



Notice of Public Meeting

The Board of Retirement of the San Mateo County Employees' Retirement Association will meet on **Tuesday, February 23, 2021 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/96070574217>
- To join the meeting via telephone, dial: (669) 900-9128, and enter Meeting ID: 960 7057 4217

Public Comment During the Meeting

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

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

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

Public Comment Prior to the Meeting

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

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

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

- 1. Call to Order, Roll Call and Miscellaneous Business**
- 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 January 26, 2021

Notice of Public Meeting

Page 2 of 3

4. Approval of the Consent Agenda*

- 4.1 Disability Retirements (1)
 - Robert Rosenthal
- 4.2 Survivor Death Benefits
- 4.3 Service Retirements
- 4.4 Continuances
- 4.5 Deferred Retirements
- 4.6 Member Account Refunds
- 4.7 Member Account Rollovers
- 4.8 Member Account Redeposits
- 4.9 Acceptance of Trustees' Reports of Educational Activities
- 4.10 Acceptance of Semi-Annual Compliance Certification Statements for the Period Ended December 31, 2020
- 4.11 Acceptance of Preliminary Semi-Annual Financial Report for Period Ended December 31, 2020 Financials
- 4.12 Acceptance of Preliminary Semi-Annual Budget Report for Period Ended December 31, 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 January 31, 2021
- 6.2 Report on Quarterly Investment Performance for the Period Ended December 31, 2020

7. Board & Management Support

- 7.1 Report on March 23, 2021 Virtual Board-Staff Retreat Planning
- 7.2 Approval of Resolution Temporarily Suspending Requirement of Nomination Signatures for the June 2021 Election
- 7.3 Report on Status of Trustee Elections
- 7.4 Presentation of SamCERA Mobile Application by Digital Deployment

8. Management Reports

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

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

- C1 Consideration of Disability Items, if any, removed from the Consent Agenda

9. Report on Actions Taken in Closed Session

Notice of Public Meeting

Page 3 of 3

10. Adjournment in Memory of the Following Deceased Members:

| | | |
|---------------------------|-------------------|---------------------|
| Janatpour, Danna | January 5, 2021 | Hospital |
| Dunn, Peter | January 9, 2021 | Assessor's |
| Cattich, Pamela | January 15, 2021 | Planning & Building |
| Weise, Philip | January 11, 2021 | Vocatiional Rehab |
| Cooper, Ethel | January 20, 2021 | Chope Hospital |
| Connolly-Overbey, Marilyn | December 19, 2020 | Correctional Health |
| Duterte, Ildefonso | January 11, 2021 | Controller's |
| Webster, Edward | January 21, 2021 | General Services |
| Modica, Frances | January 20, 2021 | Mental Health |
| Waters, Gail | January 21, 2021 | Social Services |
| Sisneros, Tony | January 24, 2021 | Pharmacy |



Scott Hood, Chief Executive Officer

Posted: February 17, 2021

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

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

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

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

JANUARY 26, 2021 – REGULAR BOARD MEETING MINUTES

2101.1 Call to Order, Roll Call and Miscellaneous Business

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

Roll Call:

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

Absent: Paul Hackleman and Susan Lee.

Alternates: None.

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

Consultants and speakers: Joe Abdou, Marc Gesell, and Margaret Jadallah (Verus).

2101.2.1 Oral Communications from the Board: None.

2101.2.2 Oral Communications from the Public: Mr. David asked if there was any public comment from those individuals participating on the telephone or via Zoom. There were no public comments. Ms. Trujillo reported there were no written comments received ahead of the meeting.

2101.3.1 Approval of Regular Board Meeting Minutes from December 8, 2020: Mr. David asked if there were any changes or corrections, or objections, to the meeting minutes from the Board meeting held on December 8, 2020. Ms. Arnott noted a typo on agenda item 6.7 which should be corrected to "Approval of Proposed Alternative Investments".

Action: Mr. Battey moved to approve the minutes as noted from the Board meeting on December 8, 2020. The motion was seconded by Mr. Hoefer and carried with a vote of 9-0, with trustees Arnott, Battey, Bowler, David, Hoefer, O'Malley, Raw, Salas and Tashman all in favor; none opposed.

2101.4.0 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. Hoefer moved to approve the items on the Consent Agenda. The motion was seconded by Ms. Arnott and carried with a vote of 9-0, with trustees Arnott, Battey, Bowler, David, Hoefer, O'Malley, Raw, Salas and Tashman all in favor; none opposed.

2101.4.1 Disability Retirements: None.

2101.4.2 Survivor Death Benefits: None.

2101.4.3 **Service Retirements:**

| Name | Effective Retirement Date | Department |
|------------------------|----------------------------------|------------------------------------|
| Akiyama, Kathleen | October 22, 2020 | Behavioral Health & Recovery Srvs |
| Alfassa, Helen | October 3, 2020 | Superior Court |
| Arellano, Jessica | November 25, 2020 | Deferred - Probation |
| Chen, Eric | November 14, 2020 | Dept. of Public Works |
| Cornist Dhati, Rodney | October 6, 2020 | Deferred - Human Services Agency |
| DeJesus, Mario | October 7, 2020 | Deferred - Human Services Agency |
| DeTar, Jean | November 25, 2020 | Health Services |
| Fernyak, Susan | October 17, 2020 | San Mateo County Health |
| Fritzsching, Martin | December 1, 2020 | Deferred - Probation |
| Garibaldi, Jeffrey | October 4, 2020 | Agriculture - Weights & Measures |
| Holliday, Justin | November 5, 2020 | Deferred - Sheriff's Office |
| Homman, Tonya | October 8, 2020 | Deferred - Sheriff's Office |
| Leon, Lourdes | November 5, 2020 | Deferred - Courts |
| LeVack, Cathy | October 3, 2020 | Assessor's Office |
| McCavitt, Thomas | October 2, 2020 | Deferred - San Mateo County Health |
| Meyers, William | October 16, 2020 | San Mateo County Health |
| Mihos, David | October 17, 2020 | Probation |
| Miller, Gregory | November 1, 2020 | Deferred - Sheriff's Office |
| Munsey, John | November 15, 2020 | Sheriff's Office |
| Narag, Perla | October 31, 2020 | Health Services |
| Pacia, Michael | October 2, 2020 | Human Services Agency |
| Peavey, Chindi | November 1, 2020 | Mosquito District |
| Perkins, Brian | October 19, 2020 | Deferred - Board of Supervisors |
| Reed, Robert | November 23, 2020 | Health Services |
| Reyes, Jeremy | November 4, 2020 | Controller's Office |
| Rothaus, Gregory | November 2, 2020 | Sheriff's Office |
| Schalch, Pamela | November 29, 2020 | San Mateo County Health |
| Shuttleworth, La Donna | October 5, 2020 | Sheriff's Office |
| Simpson, Judy | October 31, 2020 | Aging & Adult Service |
| Velez, Gerardo | October 18, 2020 | Human Services Agency |
| Wettstein, Sandra | November 28, 2020 | Health Services |
| Witt, Charles | October 1, 2020 | Deferred - Sheriff's Office |
| Yuson, Maria Teresa | October 31, 2020 | Human Services Agency |

2101.4.4 **Continuances:**

| Survivor's Name | Beneficiary of: |
|------------------------|------------------------|
| Brinkman, Laurel | Brinkman, John |
| Daw, Michael | Daw, Margaret |
| Hassell, Chris | Hassell, Mark |
| Marich, Paul | Rinonos, Maria |
| Monto, Marian | Monto, Alexander |
| Ruiz, Martha | Maggy, Bradley |
| Tillotson, James | Tillotson, Christina |
| Wong, Judy | Wong, Donald |

