0%	5.0%	5.0%	4.0%	4.0%	3.0%	3.0%	3.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI ACWI ex-US	0.0%	0.0%	0.0%	0.0%	0.0%	18.0%	18.0%	18.0%	21.0%	21.0%	15.0%	0.0%	0.0%	0.0%
MSCI ACWI ex-US IMI 100% Hedged (Net)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI ACWI ex-US IMI	19.0%	20.0%	20.0%	20.0%	20.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI ACWI ex-US IMI (Net)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
MSCI EAFE	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	20.0%	20.0%	20.0%
NCREIF ODCE	7.0%	7.0%	7.0%	6.0%	6.0%	5.0%	5.0%	5.0%	6.0%	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%

# Policy Index and Benchmark History

Period Ending: June 30, 2020

Public Equity Benchmark	As of:																
	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%	34.0%	31.3%	23.1%	0.0%	0.0%	0.0%
MSCI ACWI ex US IMI 100% Hedged (Net)	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%	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)	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%	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%	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%	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%	8.3%	12.0%	13.2%	13.5%	15.4%	24.2%	25.0%	25.0%
Russell 3000	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%	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%

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:													
	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	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	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%	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%	16.0%	15.0%	0.0%	0.0%	0.0%	0.0%
BBgBarc Multiverse	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%	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%	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%

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%

Risk Parity Benchmark	As of:	
	1/1/17	10/1/10
BBgBarc Aggregate	0.0%	40.0%
BBgBarc Global Aggregate	40.0%	0.0%
MSCI World	60.0%	0.0%
Russell 3000	0.0%	60.0%
	100.0%	100.0%

# Policy Index and Benchmark History

Period Ending: June 30, 2020

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

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

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

Inflation Hedge	As of:					
	4/1/20	10/1/19	4/1/18	2/1/17	10/1/16	4/1/16
BBgBarc TIPS	0.00%	5.88%	11.11%	12.5%	14.3%	14.3%
Bloomberg Commodity	0.00%	0.00%	0.00%	0.0%	0.0%	21.4%
CPI + 5% (RA)	0.00%	0.00%	0.00%	0.0%	0.0%	14.3%
Blended Liquid Real Asset	35.29%	35.29%	33.34%	0.0%	0.0%	0.0%
Blended Private Real Asset	11.77%	11.77%	11.11%	43.8%	35.7%	0.0%
NCREIF ODCE	52.94%	47.06%	44.44%	43.8%	50.0%	50.0%
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

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

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

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

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

# Policy Index and Benchmark History

Period Ending: June 30, 2020

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

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

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

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

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



# Fee Schedule

Period Ending: June 30, 2020

## 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-EAFE Equity Index Fund

On All Assets:	0.03% per annum
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## BlackRock-Russell 1000 Index Fund

On All Assets:	0.01% per annum
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## BlackRock-Intermediate Govt Bond Index Fund

On All Assets:	0.025% per annum
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## BlackRock-MSCI ACWI ex US IMI Index Fund

On All Assets:	0.045% per annum
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## DoubleLine

On All Assets:	0.30% per annum
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## 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:	0.20% per annum
Next \$50 million:	0.175% per annum
Next \$100 million:	0.10% per annum
Thereafter:	0.085% 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

On All Assets:	0.30% per annum
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## 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
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## QMA

First \$50 million:	0.55% per annum
Thereafter:	0.50% per annum

## Western Asset Management

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

## Mondrian Investment Partners

### Assets Below \$190 million

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

### Assets Above \$190 million

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

## NISA

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

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

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

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

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

# Manager Compliance (Gross)

Period Ending: June 30, 2020

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 STAR	BBgBarc US Aggregate TR	✓	--	✓
Angelo Gordon Credit Solutions	BBgBarc BA Intermediate HY	--	--	--
Beach Point Select	BBgBarc BA Intermediate HY	✓	✓	✓
Brigade Capital	BBgBarc BA Intermediate HY	✗	✗	✗
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	--	--	--
AQR DELTA XN	Libor 1 month +4%	✗	✗	✗
Aberdeen Standard GARS	Libor 1 month +4%	--	--	--
Graham Quant Macro	Libor 1 month +4%	--	--	--
PIMCO MAARS Fund LP	Libor 1 month +4%	--	--	--

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

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



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THAT DRIVE  
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SUCCESS**

3<sup>RD</sup> QUARTER 2020  
Investment Landscape

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## Annual outlooks

### 2020 REAL ASSETS OUTLOOK

The ongoing impact of COVID-19 on the global economy has dramatically altered our outlook on inflation, risk and asset class returns. Going into 2020, valuations for many risk assets were rich and expected returns were low. In a matter of weeks, we've seen a broad market sell-off, improving valuations.

- A combination of poor performance, high volatility and ESG-related concerns are driving a shift in investor preference within real assets.
- The shutdowns of economies around the globe will likely have lasting impacts and create some stress and distress for affected assets and those with highly levered capital structures.
- Negative impacts in real estate will likely take several quarters to flow through the appraisal cycle on the private side, creating challenges for existing assets and opportunities for fresh capital.

## Topics of interest

### BROADENING DIVERSITY CONSIDERATION

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

### STRATEGIC LIQUIDITY

An analysis of illiquid allocations across a universe of portfolios suggests that institution type and size may be the determining factors in how much capital is allocated to illiquid assets. We believe illiquid allocations should be based on the financial situation of the institution. Verus has developed a framework to analyze the impact illiquid asset programs have on the overall portfolio.

## Sound thinking

### KNOWING WHERE YOU'RE GOING MATTERS

CIO Ian Toner, CFA, and Public Markets Managing Director Marianne Feeley, CFA, outline broader elements of diversity – beyond ownership – that may be used to characterize the demographic qualities of an investment firm.

It frames the broader approach to understanding diversity that we are adapting at Verus, which is an integral part of our process of collecting and using information about investment managers.

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Economic environment 6

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Other assets 38

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Appendix 41

# 2<sup>nd</sup> quarter summary

## THE ECONOMIC CLIMATE

- U.S. GDP grew at a 0.3% rate year-over-year in Q1 (-5.0% quarterly annualized rate). The slowdown was broad-based, as consumer purchases slowed, businesses cut back investment, inventories were drawn down, and exports weakened. Q2 GDP growth forecasts suggest a severe contraction of -35%, though estimates vary widely. **p. 11**
- The U.S. labor market experienced a historic shock in Q2, as unemployment jumped from 4.4% in March to 14.7% in April, then recovered partially to 11.1% in June. Recent labor market data have beat expectations materially, but the severity of the shock is notable. A majority of the unemployed have reported their job losses as temporary. It will be important to watch what portion of these losses are indeed temporary rather than permanent. **p. 13**

## PORTFOLIO IMPACTS

- Most major equity benchmarks are within 15% of all-time highs, despite major damage that COVID-19 has inflicted on the global economy. Some of this damage has been mitigated by government support, but some damage is likely yet to be felt. **p. 28**
- U.S. core inflation fell steeply from 2.1% in March to 1.2% in June, while food prices have risen. COVID-19 has led to a significant rise in at-home meal preparation (greater demand for certain items), while reportedly negatively impacting food processing facilities (less supply). **p. 12**

## THE INVESTMENT CLIMATE

- The Federal Reserve continued to roll out the litany of support programs that were announced in the first quarter. The Fed's balance sheet grew from \$5.3 trillion to \$7.1 trillion over the second quarter. **p. 23**
- Moves in the CBOE VIX Index moderated in June. The long-term average of the index is near 19. It has remained above that level since February, reaching a high point of 85 on March 18th, and closing June at 30. **p. 36**
- The Fed expanded the list of eligible securities for purchase to include corporate debt. While the Fed will primarily target investment grade debt securities, it will also buy some non-investment grade debt from "fallen angels" which were investment-grade prior to the pandemic. **p. 23**

## ASSET ALLOCATION ISSUES

- U.S. equities delivered an incredible comeback, following a sudden and significant sell-off in March. The S&P 500 rallied +20.5% in the second quarter, bringing year-to-date performance to -3.1%, and positive +7.5% over the past twelve months. **p. 30**
- The U.S. dollar weakened in Q2, falling -2.3%. The market recovery (less demand for safe-haven currencies) and materially lower U.S. interest rates (less attractive U.S. dollar) have likely contributed to depreciation. **p. 39**

A mildly underweight risk stance appears appropriate in today's environment

We remain watchful of the COVID-19 second wave and its impact on economic reopening

# What drove the market in Q2?

“The second wave of coronavirus: How bad will it be as lockdowns ease?”

## U.S. DAILY NEW CONFIRMED COVID-19 CASES

1/31	2/29	3/31	4/30	5/31	6/30
2	8	26,169	29,419	19,665	45,596

Article Source: *The Philadelphia Inquirer*, May 6<sup>th</sup>, 2020

“Early results from Moderna coronavirus vaccine trial show participants developed antibodies against the virus”

## MODERNA U.S. EQUITY SHARE PRICE

1/31	2/29	3/31	4/30	5/31	6/30
\$20.51	\$25.93	\$29.95	\$45.99	\$61.50	\$64.21

Article Source: *CNN*, May 18<sup>th</sup>, 2020

“Nasdaq erases losses for 2020 as mega-cap tech rallies offset coronavirus drag”

## NASDAQ COMPOSITE INDEX TOTAL RETURN MINUS S&P 500 TOTAL RETURN

Jan	Feb	Mar	Apr	May	Jun
+2.1%	+2.0%	+2.3%	+2.7%	+2.1%	+4.1%

Article Source: *Business Insider*, May 7<sup>th</sup>, 2020

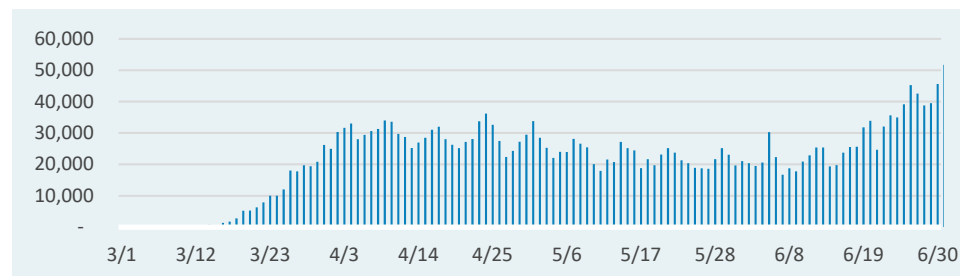
“How China’s national security law could change Hong Kong forever”

## HONG KONG VISITOR ARRIVALS (YEAR OVER YEAR CHANGE)

Dec	Jan	Feb	Mar	Apr	May
-51.5%	-52.7%	-96.4%	-98.6%	-99.9%	-99.9%

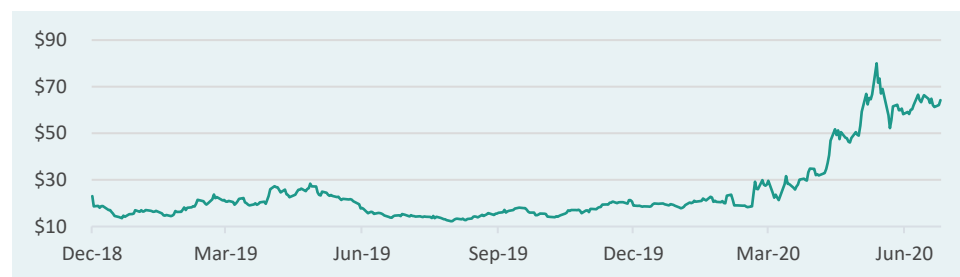
Article Source: *CNBC*, July 1<sup>st</sup>, 2020

## DAILY NEW COVID-19 CASES (UNITED STATES)



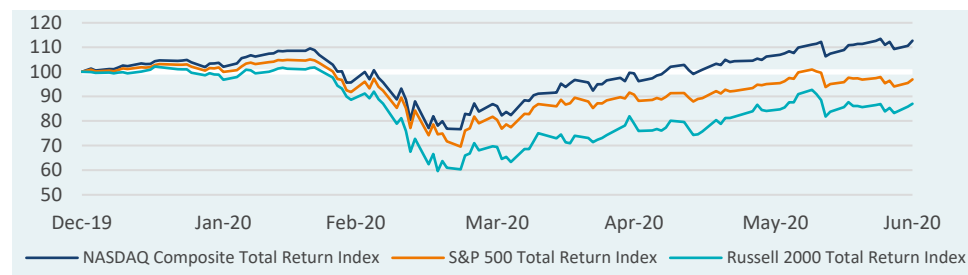
Source: *Bloomberg*, as of 6/30/20

## MODERNA INC. SHARE PRICE



Source: *Bloomberg*, as of 6/30/20

## U.S. EQUITY INDEX PERFORMANCE (INDEXED 12/31/2019=100)



Source: *NASDAQ, Standard and Poor's, FTSE Russell, Bloomberg*, as of 6/30/20



# Economic environment

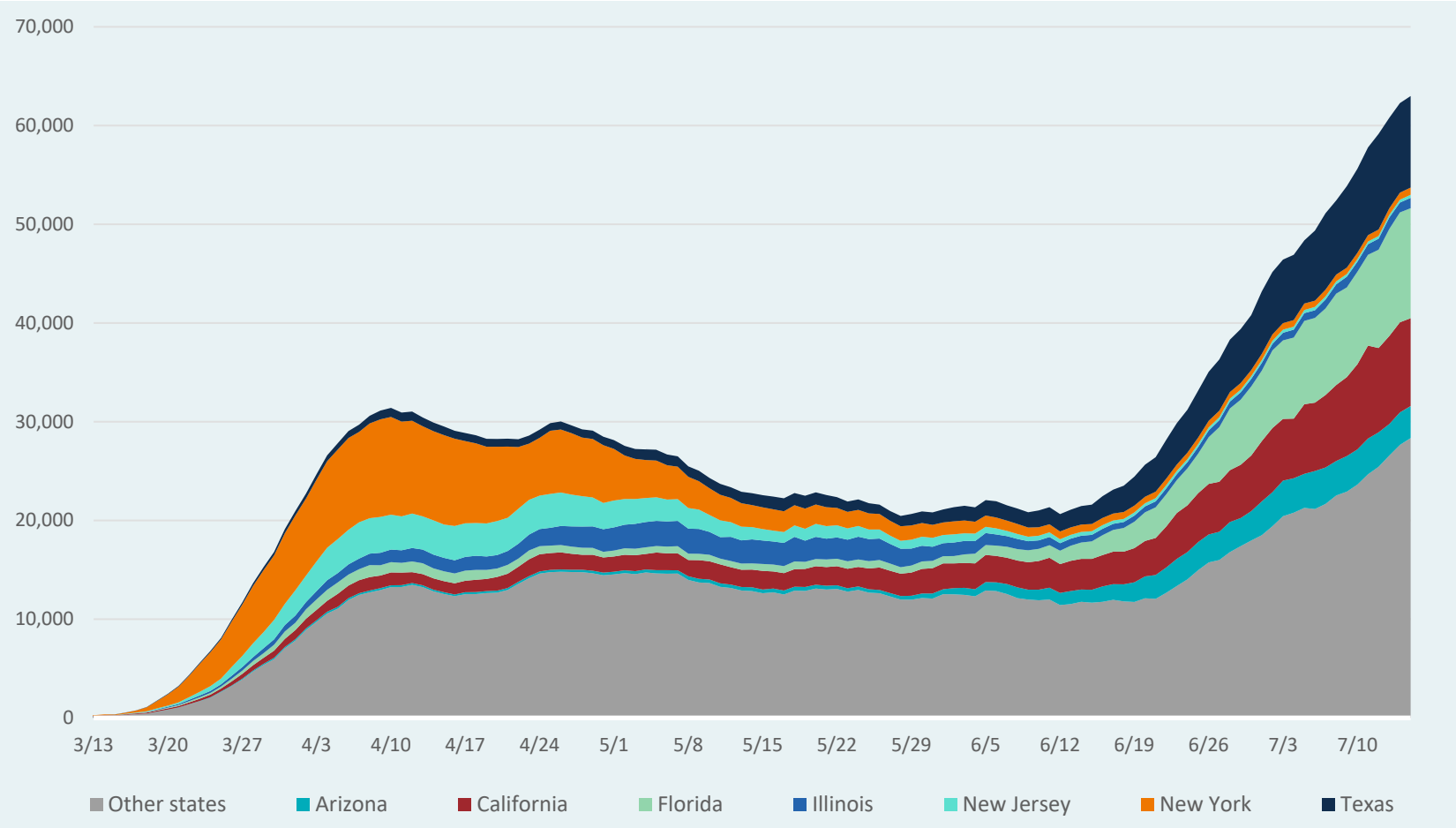
# U.S. economics summary

- U.S. GDP grew at a 0.3% rate year-over-year in Q1 (-5.0% quarterly annualized rate). The slowdown was broad-based, as consumer purchases slowed, businesses cut back investment, inventories were drawn down, and exports weakened. Q2 GDP growth forecasts suggest a severe contraction of -35%, though estimates vary widely.
- As of June 29<sup>th</sup> there were 34 states with a transmission rate of COVID-19 above 1.0, an indication that the virus continues to spread exponentially. Southern states and Sun Belt states are in retreat—taking lockdown steps reminiscent of March and April—only weeks after governors began to reopen their economies.
- The U.S. labor market experienced a historic shock in Q2 as unemployment jumped from 4.4% in March to 14.7% in April, then recovered partially to 11.1% in June.
- U.S. core inflation exhibited a steep drop from 2.1% in March to 1.2% in June. Headline inflation also slowed from 1.5% to 0.6%, pushed lower by the recent decline in energy prices. On the other hand, food prices have been rising—specifically meats, poultry, fish and eggs—due in large part to interruptions at processing plants.
- The Bloomberg Consumer Comfort Index experienced a dramatic weakening year-to-date, falling from a near-record high of 67.3 in late January to 34.7 in May, then ending June at 43.3.
- It has been reported that 8.6% of all mortgages in the U.S. are in forbearance. To put this number into perspective, during the 2008-2009 housing crisis the mortgage default rate reached approximately 10%. If a large portion of loans in forbearance later face foreclosure, this could put significant pressure on the housing market.

	Most Recent	12 Months Prior
GDP (YoY)	0.3% 3/31/20	2.7% 3/31/19
Inflation (CPI YoY, Core)	1.2% 5/31/20	2.0% 5/31/19
Expected Inflation (5yr-5yr forward)	1.5% 6/30/20	1.8% 6/30/19
Fed Funds Target Range	0% – 0.25% 6/30/20	2.25% – 2.50% 6/30/19
10 Year Rate	0.7% 6/30/20	2.0% 6/30/19
U-3 Unemployment	11.1% 6/30/20	3.7% 6/30/19
U-6 Unemployment	18.0% 6/30/20	7.2% 6/30/19

# COVID-19 update

U.S. DAILY NEW CASES DECOMPOSITION (7-DAY TRAILING AVERAGE)



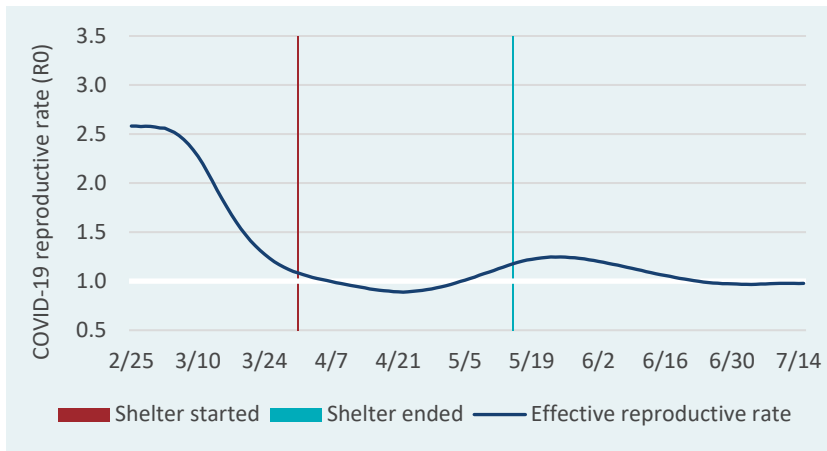
Toward the end of June, daily case growth began to indicate the emergence of a second wave of COVID-19

Most of the resurgence has occurred across a small group of U.S. states

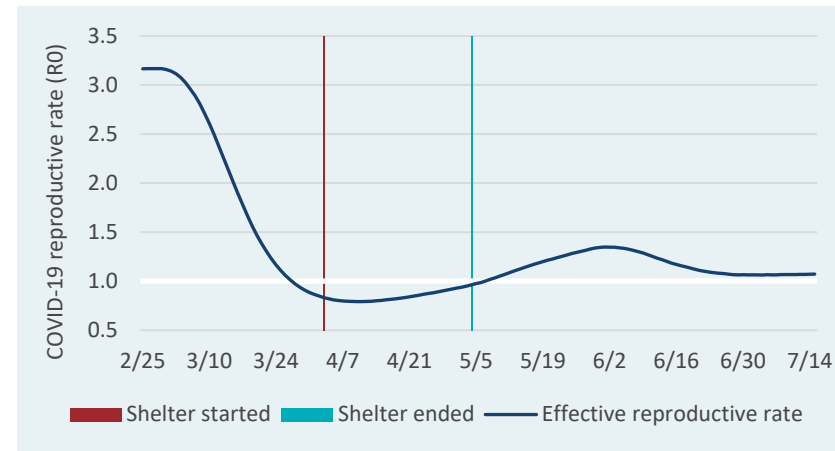
Source: Bloomberg, as of 7/15/20

# Reproductive rates (R0) by state hot spot

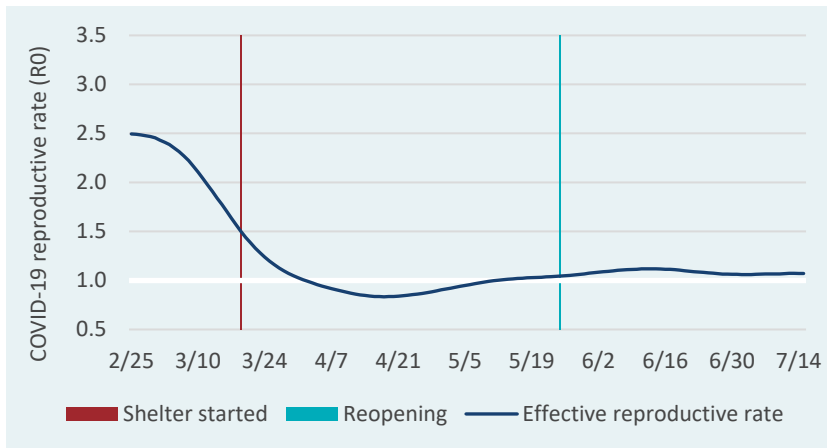
## ARIZONA



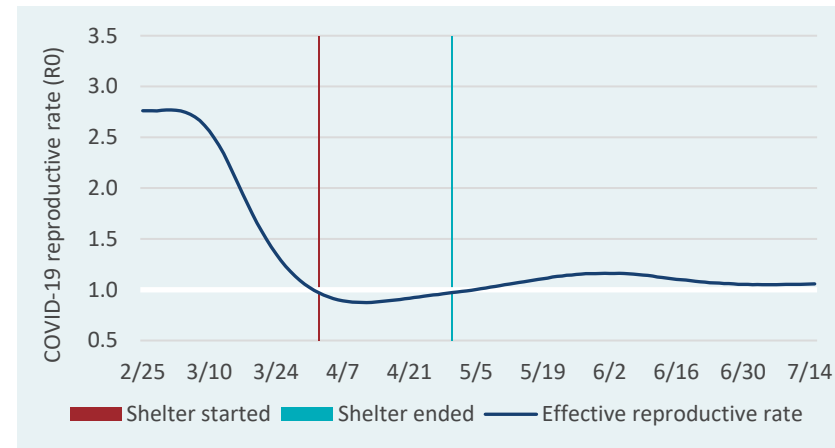
## FLORIDA



## CALIFORNIA



## TEXAS

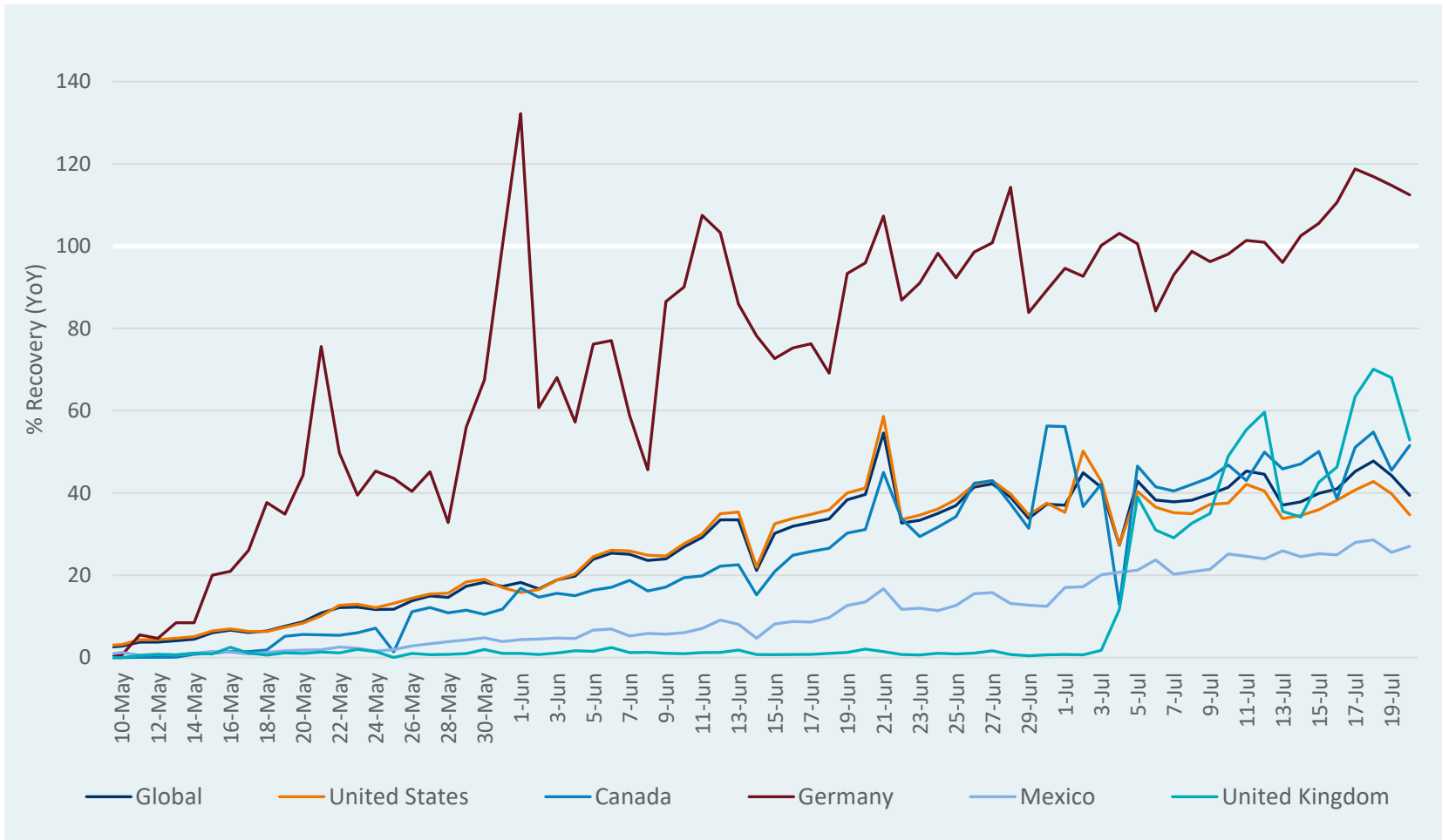


In many states around the country, resurgences in R0 rates above 1.0 began prior to the formal ending of shelter-in-place orders

Source: rt.live, as of 7/15/20. The R0 rate represents the average number of additional people each infected person will transmit the virus to. R0 rates below 1.0 indicate the virus will decline and eventually die out.