2101.4.5 **Deferred Retirements:**

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

| Name | Retirement Plan Type |
|--------------------|--------------------------------------|
| Bonilla, Barbara | G5, Vested - Auto Defer - Code 31700 |
| Bui, Jennifer | G5, Vested - Auto Defer - Code 31700 |
| Chen, Cindy | G7, Non-vested - Reciprocity |
| Chu, Chiu Ming | G7, Non-vested - Reciprocity |
| Cleofas, Richard | G7, Non-vested - Reciprocity |
| Contreras, Daniel | S7, Non-vested - Reciprocity |
| Glynn, Gretchen | G4, Vested - Reciprocity |
| Haskell, Deanna | G4, Vested |
| Hoang, John C | G4, Vested - Reciprocity |
| Joya, Emrick | S7, Non-vested - Reciprocity |
| Mihos, Elizabeth | P4, Vested |
| Nguyen, Linda | G7, Vested - Auto Defer - Code 31700 |
| Oh, Brian | G7, Vested - Reciprocity |
| Slaughter, Matthew | G5, Vested - Auto Defer - Code 31700 |

2101.4.6 **Member Account Refunds:**

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

| Name | Retirement Plan Type |
|-----------------|-----------------------------|
| Corzantes, Juan | S7, Non-vested |
| Glutz, James | S7, Non-vested |

2101.4.7 **Member Account Rollovers:**

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

| Name | Retirement Plan Type |
|----------------------|-----------------------------|
| Hawkins, Christopher | G4, Non-vested |

2101.4.8 **Member Account Redeposits:**

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

| Name | Retirement Plan Type |
|--------------------|-----------------------------|
| Castaneda, Rogelio | G4, Vested |

2101.4.9 **Acceptance of Trustees' Reports of Educational Activities:** None.

2101.4.10 **Acceptance of Semi-Annual Compliance Certification Statements for the Period Ended December 31, 2020:** The Board accepted the semi-annual Compliance Certification Statements for SamCERA's non-alternative investment managers and investment consultant, as of December 31, 2020.

2101.5.1 **Consideration of Agenda Items, if any, Removed from the Consent Agenda:** None.

2101.5.2 **Approval of a Resolution Adopting Cost of Living Adjustments (COLAs) for 2021:** Mr. Hood discussed Milliman's recommendation for cost of living adjustments (COLAs) for 2021. COLAs were recommended for each retiree and beneficiary recipient, who retire on or before April 1, 2021, as follows: 1.5% for all Plan 1, 2, 4, 5, 6 and 7 members and between 1.5% and 3% depending on retirement date and COLA Bank for Probation Plan 1 members.

Action: Ms. Salas motioned to approve a resolution adopting the Cost of Living Adjustments as recommended by Milliman, Inc. The motion was seconded by Ms. O'Malley and carried by a vote of 9-0, with trustees Arnott, Battey, Bowler, David, Hoefer, O'Malley, Raw, Salas and Tashman all in favor; none opposed.

2101.6.1 **Report on Preliminary Monthly Portfolio Performance Report for the Period Ended December 31, 2020:** Mr. Coultrip reported that SamCERA's net preliminary return for December was 2.2% bringing the preliminary trailing twelve month return ending December 2020 to 9.6% net, which is above SamCERA's Plan Benchmark return of 9.0% and above SamCERA's Actuarial Assumed Earnings Rate of 6.5%. This item was informational and for discussion only, no action was taken.

2101.6.2 **Approval of Updated Asset Allocation Policy Portfolio:** Mr. Coultrip discussed the proposed policy tweaks to the current portfolio by reducing core fixed by 3% (by removing SamCERA's intermediate Treasury portfolio), and adding 2% to the growth bucket (1% each to domestic and international equity), while keeping 1% in Diversifying by adding to absolute return. The allocation to inflation Hedge remains the same, however a 1% increase to private real assets is funded by a 1% reduction to real estate. Ms. Jadallah and Mr. Gesell of Verus, presented their capital market assumption and asset allocation report to the Board.

Action: Mr. Raw motioned to approve the proposed updated asset allocation policy portfolio. The motion was seconded by Ms. Salas and carried by a vote of 9-0, with trustees Arnott, Battey, Bowler, David, Hoefer, O'Malley, Raw, Salas and Tashman all in favor; none opposed.

2101.7.1 **Report on March 23, 2021 Virtual Board-Staff Retreat Planning:** Mr. Hood discussed the list of suggested retreat topics for the upcoming Board-Staff Retreat. He mentioned that in speaking with Nick Collier (Milliman, Inc.) last week, it was recommended to include a discussion regarding actuarial funding options. He also mentioned potentially having Associate Economist, Luiz Oliveira speak at the retreat. Mr. Hood offered the Board with another opportunity to suggest additional topics. This item was informational only, no action was taken.

2101.7.2 **Approval to Fill the Chief Legal Counsel Position:** Mr. Hood noted that Ms. Carlson will be retiring on April 1, 2021. He discussed staff's search in finding her replacement and requested authority to directly appoint Paul Okada to fill the Chief Legal Counsel position. Mr. Hood discussed Paul's private and public sector experience and noted staff does not believe there can be a better candidate for the position.

Action: Mr. Tashman motioned to authorize the Chief Executive Officer to hire Paul Okada to fill the position of Retirement Chief Legal Counsel. The motion was seconded by Mr. Raw and carried by a vote of 9-0, with trustees Arnott, Battey, Bowler, David, Hoefer, O'Malley, Raw, Salas and Tashman all in favor; none opposed.

2101.8.1 **Chief Executive Officer's Report:** Mr. Hood informed the Board that Vitech recently presented plans to change platforms to operate its pension administration software. Staff is reviewing the information and will request additional information from Vitech. Mr. Hood shared a few items that may be on next month's agenda in addition to the retreat agenda.

Paul Okada joined the meeting and introduced himself to the Board. He expressed his gratitude for the opportunity and looks forward to working with them.

2101.8.2 **Assistant Executive Officer's Report:** Ms. Smith reported that all 1099's have been mailed out. She shared that a recruitment is in progress to fill the current Retirement Senior Account vacancy. Ms. Smith reviewed the upcoming term expirations of 3 seats on the Board of Retirement, which will expire on June 30, 2021: 2nd Member (Katherine O'Malley), 7th Member (Robert Raw) and 9th Member Safety Alternate (Susan Lee). Ms. Smith had an initial call with the Elections Office and plans to provide the election schedule at next month's meeting. Ms. Trujillo informed Board members about upcoming educational events.

2101.8.3 **Chief Investment Officer's Report:** None.

2101.8.4 **Chief Legal Counsel's Report:** Ms. Carlson expressed her happiness that Mr. Okada will be the next Chief Legal Counsel and looks forward to working with him for a seamless transition at the end of March.

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

2101.10 **Adjournment:** Mr. David adjourned the meeting at 11:54 a.m. in memory of the deceased members listed below.

| | | |
|----------------------|-------------------|---------------------------|
| Maggy, Bradley | November 12, 2020 | Personnel |
| Taylor, Lois | November 15, 2020 | Chope Hospital |
| Burns, Dorothy | November 19, 2020 | Children's Services |
| Tillotson, Christina | November 21, 2020 | Mental Health |
| Hekker, Janice | November 22, 2020 | Chope Hospital |
| Sanfelice, Caterina | November 23, 2020 | Hospital |
| Durchslag, Joanne | November 27, 2020 | Mental Health |
| West, Dorothy | December 2, 2020 | Library |
| Evans, Laura | December 4, 2020 | Chope Hospital |
| Zahradnik, David | December 12, 2020 | Sheriff's |
| Kamiya, Stanley | December 12, 2020 | Mosquito & Vector Control |
| McManners, Jeanne | December 12, 2020 | Chope Hospital |
| Barela, Frank | December 18, 2020 | Courts |
| Barretta, Steven | December 21, 2020 | Sheriff's |
| Kong, Georgette | December 26, 2020 | Library |
| Yakushi, Chiyo | December 28, 2020 | Courts |
| Kuhn, Jack | December 29, 2020 | Parks Dept |
| Emmerich, Joann | January 1, 2021 | General Services |

Al David
Board Chair

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

February 23, 2021

Agenda Items 4.1- 4.9

TO: Board of Retirement

FROM: Elizabeth LeNguyen, Retirement Benefits Manager



SUBJECT: Approval of Consent Agenda Items 4.1 – 4.9

4.1 Disability Retirements

- a) The Board find that **Robert Rosenthal** (1) is permanently incapacitated from the performance of his usual and customary duties as a Group Supervisor II, (2) find that his disability was the result of an injury arising out of and in the course of his employment and (3) grant his application for a service-connected disability retirement.

4.2 Survivor Death Benefits

None.

4.3 Service Retirements

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

| Name | Effective Retirement Date | Department |
|------------------------|----------------------------------|--------------------------------------|
| Beaudette, Eileen | January 1, 2021 | San Mateo County Health |
| Buenaventura, Rosauero | December 23, 2020 | San Mateo County Health |
| Cazzalli, Delmy | January 1, 2021 | Assessor's Office |
| Chandler, Tammy | December 27, 2020 | Deferred Child Health Services |
| Cohen, Elisabeth | January 1, 2021 | Assessor's Office |
| De Los Santos, Alex | January 1, 2021 | Human Services Agency |
| DiNapoli, Lorraine | December 4, 2020 | Def'd - Public Safety Communications |
| Fok, Minnie | January 1, 2021 | Child Health Services |
| Liao, Yuwen | December 3, 2020 | San Mateo County Health |
| Lucett, Matthew | November 14, 2020 | Deferred - Sheriff's Office |
| Oster, Eric | December 22, 2020 | Deferred - Sheriff's Office |
| Wang, Huimin | January 1, 2021 | Aging and Adult Services |

4.4 Continuances

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

| Survivor's Name | Beneficiary of: |
|------------------------|------------------------|
| Hekker, Henry | Hekker, Janice |
| Zahradnik, Catherine | Zahradnik, David |

4.5 Deferred Retirements

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

| Name | Retirement Plan Type |
|-------------------------|--------------------------------------|
| Hannagan, Brooke | G5, Vested - Auto Defer - Code 31700 |
| Kohler, Carly | G7, Vested |
| Martin, Maricela Segura | G7, Non-vested - Reciprocity |
| Nardi, Elizabeth | G5, Vested - Auto Defer - Code 31700 |
| Pettit, Stephen M | S5, Vested - Reciprocity |
| Sebay, Megan | G7, Vested |
| Spataro, Jenny | G7, Vested |
| Strandberg, Lindsey | G7, Non-vested - Reciprocity |
| West, Alison | G7, Non-vested - Reciprocity |

4.6 Member Account Refunds

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

| Name | Retirement Plan Type |
|---------------------------|-----------------------------|
| Camarena Chavez, Cristian | G7, Non-vested |
| Carlay, Christopher | G7, Non-vested |
| Folauoo, Patsy | G4, Vested |
| Hart, Ashley | G4, Vested |
| Jacobs, Jay | G4, Vested |
| Marquez, Jackie | G7, Non-vested |

4.7 Member Account Rollovers

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

| Name | Retirement Plan Type |
|--------------|-----------------------------|
| Wong, Rodney | S4, Non-vested |

4.8 Member Account Redeposits

None.

4.9 Acceptance of Trustees' Reports of Educational Activities


None.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

February 23, 2021

Agenda Item 4.10

TO: Board of Retirement

FROM: Doris Ng, Retirement Investment Analyst 

SUBJECT: Semi-Annual Compliance Certification Statement for Period Ended December 31, 2020

Recommendation

Accept the semi-annual Compliance Certification Statement for SamCERA's non-alternative investment managers, as of December 31, 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 January Board meeting.

Discussion

The attached Compliance Certification Statements report that SamCERA's investment managers (BlackRock, PIMCO and State Street Global Advisors) were in compliance with SamCERA's Investment Policy as of December 31, 2020. There were no reported significant developments in portfolio construction, investment approach, firm ownership or organizational structure of concern relating to the association's public investments. There were no notable issues regarding industry or regulatory actions that impact SamCERA. The managers were also requested to provide data regarding the characteristics and composition of their portfolios. No prominent issues were identified during the review. Any items that raise concern will be brought to the manager's or investment consultant's attention and will be thoroughly vetted by staff.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

Attachments

Compliance Certification Statement Matrix 12-2020

Compliance Certification Statements (5)

- A. Domestic Equity: BlackRock
- B. International Equity: Blackrock
- C. Fixed Income: BlackRock, PIMCO
- D. Real Assets: State Street Global Advisors

Compliance Certification Statement Matrix – December 31, 2020

| Investment Manager | Mandate | General Compliance Issues | Derivative Instruments | Investment Manager Guidelines | Mandate Specific |
|---|---------|---|------------------------|-------------------------------|--|
| Domestic Equity | | | | | |
| BlackRock Russell 1000 | | No Concerns | No Concerns | No Concerns | Largest single security AAPL 6% Largest single industry Information Technology 27.8% |
| International Equity | | | | | |
| Blackrock MSCI ACWI ex US IMI | | No Concern | No Concern | No Concern | <ul style="list-style-type: none"> • 3.38% ADR • 30.71% emerging markets |
| Fixed Income | | | | | |
| Blackrock Intermediate Government Bond Index | | No Concerns | Not Applicable | No Concerns | No Concerns |
| PIMCO (Diversified Income Fund) | | <ul style="list-style-type: none"> • Oct 2020-Formed strategic invmnt platform betwn GE Capital Aviation Services & PIMCO to lease aircraft • Sept 2020-Hired Mathieu Clavel as | No Concerns | No Concerns | No Concerns |

Compliance Certification Statement Matrix – December 31, 2020

| Investment Manager | Mandate | General Compliance Issues | Derivative Instruments | Investment Manager Guidelines | Mandate Specific |
|---|---------|---|--|-------------------------------|---|
| | | Hd of Private Credit Europe. Mark Carney join Glb Advisory Board. | | | |
| Real Assets | | | | | |
| State Street Global Advisors (Custom Real Asset Account) | | <ul style="list-style-type: none"> Mar 2021-Rick Lacaille, Glbl Chief Invmnt Officer transition to new role as State Street's Sr. Investment Advisor. Lori Heinel to be promoted to Glbl Chief Invmnt Officer. | <ul style="list-style-type: none"> Largest single counterparty: Societe General 18.8% | No Concerns | <ul style="list-style-type: none"> 1.96 % ADRs 23.93% Derivatives 1.83% Rule 144A 1.42% largest single security Corteva Inc |

BlackRock Russell 1000 Index – December 31, 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) by **Wednesday, January 13, 2021.**

General Compliance Issues

1. Have there been any significant portfolio developments, major changes in firm ownership, organizational structure and personnel?