# Restaurants reopening

## RECOVERY OF RESTAURANT INDUSTRY



Restaurant activity recovered notably from May through June, but remains far below pre-pandemic levels

Source: OpenTable, as of 7/20/20 – Number of meals served for a given week relative to the same week of the prior year

# GDP growth

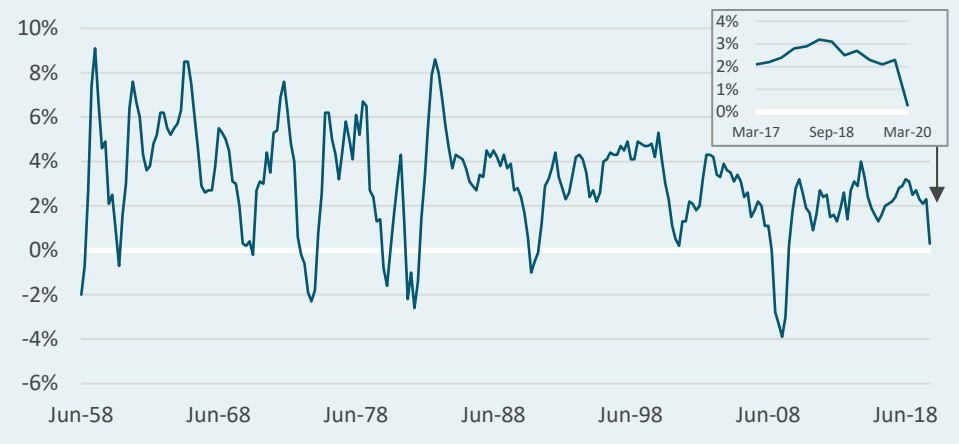
Real GDP grew at a 0.3% rate year-over-year in the first quarter (-5.0% quarterly annualized rate). The slowdown was broad-based, as consumer purchases slowed notably, businesses cut back on investment, inventories were drawn down, and exports weakened. Forecasts of Q2 GDP growth suggest a severe economic contraction of roughly -35%, though estimates vary widely.

The United States runs a significant trade deficit, and imports far more than it exports in U.S. dollar terms. As a result, the slowdown in global trade in the first quarter provided a tailwind for GDP growth as exports fell less in nominal terms than imports, leading to a reduction in the size of the trade deficit. Additionally, the recent inventory drawdowns

may leave room for inventory builds to contribute positively to GDP growth in the coming quarters. Still, consumption accounts for roughly 70% of GDP. The financial health of the consumer and the willingness of the consumer to spend will likely drive growth through the remainder of the year.

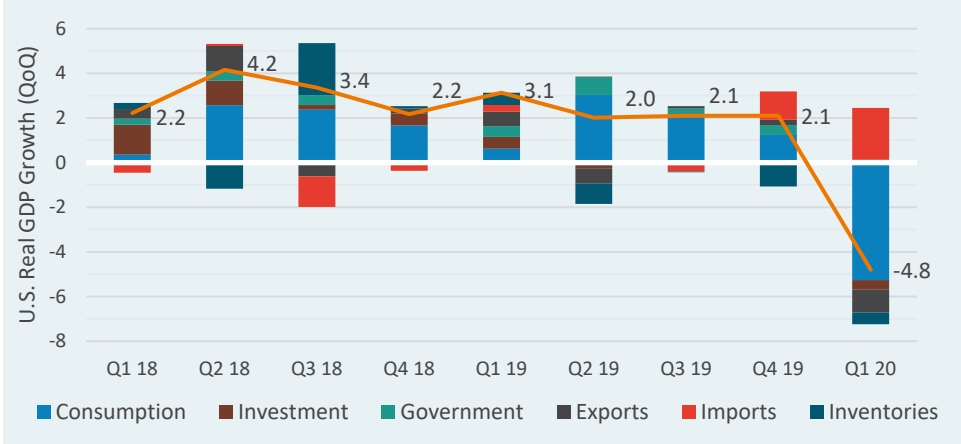
Thus far, fiscal support through the CARES Act and other packages have amounted to roughly 12% of U.S. GDP. Only Japan (42%) has spent more as a percentage of GDP. Moving forward into Q3, the ability and willingness of Congress to provide further accommodation will feature prominently in discussions around the economic outlook.

### U.S. REAL GDP GROWTH (YOY)



Source: Bloomberg, as of 3/31/20

### U.S. GDP GROWTH ATTRIBUTION



Source: BEA, annualized quarterly rate, as of 3/31/20

# Inflation

U.S. core inflation exhibited a steep drop from 2.1% in March to 1.2% in June. Headline inflation also slowed from 1.5% to 0.6%, pushed lower by the recent decline in energy prices.

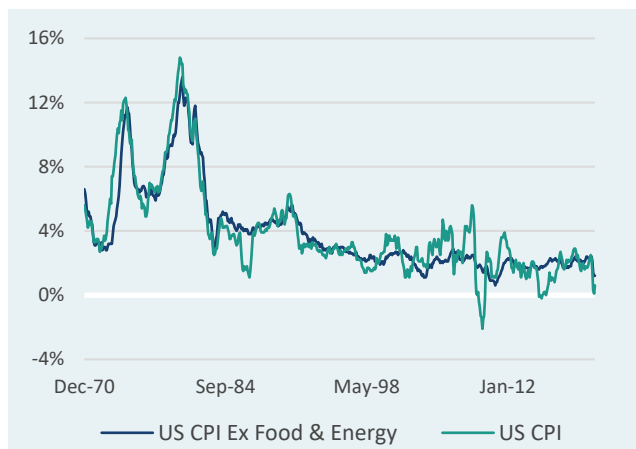
On the other hand, food prices have been increasing—specifically meats, poultry, fish and eggs. COVID-19 has led to a significant rise in at-home meal preparation (greater demand for certain items), while reportedly interrupting food processing plants (less supply). Both effects may be contributing to recent price increases.

The 10yr U.S. TIPS inflation breakeven rate recovered to 1.3%

from a low of 0.5% on March 19<sup>th</sup>. The breakeven rate is at a level not seen since 2016 at the depths of an oil crash that sparked broad fears of deflation.

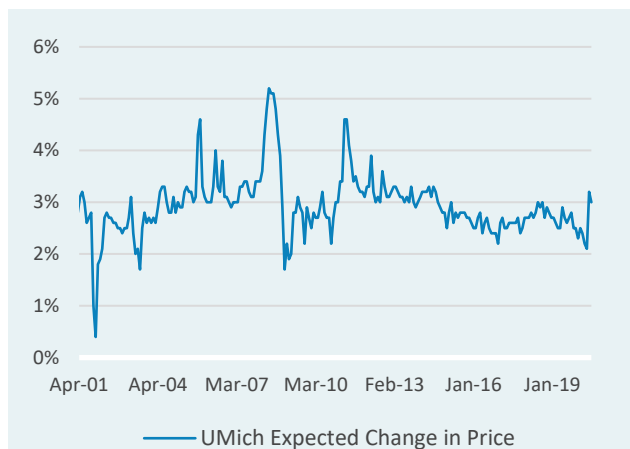
Interestingly, consumer inflation surveys indicate that expectations jumped significantly from 2.1% in April to 3.0% in June. Investors have engaged in an ongoing debate regarding the possible direction of inflation throughout the economic recovery. There seem to be reasonable arguments for inflationary pressures, but also for deflationary pressures, as a result of the COVID-19 induced economic slowdown.

**U.S. CPI (YOY)**



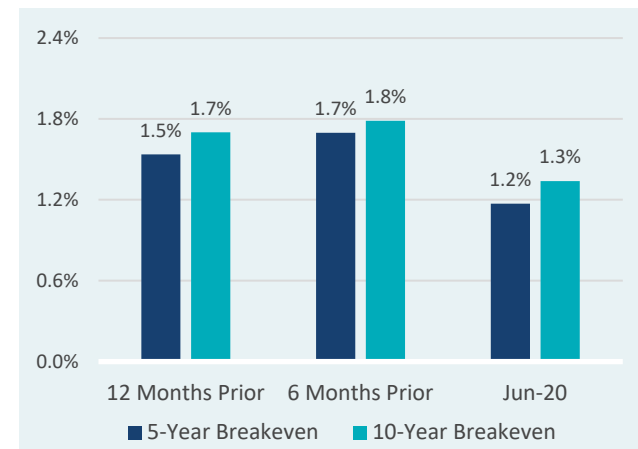
Source: Bloomberg, as of 6/30/20

**CONSUMER INFLATION EXPECTATIONS**



Source: University of Michigan, as of 6/30/20

**BREAKEVEN INFLATION RATES**



Source: Bloomberg, as of 6/30/20

# Labor market

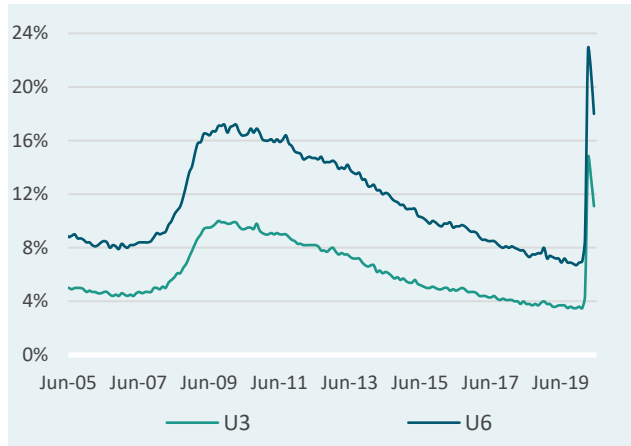
The U.S. labor market experienced a historic shock in Q2, as unemployment jumped from 4.4% in March to 14.7% in April, before recovering partially to 11.1% in June. However, many workers were not present at work but remained categorized as employed. If these workers were instead counted as jobless, the true unemployment rate may have reached 20% before recovering to around 12%. Although recent labor market data has generally beat expectations by a wide margin, the severity of the shock and current magnitude of dislocation is notable. Most of the unemployed have reported their joblessness to be temporary and believe that their employer will be calling them back to work.

It will be important to watch what portion of job losses are indeed temporary, and what portion end up being more permanent in nature.

Churn within the labor market has remained extremely elevated as businesses have contended with the constantly-evolving COVID-19 situation and its impacts on mandated social distancing controls. Additionally, some employers have decided to remain closed until the end of July to allow their employees the flexibility to receive an additional \$600 in weekly unemployment benefits set to expire on July 31<sup>st</sup>.

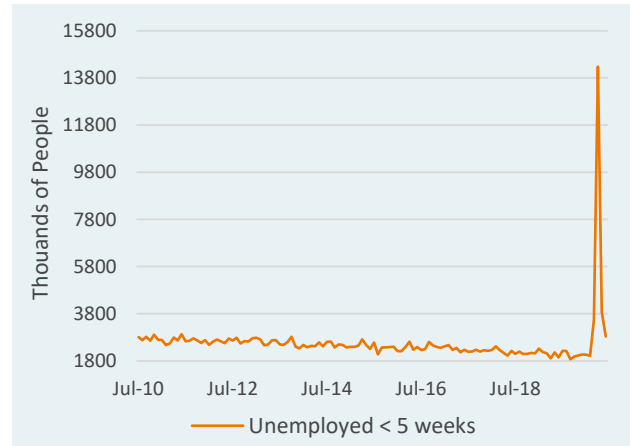
U.S. labor market experienced the largest negative shock in modern history

## U.S. UNEMPLOYMENT



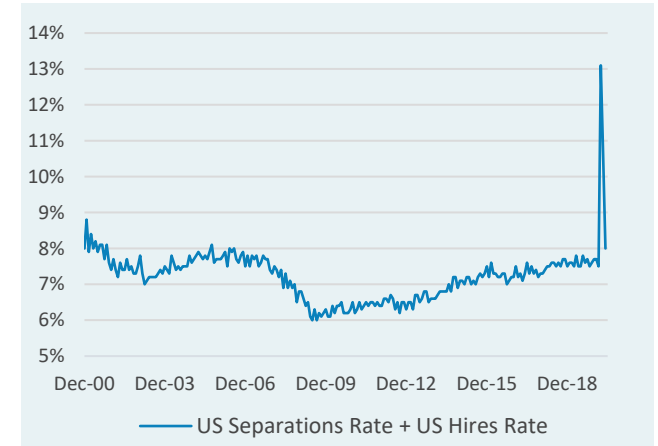
Source: FRED, as of 6/30/20

## U.S. UNEMPLOYMENT DURATION



Source: U.S. Bureau of Labor Statistics, as of 6/30/20

## U.S. LABOR MARKET CHURN

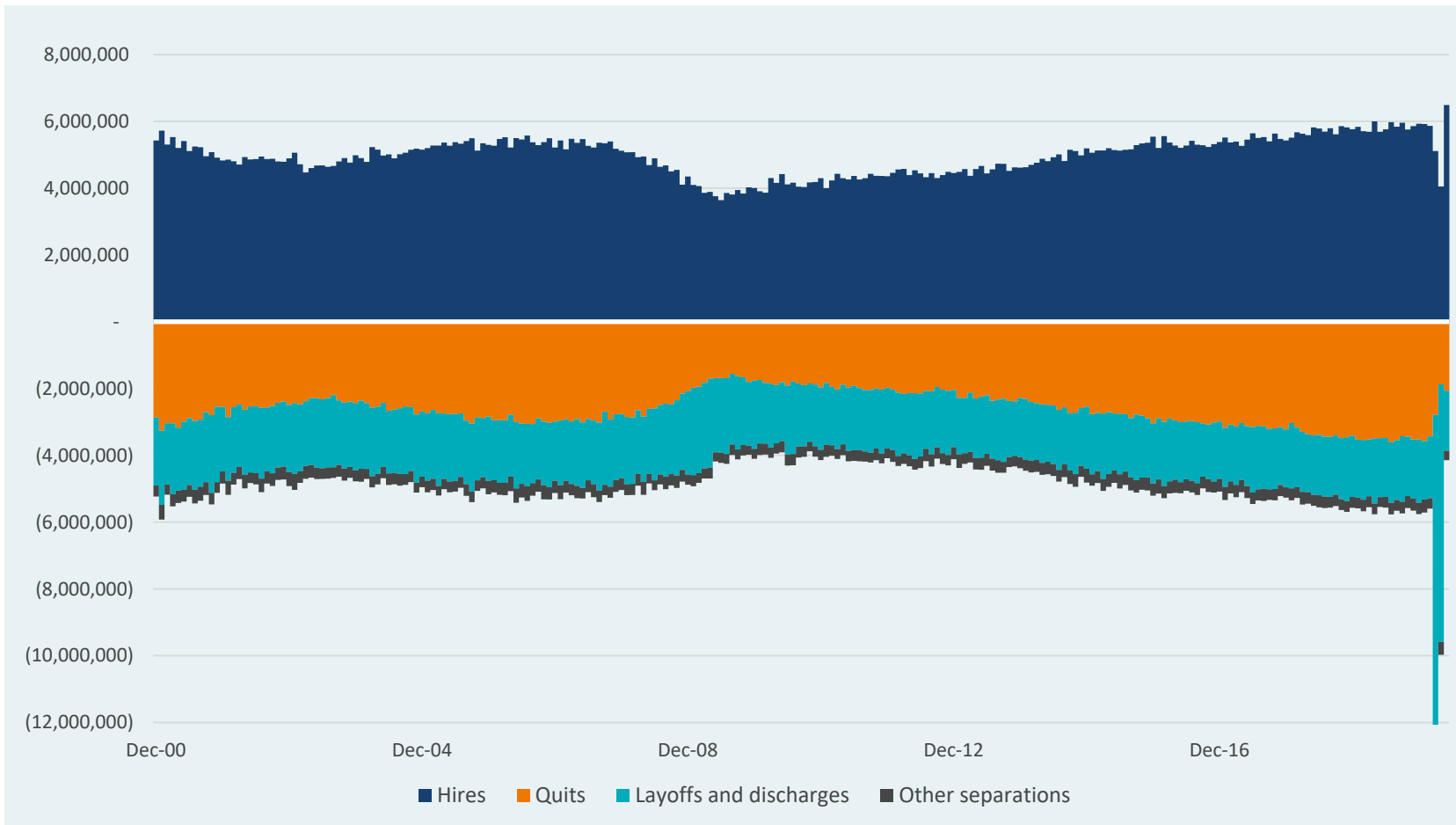


Source: BLS, as of 5/31/20 – Chart illustrates the total number of U.S. workers departing work and starting new work



# Labor market churn

MONTHLY JOB HIRES, QUILTS, LAYOFFS & DISCHARGES, AND OTHER SEPARATIONS LEVELS

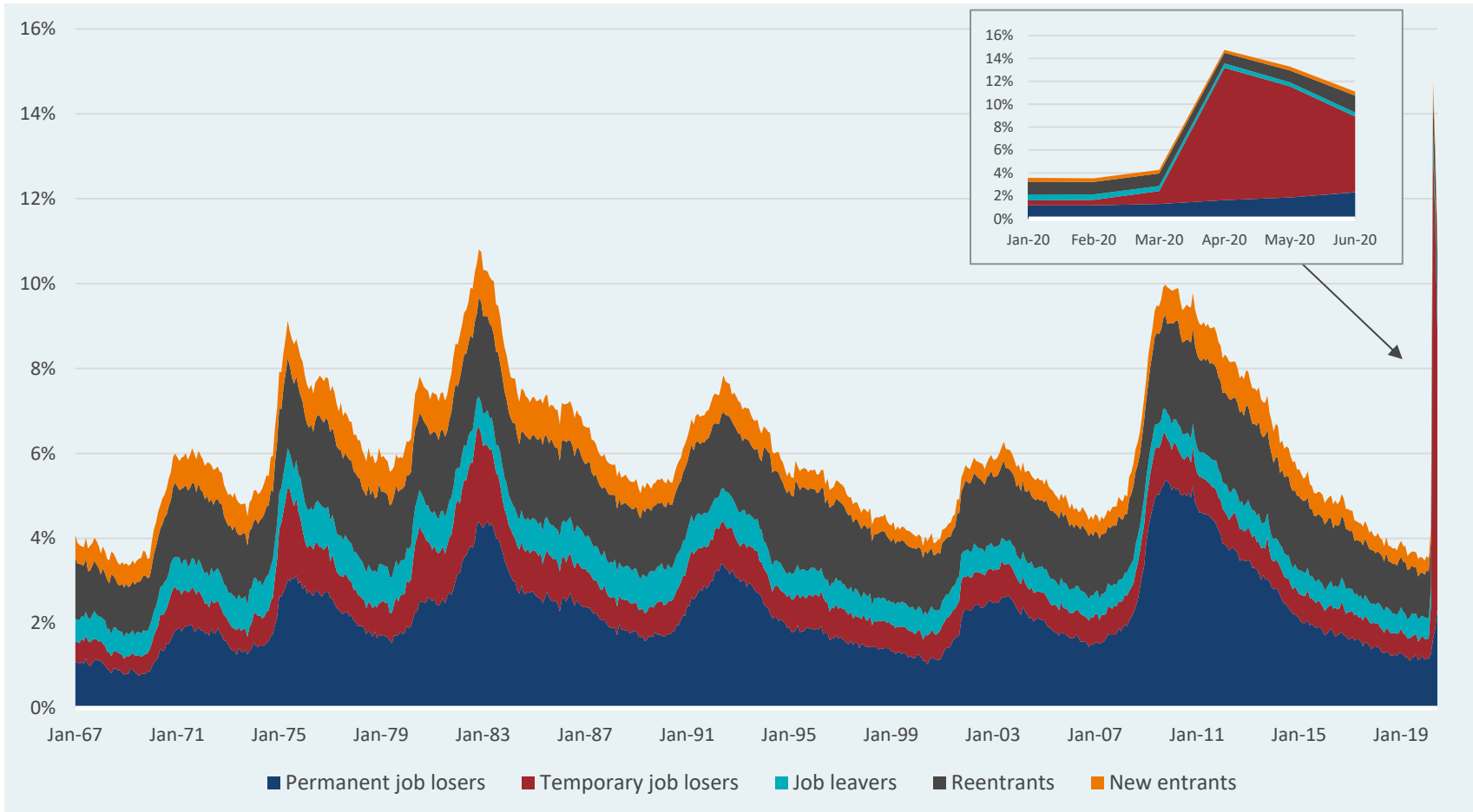


While voluntary separations (quits) have slowed, both hires and involuntary separations have spiked to record levels

Source: BLS, as of 5/31/20

# Permanent job losses are increasing...

U-3 UNEMPLOYMENT RATE – CONTRIBUTION BY COHORT



Many temporarily unemployed workers have gone back to work

Some temporary job losses have become permanent, while many unemployed have reignited their job search

Source: BLS, as of 6/30/20

# The consumer

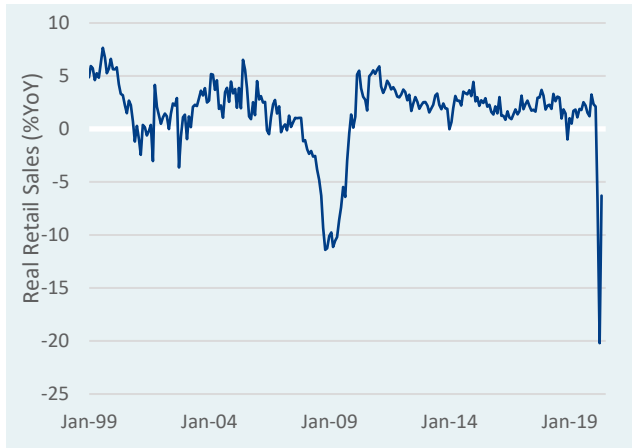
The U.S. consumer has been the greatest support to moderate domestic economic growth in recent years. Consumers have also shown conservatism in their spending habits and restraint in the use of credit, with household balance sheets remaining robust. The economic slowdown resulted in a severe drop in spending—a drop-off in fact nearly double the size of the contraction experienced during the 2008-2009 Global Financial Crisis.

Between February and May, revolving U.S. consumer credit outstanding shrunk by about \$104 billion to \$996 billion, indicating that American consumers have been paying down

their credit card debts significantly. Some of this deleveraging has been made possible by recent fiscal stimulus.

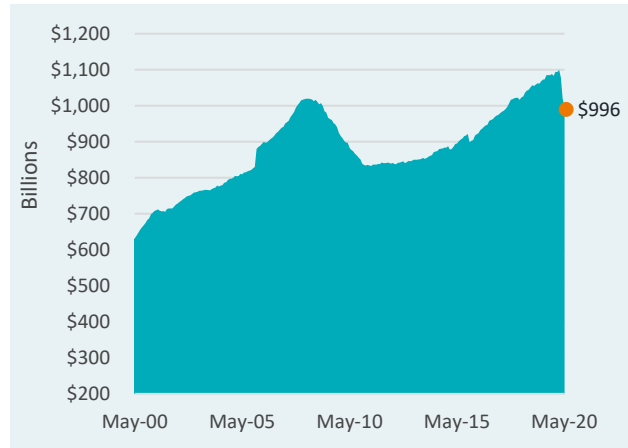
The U.S. personal savings rate reached 32% in April—the highest reading since its inception in the 1960s. The extreme conservatism shown recently has likely been fueled by uncertainty around job security, but also by a simple inability to spend as restaurants and businesses which typically are the recipients of discretionary spending have been forced to (or have willingly) closed their doors, and vacation plans have been delayed or canceled.

**REAL RETAIL SALES GROWTH (YOY)**



Source: FRED, as of 5/31/20

**U.S. REVOLVING CREDIT OUTSTANDING**



Source: Federal Reserve, as of 5/31/20

**PERSONAL SAVINGS RATE**



Source: FRED, as of 5/31/20

# Sentiment

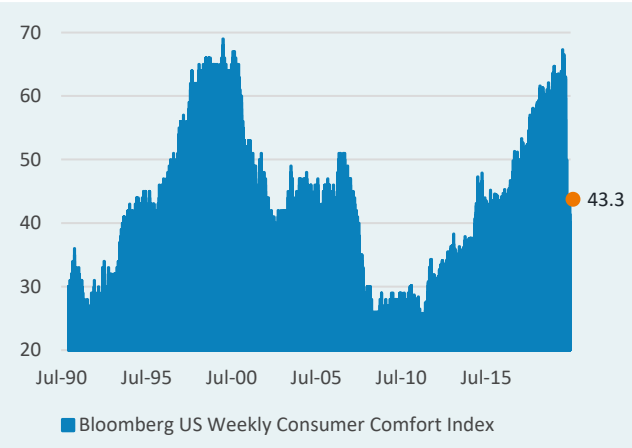
The Bloomberg Consumer Comfort Index attempts to gauge Americans' view on the economy, their personal financial situation, and buying conditions. The index experienced a dramatic weakening year-to-date, falling from a near-record high of 67.3 in late January to 34.7 in May, then ending June at 43.3.

The University of Michigan Consumer Sentiment Survey is similar in purpose to the Bloomberg index. The survey attempts to gauge attitudes about the business climate, personal finances, and spending conditions. This index also showed a significant weakening in Q2 which was comparable

in magnitude to past U.S. economic slowdowns, falling from 101.0 in February to 71.8 in April, before partially rebounding to 78.1 in June. The rebound was reportedly supported by gains in employment. Few survey respondents anticipated favorable economic conditions anytime soon.

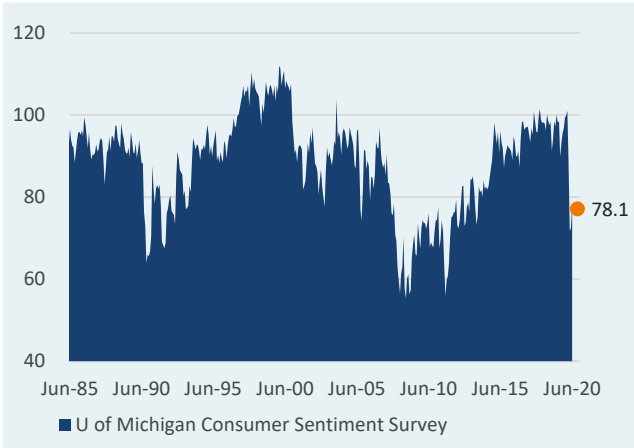
The Small Business Optimism Index has rebounded since the onset of COVID-19 and the subsequent economic slowdown. The index rose to 100.6, as many business owners reportedly expect sales to improve, remain optimistic about future business conditions, and generally expect the recession to be short-lived.

### CONSUMER COMFORT



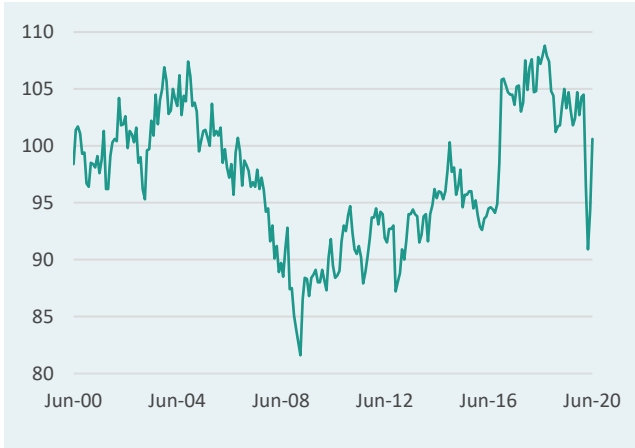
Source: Bloomberg, as of 6/30/20

### CONSUMER SENTIMENT



Source: University of Michigan, as of 6/30/20

### SMALL BUSINESS OPTIMISM



Source: NFIB, as of 6/30/20

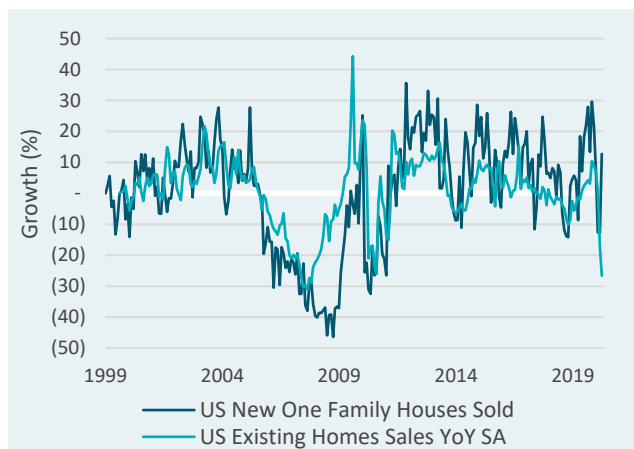
# Housing

Existing home sales slowed significantly in Q2, dropping -26.6% year-over-year in June. The 30-year fixed mortgage interest rate fell further, finishing the second quarter at 3.07%. Near record-low interest rates have likely boosted home demand, helping to mitigate the significant effects of the economic recession. Trends in the housing market are typically slower-moving and often lag economic downturns, which may mean the true impact of COVID-19 on the U.S. housing market has yet to be seen.

backed mortgages who have been affected by COVID-19 are able to request forbearance on mortgage payments for up to 180 days, with an option to extend for an additional 180 days. According to Black Knight, a mortgage data provider, 8.6% of all mortgages in the United States were in forbearance during late-June. To put this number into perspective, during the 2008-2009 housing crisis the mortgage default rate reached approximately 10%. If these loans in forbearance later face foreclosure, it could put significant pressure on the housing market.

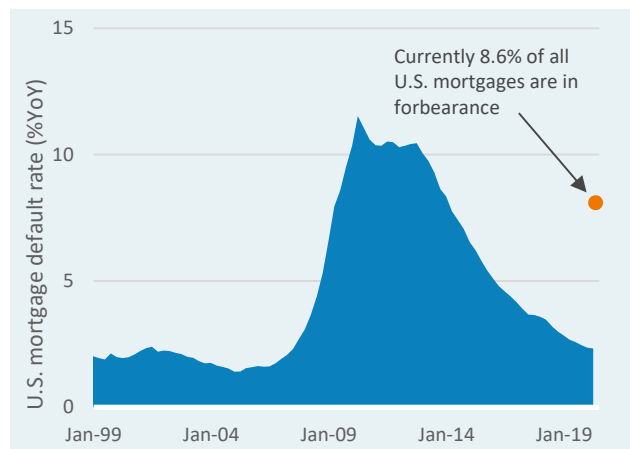
Under the new CARES Act, homeowners with federally-

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



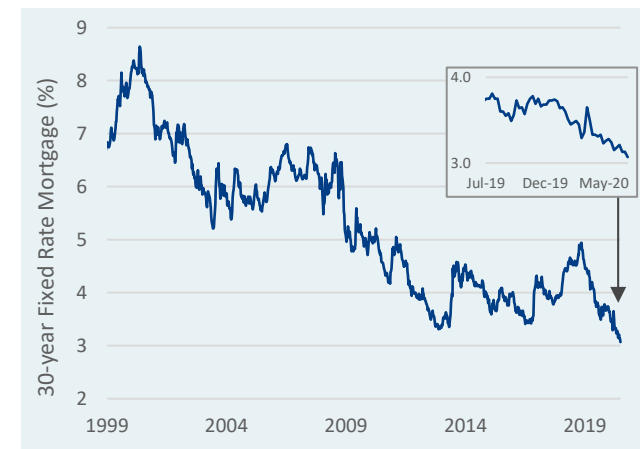
Source: FRED, as of 5/31/20

**MORTGAGE DEFAULT RATE (%)**



Source: FRED, as of 3/31/20

**30YR FIXED RATE MORTGAGE**



Source: FRED, as of 6/30/20

# International economics summary

— In Q1, most international economies began contracting in what will likely turn out to be a global recession. The steady and stable economic expansion in recent years has shifted suddenly with the onset of COVID-19. The IMF now expects 2020 global GDP to fall -4.9%, followed by a +5.4% recovery in 2021.

— Policymakers in Brussels achieved unanimous approval on a €750 billion stimulus package to help support an economic recovery within the European Union. After much debate, officials decided to distribute €390 billion in the form of grants to member states hardest hit by the pandemic (Italy/Spain), and the other €360 in low-interest, non-concessionary loans for members of the bloc.

— U.S.-China relations were further strained Q2. The Trump administration placed restrictions on U.S. exports to Hong Kong in response to a Chinese law which

effectively tightens control over the territory. The restrictions apply to only 2.2% of U.S. exports, but sanctions on China could unravel an already fragile agreement between the two global powers. U.S.-China tensions have been escalating and will warrant close monitoring in the coming months.

— Headline consumer prices fell materially over the second quarter as spending at brick-and-mortar stores, restaurants, and bars weakened alongside the implementation of social distancing controls. Continued broad-based price declines could soon lead to deflation risks for many economies.

— Since hitting lows of -304.6 in early May, the Citi Eurozone Economic Surprise Index rallied back to -99.8, indicating that economic data have been improving relative to median economist estimates. Continued relative strengthening could be supportive to the equity market.

Area	GDP (Real, YoY)	Inflation (CPI, YoY)	Unemployment
United States	0.3% <i>3/31/20</i>	0.1% <i>5/31/20</i>	11.1% <i>6/30/20</i>
Eurozone	(3.1%) <i>3/31/20</i>	0.3% <i>6/30/20</i>	7.4% <i>5/31/20</i>
Japan	(1.7%) <i>3/31/20</i>	0.3% <i>6/30/20</i>	2.9% <i>5/31/20</i>
BRICS Nations	(4.1%) <i>3/31/20</i>	4.9% <i>3/31/20</i>	5.1% <i>3/31/20</i>
Brazil	(0.3%) <i>3/31/20</i>	1.9% <i>5/31/20</i>	12.9% <i>5/31/20</i>
Russia	1.6% <i>3/31/20</i>	2.9% <i>5/31/20</i>	6.1% <i>5/31/20</i>
India	4.7% <i>12/31/19</i>	5.8% <i>3/31/20</i>	8.5% <i>12/31/17</i>
China	(6.8%) <i>3/31/20</i>	2.4% <i>5/31/20</i>	3.7% <i>3/31/20</i>

# International economics

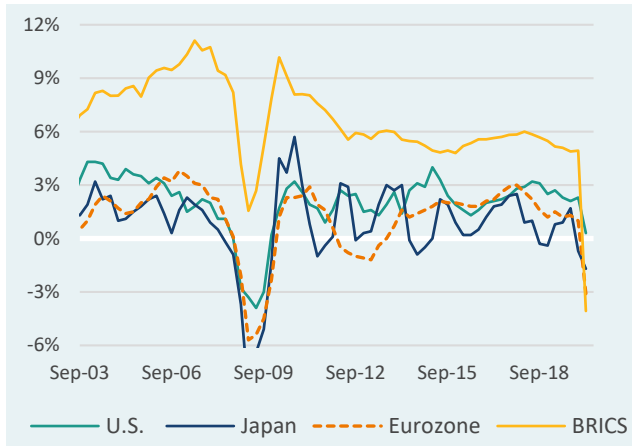
In the first quarter, most international economies began contracting, in what will likely turn out to be a global recession. The steady and stable economic expansion in recent years has shifted suddenly with the onset of COVID-19. The IMF now expects 2020 global GDP to fall -4.9%, followed by a +5.4% recovery in 2021.

Headline consumer prices fell internationally over Q2 as spending at brick-and-mortar stores, restaurants, and bars weakened alongside the implementation of social distancing controls. Continued broad-based price declines could soon lead to deflation risks for many economies. A large contributor to disinflation has been the recent sell-off in crude oil. The price of a barrel of Brent crude oil fell from

around \$80 per barrel at year-end to around \$30 per barrel at the end of Q1, and bottomed at \$22.90 on April 28<sup>th</sup>. Oil later recovered, due in part to certain economies beginning to gradually reopen, as well as price-supportive output cuts announced by OPEC+.

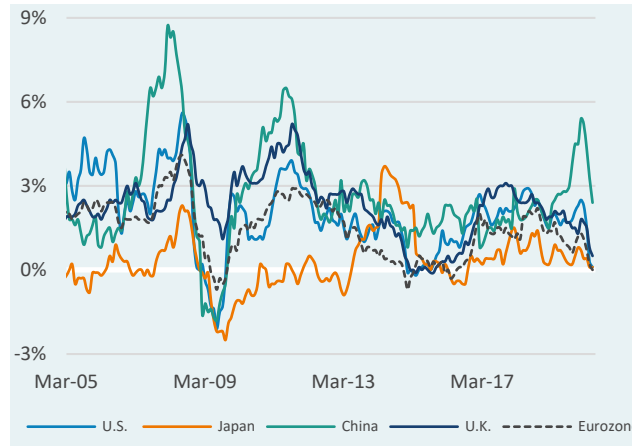
Policymakers in Brussels managed to achieve unanimous approval on a €750 billion stimulus package to help support an economic recovery within the European Union. After much debate, officials decided to distribute €390 billion in the form of grants to member states hardest hit by the pandemic (Italy/Spain), and the other €360 in low-interest, non-concessionary loans for members of the bloc.

**REAL GDP GROWTH (YOY)**



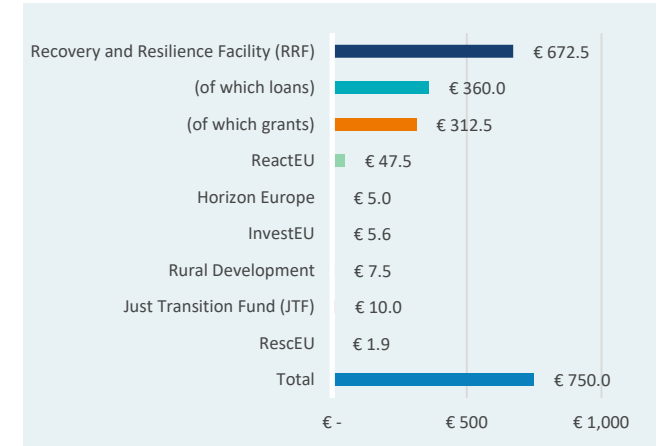
Source: Bloomberg, as of 3/31/20

**INFLATION (CPI YOY)**



Source: Bloomberg, inflation range of past 5 years, as of 5/31/20

**E.U. STIMULUS PACKAGE (BILLIONS)**



Source: European Council, as of 7/21/20

# U.S.-China tensions escalating





# Fixed income rates & credit

# Interest rate environment

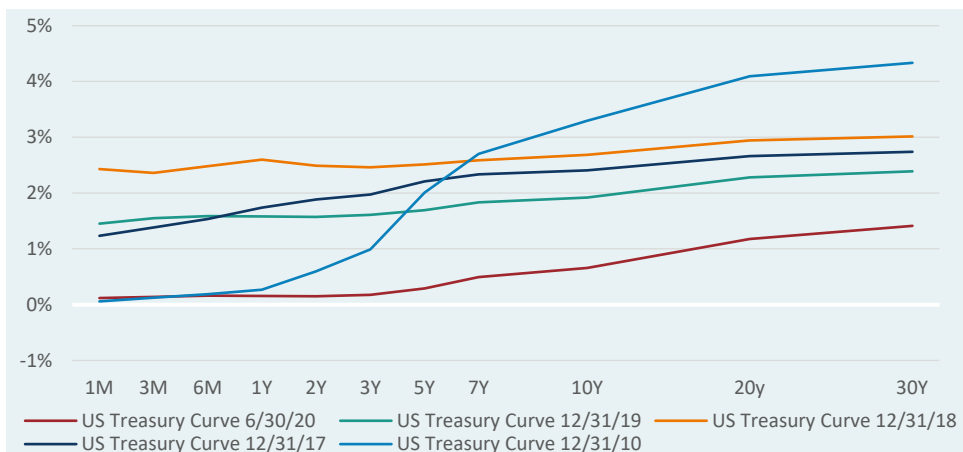
- The Federal Reserve continued to roll out the litany of support programs it announced in the first quarter. The Fed’s balance sheet grew from \$5.3 trillion to \$7.1 trillion over the second quarter.
- It appears the Federal Reserve may implement a yield curve control policy as a component of its policy toolkit. At the June Fed meeting, officials acknowledged that while setting intermediate-term yield caps may help strengthen short-term rate guidance, they remained concerned about several potential implications of beginning down that path.
- The Fed also expanded the list of eligible securities for purchase through its Primary and Secondary Market Credit Facilities to include corporate debt, either directly through companies or through exchange-traded funds. The Fed indicated that it would primarily target investment grade debt securities, and that it would also purchase certain non-investment grade debt from “fallen angels” which held investment-grade debt ratings prior to the pandemic.
- The European Central Bank increased the size of its Pandemic Emergency Purchase Programme from the initial €750 billion to a total of €1.35 trillion. The ECB will now be able to deploy the funds in a “flexible manner over time, across asset classes and among jurisdictions” through June 2021, which may help reduce borrowing costs.
- Real yields continued to decline around the globe as nominal sovereign bond yields were largely unchanged and longer-term inflation expectations recovered.
- Emerging market debt yields fell considerably in the second quarter, likely supported by disinflationary effects of the sell-off in commodities which emboldened central bankers to adopt more accommodative policy.

Area	Short Term (3M)	10-Year
United States	0.13%	0.66%
Germany	(0.56%)	(0.46%)
France	(0.52%)	(0.11%)
Spain	(0.49%)	0.46%
Italy	(0.29%)	1.26%
Greece	0.32%	1.20%
U.K.	0.01%	0.17%
Japan	(0.17%)	0.02%
Australia	0.21%	0.87%
China	1.74%	2.84%
Brazil	2.04%	6.83%
Russia	4.57%	5.92%

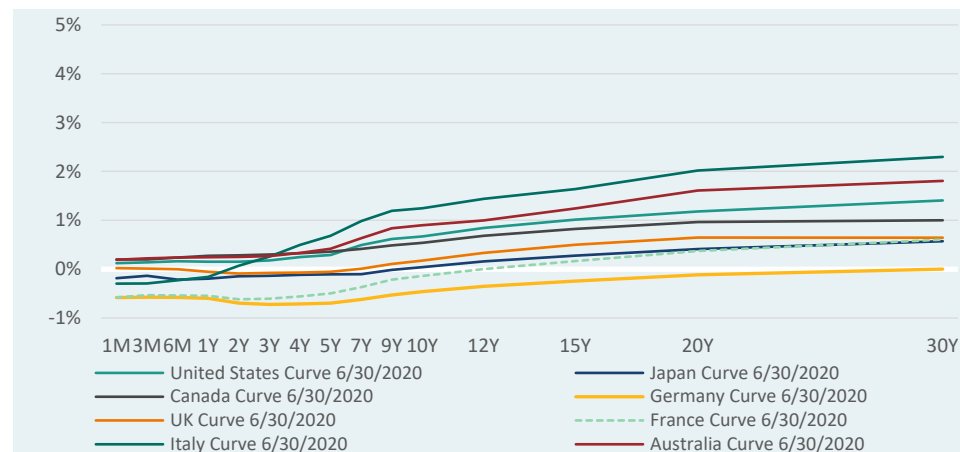
Source: Bloomberg, as of 6/30/20

# Yield environment

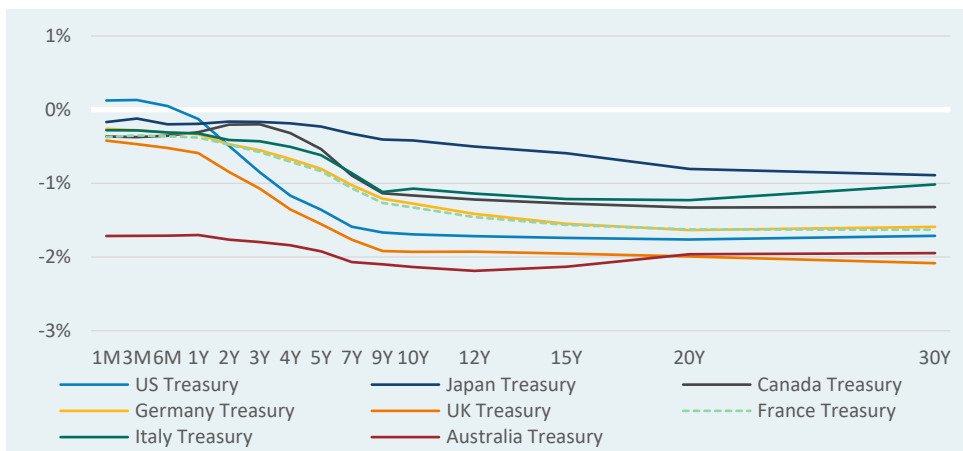
## U.S. YIELD CURVE



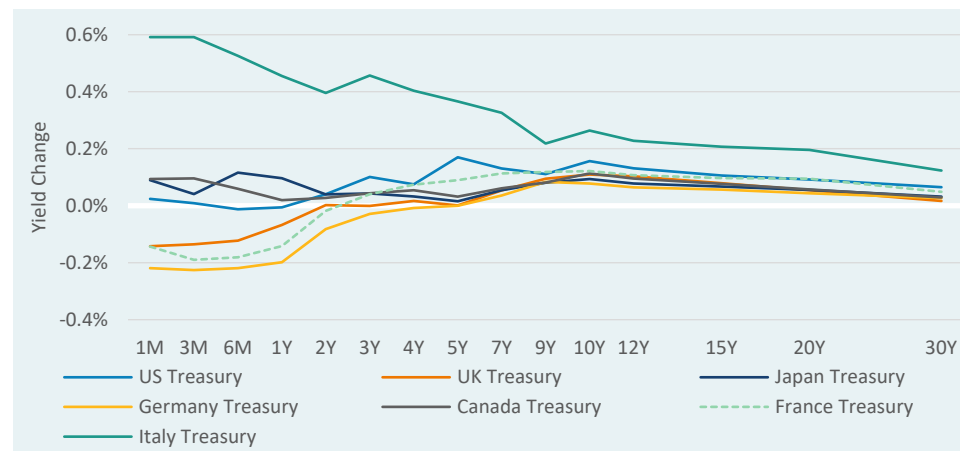
## GLOBAL GOVERNMENT YIELD CURVES



## YIELD CURVE CHANGES OVER LAST FIVE YEARS



## IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 6/30/20

# Credit environment

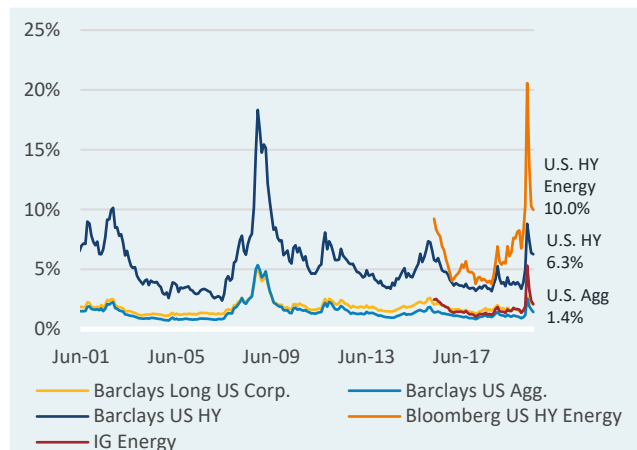
Despite historically weak economic data releases throughout Q2, a significant degree of confidence and liquidity was restored to credit markets due to continued support from the Federal Reserve, which ended the quarter with nearly \$10 billion in corporate debt on its balance sheet. Accordingly, credit markets displayed a dramatic recovery, with some of the worst performing sectors of Q1 leading the rebound. High yield and leveraged loans returned 10.2% and 9.7%, respectively, while the broad U.S. Credit Index returned 8.2%. Within U.S. credit, longer-duration and lower-quality issues tended to perform best.

Credit spreads tightened across the board in Q2, as U.S. corporate investment grade tightened to 150 bps from 272 bps at the end

of the first quarter, and high yield spreads moved from 880 bps to 626 bps.

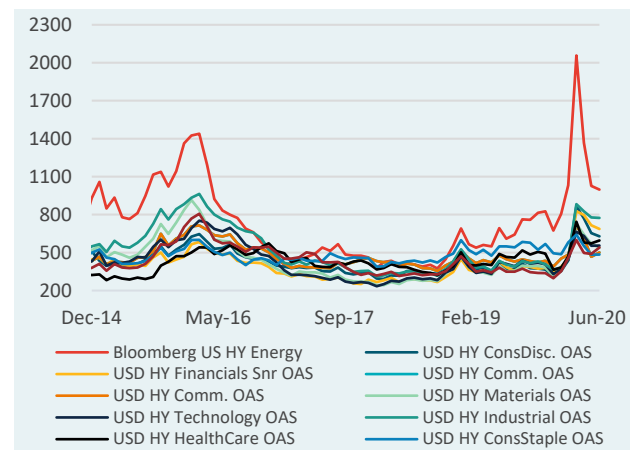
U.S. investment grade downgrades slowed dramatically in June, with only two issuers deteriorating to high yield status. This was down from three issuers in May, five issuers in April, and a peak of 10 issuers in March. So far in 2020, a majority of downgrades have come from the energy and automotive sectors, which have contributed 40% and 25% of total fallen angels, respectively.

## SPREADS



Source: Barclays, Bloomberg, as of 6/30/20

## HIGH YIELD SECTOR SPREADS (BPS)



Source: Bloomberg, as of 6/30/20

Market	Credit Spread (OAS)	
	6/30/20	6/30/19
Long U.S. Corp	2.0%	1.6%
U.S. Inv Grade Corp	1.5%	1.2%
U.S. High Yield	6.3%	3.8%
U.S. Bank Loans*	6.2%	4.4%

Source: Barclays, Credit Suisse, Bloomberg, as of 6/30/20  
\*Discount margin (4-year life)

# Default & issuance

The second quarter saw a broad upsurge in default activity with \$76.2 billion of defaults. This figure was only slightly below the \$76.6 billion worth of defaults seen in Q1 2009.