Yes: Please explain. / No

Ownership

BlackRock, Inc. (together, with its subsidiaries, unless the context otherwise indicates, "BlackRock" or the "Company") is a leading publicly traded investment management firm, with common stock listed on the New York Stock Exchange, providing a broad range of investment management and technology services to institutional and retail clients worldwide. As at 30 September 2020, there was no person known by BlackRock to own beneficially 10% or more of any class of outstanding voting securities of BlackRock.

The ownership details for 4Q20 is not publicly available.

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.

There have been no material changes to the organizational structure over the last quarter ending as of 31 December 2020.

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

Yes: Please explain. / No

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

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

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

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

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

Firm Capabilities

BlackRock provides diversified investment management to institutional clients, intermediary and individual investors through various investment vehicles. Investment management services primarily consist of the management of equity, fixed income, multi-asset class, alternative investment and cash management products. BlackRock offers its investment products in a variety of vehicles, including open-end and closed-end mutual funds, iShares® exchange traded funds (“ETFs”), collective investment trusts and separate accounts. In addition, BlackRock provides market risk management, financial markets advisory and enterprise investment system services to a broad base of clients. Financial markets advisory services include valuation services relating to illiquid securities, dispositions and workout assignments (including long-term portfolio liquidation assignments), risk management and strategic planning and execution.

Our breadth of capabilities enables outcome-based solutions tailored to individual client objectives. Please refer to the following chart for an overview of BlackRock’s products and services.

\$7.81 trillion in assets under management

| | |
|---|--|
| Equity \$3.78 trillion | <ul style="list-style-type: none"> • Capabilities across investment styles: index, active fundamental, scientific and absolute return • Global, regional and sector-specific investing |
| Fixed Income \$2.53 trillion | <ul style="list-style-type: none"> • Manage strategies across benchmark types and styles: index, fundamental, model-based and absolute return • Specialized experts covering all market sectors |
| Alternatives* \$222 billion | <ul style="list-style-type: none"> • Specialized capabilities across real estate, private equity, direct hedge funds, fund of hedge funds, infrastructure and renewable power • Solutions-oriented approach extends to alternatives portfolio construction |
| Multi-asset \$598 billion | <ul style="list-style-type: none"> • Outcome focused: target-date, balanced risk factor, and liability-driven investing • Asset-class agnostic perspective facilitates unbiased market views, advice, and portfolio solutions |
| Cash \$652 billion | <ul style="list-style-type: none"> • Recognized as a 'go to' leader in credit and liquidity • Flexible product range across multiple currencies |

Scalable services and infrastructure

| | |
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| Risk Management | <ul style="list-style-type: none"> • Centralized platform analyzes risk across asset classes • Leverage for risk management, investment decision support and performance analytics |
| Advisory | <ul style="list-style-type: none"> • Advise public and private financial institutions on complex capital markets and balance sheet exposures • Managed or advised on over \$8 trillion in asset and derivative portfolios |
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AUM As of 30 September 2020

* The alternatives AUM may include committed capital, in addition to invested capital, which remains subject to drawdown

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

As a global investment manager, BlackRock, Inc., and its various subsidiaries including BlackRock Institutional Trust Company may be subject to regulatory oversight in numerous jurisdictions including examinations and various requests for information. BlackRock Institutional Trust Company regulators routinely provide it with comment letters at the conclusion of these examinations in which they request that BlackRock Institutional Trust Company correct or modify certain of its practices. In all such instances, 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.

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4. Has the firm’s insurance coverage been sustained?

Yes / No: Please explain.

BlackRock maintains the following types of global insurance coverage:

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

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

Investment Management Fees

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

Derivative Investments

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

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

If **Yes**:

- a) Do the counter-parties have investment grade debt? **Yes**/ **No**
 - b) Are the counter-parties registered with the SEC and do they have net capital to protect against potential adverse market circumstances? **Yes**/ **No: Please explain.**
4. For non-exchange traded derivative transactions, were the counter-parties financial institutions (banks)?
 Yes / **No**

If Yes:

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

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

- a) What is the largest exposure to a single counter-party within the portfolio?
- b) Please specify the name of the counter-party and the amount of exposure.
- c) Have there been any changes to the investment manager's list of approved counter-parties over the past six months?

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.

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

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

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

As stated above, we typically use equity index futures in our strategies for the purpose of efficient portfolio management. Futures are not used for speculative or leveraged positions in the portfolio and we keep cash to fully cover all outstanding futures positions.

Exchange traded futures are employed to equitize dividend accruals as well as to manage day-to-day cash flows generated from clients trades, dividends, interest received and other activity associated with securities in the portfolio. Specifically, futures contracts are purchased to provide immediate market exposure proportionate to cash accruals and investable cash within the portfolio. While we seek to remain fully 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.

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

Domestic Equity Portfolios (Large, Mid & Small)

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

| | |
|-------------------------------|--------------|
| <i>Common Stock</i> | <i>99.8%</i> |
| <i>Preferred Stock</i> | <i>%</i> |
| <i>Convertible Securities</i> | <i>%</i> |
| <i>Cash & Equivalents</i> | <i>0.2%</i> |

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

| | |
|------------------|--------------|
| <i>Large-Cap</i> | <i>64.2%</i> |
| <i>Mid-Cap</i> | <i>33.8%</i> |
| <i>Small-Cap</i> | <i>1.6%</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. N / A
4. What is the largest percentage of the portfolio represented by a single security? Please specify the security and percentage amount. If any securities were above 5% at the time of purchase, please list and explain why. AAPL 6%
5. What is the largest percentage of the portfolio represented by a single industry? Specify the name of the industry, percentage amount and size relative to benchmark. Please specify all industries above 15%.

Information Technology, 27.8%



Signed by: Rajeev Ghia

Dated: 1/29/2021

Name of Firm: BlackRock

BlackRock MSCI ACWI ex US IMI Index – December 31, 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) by **Wednesday, January 13, 2021.**

General Compliance Issues

1. Have there been any significant portfolio developments, major changes in firm ownership, organizational structure and personnel?

Yes: Please explain. / No

Ownership

BlackRock, Inc. (together, with its subsidiaries, unless the context otherwise indicates, "BlackRock" or the "Company") is a leading publicly traded investment management firm, with common stock listed on the New York Stock Exchange, providing a broad range of investment management and technology services to institutional and retail clients worldwide. As at 30 September 2020, there was no person known by BlackRock to own beneficially 10% or more of any class of outstanding voting securities of BlackRock.

The ownership details for 4Q20 is not publicly available.

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.

There have been no material changes to the organizational structure over the last quarter ending as of 31 December 2020.

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

Yes: Please explain. / No

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

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

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

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

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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 BlackRock Institutional Trust Company’s investment management responsibilities.

4. Has the firm’s insurance coverage been sustained?

Yes / No: Please explain.

BlackRock maintains the following types of global insurance coverage:

| Type |
|--|
| <u>Investment Advisers Professional Liability (aka Errors & Omissions Liability)</u> |
| <u>Fidelity Bond (aka Crime or Financial Institution Bond)</u> |

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

Investment Management Fees

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

Derivative Investments

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

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

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

If **Yes**:

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

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

If Yes:

- a) Do the counter-parties have investment grade debt? Yes/ No
b) Do the counter-parties have total assets in excess of \$1 billion, and significant net capital to protect against potential adverse market circumstances?
 Yes/ No: Please explain.
5. Is individual counter-party exposure well diversified? Yes/ No: Please explain.
a) What is the largest exposure to a single counter-party within the portfolio?
b) Please specify the name of the counter-party and the amount of exposure.
c) Have there been any changes to the investment manager's list of approved counter-parties over the past six months?