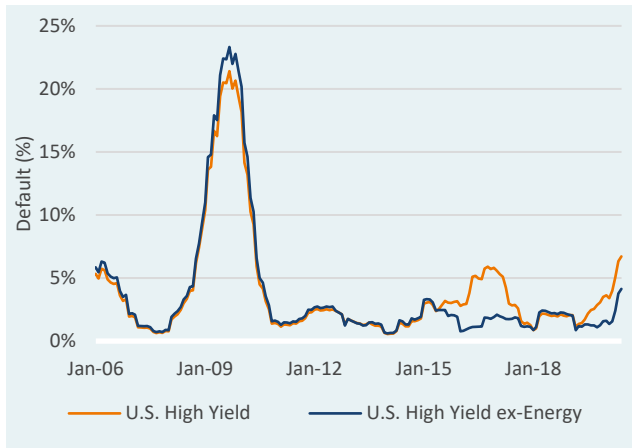
Through the first half of 2020, 60 companies defaulted which pushed the par-weighted U.S. high yield default rate to a 10-year high of 6.2%. The default rate of bank loans rose to 4.0% from 1.9% in Q1, remaining at a lower level than high yield largely due to less representation from the energy sector.

The energy sector continues to experience the greatest pain year-to-date, with 18 defaults/distressed transactions comprising 30% of the

\$106 billion total. The next hardest-hit sectors have been telecommunications (15.8%), cable & satellite (13.6%), and retail (10.4%).

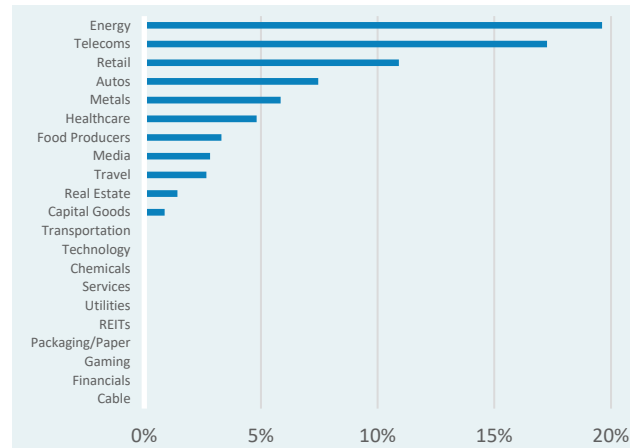
So far, 2020 has seen record issuance of investment grade and high yield bonds. Investment grade issuance peaked in April with \$284 billion of new issues, before falling back to a still elevated level of \$163 billion in June. Year-to-date net issuance of investment grade was \$781 billion, driven by a record \$1.2 trillion of new issuance. High yield has also seen aggressive new issuance, with \$218 billion over 330 new issues.

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



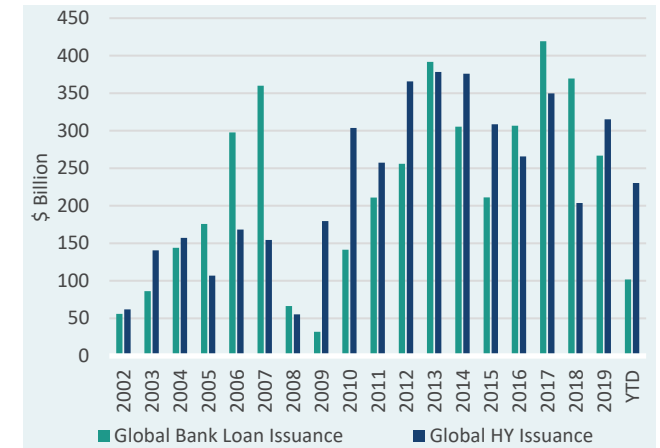
Source: BofA Merrill Lynch, as of 6/30/20

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



Source: BofA Merrill Lynch, as of 6/30/20 – par weighted

**GLOBAL ISSUANCE (\$ BILLIONS)**



Source: Bloomberg, BofA Merrill Lynch, as of 6/30/20

# Equity

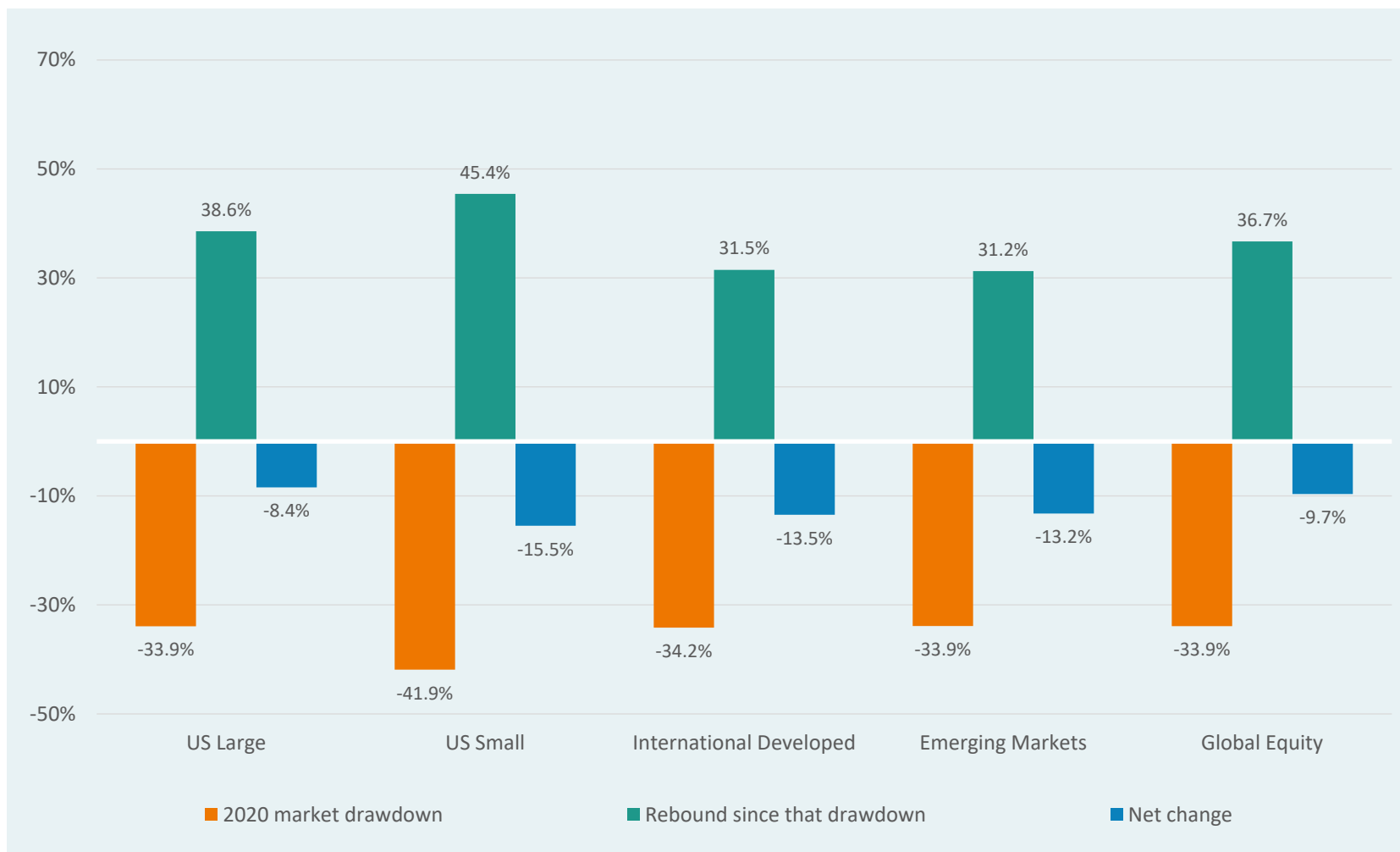
# Equity environment

- U.S. equities delivered an incredible comeback, following the sudden sell-off in March. The S&P 500 rallied +20.5% in Q2, bringing year-to-date performance to -3.1%, and positive +7.5% over the past twelve months. International developed equities (MSCI EAFE +12.9% QTD, -5.1% YoY) and emerging market equities (MSCI EM +18.1% QTD, -3.4% YoY) lagged the domestic market.
- Most major equity benchmarks are within 15% of all-time highs, despite major damage that COVID-19 has inflicted on the global economy. Some of this damage has been mitigated by government support, but some damage is likely yet to be felt.
- According to FactSet, the estimated S&P 500 year-over-year decline in earnings for Q2 is -43.8%. This would mark the largest decline in earnings since Q4 2008 (-69.1%).
- Moves in the CBOE VIX Index moderated in June. The long-term average of the index is near 19. It has remained above that level since February, reaching a high point of 85.0 on March 18th, and closing June at 30.4.
- The U.S. dollar weakened in Q2, falling -2.3% according to the Bloomberg Dollar Spot Index. The market recovery (less demand for save-haven currencies) and materially lower U.S. interest rates (less attractive U.S. Dollar) have likely contributed to the move.
- Growth stocks beat value stocks for the ninth consecutive month. The Russell 1000 Growth Index (+27.8%) outperformed the Russell 1000 Value Index (+14.3%). Sector performance disparity continues to impact the behavior of value. While energy delivered outsized returns relative to the overall index, other value-tilted sectors such as utilities and financials delivered poor performance.

	QTD TOTAL RETURN		1 YEAR TOTAL RETURN	
	(unhedged)	(hedged)	(unhedged)	(hedged)
US Large Cap (S&P 500)	20.5%		7.5%	
US Small Cap (Russell 2000)	25.4%		(6.6%)	
US Large Value (Russell 1000 Value)	14.3%		(8.8%)	
US Large Growth (Russell 1000 Growth)	27.8%		23.3%	
International Large (MSCI EAFE)	14.9%	12.9%	(5.1%)	(2.1%)
Eurozone (Euro Stoxx 50)	20.1%	17.8%	(6.4%)	(2.7%)
U.K. (FTSE 100)	9.0%	9.2%	(15.9%)	(12.2%)
Japan (NIKKEI 225)	17.9%	18.2%	6.6%	9.0%
Emerging Markets (MSCI Emerging Markets)	18.1%	16.6%	(3.4%)	1.7%

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 6/30/20

# Equity market peak-to-trough



Equity markets around the world have recovered most of their losses

As of 6/30/20 - "Peak-to-trough" is defined as the total loss from the highest value achieved in 2020 to the lowest value achieved following the COVID-19 market drawdown. "Net change" is the difference between the market price on June 30<sup>th</sup> and the highest value achieved in 2020. Indexes include: S&P 500, Russell 2000, MSCI EAFE, MSCI Emerging Markets, MSCI ACWI.



# Domestic equity

U.S. equities delivered an incredible comeback, following the sudden and significant sell-off in March. The S&P 500 rallied +20.5% in the second quarter, bringing the year-to-date performance to -3.1%, and positive +7.5% over the past year.

While the Consumer Discretionary (+32.9%) and IT (+30.5%) sectors did post outsized performance, participation in the rebound was broad-based and not confined to mega-cap tech names such as Amazon. The S&P 500 Equal-Weighted Index outperformed the S&P 500 Index by 1.2%.

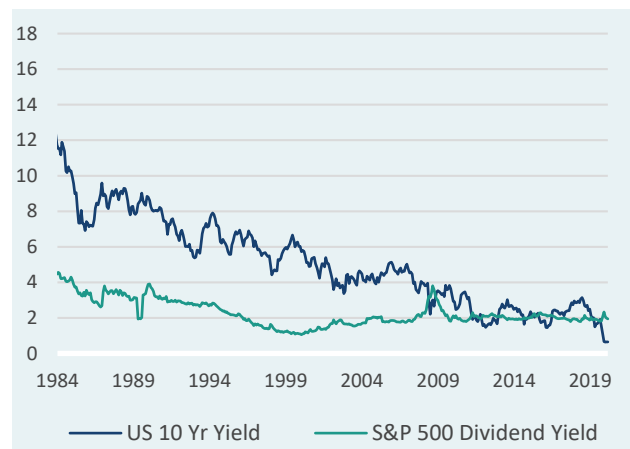
U.S. Treasury yields have moved closer to zero in 2020, which has reignited an ongoing discussion around the extent to which this dynamic will affect the equity market. We believe that the recent decline in interest rates should foundationally have a lifting effect on the value of equities, all else equal, since the value of a stock equals the present value of all future cash flows from that stock (lower interest rates result in higher present values). Generationally-low interest rates also create difficulties in holding higher quality fixed income due to inherent drag on portfolio performance. This potentially puts pressure on investors to make larger allocations to risky assets.

## S&P 500



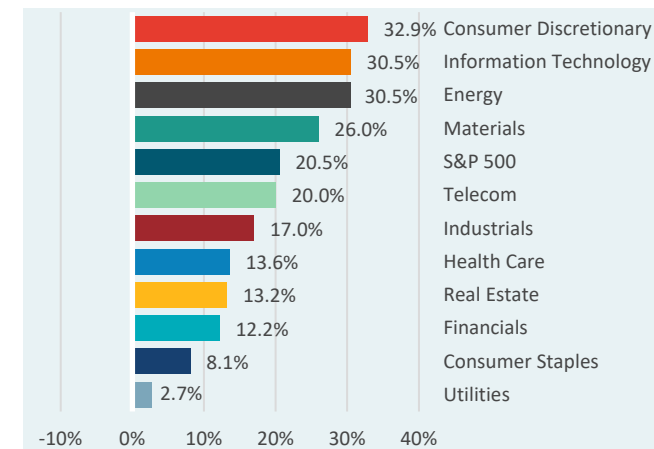
Source: Standard & Poor's, as of 6/30/20

## DIVIDEND YIELD VS BOND YIELD



Source: Standard & Poor's, as of 6/30/20

## Q2 SECTOR PERFORMANCE



Source: Standard & Poor's, as of 6/30/20

# Domestic equity size & style

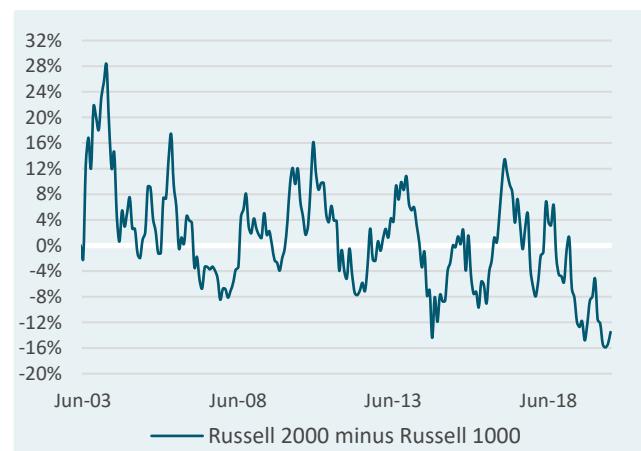
Growth stocks beat value stocks for the ninth consecutive month. The Russell 1000 Growth Index (+27.8%) outperformed the Russell 1000 Value Index (+14.3%). Small stocks beat large during the quarter (Russell 2000 +25.4%, Russell 1000 +21.8%), but continue to lag significantly over the longer-term.

Sector performance disparity continues to impact the behavior of value. While energy (+32.6%) delivered outsized returns over the quarter relative to the overall index (+21.8%), other value-tilted sectors such as financials (+16.3%), consumer staples (+9.0%), and utilities (+4.0%)

presented a drag on overall index performance.

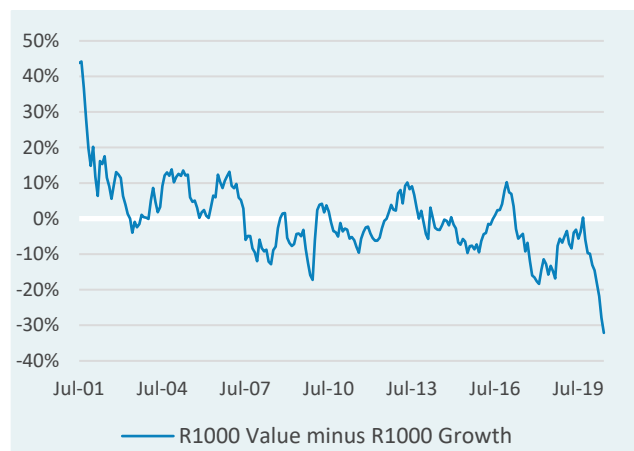
We believe it is extremely difficult to successfully make short-term bets on style factors. Factor performance can be incredibly noisy and vulnerable to sector randomness. Value has become historically cheap, to arguably attractive levels, though a catalyst for a value turnaround is not yet evident. We are watching closely the developments in this space to identify potential opportunities. However, we continue to believe that consistent long-term exposure to the value factor is an ideal implementation approach for most investors, most of the time.

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



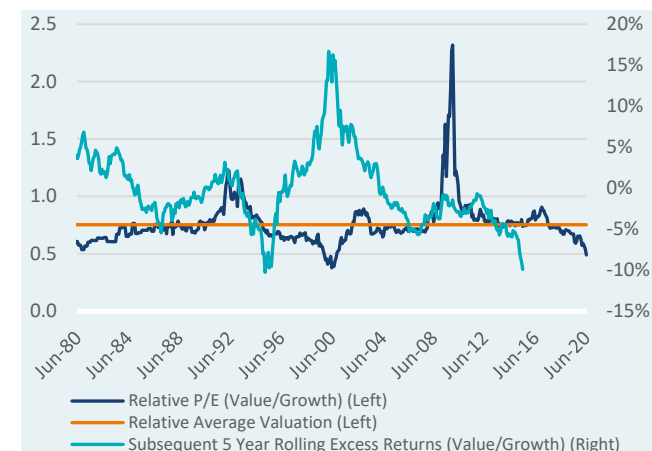
Source: FTSE, as of 6/30/20

**VALUE VS GROWTH (YOY)**



Source: FTSE, as of 6/30/20

**VALUE APPEARS HISTORICALLY CHEAP**



Source: Russell, Bloomberg, as of 6/30/20

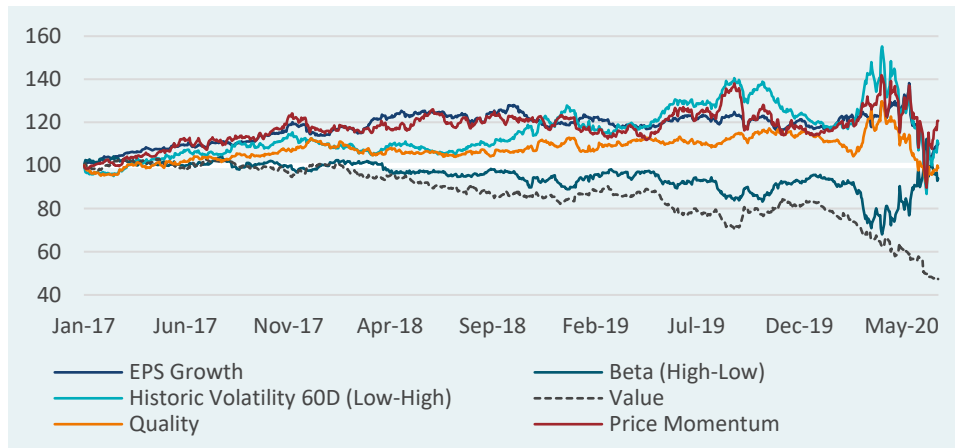
# Equity factor monitor

A significant rotation into higher beta, higher volatility, and/or lower quality (long/short, sector neutral, S&P 500 Index quintiles) stocks occurred during the second quarter. The change in investor preferences began in early April and was likely triggered by a combination of extraordinary central bank intervention, along with better than initially expected economic news and COVID-19 pandemic-related data. The rotation began moderating in mid-June as higher quality stocks bounced back.

From a longer-term perspective, the Q2 rotation did not come close to reversing the longer-term positive results accruing to the momentum and low volatility equity factors.

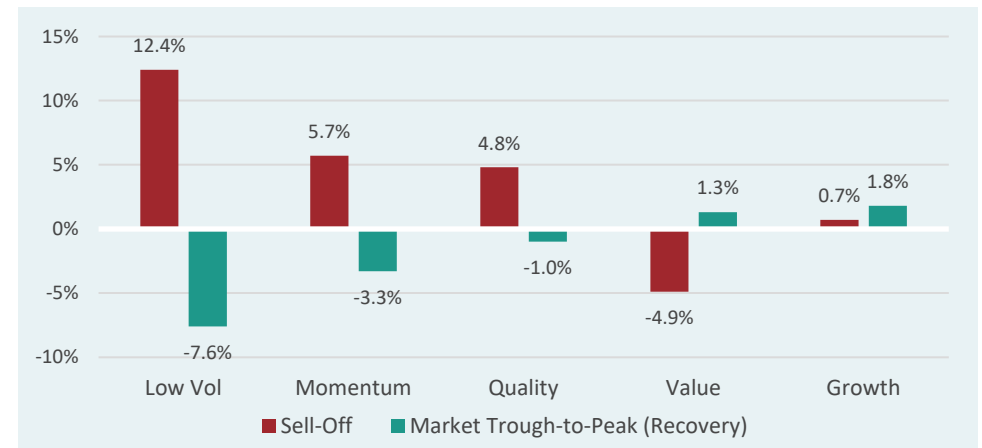
The value factor continued its long-term run of weak results during the quarter. Some have speculated that the value factor returns may benefit from a change in market regime from the current low growth and inflation backdrop to an environment of higher growth and inflation. The rise of factor-focused investing through dedicated smart beta ETFs could also be playing a role. Historical analysis suggests growth is the only factor showing relatively low sensitivity to both upturns and downturns. This analysis also indicates that low volatility, momentum, and quality factors were better protectors of capital during sell-offs.

## FACTOR PERFORMANCE (INDEXED 1/2/2017=100)



Source: J.P. Morgan, as of 6/26/20

## MEDIAN STYLE PERFORMANCE DURING MARKET SELL-OFF & RECOVERY



Source: J.P. Morgan, as of 6/26/20

# International developed equity

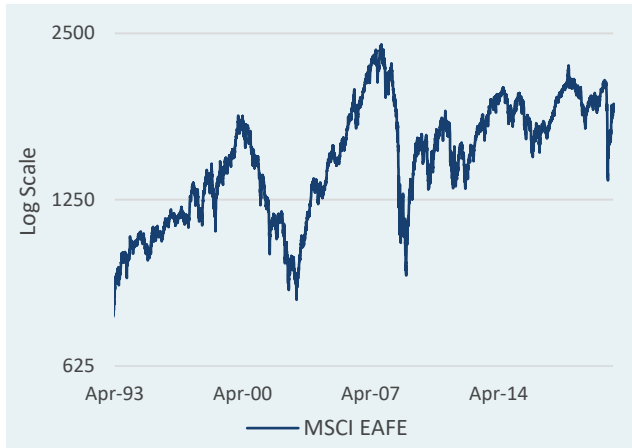
Equity markets around the world delivered a surprisingly strong recovery in the second quarter, rising between 12% to 20%. U.K. equities have lagged, only rising +7.8% over the quarter and remained down -23.3% over the year-to-date. Eurozone equities were among the top performers (MSCI Euro +19.6%). However, international equities lagged domestic markets (S&P 500 +20.5%).

On a one-year basis, the volatility of currency markets detracted from the performance of investors with unhedged currency exposure. Investors in international developed

equities lost -3.0% due to currency movement (MSCI EAFE), and investors in emerging markets lost -5.1% (MSCI EM).

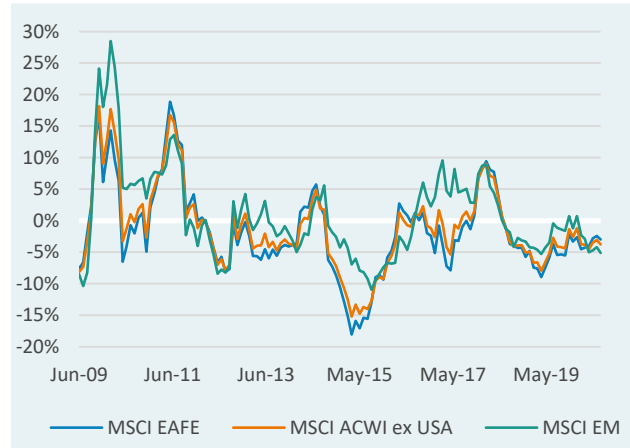
Earnings have fallen materially while equity prices recovered much of their losses. These two effects have led to a significant jump in equity valuations. This dynamic is not uncommon in environments where investors “look to the other side” of a crisis and generally expect tough conditions to be short-lived. With that said, if earnings do not recover to prior levels in a timely manner, investors may begin to question elevated multiples.

**INTERNATIONAL DEVELOPED EQUITIES**



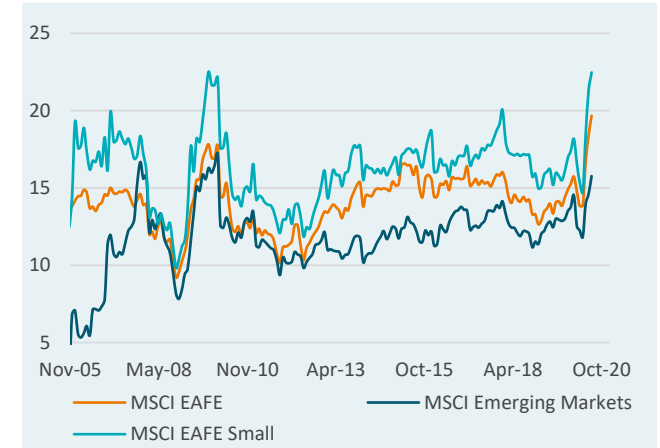
Source: MSCI, as of 6/30/20

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



Source: MSCI, as of 6/30/20

**FORWARD P/E**



Source: MSCI, as of 6/30/20

# Emerging market equity

Emerging market equities (MSCI EM +18.1%) underperformed U.S. (S&P 500 +20.5%) while outperforming international developed equities (MSCI EAFE +14.9%) over the quarter. Within the emerging market complex, Latin American equities outperformed Asia over the quarter (MSCI EM Latin American +19.1% vs. MSCI EM Asia +17.8%) but underperformed year-to-date (-35.2% vs. -3.5%).

Low inflation in emerging economies may allow central banks more room to maneuver relative to developed economies with regard to the use of monetary policy in

encouraging economic growth during the global slowdown.

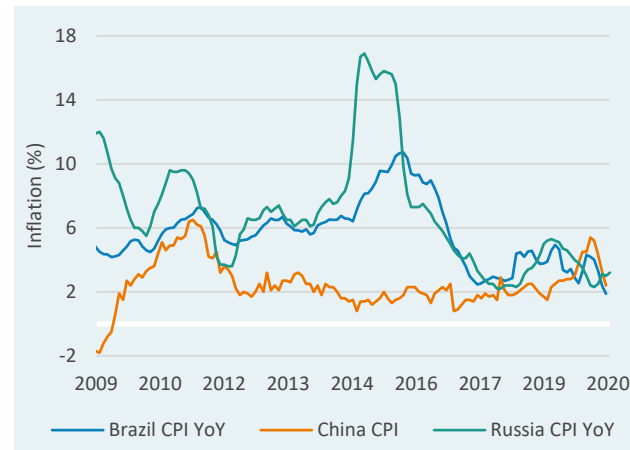
Emerging currencies appreciated in Q2, which was additive to performance (MSCI EM Unhedged +18.1%, MSCI EM Hedged +16.6%). The significant depreciation of the Brazilian real and Turkish lira provided material headwinds for the performance of U.S. investors who have unhedged exposure to emerging markets. On the other hand, the Russian ruble saw large gains as the currency benefitted from rising oil prices.

## EMERGING MARKET EQUITY



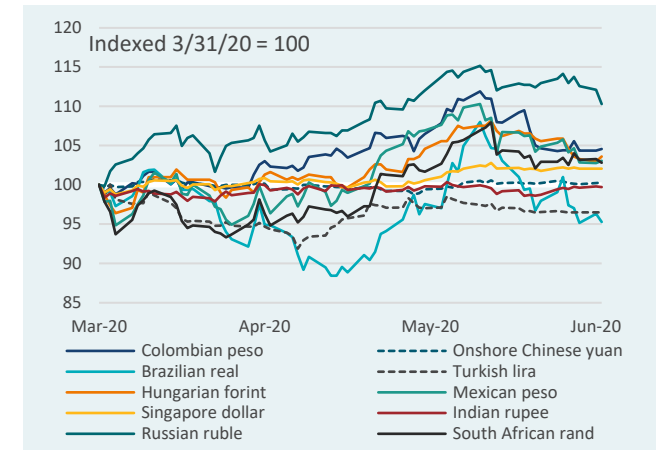
Source: MSCI, as of 6/30/20

## INFLATION (YOY)



Source: Bloomberg, as of 6/30/20

## J.P. MORGAN EMCI CONSTITUENTS (VS. USD)



Source: Bloomberg, as of 6/30/20

# Equity valuations

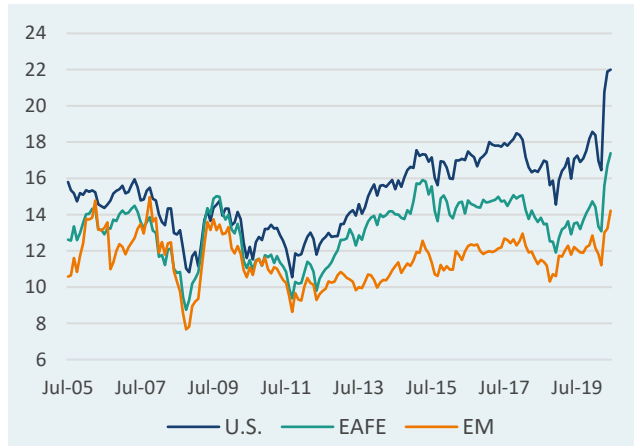
Equity valuations fell in Q1 alongside the broad market selloff. In Q2, valuations reflated significantly as investors seemed to interpret the pandemic-induced earnings recession as more temporary in nature.

Equity prices are typically viewed as the present value of the sum of future cash flows. If the earnings drawdown is indeed temporary and “v-shaped” in nature, this implies mathematically a more modest loss of equity value. Furthermore, near zero interest rates in the developed world likely offset some of this impact (lower interest rates increase

the present value of equity). While we do not necessarily disagree with the argument that the equity rebound has been *too much too soon*, these two effects (potentially quick recovery but very low interest rates) may help us to better understand the recent rally.

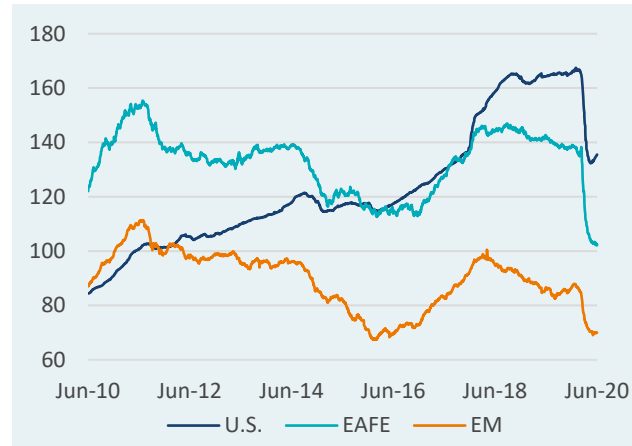
Expected earnings over the next 12 months appear to have bottomed in the United States and look close to bottoming for the international developed and emerging markets. These expectations may provide some stability to equity valuations in the coming months.

## FORWARD P/E RATIOS



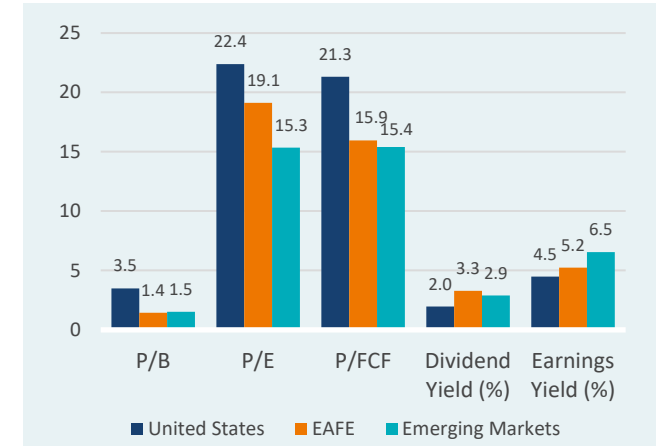
Source: MSCI, 12m forward P/E, as of 3/31/20

## BLENDED FORWARD 12-MONTH EPS ESTIMATES



Source: MSCI, 12m forward EPS, as of 6/30/20

## VALUATION METRICS (3-MONTH AVERAGE)



Source: Bloomberg, MSCI as of 6/30/20 - trailing P/E

# Equity volatility

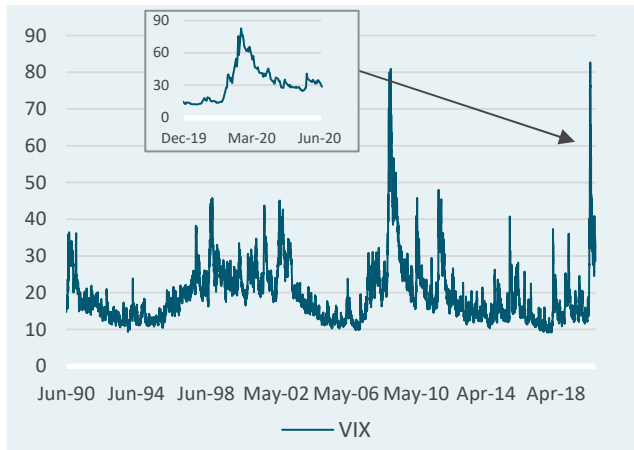
Moves in the CBOE VIX Index moderated in June. The long-term average of the index is near 19. It has remained above that level since February, reaching a high point of 85.0 on March 18th, and closing June at 30.4.

The VIX futures curve, which reflects expectations for future implied volatility of S&P 500 Index options, has taken on an inverted “v-shape” over the next six months, indicating market participants are pricing in higher S&P 500 volatility toward the end of the year around the U.S. election. After October, the market expectation is for volatility to subside

considerably. In normal circumstances, the VIX futures curve exhibits a moderate upward slope due to the skewed and mean-reverting nature of volatility generally (it is low most of the time, though there are occasional, large, short-lived spikes).

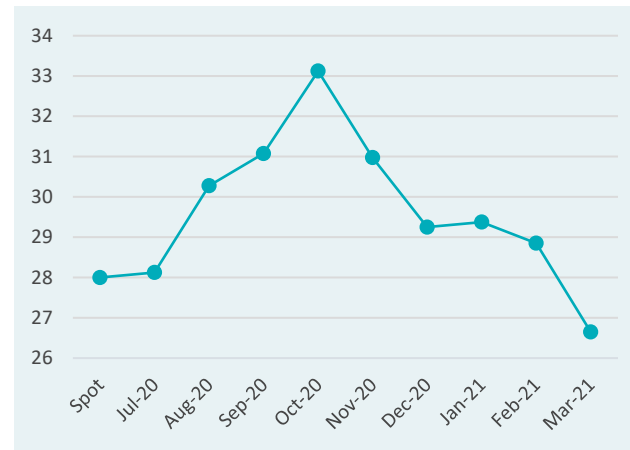
In the first quarter, the implied volatility on S&P 500 Index out-of-the-money put options spiked relative to similarly out-of-the-money call options, indicating investor preference for downside protection. That preference faded over the second quarter, but remained fairly strong relative to recent history.

**U.S. IMPLIED VOLATILITY (VIX)**



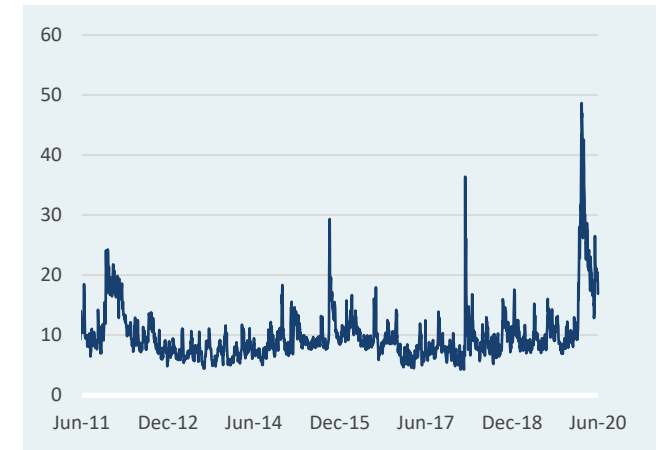
Source: CBOE, as of 6/30/20

**VIX FUTURES CURVE**



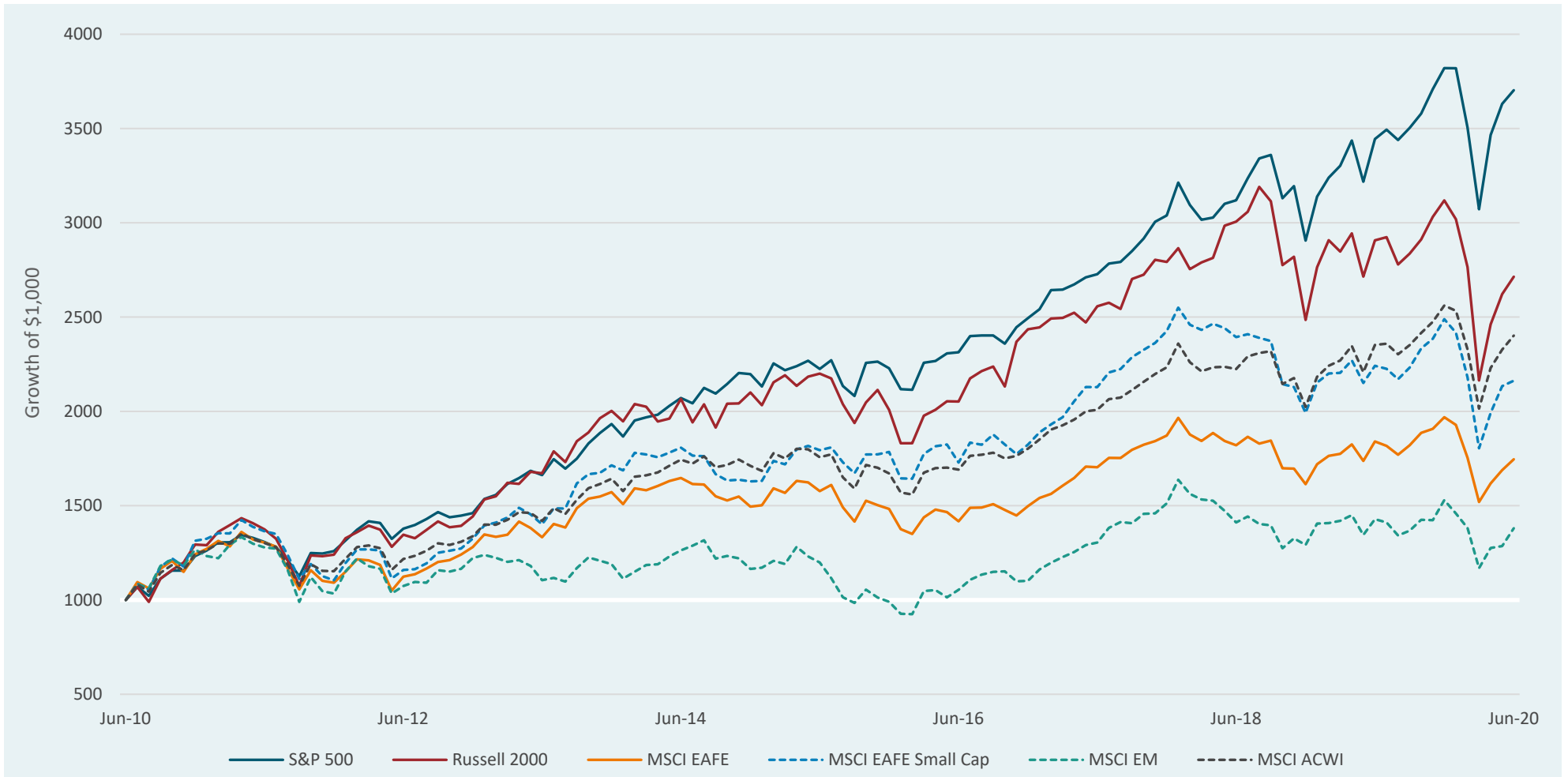
Source: CBOE, Bloomberg, as of 6/30/20

**30-DAY 10-DELTA SKEW (S&P 500 OPTIONS)**



Source: CBOE, Bloomberg, as of 6/30/20

# Long-term equity performance



Source: Morningstar, as of 6/30/20



# Other assets

# Currency

The U.S. dollar weakened in the second quarter, falling -2.3% according to the Bloomberg Dollar Spot Index. The dollar fell -2.4% against the Euro, appreciated +0.4% against the British pound, and fell -0.1% relative to the Japanese yen. The market recovery (less demand for safe-haven currencies) and materially lower U.S. interest rates (less attractive U.S. dollar) have likely contributed to the move lower.

As the euro strengthened in Q2, some currency analysts have adopted a more optimistic view on the common currency. Improved macroeconomic conditions relative to the United

States, the potential implications of a strong cyclical rebound, as well as the ECB's apparent unwillingness to push rates much lower below 0%, may be leading to euro appreciation.

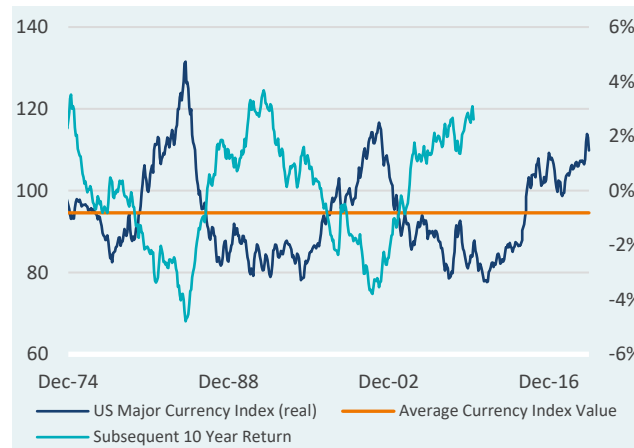
The MSCI Currency Factor Mix Index, constructed as a combination of individual currency factor indices (carry, value, momentum) declined 1.7% in Q2. The momentum factor (-7.8%) drove declines in the overall index as the U.S. dollar began to weaken relative to other major currency pairs following a period of strong appreciation.

**BLOOMBERG DOLLAR SPOT INDEX**



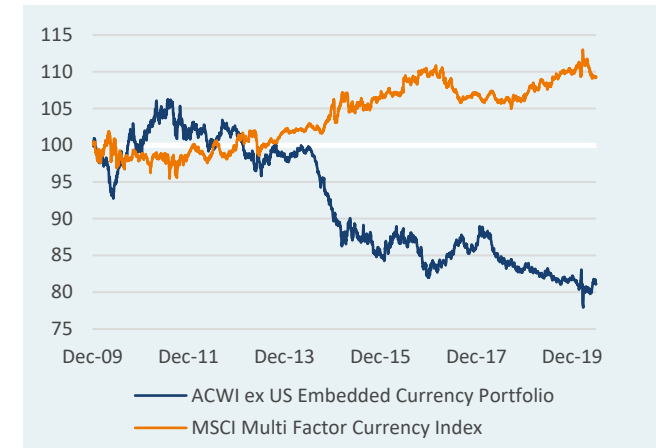
Source: Bloomberg, as of 6/30/20

**USD CURRENCY LEVEL & SUBSEQUENT RETURN**



Source: Federal Reserve, as of 6/30/20

**EMBEDDED CURRENCY VS CURRENCY BETA**



Source: MSCI, Bloomberg, as of 6/30/20

# Commodities

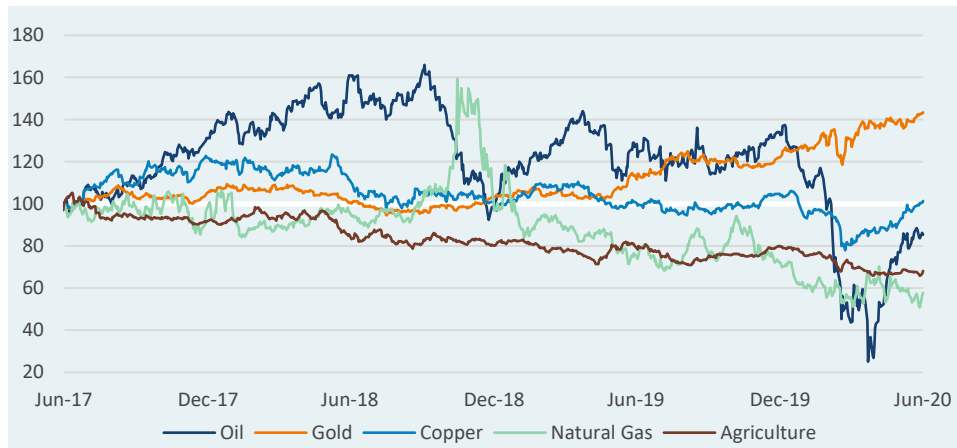
The Bloomberg Commodity Index returned 5.1% in the second quarter, though the index remains depressed year-to-date (-19.4%). A global recession driven by COVID-19 has led to an unprecedented industrial slowdown, severely impacting the demand for energy. The energy (-46.3%) and petroleum (-49.8%) components of the index have dragged performance lower year-to-date.

Gold prices climbed higher during Q2 amidst a backdrop of heightened geopolitical and economic uncertainty, lower global real yields (which diminish the opportunity cost of holding gold), and a weakening U.S. dollar. Spot gold prices

rose from \$1577/oz to \$1781/oz, their highest level since 2011, and have returned 17.1% so far this year. Industrial metals (+12.3%) were bid higher in the second quarter alongside oil, perhaps on enthusiasm around reopening plans and a possible economic rebound. Copper (+21.2%) experienced supply-side tailwinds as COVID-19 spread through Peru, raising production concerns.

Some of the poor recent performance of commodities has been caused by an upward sloping futures curve, which can generate losses due to negative “roll return”. Unattractive futures curve shape continues to contribute to performance.

## COMMODITY PERFORMANCE



Source: Bloomberg, as of 6/30/20

## COMMODITIES ROLL RETURN



Source: Standard & Poor's, as of 6/30/20

# Appendix

# Periodic table of returns

BEST ↑

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	YTD	5-Year	10-Year
Large Cap Growth	38.7	66.4	31.8	14.0	25.9	56.3	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	13.3	31.7	37.3	6.7	36.4	9.8	15.9	17.2
US Bonds	27.0	43.1	22.8	8.4	10.3	48.5	22.2	21.4	26.9	16.2	1.4	37.2	26.9	7.8	18.1	38.8	13.2	5.7	21.3	30.2	1.9	31.4	6.1	10.5	14.0
Real Estate	20.3	33.2	12.2	7.3	6.7	47.3	20.7	20.1	23.5	15.8	-6.5	34.5	24.5	2.6	17.9	34.5	13.0	0.9	17.3	25.0	0.0	28.5	0.7	7.0	12.9
Cash	19.3	27.3	11.6	3.3	1.6	46.0	18.3	14.0	22.2	11.8	-21.4	32.5	19.2	1.5	17.5	33.5	11.8	0.6	12.1	22.2	-1.5	26.5	0.4	6.9	10.5
Hedge Funds of Funds	16.2	26.5	7.0	2.8	1.0	39.2	16.5	7.5	18.4	11.6	-25.9	28.4	16.8	0.4	16.4	33.1	6.0	0.0	11.8	21.7	-3.5	25.5	-2.3	5.5	10.4
60/40 Global Portfolio	8.7	21.3	4.1	-2.4	-6.0	29.9	14.3	6.3	15.5	10.3	-33.8	23.3	16.1	-2.1	15.3	23.3	4.9	-0.8	11.2	14.6	-6.0	22.4	-2.3	4.6	9.8
Large Cap Equity	15.6	24.3	6.0	2.5	-5.9	30.0	14.5	7.1	16.6	10.9	-28.9	27.2	16.7	0.1	16.3	32.5	5.6	-0.4	11.3	17.1	-4.8	22.0	-2.8	4.3	7.8
Small Cap Growth	4.9	20.9	-3.0	-5.6	-11.4	29.7	12.9	5.3	15.1	7.0	-35.6	20.6	15.5	-2.9	14.6	12.1	4.2	-1.4	8.0	13.7	-8.3	18.6	-3.1	4.3	6.8
Emerging Markets Equity	1.2	13.2	-7.3	-9.1	-15.5	25.2	11.4	4.7	13.3	7.0	-36.8	19.7	13.1	-4.2	11.5	11.0	3.4	-2.5	7.1	7.8	-9.3	18.4	-9.8	2.9	5.7
International Equity	-2.5	11.4	-7.8	-9.2	-15.7	23.9	9.1	4.6	10.4	5.8	-37.6	18.9	10.2	-5.5	10.5	9.0	2.8	-3.8	5.7	7.7	-11.0	8.7	-11.3	2.1	3.8
Small Cap Equity	-5.1	7.3	-14.0	-12.4	-20.5	11.6	6.9	4.6	9.1	4.4	-38.4	11.5	8.2	-5.7	4.8	0.1	0.0	-4.4	2.6	7.0	-11.2	7.8	-13.0	1.4	3.3
Large Cap Value	-6.5	4.8	-22.4	-19.5	-21.7	9.0	6.3	4.2	4.8	-0.2	-38.5	5.9	6.5	-11.7	4.2	-2.0	-1.8	-7.5	1.0	3.5	-12.9	7.7	-16.3	1.3	2.7
Commodities	-25.3	-0.8	-22.4	-20.4	-27.9	4.1	4.3	3.2	4.3	-1.6	-43.1	0.2	5.7	-13.3	0.1	-2.3	-4.5	-14.9	0.5	1.7	-13.8	6.4	-19.4	1.1	0.6
Small Cap Value	-27.0	-1.5	-30.6	-21.2	-30.3	1.0	1.4	2.4	2.1	-9.8	-53.2	-16.9	0.1	-18.2	-1.1	-9.5	-17.0	-24.7	0.3	0.9	-14.6	2.1	-23.5	-7.7	-5.8

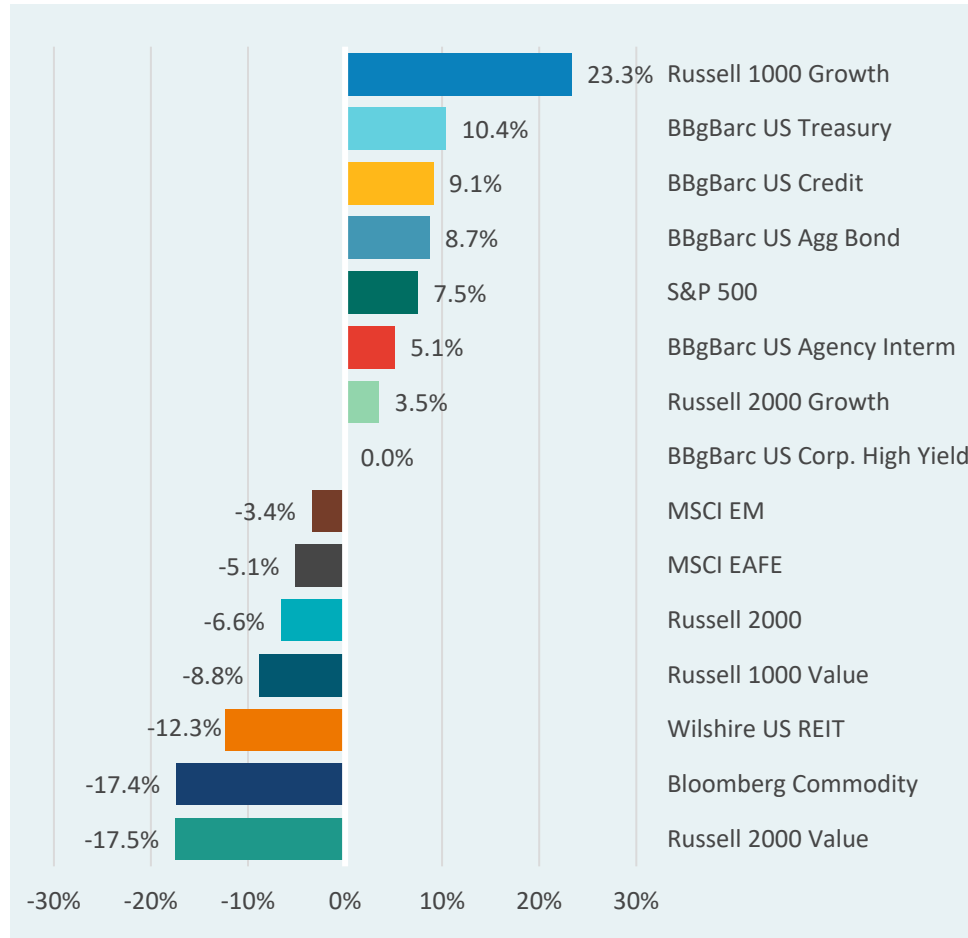
↓ WORST

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

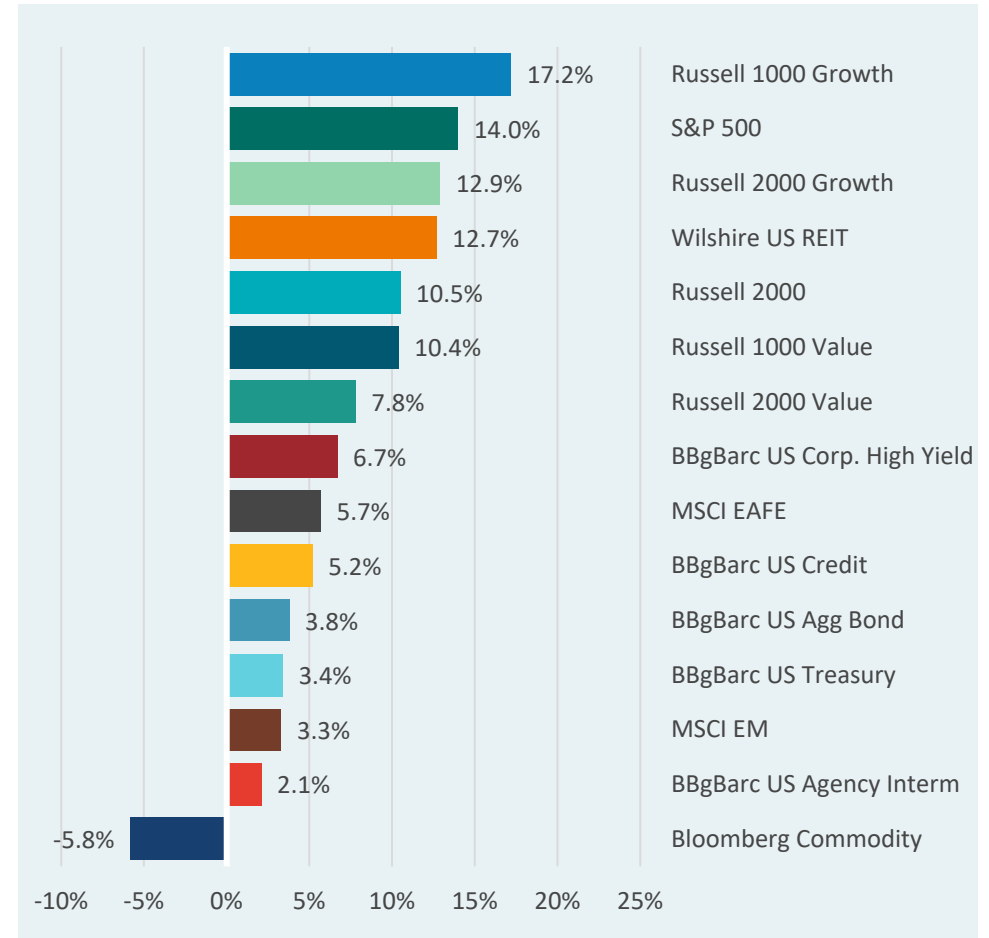
Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BBgBarc US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, BBgBarc Global Bond. NCREIF Property Index performance data as of 3/31/20.