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.

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

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

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

As stated above, we typically use equity index futures in our strategies for the purpose of efficient portfolio management. Futures are not used for speculative or leveraged positions in the portfolio and we keep cash to fully cover all outstanding futures positions.

Exchange traded futures are employed to equitize dividend accruals as well as to manage day-to-day cash flows generated from clients trades, dividends, interest received and other activity associated with securities in the portfolio. Specifically, futures contracts are purchased to provide immediate market exposure proportionate to cash accruals and investable cash within the portfolio. While we seek to remain fully 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.

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

International Equity Portfolios

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

| | |
|--|---------------|
| <i>Foreign Ordinary Shares</i> | <i>96.62%</i> |
| <i>ADR's</i> | <i>3.38%</i> |
| <i>Cash & Equivalents (Foreign)</i> | <i>0-3%</i> |
| <i>Cash & Equivalents (Domestic)</i> | <i>0-3%</i> |

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

| | |
|------------------|--------------|
| <i>Large-Cap</i> | <i>60.6%</i> |
| <i>Mid-Cap</i> | <i>32.7%</i> |
| <i>Small-Cap</i> | <i>6.9%</i> |

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

The fund seeks to track the holdings of the MSCI ACWI ex USA IMI Index and does not make security selection outside of the benchmark.

In instances where it is not beneficial to replicate fully, we employ an optimization approach to replicating the index. Optimization may be used to manage strategies where full replication is less effective due to illiquid securities, high transactions costs, unavailable markets, and other legal and regulatory constraints. The optimization process is managed on our Aladdin platform and is built on top of our proprietary transaction cost and risk models, with the goal of creating a portfolio that has risk characteristics similar to that of the benchmark. By evaluating a security's risk characteristics – including volatility, size, industry membership and country of domicile, among other attributes – the optimization process allows us to systematically trade off the risk of any potential misweights relative to the cost of acquiring that position. The portfolio engineering teams have extensive background in the development and use of risk models, their construction, behavior, limitations, and appropriate uses. The equity index team utilizes BlackRock Fundamental Risk for Equity (BFRE) models which are used for risk estimation, as well as portfolio construction and optimization. These models use company fundamentals, technical factors as well as historical market data, to describe the risk profile of equity assets and portfolios.

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.

EM at 30.71%.

A handwritten signature in dark ink, appearing to read 'Rajeev Ghia', is written above a horizontal line.

Signed by: Rajeev Ghia

Dated: 1/29/2021

Name of Firm: BlackRock

BlackRock Intermediate Government Bond Index – December 31, 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) by **Wednesday, January 13, 2021.**

General Compliance Issues

1. Have there been any significant portfolio developments, major changes in firm ownership, organizational structure and personnel?

Yes: Please explain. / **No**

Ownership

BlackRock, Inc. (together, with its subsidiaries, unless the context otherwise indicates, "BlackRock" or the "Company") is a leading publicly traded investment management firm, with common stock listed on the New York Stock Exchange, providing a broad range of investment management and technology services to institutional and retail clients worldwide. As at 30 September 2020, there was no person known by BlackRock to own beneficially 10% or more of any class of outstanding voting securities of BlackRock.

The ownership details for 4Q20 is not publicly available.

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.

There have been no material changes to the organizational structure over the last quarter ending as of 31 December 2020.

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

Yes: Please explain. / **No**

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

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

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

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

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

Firm Capabilities

BlackRock provides diversified investment management to institutional clients, intermediary and individual investors through various investment vehicles. Investment management services primarily consist of the management of equity, fixed income, multi-asset class, alternative investment and cash management products. BlackRock offers its investment products in a variety of vehicles, including open-end and closed-end mutual funds, iShares® exchange traded funds (“ETFs”), collective investment trusts and separate accounts. In addition, BlackRock provides market risk management, financial markets advisory and enterprise investment system services to a broad base of clients. Financial markets advisory services include valuation services relating to illiquid securities, dispositions and workout assignments (including long-term portfolio liquidation assignments), risk management and strategic planning and execution.

Our breadth of capabilities enables outcome-based solutions tailored to individual client objectives. Please refer to the following chart for an overview of BlackRock’s products and services.

\$7.81 trillion in assets under management

| | |
|---|--|
| Equity \$3.78 trillion | <ul style="list-style-type: none"> • Capabilities across investment styles: index, active fundamental, scientific and absolute return • Global, regional and sector-specific investing |
| Fixed Income \$2.53 trillion | <ul style="list-style-type: none"> • Manage strategies across benchmark types and styles: index, fundamental, model-based and absolute return • Specialized experts covering all market sectors |
| Alternatives* \$222 billion | <ul style="list-style-type: none"> • Specialized capabilities across real estate, private equity, direct hedge funds, fund of hedge funds, infrastructure and renewable power • Solutions-oriented approach extends to alternatives portfolio construction |
| Multi-asset \$598 billion | <ul style="list-style-type: none"> • Outcome focused: target-date, balanced risk factor, and liability-driven investing • Asset-class agnostic perspective facilitates unbiased market views, advice, and portfolio solutions |
| Cash \$652 billion | <ul style="list-style-type: none"> • Recognized as a 'go to' leader in credit and liquidity • Flexible product range across multiple currencies |

Scalable services and infrastructure

| | |
|------------------------------|--|
| Risk Management | <ul style="list-style-type: none"> • Centralized platform analyzes risk across asset classes • Leverage for risk management, investment decision support and performance analytics |
| Advisory | <ul style="list-style-type: none"> • Advise public and private financial institutions on complex capital markets and balance sheet exposures • Managed or advised on over \$8 trillion in asset and derivative portfolios |
| Transition Management | <ul style="list-style-type: none"> • Partner with clients to help save costs and reduce risks when changing investment exposures • Executed over 2,000 individual transitions with assets totaling \$2.4 trillion over the past five years |
| Securities Lending | <ul style="list-style-type: none"> • Focus on research, technology and coordination with portfolio management functions that seek to deliver above market returns • Covers securities in over 30 markets globally |
| Trading | <ul style="list-style-type: none"> • More than 72,000 trades per day across equity, fixed income, cash, currency and futures • 24-hour global coverage across seven trading desks |

AUM As of 30 September 2020

* The alternatives AUM may include committed capital, in addition to invested capital, which remains subject to drawdown

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

As a global investment manager, BlackRock, Inc., and its various subsidiaries including BlackRock Institutional Trust Company may be subject to regulatory oversight in numerous jurisdictions including examinations and various requests for information. BlackRock Institutional Trust Company regulators routinely provide it with comment letters at the conclusion of these examinations in which they request that BlackRock Institutional Trust Company correct or modify certain of its practices. In all such instances, 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 Institutional Trust Company 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 BlackRock Institutional Trust Company ability to manage its clients' assets. Please refer to BlackRock's Form ADV and SEC disclosures for additional information on regulatory matters concerning [BlackRock Institutional Trust Company or BlackRock as a whole. The recent fines related to BlackRock, Inc. or [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.