# Major asset class returns

ONE YEAR ENDING JUNE



TEN YEARS ENDING JUNE



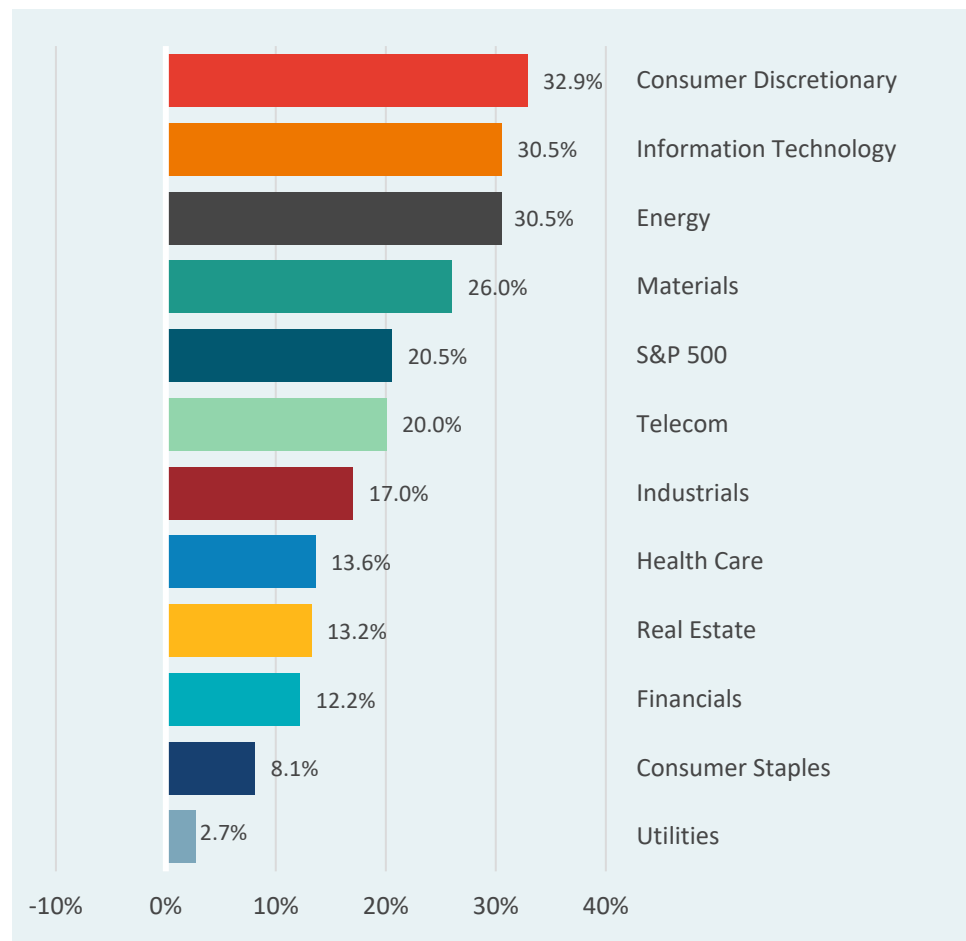
\*Only publicly traded asset performance is shown here. Performance of private assets is typically released with a 3- to 6-month delay.

Source: Morningstar, as of 6/30/20

Source: Morningstar, as of 6/30/20

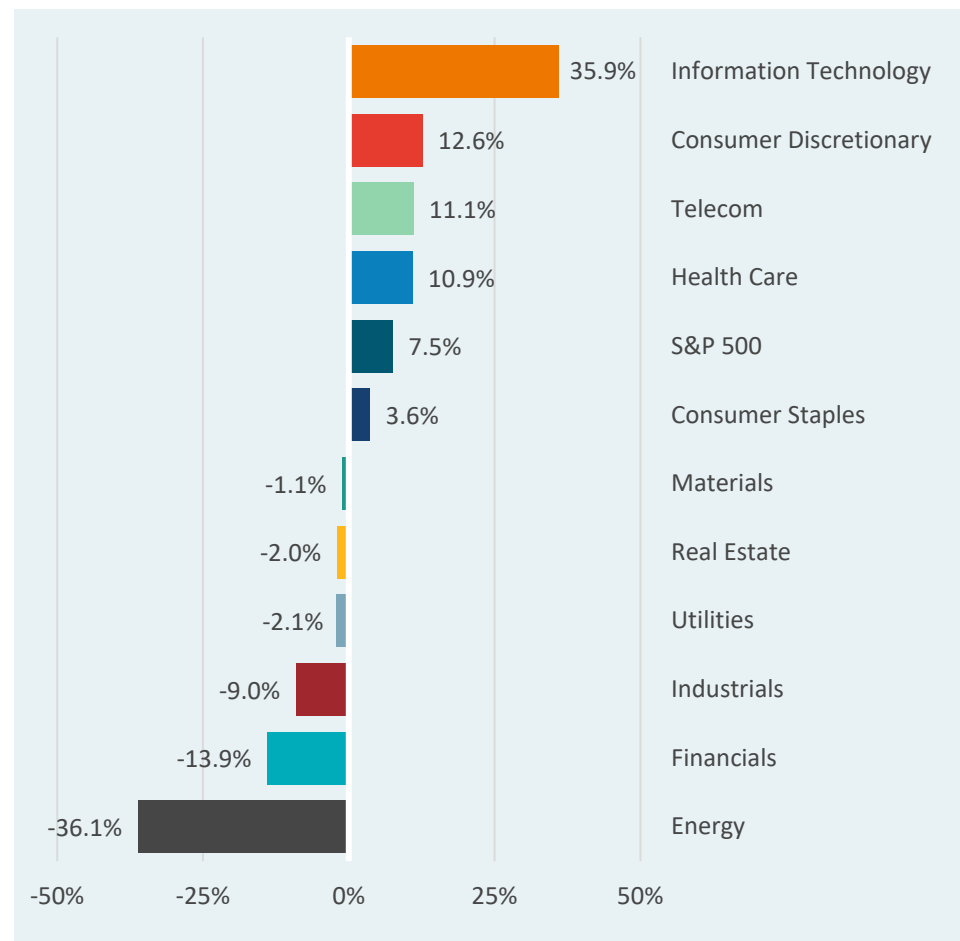
# S&P 500 sector returns

QTD



Source: Morningstar, as of 6/30/20

ONE YEAR ENDING JUNE

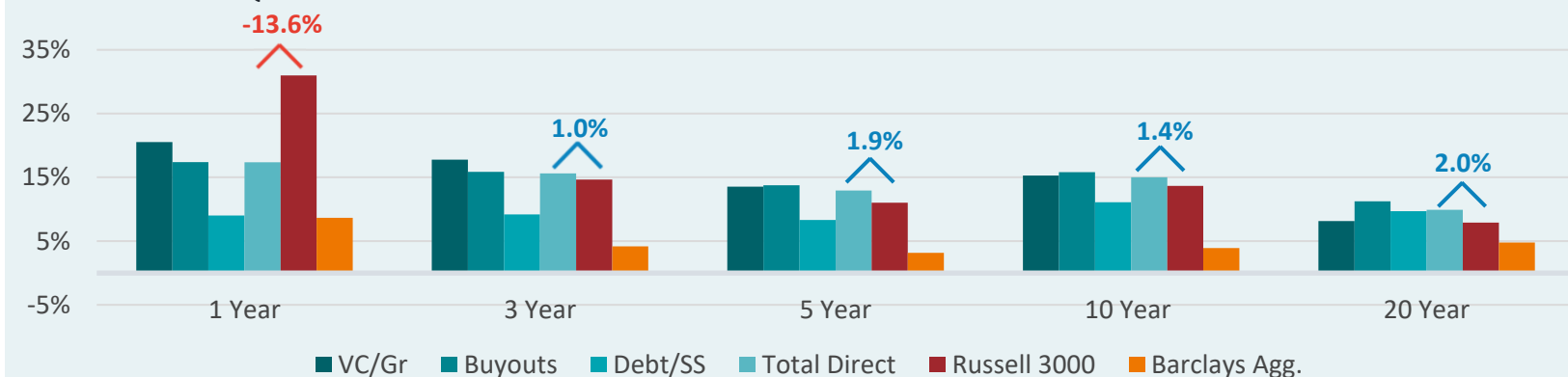


Source: Morningstar, as of 6/30/20

# Private equity vs. public performance

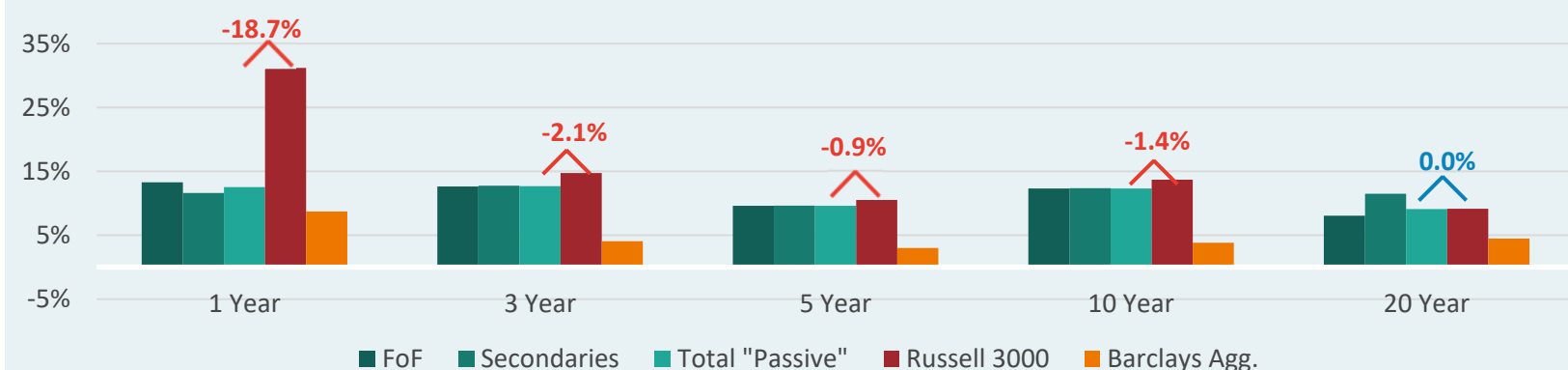
As of 12/31/2019

## DIRECT PRIVATE EQUITY FUND INVESTMENTS



Direct P.E Fund Investments outperformed comparable public equities across all time periods, except on a 1-year basis

## "PASSIVE" STRATEGIES



"Passive" strategies underperformed comparable public equities across all time periods, except on a 20-year basis

Sources: Thomson Reuters Cambridge Universe's PME Module: U.S. Private Equity Funds sub asset classes as of December 31, 2019. 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 equity vs. liquid real assets performance

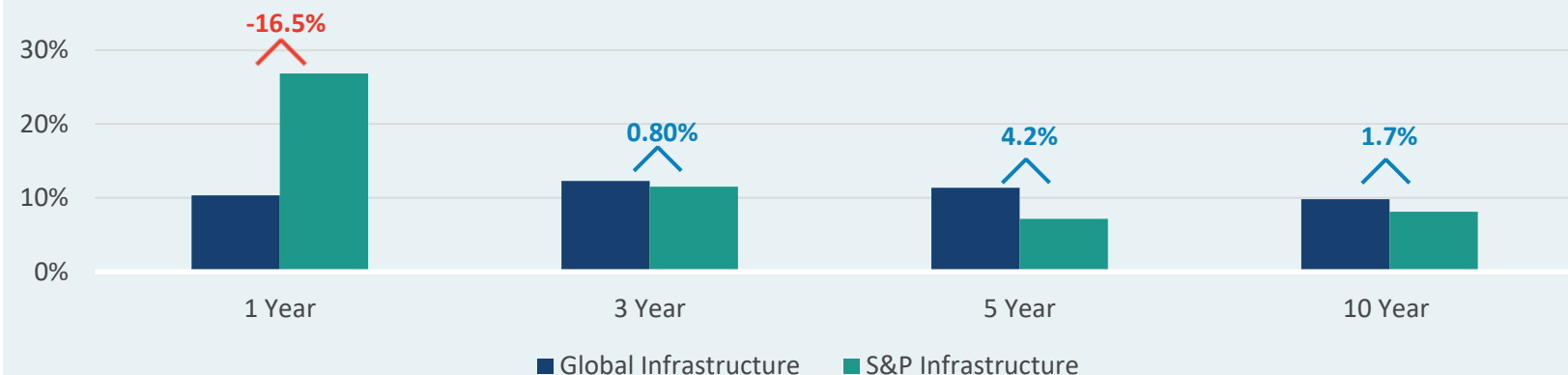
As of 12/31/2019

## GLOBAL NATURAL RESOURCES FUNDS



N.R. funds underperformed the MSCI World Natural Resources benchmark across all time periods, except on a 10 year basis

## GLOBAL INFRASTRUCTURE FUNDS



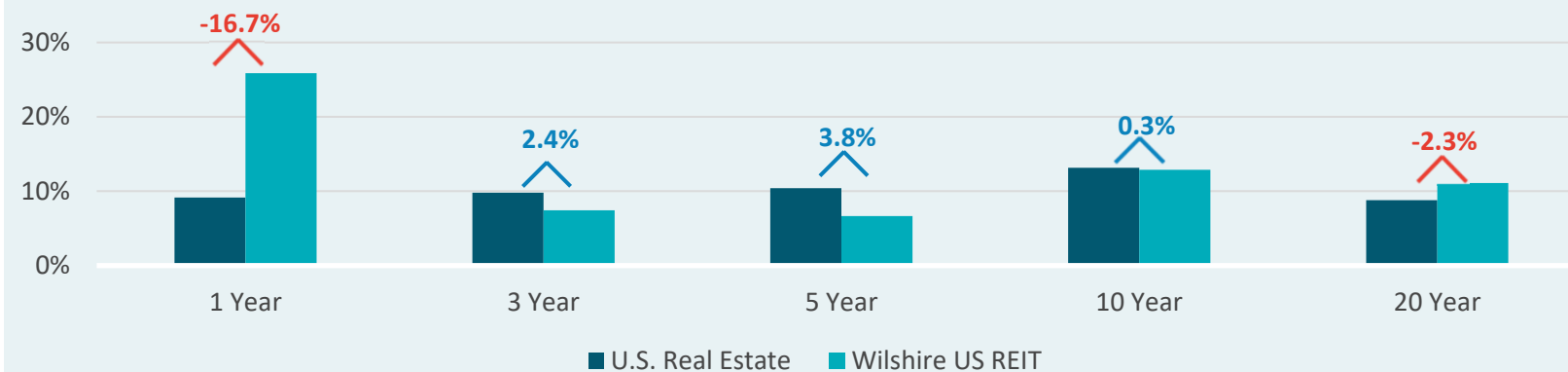
Infra. funds outperformed the S&P Infra. across all periods, except on a 1-year basis

Sources: Thomson Reuters CJA 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, 2019. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real assets universes.

# Private vs. liquid & core real estate performance

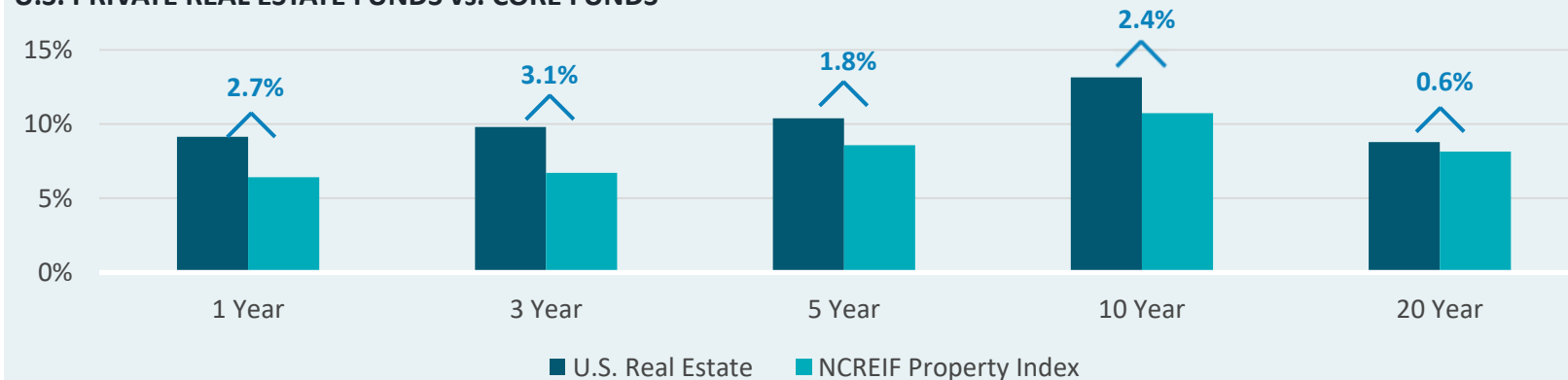
As of 12/31/2019

**U.S. PRIVATE REAL ESTATE FUNDS vs. LIQUID UNIVERSE**



U.S. Private R.E. funds underperformed the Wilshire U.S. REIT Index on a 1- and 20-year basis, but not over 3-, 5-, and 10-years basis.

**U.S. PRIVATE REAL ESTATE FUNDS vs. CORE FUNDS**



U.S. Private R.E. Funds outperformed the NCREIF Property Index over all time periods

Sources: Thomson Reuters C|A PME: U.S. Real Estate universes as of December 31, 2019. 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
<b>Core Index</b>							
S&P 500	2.0	20.5	(3.1)	7.5	10.7	10.7	14.0
S&P 500 Equal Weighted	1.6	21.7	(10.8)	(3.2)	5.4	7.1	12.6
DJ Industrial Average	1.8	18.5	(8.4)	(0.5)	9.1	10.6	13.0
Russell Top 200	2.4	20.9	(0.5)	11.2	12.5	11.9	14.6
Russell 1000	2.2	21.8	(2.8)	7.5	10.6	10.5	14.0
Russell 2000	3.5	25.4	(13.0)	(6.6)	2.0	4.3	10.5
Russell 3000	2.3	22.0	(3.5)	6.5	10.0	10.0	13.7
Russell Mid Cap	1.8	24.6	(9.1)	(2.2)	5.8	6.8	12.3
<b>Style Index</b>							
Russell 1000 Growth	4.4	27.8	9.8	23.3	19.0	15.9	17.2
Russell 1000 Value	(0.7)	14.3	(16.3)	(8.8)	1.8	4.6	10.4
Russell 2000 Growth	3.8	30.6	(3.1)	3.5	7.9	6.9	12.9
Russell 2000 Value	2.9	18.9	(23.5)	(17.5)	(4.3)	1.3	7.8

## INTERNATIONAL EQUITY

<b>Broad Index</b>							
MSCI ACWI	3.2	19.2	(6.3)	2.1	6.1	6.5	9.2
MSCI ACWI ex US	4.5	16.1	(11.0)	(4.8)	1.1	2.3	5.0
MSCI EAFE	3.4	14.9	(11.3)	(5.1)	0.8	2.1	5.7
MSCI EM	7.4	18.1	(9.8)	(3.4)	1.9	2.9	3.3
MSCI EAFE Small Cap	1.4	19.9	(13.1)	(3.5)	0.5	3.8	8.0
<b>Style Index</b>							
MSCI EAFE Growth	3.2	16.9	(3.5)	4.2	5.9	5.5	7.8
MSCI EAFE Value	3.6	12.4	(19.3)	(14.5)	(4.4)	(1.6)	3.5
<b>Regional Index</b>							
MSCI UK	1.4	7.8	(23.3)	(17.7)	(3.9)	(2.5)	3.9
MSCI Japan	(0.0)	11.6	(7.1)	3.1	3.0	3.4	6.1
MSCI Euro	6.2	19.6	(12.7)	(7.7)	(0.9)	1.6	5.0
MSCI EM Asia	8.2	17.8	(3.5)	4.9	4.1	4.8	5.8
MSCI EM Latin American	5.3	19.1	(35.2)	(32.5)	(7.2)	(3.2)	(3.8)

## FIXED INCOME

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
<b>Broad Index</b>							
BBgBarc US TIPS	1.1	4.2	6.0	8.3	5.0	3.7	3.5
BBgBarc US Treasury Bills	0.0	0.0	0.7	1.7	1.8	1.2	0.7
BBgBarc US Agg Bond	0.6	2.9	6.1	8.7	5.3	4.3	3.8
<b>Duration</b>							
BBgBarc US Treasury 1-3 Yr	0.0	0.2	3.0	4.1	2.7	1.9	1.3
BBgBarc US Treasury Long	0.1	0.2	21.2	25.4	12.0	9.3	7.7
BBgBarc US Treasury	0.1	0.5	8.7	10.4	5.6	4.1	3.4
<b>Issuer</b>							
BBgBarc US MBS	(0.1)	0.7	3.5	5.7	4.0	3.2	3.1
BBgBarc US Corp. High Yield	1.0	10.2	(3.8)	0.0	3.3	4.8	6.7
BBgBarc US Agency Interm	0.1	0.8	3.7	5.1	3.3	2.5	2.1
BBgBarc US Credit	1.8	8.2	4.8	9.1	6.1	5.5	5.2

## OTHER

<b>Index</b>							
Bloomberg Commodity	2.3	5.1	(19.4)	(17.4)	(6.1)	(7.7)	(5.8)
Wilshire US REIT	2.3	10.6	(17.8)	(12.3)	0.2	5.7	12.7
CS Leveraged Loans	1.3	9.7	(4.8)	(2.3)	2.1	4.6	5.0
Alerian MLP	(8.2)	47.2	(38.3)	(44.1)	(18.3)	(13.6)	(1.4)
<b>Regional Index</b>							
JPM EMBI Global Div	3.5	12.3	(2.8)	0.5	3.6	5.3	6.0
JPM GBI-EM Global Div	0.5	9.8	(6.9)	(2.8)	1.1	2.3	1.6
<b>Hedge Funds</b>							
HFRI Composite	1.9	9.0	(3.5)	(0.6)	2.1	2.3	3.7
HFRI FOF Composite	1.3	7.2	(2.3)	(0.2)	2.0	1.4	2.7
<b>Currency (Spot)</b>							
Euro	1.0	2.4	0.1	(1.4)	(0.5)	0.2	(0.9)
Pound	(0.1)	(0.4)	(6.7)	(2.9)	(1.7)	(4.7)	(1.9)
Yen	(0.1)	0.1	0.7	(0.1)	1.4	2.6	(2.0)

Source: Morningstar, HFR, as of 6/30/20

# Definitions

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

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

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

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

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# Glossary

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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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 25, 2020

Agenda Item 6.3

**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 bond managers. The annual reviews for SamCERA's global and core bond managers will be reviewed in the next board meeting.

**Background**

On August 6<sup>th</sup>, SamCERA staff and consultant held annual review meetings through teleconference for our two opportunistic credit bond managers, PIMCO and Beach Point.

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 August 6<sup>th</sup>, we reviewed two investment strategies with PIMCO. First, 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.

Next, 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.

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.

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)

*Date of meeting: 8/6/2020*

*Location: Zoom call*

Manager Representative(s)

Brian Leach (Senior Strategist)  
Sasha Talcott (Account Management)  
Kevin Gray (Account Management)

Account Assets

\$125 million (6/30/20)

Verus Representative(s)

Margaret Jadallah

Client Representative(s)

Mike Coultrip (CIO), Doris Ng (Analyst)

## 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 6/30/20 were \$1.9 trillion, and in/outflows at the firm level have been net positive since SamCERA's last review. As of June 30, 2020, Diversified Income strategy assets were approximately \$32 billion which is large enough to be relevant but small enough for the team to be relatively nimble. DI fund assets were \$4.4 billion. In March of 2020, PIMCO and its parent Allianz agreed to transition Allianz Real Estate (ARE) to PIMCO. ARE is a global commercial real estate business with Allianz with franchises in Europe, US and Asia. It is anticipated that the transition will take place over the next year and add approximately \$100 billion to firm assets. There have been some senior retirements at PIMCO since the last SamCERA review but none from the Diversified Income portfolio management team.

### 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 July 31, 2020, SamCERA's DI portfolio outperformed its custom benchmark since inception (4.3% net vs. 4.1% 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. Investment grade credit has been additive to returns, whereas non-agency mortgages have detracted from performance.

Positioning for the DI Fund has changed incrementally since the global pandemic but remains on the more defensive side. The team added to investment grade credit over the last few months with an emphasis on non-cyclicals. Financials remain a theme in the portfolio because they are trading at BBB spreads but have higher quality balance sheets and increased reserves. The portfolio holds selective emerging markets that the team believes offers good risk-adjusted relative value as well as selective non-energy names in high yield. At this time, the portfolio is neutral from a duration standpoint to its custom benchmark and is emphasizing lower beta markets.

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

August 25, 2020

Agenda Item 6.4

**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, 2020.

**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 thirteen years since inception, the securities lending program has earned \$7.0 million for SamCERA. During the fiscal year ended June 30, 2020, the program earned \$35,079. This is a 47% decrease from last fiscal year's earnings of \$65,993. 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, 2020 was 1.1%, which was a slight decrease from 1.4% on June 30, 2019. The year over year decrease is mainly due to the termination of an investment manager that held securities that were frequently utilized.

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

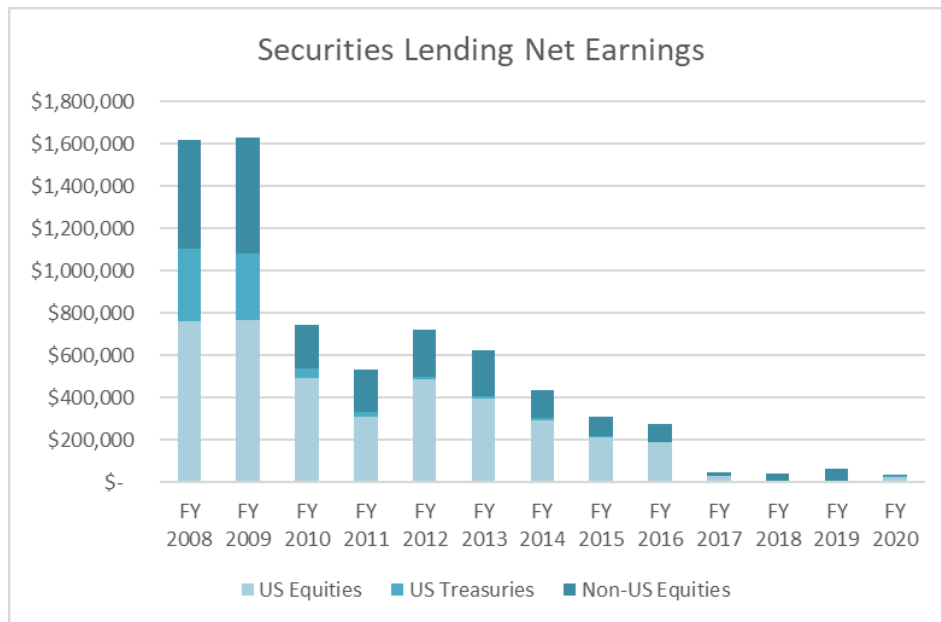
**Attachment**

Securities Lending Report for Fiscal Year Ended June 30, 2020

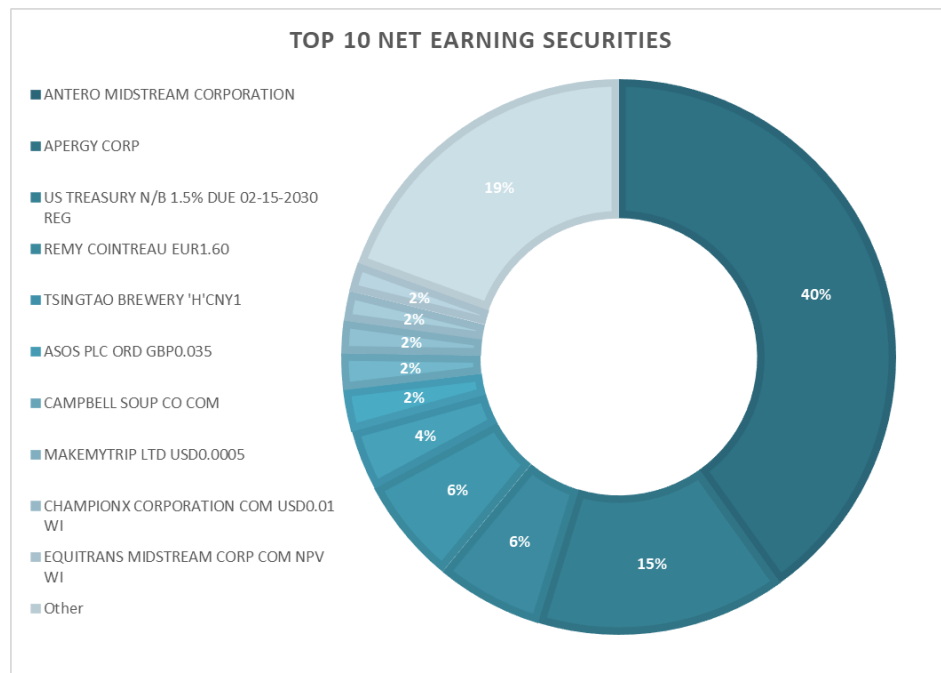
## SamCERA Securities Lending Report as of June 30, 2020

### Earnings

SamCERA’s securities lending program earned \$35,079 for the fiscal year ending June 30, 2020. This is a 46.8% decrease over last year’s fiscal year earnings of \$65,993. As of June 30, 2020, the program has earned \$7.0 million since its inception on July 1, 2007.



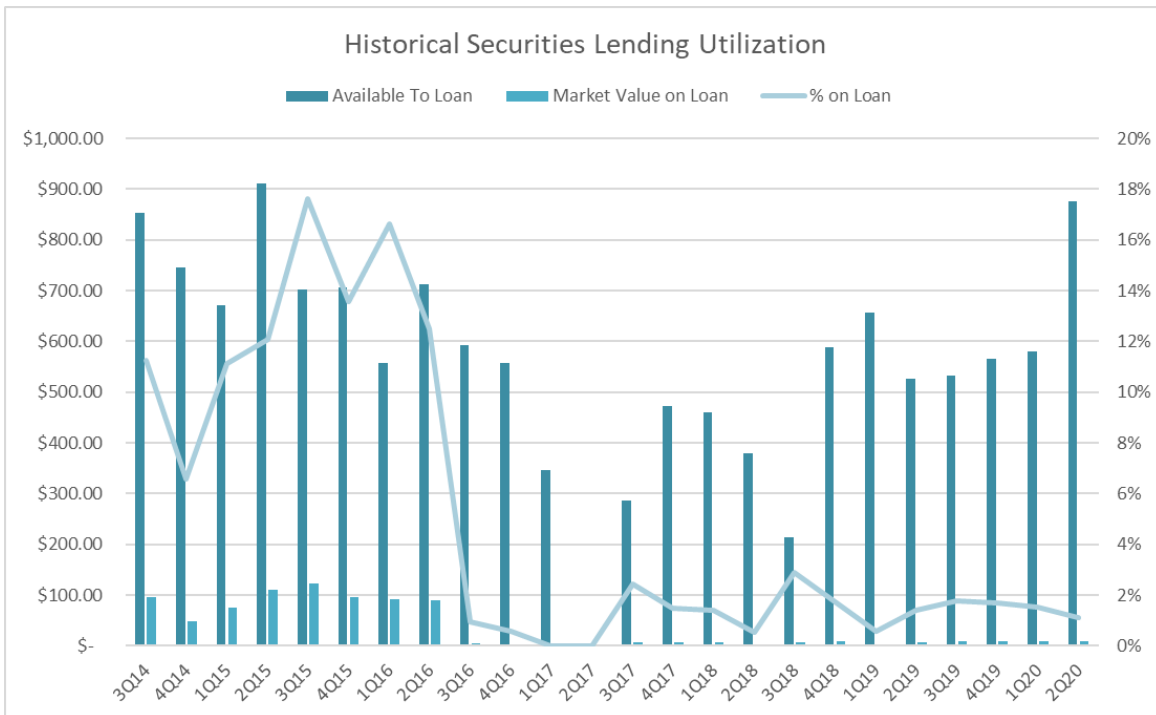
Fiscal year earnings were mainly attributable to a few specific securities, two US equities in particular.



### Utilization

Utilization (securities on-loan amount divided by lendable assets) has ranged from 0% to 20% during the five years that SamCERA has used Northern Trust as its securities lending provider. For fiscal year ended June 30, 2020, securities lending utilization was 1.1%, which was a slight decrease from 1.4% the previous year.

The decrease in year over year utilization is mainly attributable to the termination of an investment manager (Cushing Asset Management) that held securities that were frequently on loan.



Although there was a manager termination during the fiscal year, SamCERA also added two new separate accounts eligible for securities lending (NISA and DoubleLine). The addition of these two new accounts in the second half of the fiscal year is reflected in the chart above as an increase in the market value of securities available to loan. SamCERA had six separate accounts that had securities on loan 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 43 days as of June 30, 2020. Cash open collateral is invested in a short-term investment pool, the NILAP fund, which had an interest sensitivity of 38 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 25, 2020

Agenda Item 6.5

**TO:** Board of Retirement

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

**SUBJECT:** Report on SamCERA's Risk Dashboard

**Recommendation**

Review the SamCERA risk dashboard and provide direction as needed.

**Background**

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

Verus last presented the Risk Dashboard in February 2020 with data as of calendar year-end 2019. The Risk Dashboard presented today (and annually going forward) will be with data as of June fiscal year-end.

**Discussion**

Marc Gesell of Verus will present the SamCERA Risk Dashboard with data as of June 30, 2020.

**Attachment**

SamCERA Risk Dashboard

# San Mateo County Employees' Retirement Association

## Portfolio Risk Report

June 30, 2020

### 1 Portfolio risk



Portfolio: 13.9%



Policy: 14.7%



Average Public Pension: 15.0%



Global 60/40: 13.8%

### 2 Portfolio equity beta



Portfolio: 0.62



Policy: 0.66



Average Public Pension: 0.67



Global 60/40: 0.62

### 3 Portfolio interest rate risk - Duration



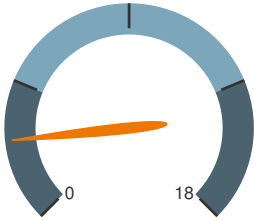
Portfolio: 1.3



Policy: 1.3

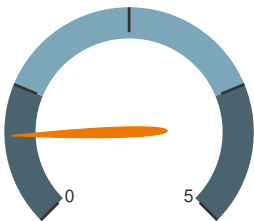


Average Public Pension: 1.3

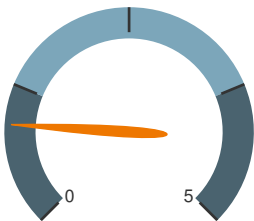


Global 60/40: 2.6

### 4 Portfolio credit risk - Spread duration



Portfolio: 0.8



Policy: 0.9



Average Public Pension: 0.7



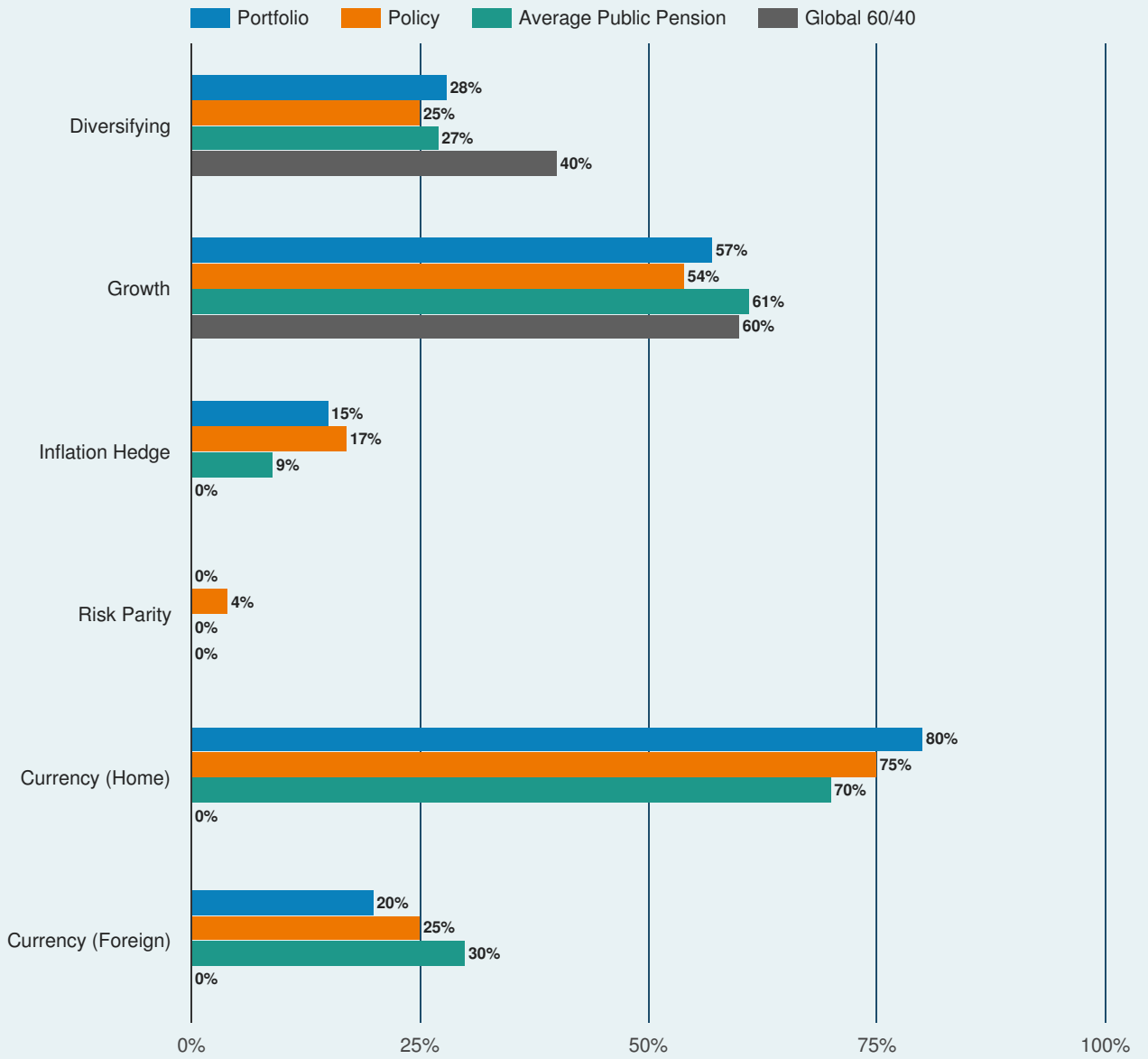
Global 60/40: 1.0

## 5 Exposure allocation by asset class

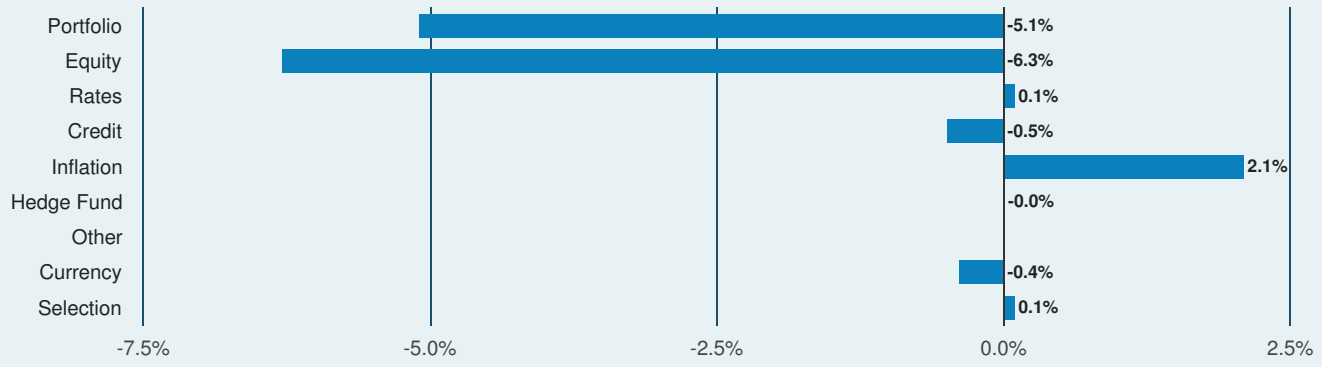
		Portfolio	Policy	Average Public Pension	
Diversifying	Liquidity	1.5%	1.0%	2.9%	
	Absolute Return	5.6%	6.0%	7.0%	
	Core Fixed	21.1%	18.0%	16.7%	40.0%
<b>Diversifying Total</b>		<b>28.2%</b>	<b>25.0%</b>	<b>26.6%</b>	<b>40.0%</b>
Growth	Developed International	0.0%	16.0%		
	Emerging Markets	0.0%	2.0%	4.7%	
	Small Cap Equity	1.6%	2.0%		
	Private Credit	2.3%			
	Private Equity	6.0%	6.0%	10.1%	
	Opportunistic Credit	7.8%	8.0%	2.2%	
	International	17.8%		20.0%	60.0%
	Large Cap Equity	21.1%	20.0%	24.3%	
<b>Growth Total</b>		<b>56.6%</b>	<b>54.0%</b>	<b>61.3%</b>	<b>60.0%</b>
Inflation Hedge	Private Real Assets	2.0%	2.0%	1.0%	
	Public Real Assets	4.0%	6.0%		
	Real Estate	9.2%	9.0%	8.4%	
<b>Inflation Hedge Total</b>		<b>15.2%</b>	<b>17.0%</b>	<b>9.4%</b>	
Risk Parity	Risk Parity	0.0%	4.0%		
<b>Risk Parity Total</b>		<b>0.0%</b>	<b>4.0%</b>		
<b>Total Portfolio</b>		<b>100%</b>	<b>100%</b>	<b>100%</b>	



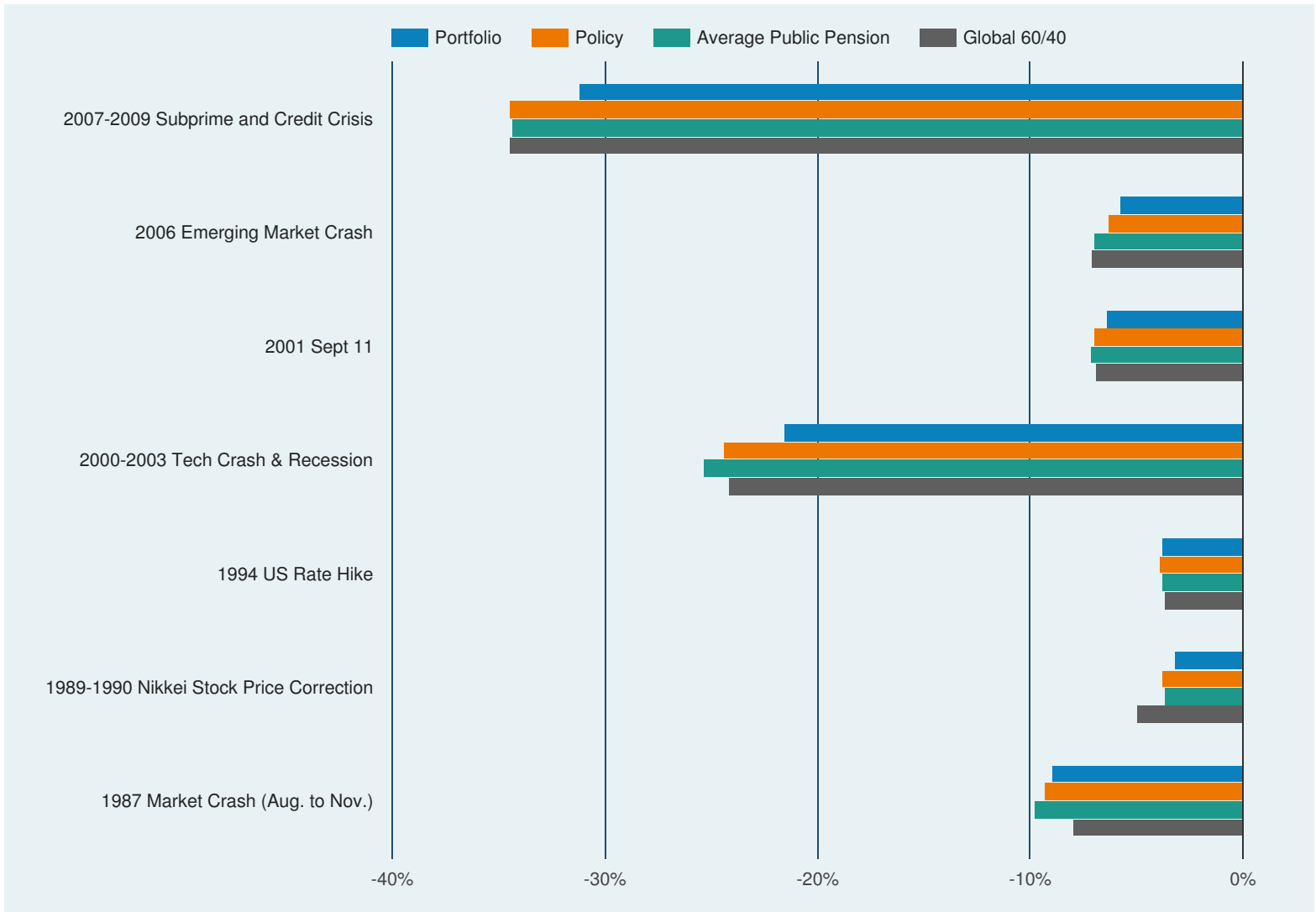
## 6 Exposure allocation



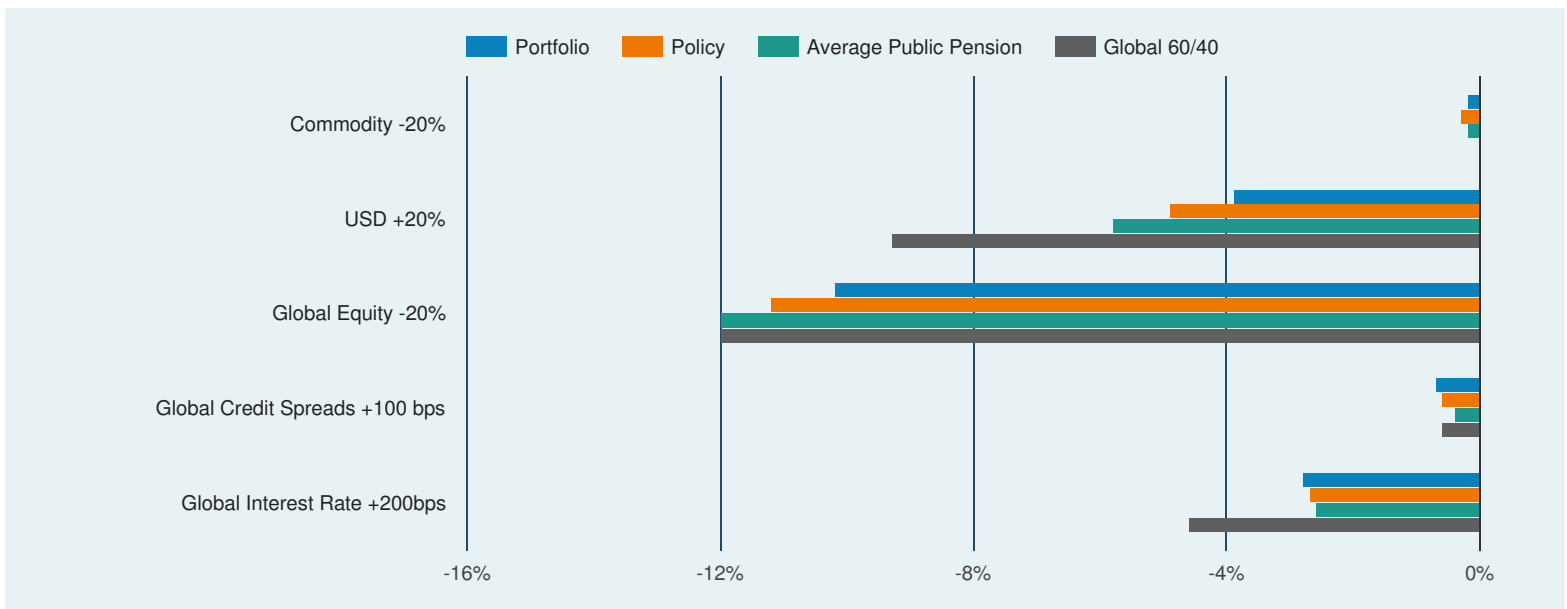
## 9 Risk factor weight relative to target