On 8 March 2012, BlackRock Institutional Trust Company, N.A. ("BTC") entered into an Offer of Settlement (the "Agreement") with the CFTC and consented to the entry of an Order, which makes findings and imposes remedial sanctions against BTC. Without admitting or denying wrongdoing, BTC agreed to the imposition of a \$250,000 penalty and the entry of the Order to resolve allegations by the CFTC that two trades by BTC violated Section 4c(a)(1) of the Commodity Exchange Act and CFTC Regulation 1.38(a). BTC also agreed to refrain from any further violations of the above-mentioned statutory provisions. The CFTC did not allege that any clients of BTC, BlackRock or any related affiliate were harmed in any way in the execution of these two trades.

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.

On 3 October 2012, BlackRock Financial Management Inc. ("BFM") reached an agreement with the 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.

On 8 January 2014, BlackRock, Inc. reached a settlement with the New York Attorney General's office ("AG") pursuant to which the AG found BlackRock's use of analyst surveys violated New York's Martin Act and Executive Law. The settlement did not involve the payment of any fine or other penalty although BlackRock paid \$400,000 to cover the AG's costs of investigation. BlackRock neither admitted nor denied the allegations, but agreed to stop using analyst surveys.

On 8 May 2014, the primary Italian securities regulator ("CONSOB") fined BlackRock Investment Management (UK) Limited ("BIMUK") 150,000 EURO (approximately \$205,826 USD) for negligent

market manipulation. The fine was based on BIMUK's filing, on behalf of the BlackRock group of companies, a large shareholder report regarding its holdings in Unicredit S.p.A. to CONSOB in December 2011, which turned out to be incorrect.

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.

On 20 April 2015, BlackRock Advisors, LLC ("BAL") reached a settlement with the Securities and Exchange Commission ("SEC") regarding BlackRock's handling of a former portfolio manager's personal investments and involvement in a family business, Rice Energy LP and related entities. As part of the settlement, BAL agreed to pay a \$12 million penalty and retained an independent compliance consultant to review BlackRock's policies and procedures regarding the outside activities of BlackRock's employees. There was neither an allegation by the SEC of any loss to any BlackRock investors, nor did this settlement have any adverse impact on BlackRock's ability to manage its clients' funds.

On 17 January 2017, BlackRock, Inc. reached an agreement with the SEC resolving a matter regarding a provision in an old version of BlackRock's form employee separation agreement that the SEC believed violated Dodd Frank's whistleblower provisions. The settlement with the SEC included a \$340,000 payment and BlackRock agreed it would not include the provision in future agreements. In addition, BlackRock agreed to notify by letter, certain former employees who signed the agreement between October 2011 and March 2016.

On 25 April 2017, BlackRock Fund Advisors ("BFA") reached an agreement with the SEC resolving a matter regarding whether one BFA-managed ETF (the iShares MSCI Russia Capped ETF) was covered by certain exemptive relief the SEC previously granted BFA and other iShares funds. BFA, which did not admit or deny any of the SEC's findings, agreed to resolve the matter for a civil monetary penalty of \$1.5 million.

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 BlackRock Institutional Trust Company's investment management responsibilities.

4. Has the firm's insurance coverage been sustained?

Yes / No: Please explain.

BlackRock maintains the following types of global insurance coverage:

| Type |
|--|
| <u>Investment Advisers Professional Liability (aka Errors & Omissions Liability)</u> |
| <u>Fidelity Bond (aka Crime or Financial Institution Bond)</u> |

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

Investment Management Fees

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

Derivative Investments

1. Are derivatives used in the management of the investment strategy?
 Yes: Please ANSWER the remaining questions in this section.
 No: Please SKIP the remaining questions in this section.
2. If the firm entered into a non-exchange traded derivative, was the general nature and associated risks of the counter-party fully evaluated?
 Yes / **No: Please explain.**
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.**
4. For non-exchange traded derivative transactions, were the counter-parties financial institutions (banks)?
 Yes / **No**

If Yes:

- a) Do the counter-parties have investment grade debt? **Yes**/ **No**
 - b) Do the counter-parties have total assets in excess of \$1 billion, and significant net capital to protect against potential adverse market circumstances?
 Yes/ **No: Please explain.**
5. Is individual counter-party exposure well diversified? **Yes**/ **No: Please explain.**
 - a) What is the largest exposure to a single counter-party within the portfolio?
 - b) Please specify the name of the counter-party and the amount of exposure.
 - c) Have there been any changes to the investment manager's list of approved counter-parties over the past six months?
 6. Specify the security pricing sources used when developing portfolio market value exposures for non-exchange traded derivative positions.

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**

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>Commercial Paper</i> | % |
| <i>Other high grade short-term securities</i> | % |
| <i>U.S. Government & Agency securities</i> | 98.6% |
| <i>Corporate Bonds</i> | % |
| <i>Mortgage and asset-backed securities</i> | % |
| <i>Yankee bond securities</i> | % |
| <i>Other (please specify)</i> | 1.4% |

Short-term investment fund

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



Signed by: Rajeev Ghia

Dated: 1/29/2021

Name of Firm: BlackRock

PIMCO Diversified Income Fund – December 31, 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) by **Wednesday, January 13, 2021.**

General Compliance Issues

1. Have there been any significant portfolio developments, major changes in firm ownership, organizational structure and personnel?

Yes: Please explain. / **No**

Please refer to the attached Quarterly Firm Report.

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

Yes: Please explain. / **No**

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

3. Have there have been any industry or regulatory disciplinary actions taken against the firm?

Yes: Please explain. / **No**

Please reference the attached compliance letter.

4. Has the firm's insurance coverage been sustained?

Yes / **No: Please explain.**

Please reference the attached compliance letter.

Investment Management Fees

1. Is *SamCERA's* investment management fee schedule higher than those charged other institutional clients who hold an account investment substantially similar to ours?

Yes: Please explain. / **No**

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

Derivative Investments

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

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

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

Please refer to the attached Diversified Income Fund Annual Report.

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

Please refer to the attached Diversified Income Fund Annual Report.

If Yes:

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

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

Please refer to the attached Diversified Income Fund Annual Report.

If Yes:

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

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

Please refer to the attached Diversified Income Fund Annual Report.

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

Please refer to the attached PIMCO Pricing Policy.

- 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.

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

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

Investment Manager Guidelines

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

Please refer to the attached Bond Statistics Report.

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

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

Fixed Income Portfolios

- 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 & Equivalents</i> | <i>%</i> |
| <i>Total</i> | <i>%</i> |

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 9/30/2020, the Fund represented 0.38% of the Firm assets.

As of 9/30/2020, SamCERA's investment represented 2.17% of Fund assets.

Signed by: 

Dated:
1/13/2021

Name of Firm:
PIMCO

State Street Global Advisors Custom Real Asset Account – December 31, 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) by **Wednesday, January 13, 2021**.

General Compliance Issues

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

Please see attached Q4 2020 Organizational Changes Memo

2. Have there been any changes in the firm's investment approach?
 Yes: Please explain. / **No**
3. Have there have been any industry or regulatory disciplinary actions taken against the firm?
 Yes: Please explain. / **No**

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

4. Have there been any investment guideline breaches during the prior 6 months?
 Yes: Please explain. / **No**
5. Have proxy ballots been voted in accordance with the best economic interest of SamCERA?
 Yes / **No: Please explain.**

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

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

Investment Management Fees

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

Derivative Investments

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

Firms are registered by the applicable regulatory authorities. Counterparties are banks as opposed to broker dealers. Net Capital is a broker dealer related term.

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

If Yes:

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

5. Is individual counter-party exposure well diversified? **Yes** / **No: Please explain.**
- a) What is the largest exposure to a single counter-party within the portfolio?
approximately 18.8% as of 12./31/2020
- b) Please specify the name of the counter-party and the amount of exposure.
Societe General: approximately \$53.6 million

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

No

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

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

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

The swap positions are based on a commodity index (Bloomberg Commodity Roll Select TR Index). The Index is comprised of a diversified basket of liquid (listed) commodity futures contracts. Please see attached Commodity Index SDD.

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

Real Asset Portfolio

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

| | |
|---|---------------|
| <i>Foreign Ordinary Shares</i> | <i>0.11%</i> |
| <i>ADR's</i> | <i>1.96%</i> |
| <i>Common Stock</i> | <i>48.59%</i> |
| <i>MIP Limited Partnership</i> | <i>0.00%</i> |
| <i>Derivatives: Futures/ Options</i> | <i>23.93%</i> |
| <i>Cash & Equivalent (Domestic)</i> | <i>0.12%</i> |
| <i>Cash & Equivalent (Foreign)</i> | <i>0.45%</i> |
| <i>Other (TIPS)</i> | <i>24.85%</i> |

2. Specify the large, mid and small capitalization exposure of the portfolios.
S&P Global LargeMidCap Natural Resources Index NL Fund (ZVB5)

| | |
|------------------|---------------|
| <i>Large-Cap</i> | <i>76.17%</i> |
| <i>Mid-Cap</i> | <i>19.95%</i> |
| <i>Small-Cap</i> | <i>3.88%</i> |

S&P Global Infrastructure Index NL CTF (ZVPY)

| | |
|------------------|---------------|
| <i>Large-Cap</i> | <i>72.74%</i> |
| <i>Mid-Cap</i> | <i>23.06%</i> |

| | |
|------------------|--------------|
| <i>Small-Cap</i> | <i>4.20%</i> |
|------------------|--------------|

Bloomberg Roll Select Commodity Indx SM NL FD (ZVME)

| | |
|------------------|--------------------|
| <i>Large-Cap</i> | <i>N/A-Swaps%</i> |
| <i>Mid-Cap</i> | <i>N/A-Swaps %</i> |
| <i>Small-Cap</i> | <i>N/A-Swaps %</i> |

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

1.83%

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

Corteva Inc - Common Stock USD – 1.42%

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

Corteva Inc - Common Stock USD – 1.42%

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

Part I

Real Asset Strategy AUM (12/31/2020) – \$5.92B (0.17%)

Underlying Funds

S&P Global LargeMidCap Natural Resources Index NL Fund (ZVB5) – 1,058,381,269 (0.03%)

Bloomberg Roll Select Commodity Indx SM NL FD (ZVME) – 285,695,238 (0.01%)

S&P Global Infrastructure Index NL CTF (ZVPY) – 606,577,702 (0.02%)

U.S. TIPS Indx NL Fund (CMTP) – 2,360,886,679 (0.07%)

SSGA Firm AUM (12/31/2020) - 3,467,466,564,524

Part II

SMCERA AUM (12/31/2020) - \$ 227,469,523 (3.84%)

Real Asset Strategy AUM (12/31/2020) - \$5.92B

A handwritten signature in cursive script, appearing to read "Melissa Lo".

Signed by: Melissa Lo, Officer, SSGA Global Investment Oversight

Dated: January 19, 2021

Name of Firm State Street Global Advisors

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

February 23, 2021

Agenda Item 4.11

TO: Board of Retirement

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

SUBJECT: Preliminary Semi-Annual Financial Report for the Period Ended December 31, 2020

Recommendation

Accept the Preliminary Semi-Annual Financial Report for the Period Ended December 31, 2020.

Background

The preliminary semi-annual financial report provides financial information on SamCERA's financial position as of December 31, 2020, and its operating results for the period ended December 31, 2020.

The *Statement of Fiduciary Net Position* (balance sheet) provides a snapshot of the account balance as of December 31, 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 period ended December 31, 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 retiree benefit payments, member refunds, administrative and information technology expenses.

Summary

SamCERA's financial position manifested an impressive increase over the six-months ended December 31, 2020. Its net position increased by \$824 million, or 17%, to \$5.6 billion, predominantly from appreciation on investments fueled by strong market performance, particularly in international equity. The increase not only brought the portfolio value to a record high but also reinforced the financial strength of the Retirement Fund.

Statement of Fiduciary Net Position

The table below shows SamCERA's preliminary Statement of Fiduciary Net Position as of December 31, 2020. Its assets and liabilities were compared to those on July 1, 2020, to reflect changes over the first six-months of the fiscal year. Significant changes are discussed below.

Statement of Fiduciary Net Position

| | Preliminary | Actual | Increase (Decrease) | |
|---|--------------------------------|--------------------------------|------------------------------|------------|
| | 12/31/20 | 7/1/20 | Amount | Percentage |
| ASSETS: | | | | |
| Cash and Cash Equivalents | \$ 236,323,951 | \$ 107,989,686 | \$ 128,334,265 | 119% |
| Cash Management Overlay | 41,631,469 | 54,095,321 | (12,463,852) | -23% |
| Securities Lending Cash Collateral | 2,300,537 | 2,423,778 | (123,241) | -5% |
| Subtotal - Cash and Other Cash Related Activities | <u>280,255,957</u> | <u>164,508,785</u> | <u>115,747,172</u> | 70% |
| Receivables | | | | |
| Contributions | - | 12,376,867 | (12,376,867) | -100% |
| Due from Broker for Investments Sold | 121,863,624 | 78,103,219 | 43,760,405 | 56% |
| Investment Income | 6,645,075 | 5,390,580 | 1,254,495 | 23% |
| Securities Lending Income | 1,605 | 2,752 | (1,147) | -42% |
| Other Receivable | 83,907 | 86,859 | (2,952) | -3% |
| Subtotal - Receivables | <u>128,594,211</u> | <u>95,960,277</u> | <u>32,633,934</u> | 34% |
| Investments at Fair Value | | | | |
| Fixed Income | 1,560,270,070 | 1,434,811,710 | 125,458,360 | 9% |
| Public Equity | 2,216,109,378 | 1,866,264,297 | 349,845,081 | 19% |
| Alternatives | 755,875,170 | 593,379,227 | 162,495,943 | 27% |
| Inflation Hedge | 756,211,604 | 704,360,824 | 51,850,780 | 7% |
| Subtotal - Investment at Fair Value | <u>5,288,466,222</u> | <u>4,598,816,058</u> | <u>689,650,164</u> | 15% |
| Capital Assets | 8,108,286 | 8,108,286 | - | 0% |
| Less: Accumulated Depreciation | <u>(3,317,886)</u> | <u>(2,898,888)</u> | <u>(418,998)</u> | 14% |
| Capital Assets, Net of Accumulated Depreciation | <u>4,790,400</u> | <u>5,209,398</u> | <u>(418,998)</u> | -8% |
| TOTAL ASSETS | <u>5,702,106,790</u> | <u>4,864,494,518</u> | <u>837,612,272</u> | 17% |
| LIABILITIES: | | | | |
| Payable - Investment Management Fees | 2,667,913 | 2,035,363 | 632,550 | 31% |
| Due to Broker for Investments Purchased | 91,438,587 | 78,241,899 | 13,196,688 | 17% |
| Securities Lending Cash Collateral - Due to Borrowers | 2,300,537 | 2,423,778 | (123,241) | -5% |
| Other | 912,984 | 1,291,165 | (378,181) | -29% |
| TOTAL LIABILITIES | <u>97,320,021</u> | <u>83,992,205</u> | <u>13,327,816</u> | 16% |
| NET POSITION RESTRICTED FOR PENSIONS | <u>\$ 5,604,786,769</u> | <u>\$ 4,780,502,313</u> | <u>\$ 824,284,456</u> | 17% |

Assets. SamCERA's total assets increased by \$838 million, or 17%, compared to six months ago. Significant changes of specific items include the following:

- Cash and Cash Equivalents increased by \$128 million. Prepayments from the County usually come in two equal installments with the first due in July and the second in January. The second installment of \$101.5 million was transferred to the Retirement Fund in December, a bit earlier than anticipated.