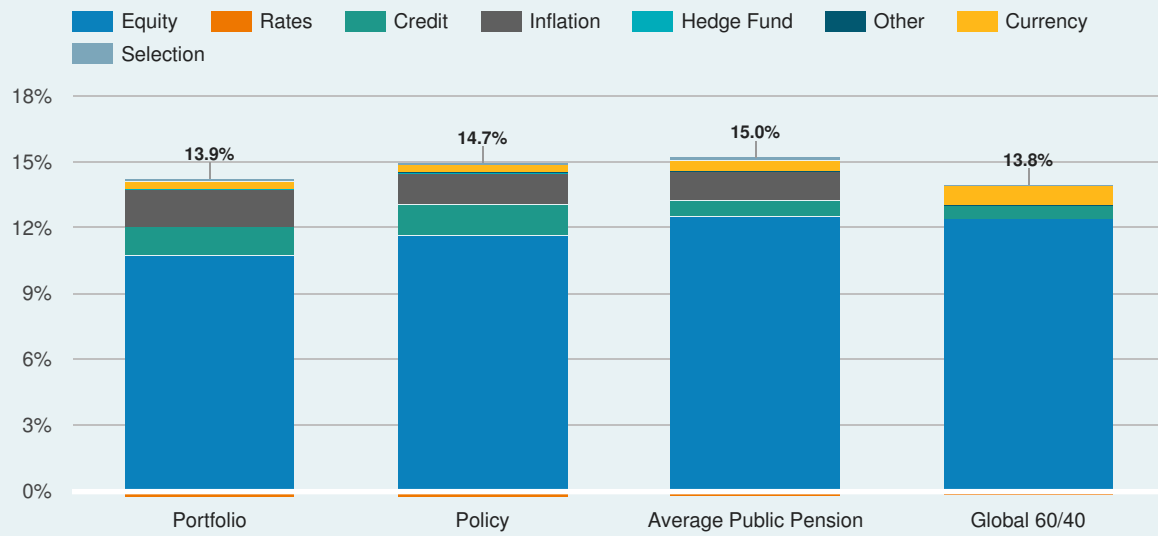
## 10 Tail risk - Scenario analysis



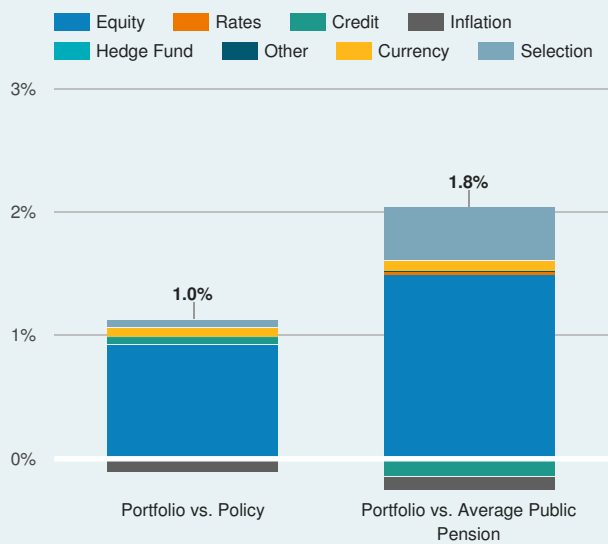
## 11 Tail risk - Stress tests



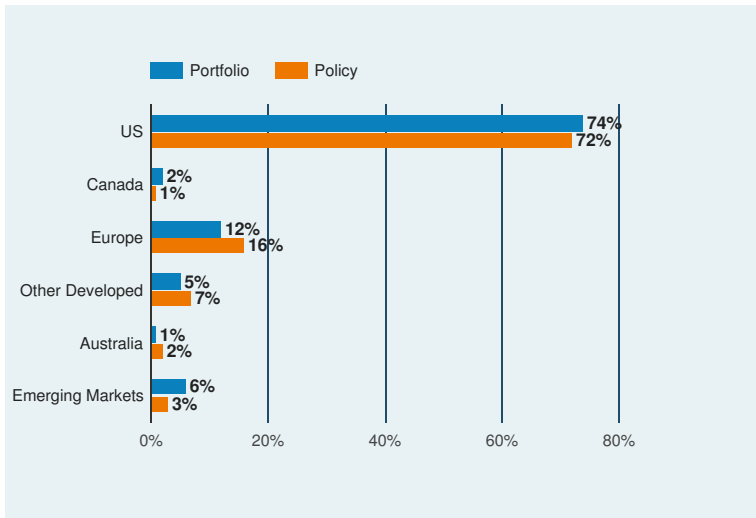
## 12 Risk contribution by risk factor



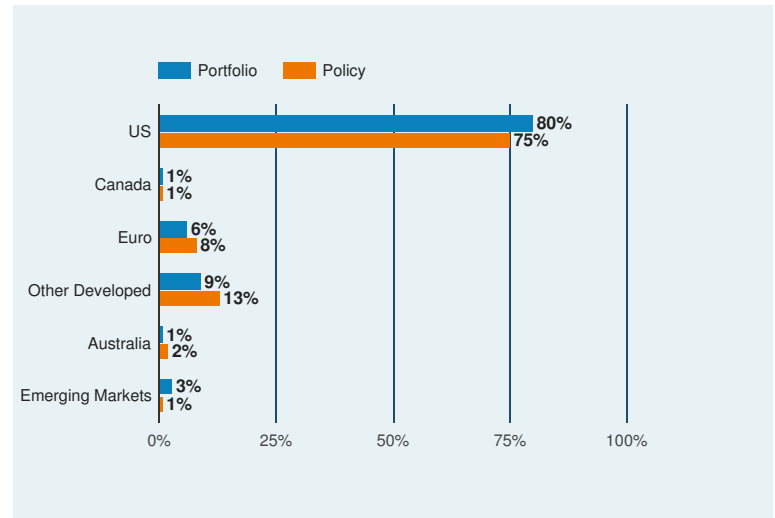
## 13 Active risk contribution by risk factor



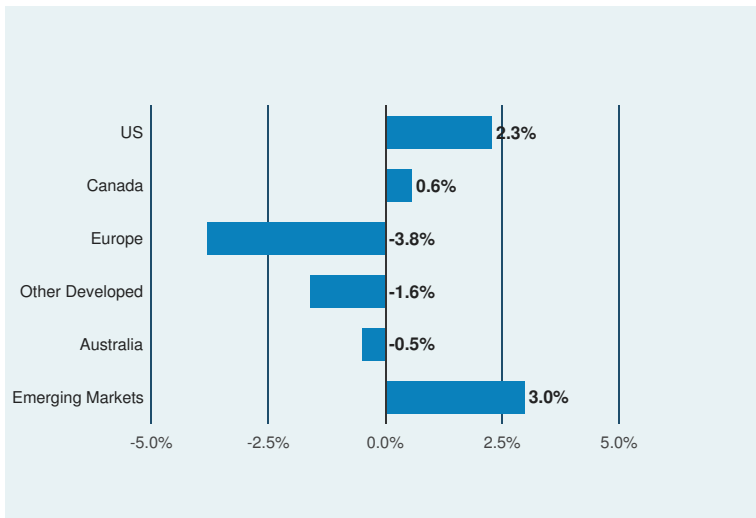
## 14 Geographic exposure



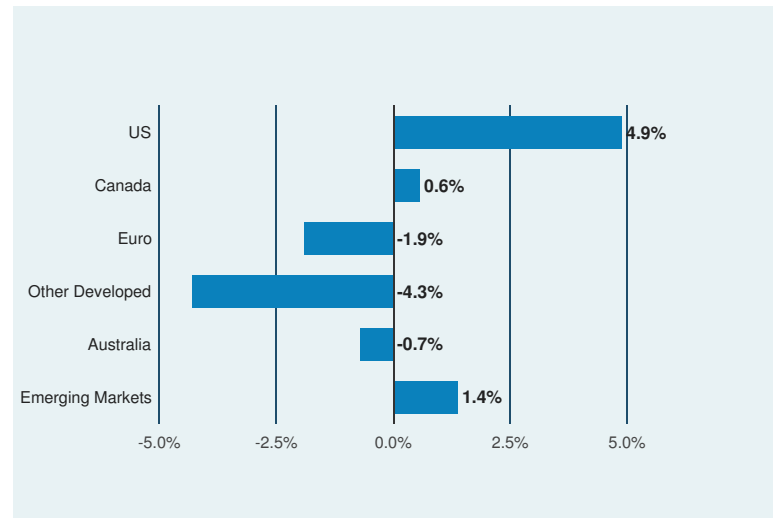
## 15 Currency exposure



## 16 Net geographic exposure



## 17 Net currency exposure



## 18 Market value summary per BarraOne

Bucket	Asset Class	Account Name	Account	Market Value (millions)
Cash	Cash	General Account	SAMCERAO49	25.6
		Treasury & LAIF	SAMCERAO50	23.9
		Cash Overlay	SAMCERAO85	18.4
		Transition Account	SAMCERAO78	0.0
Cash Total				68.0
Credit	Global Credit	PIMCO Diversified	SAMCERAO64	125.2
		Franklin Templeton	SAMCERA_FRANKTEMP	58.6
		Angelo Gordon Credit Solutions	SAMCERAO75	11.0
	HY Bonds	AG CSF Annex Dislocation Fund	SAMCERAO79	13.3
	Private Credit	PIMCO Private Income	SAMCERAO72	37.5
		TCP Direct Lending VIII	SAMCERAO57	33.3
		White Oak Yield	SAMCERAO62	31.9
		Blackrock DL Feeder IX-U	SAMCERAO74	3.5
	US Credit	Brigade Capital	SAMCERAO29	84.3
		Beach Point Select	SAMCERAO28	63.0
		Angelo Gordon Opportunistic	SAMCERAO26	3.3
		Angelo Gordon STAR	SAMCERAO27	2.2
	Credit Total			
Equity	Global Equity	Baillie Gifford	SAMCERAO14	291.0
		Mondrian	SAMCERAO17	246.8
	International Equity	BlackRock MSCI ACWI EX-US IMI	SAMCERAO91	282.3
	Private Equity	Private Equity	SAMCERA_PE	277.8
	US Equity	BlackRock Russell 1000	SAMCERAO59	508.4
		PanAgora Defuseq	SAMCERAO69	158.2
		Acadian US MGD V	SAMCERAO68	152.8
		DE Shaw	SAMCERAO04	151.7

		QMA US Small Cap	SAMCERA055	72.5
Equity Total				2,141.4
Hedge Fund	Fund of Funds	Aberdeen Standard GARS	SAMCERA037	75.5
	Hedge Fund	Graham Quant Macro	SAMCERA076	72.5
		PIMCO MAARS Fund LP	SAMCERA080	70.3
		AQR DELTA XN	SAMCERA036	40.9
Hedge Fund Total				259.1
Inflation	Commodities	SSgA Custom Real Asset	SAMCERA058	186.6
	Real Estate	Invesco	SAMCERA044	263.3
		Private Real Asset	SAMCERA_RA	90.4
		PGIM RE US Debt Fund	SAMCERA063	85.1
		Harrison Street Core Property	SAMCERA073	50.0
		Invesco US Val IV	SAMCERA045	14.6
		Invesco US Val V	SAMCERA071	12.8
Inflation Total				702.7
Rates	Core Bonds	NISA Core Bond	SAMCERA090	202.8
	US Bonds	FIAM Bond	SAMCERA021	254.2
		DoubleLine	SAMCERA077	207.1
		Western TRU	SAMCERA022	167.6
		BlackRock Intermediate Govt	SAMCERA060	140.2
Rates Total				971.9
<b>Total Portfolio (millions)</b>				<b>4,609.9</b>

## Chart Definitions

### 1 Portfolio risk

Total risk comparison of Portfolio, Policy, and Peer Group. Policy is composed of: 2.0% MSCI Emerging Markets, 7.0% Bloomberg Barclays U.S. Corporate High Yield, 14.0% Bloomberg Barclays Aggregate Index, 2.0% Custom Real Asset Index, 6.0% Custom Real Asset Index, 8.0% NCREIF ODCE, 17.0% MSCI EAFE, 6.0% HFRI FOF Diversified Index, 7.0% Private Equity, 3.2% Bloomberg Barclays Global Aggregate, 4.8% MSCI World, 18.0% Russell 1000 Index, 2.0% Bloomberg Barclays U.S. Treasury: U.S. TIPS, and 3.0% Russell 2000 Index. Average Public Pension consists of: 26.0% S&P 500 Index, 4.0% MSCI ACWI IMI, 16.6% MSCI ACWI ex USA IMI, 2.6% MSCI EAFE, 3.5% MSCI EM, 1.5% Bloomberg Barclays Global Aggregate, 2.0% Bloomberg Barclays Global Treasury ex US, 17.1% Bloomberg Barclays U.S. Aggregate, 1.3% Bloomberg Barclays Emerging Markets, 7.6% HFRI FOF Index, 8.3% Private Equity, 2.0% Bloomberg Commodity Index, 6.2% NCREIF Property Index, and 1.3% Barclays U.S. Treasury Bills 1-3 Months. Average Public Pension is defined as the average allocation of > \$1b InvestorForce Public defined benefit plans. 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 Relative risk vs target by bucket

Comparative riskiness of Portfolio vs. Target on total portfolio and risk bucket levels: For example, equity bucket relative risk compares the riskiness of the Portfolio equity bucket vs the Target equity bucket.

### 8 Relative risk vs target by risk factor

Disregarding any specific asset class mandates and having a look through on the portfolio decomposing risk in respective risk factor contributions, this measure looks at the relative risk contributions specific factors of the portfolio vs. the reference benchmark. Formula: (factor risk contribution within portfolio / factor risk contribution within reference benchmark) - 1. "Other" includes Country factors and World factors.

### 9 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.

### 10 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.

### 11 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.

### 12 Risk contribution by risk factor

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

### 13 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.

### 14 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.

### 15 Currency exposure

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

### 16 Net geographic exposure

Difference between portfolio and policy allocation among major geographic areas.

### 17 Net currency exposure

Difference between portfolio and policy allocation among major currencies.

### 18 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.



- 
- 18 **Interest rate bucket**  
Coupon yield (nominal yield) of a fixed income security is a fixed percentage of the par value that does not vary with the market price of the security. Yield to Maturity (YTM) is the interest rate of return earned by an investor who buys a fixed-interest security today at the market price and holds it until maturity. Ratings indicate credit quality of a security and the issuer's ability to make payments of interest and principal.
- 
- 19 **Rates bucket - Geographic exposure**  
Geographic exposures specific to the Rates bucket 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.
- 
- 20 **Rates bucket - Currency exposure**  
Currency allocation of interest rate instruments.
- 
- 21 **Rates bucket - Security type**  
Allocation of interest rate instruments among different security types.
- 
- 22 **Credit bucket**  
Various characteristics of credit instruments.
- 
- 23 **Credit bucket - Geographic exposure**  
Geographic exposures specific to the Credit bucket 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.
- 
- 24 **Credit bucket - Currency exposure**  
Currency allocation of credit instruments.
- 
- 25 **Credit bucket - Security type**  
Allocation of credit instruments among different security types.
- 
- 26 **Inflation bucket**  
Composition of inflation hedging instruments in portfolio and benchmark. Notional duration of real rates instruments is also included.
- 
- 27 **Inflation bucket - Geographic exposure**  
Geographic exposures specific to the Inflation bucket 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.
- 
- 28 **Inflation bucket - Currency exposure**  
Currency allocation of inflation instruments.
- 
- 29 **Inflation bucket - Security type**  
Allocation of inflation instruments among different security types.
- 
- 30 **Equity bucket**  
P/E ratio is a valuation ratio of a company's current share price compared to its per-share earnings. Beta measures sensitivity to Global Equities.
- 
- 31 **Equity bucket - Geographic exposure**  
Geographic exposures specific to the Equity bucket 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.
- 
- 32 **Equity bucket - Currency exposure**  
Currency allocation of equity assets.
- 
- 33 **Equity bucket - Security type**  
Allocation of equity assets among different security types.
- 

## 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 25, 2020

Agenda Item 6.7

**TO:** Board of Retirement

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

**SUBJECT:** Report on Absolute Return Search

**Recommendation**

Provide direction to staff and consultant as appropriate regarding absolute return search.

**Background**

The primary role of the absolute return portfolio is to provide an attractive return stream to the overall SamCERA portfolio that is not overly dependent on equity markets. The current policy allocation to absolute return is 6%.

**Discussion**

Margaret Jadallah from Verus will provide an update on the absolute return search.

**Attachment**

Verus Memorandum on Absolute Return Update

# Memorandum

**To:** SamCERA  
**From:** Verus  
**Date:** August 25, 2020  
**RE:** Absolute return manager search update

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## **Executive Summary**

*SamCERA allocates 6% of plan assets to absolute return strategies as part of its strategic asset allocation. The goal of SamCERA's absolute return investments are to diversify the portfolio by providing an attractive risk-adjusted return stream that is largely uncorrelated to public markets beta, in particular equity beta. At the April 2020 Board meeting, SamCERA redeemed its investment from AQR DELTA's hedge fund replication strategy at which time, SamCERA staff and Verus started looking for replacement options that would be adept at downside protection and while providing an attractive risk-adjusted return with low correlation. This memo provides an update on remaining managers under consideration for SamCERA's absolute return portfolio. We anticipate completing our due diligence in time for SamCERA's September Board meeting.*

## **Absolute Return Structure and Manager Search Process**

SamCERA's current absolute return structure has equal weightings to risk premia strategies and diversified, alpha-driven approaches that have low correlation to public markets (one multi-strategy, one quantitative macro long/short). In January 2020, SamCERA added two manager positions for four in total to provide additional manager diversification with the goal of mitigating significant manager specific risk. Redemption of AQR DELTA, due to significant drawdowns, reduced risk premia to one manager. The emphasis of our ongoing absolute return search has been to find one or more managers for the SamCERA portfolio that have exhibited good downside protection, can provide competitive risk-adjusted returns, and ideally are flexible enough to adapt risk to changing market conditions. This last criterion can exist in alternative risk premia managers that have incorporated "faster" signals and in risk-focused global macro managers who raise and lower risk dynamically as part of their investment process.

This manager search started in May 2020 with the identification of a list of compelling absolute return managers that met the criteria described above. Verus, with the assistance of its absolute return research team, and SamCERA staff identified 10 managers in total whose strategies are designed to provide the desired attributes. These firms were also deemed to be institutional quality based on prior due diligence. We sent a detailed RFI to these firms and assessed the strengths and weaknesses of the strategies based on their responses. Verus and SamCERA reduced the list to four short-listed strategies at that point and held a series of calls reviewing their approaches in depth as well as the organization and, importantly, risk controls imbedded in the investment process. At this point, we are close to finalizing our due diligence and are most likely considering the addition of two managers who are complementary to each other as well as to SamCERA's existing absolute return managers for a total allocation of approximately \$75 million.


We will come back with a recommendation in September after finalizing our due diligence.

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

August 25, 2020

Agenda Item 7.1

**TO:** Board of Retirement

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

**SUBJECT:** Approval to Change the Date of the September 22, 2020 Meeting

**Recommendation**

Approve a change to the date of the September 22, 2020 meeting to September 29, 2020.

**Background**

The Board's regular meetings are scheduled on the fourth Tuesday of each month at 10:00 a.m. The Board is authorized by Article III, Section 3.4 of the Board's Regulations to change its meeting times and dates.

**“Regular Meetings:** Regular meetings of the Board shall be held on the Fourth Tuesday of each month. Meetings shall begin at 10:00 a.m. Meetings shall be held in SamCERA's offices. The Board may cancel and or approve a change in the date, time and/or location of meetings within the County, if the proposed change is included on the agenda of a regular meeting.”

**Discussion**

In October 2019, the Board approved the regular meeting schedule for 2020. That schedule provides that the Board would meet on September 22, 2020, the fourth Tuesday of the month. The Board's Actuary delivers the Annual Valuation in September and typically if there is a fifth Tuesday, the Board meeting is scheduled for that date to allow additional time for the Actuary to produce the report. This year the Valuation is being audited by an audit actuary. Both actuaries have indicated that having the additional week to discuss their findings and reports would be beneficial.


Staff recommends that Board formally change the date of the meeting so that staff can publish the meeting notice and reflect the new information on SamCERA's website.

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

August 25, 2020

Agenda Item 7.2

**TO:** Board of Retirement

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

**SUBJECT:** Designation of and Directions for Voting by SamCERA Delegate for the SACRS Board of Directors (BOD) Election

**Recommendation**

Designate and Direct the SamCERA Voting Delegate as to how to vote SamCERA's ballot for the SACRS BOD election.

**Background**

Due to the cancellation of the Spring 2020 SACRS Conference, the election for the SACRS Board of Directors was postponed and due to the uncertainty of whether the Fall 2020 SACRS Conference will be held, SACRS desires to conduct the election remotely. Since the election will not be held in person, submitting the Board's ballot will be an administrative task. Staff recommends that the CEO be designated as the delegate to transmit the Board's vote. Staff also recommends providing direction to staff on how to vote the Board's ballot for the SACRS BOD election.

**Discussion**

Ray MacCray, SACRS Nominating Committee Chair, sent the attached memo setting forth the SACRS Nominating Committee's recommended slate of officers for the 2020-21 fiscal year which is as follows:

President:	Vivian Gray, Los Angeles CERA
Vice President:	Roger Hilton, Orange CERS
Treasurer:	Harry E. Hagen, Santa Barbara CERS
Secretary:	Kathryn Cavness, Mendocino CERA
Regular Member:	David MacDonald, MD, Contra Costa CERA
Regular Member:	John Kelly, Sacramento CERS

**Attachments**

SACRS Nominating Committee Memo



March 24, 2020

To: SACRS Trustees & SACRS Administrators/CEO's  
 From: Ray McCray, SACRS Immediate Past President, Nominating Committee Chair  
 SACRS Nominating Committee  
 Re: SACRS Board of Director Elections 2020-2021 Elections – Final Ballot

---

SACRS BOD 2020-2021 election process began January 2020. Please provide the final ballot and voting instructions to your Board of Trustees and Voting Delegates.

DEADLINE	DESCRIPTION
March 1, 2020	Any regular member may submit nominations for the election of a Director to the Nominating Committee, provided the Nominating Committee receives those nominations no later than noon on March 1 of each calendar year regardless of whether March 1 is a Business Day. Each candidate may run for only one office. Write-in candidates for the final ballot, and nominations from the floor on the day of the election, shall not be accepted.
March 25, 2020	The Nominating Committee will report a final ballot to each regular member County Retirement System prior to March 25
November 10-13, 2020 (Exact date TBD)	Nomination Committee to conduct elections during the SACRS Business Meeting at the Fall Conference, November 10-13, 2020
November 10-13, 2020	Board of Directors take office for 1 year (until Spring 2021 Elections)

**Per SACRS Bylaws, Article VIII, Section 1. Board of Director and Section 2. Elections of Directors:**

**Section 1. Board of Directors. The Board shall consist of the officers of SACRS as described in Article VI, Section 1, the immediate Past President, and two (2) regular members**

**A. Immediate Past President.** *The immediate Past President, while he or she is a regular member of SACRS, shall also be a member of the Board. In the event the immediate Past President is unable to serve on the Board, the most recent Past President who qualifies shall serve as a member of the Board.*

**B. Two (2) Regular Members.** *Two (2) regular members shall also be members of the Board with full voting rights.*

**Section 2. Elections of Directors.** *Any regular member may submit nominations for the election of a Director to the Nominating Committee, provided the Nominating Committee receives those nominations no later than noon on March 1 of each calendar year regardless of whether March 1 is a Business Day. Each candidate may run for only one office. Write-in candidates for the final ballot, and nominations from the floor on the day of the election, shall not be accepted.*

*The Nominating Committee will report its suggested slate, along with a list of the names of all members who had been nominated, to each regular member County Retirement System prior to March 25. The Administrator of each regular member County Retirement System shall be responsible for communicating the Nominating Committee's suggested slate to each trustee and placing the election of SACRS Directors on his or her board agenda. The Administrator shall acknowledge the completion of these responsibilities with the Nominating Committee.*





*Director elections shall take place during the first regular meeting of each calendar year. The election shall be conducted by an open roll call vote, and shall conform to Article V, Sections 6 and 7 of these Bylaws.*

*Newly elected Directors shall assume their duties at the conclusion of the meeting at which they are elected, with the exception of the office of Treasurer. The incumbent Treasurer shall co-serve with the newly elected Treasurer through the completion of the current fiscal year.*

Due to the cancellation of the Spring Conference because of COVID-19 (Coronavirus) the elections will be held at the SACRS Fall Conference November 10-13, 2020 at the Renaissance Esmeralda Resort & Spa, Indian Wells. Elections will be held during the Annual Business meeting, date TBD, November 10-13, 2020.

**SACRS Nominating Committee Final Ballot:**

- |  |                |
|--|----------------|
| • Vivian Gray, Los Angeles CERA          | President      |
| • Roger Hilton, Orange CERS              | Vice President |
| • Harry Hagen, Santa Barbara, CERS       | Treasurer      |
| • Kathryn Cavness, Mendocino CERA        | Secretary      |
| • David MacDonald, MD, Contra Costa CERA | Regular Member |
| • John Kelly, Sacramento CERS            | Regular Member |

**Additional Candidates Submitted:**

- |                                      |                |
|--------------------------------------|----------------|
| • Vere Williams, San Bernardino CERA | Regular Member |
| • Edward Robinson, Kern CERA         | Regular Member |

Please prepare your voting delegate to have the ability to vote by the recommended ballot and by each position separately.

If you have any questions, please contact me at Ray McCray, [raym1@sbcglobal.net](mailto:raym1@sbcglobal.net) or (209) 471-4472.

Thank you for your prompt attention to this timely matter.

Sincerely,

*Ray McCray*

Ray McCray, San Joaquin CERA Trustee  
SACRS Nominating Committee Chair

CC: SACRS Board of Directors  
SACRS Nominating Committee Members  
Sulema H. Peterson, SACRS Executive Director