- Cash Management Overlay decreased by \$12 million. The variation margin available in the cash overly account exceeded the recommended level. As a result, most of the excess margin were transferred out of this account.
- Receivables overall increased by \$33 million. Most receivables from the prior fiscal year-end were fully settled shortly after the fiscal year began, including the \$12 million from contributions. The increase primarily attributed to two pending investment transactions, including \$27 million from a fixed income account and \$18 million from stock distributions.
- Investments overall increased by \$690 million. The increase was twofold, partly from new capital added to the portfolio and partly from market appreciation across all investment types, particularly in international equity.

Liabilities. SamCERA's total liabilities increased by \$13 million, or 16%, compared to six-months ago. Several investments purchased in November and December of 2020 were not settled until January 2021, accounting for nearly all the increase reported.

Statement of Changes in Fiduciary Net Position

SamCERA's preliminary Statement of Changes in Fiduciary Net Position (income statement) for the six-months ended December 31, 2020, is presented on page 4. Additions to and deductions from the Retirement Fund for the first fiscal half year were compared to those of the same period last year. Significant changes are discussed below.

Additions. A total of \$957 million was added to the Retirement Fund during the first fiscal half year, a 165% higher than the same period last year. Significant changes are discussed below.

- Employer Contributions were \$115 million higher than the same period last year. Of this amount, about \$101.5 million was attributable to the early transfer of the second prepayment from the County in December 2020. The remaining increase was due to two major reasons: (1) a modest increase in covered payroll triggered by negotiated increases in salaries and (2) a moderate increase in contribution rates driven by lowering the assumed investment return for fiscal year 2020-21 by a quarter percent.
- Employee Contributions were \$4 million higher than the same period last year for the two major reasons discussed earlier.
- Investment Income overall was \$476 million higher than the same period last year. The market performance was stunning despite of the COVID-19 pandemic outbreak, creating a fabulous return to the portfolio.

Deductions. A total of \$132 million was taken out from the Retirement Fund during the first half of the fiscal year, 7% more than for the same period last year. Significant changes are discussed below.

- Service retirement benefits increased by 9%. The number of retirees receiving benefits increased by 162, from 5,318 in December 2019 to 5,480 in December 2020. In addition, the final average compensations for newly retired members were relatively higher.
- Administrative expenses experienced a 10% increase, due mainly to negotiated increases in salaries.
- Information technology expenses declined modestly by 7%. Because of the pandemic, the IT team shifted its focus to support the “working from home” business model. As a result, certain IT projects were deferred.

Statement of Changes in Fiduciary Net Position

| | <u>Preliminary</u> | <u>Actual</u> | <u>Increase (Decrease)</u> | |
|--|------------------------------|------------------------------|------------------------------|-------------------|
| | <u>7/1/20 - 12/31/20</u> | <u>7/1/19 - 12/31/19</u> | <u>Amount</u> | <u>Percentage</u> |
| ADDITIONS: | | | | |
| Contributions | | | | |
| Employer Contributions | \$ 211,892,097 | \$ 96,711,217 | \$ 115,180,880 | 119% |
| Employee Contributions | 34,966,317 | 31,226,186 | 3,740,131 | 12% |
| Subtotal - Contributions | <u>246,858,414</u> | <u>127,937,403</u> | <u>118,921,011</u> | 93% |
| Investment Income | | | | |
| Interest and Dividends | 37,235,839 | 41,684,142 | (4,448,303) | -11% |
| Net Appreciation (Depreciation) in fair value of investments | 701,785,582 | 215,967,708 | 485,817,874 | 225% |
| Less: Investment Expense | <u>(29,254,772)</u> | <u>(24,357,091)</u> | <u>(4,897,681)</u> | 20% |
| Subtotal - Investment Income | <u>709,766,649</u> | <u>233,294,759</u> | <u>476,471,890</u> | 204% |
| Securities Lending Income | | | | |
| Earnings | 6,541 | 21,878 | (15,337) | -70% |
| Rebates | 3,923 | - | 3,923 | N/A |
| Less: Securities Lending Expenses | <u>(2,294)</u> | <u>(8,100)</u> | <u>5,806</u> | 72% |
| Subtotal - Securities Lending Income | <u>8,170</u> | <u>13,778</u> | <u>(5,608)</u> | -41% |
| Other Additions | - | 13,893 | (13,893) | -100% |
| Total Additions | <u>956,633,233</u> | <u>361,259,833</u> | <u>595,373,400</u> | 165% |
| DEDUCTIONS: | | | | |
| Benefits | | | | |
| Service Retirement Allowance | 112,650,680 | 103,752,689 | 8,897,991 | 9% |
| Disability Retirement Allowance | 13,875,747 | 13,828,973 | 46,774 | 0% |
| Survivor, Death and Other Benefits | <u>688,928</u> | <u>464,442</u> | <u>224,486</u> | 48% |
| Subtotal - Benefits | <u>127,215,355</u> | <u>118,046,104</u> | <u>9,169,251</u> | 8% |
| Refund of Member Contributions | 1,094,115 | 1,485,458 | (391,343) | -26% |
| Administrative Expenses | 3,354,110 | 3,036,585 | 317,525 | 10% |
| Information Technology Expenses | <u>685,197</u> | <u>736,644</u> | <u>(51,447)</u> | -7% |
| Total Deductions | <u>132,348,777</u> | <u>123,304,791</u> | <u>9,043,986</u> | 7% |
| Net Income | <u>\$ 824,284,456</u> | <u>\$ 237,955,042</u> | <u>\$ 586,329,414</u> | 246% |

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

February 23, 2021

Agenda Item 4.12

TO: Board of Retirement

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

SUBJECT: Preliminary Semi-Annual Budget-to-Actual Report for the Period Ended December 31, 2020

Recommendation

Accept the Preliminary Semi-Annual Budget-to-Actual Report for the Period Ended December 31, 2020.

Background

SamCERA's budget covers three different areas as follows:

1. Administrative Budget – covers personnel expenses (salaries and benefits) and administrative overhead (services and supplies), which 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 for investment related matters (Government Code §31596.1).

Discussion

The mid-year budget and actual expense comparison indicated that SamCERA's actual spending during the first half of the fiscal year was well managed and controlled.

| | Budget Through 6/30/2021 | Actual Through 12/31/2020 | Percentage of Budget Used |
|----------------|---|--|--|
| Investment | \$ 30,232,571 | \$ 18,935,678 | 63% |
| Administration | 7,232,983 | 3,354,111 | 46% |
| Technology | 1,225,500 | 266,199 | 22% |
| Total | <u>\$ 38,691,054</u> | <u>\$ 22,555,988</u> | 58% |

Professional Services Budget. Actual professional service expenses were about \$19 million in total for the six-months ended December 31, 2020.

| Investment Management & Other Professional Services | | | | |
|--|------------------------------------|-----------------------------------|------------------------|--|
| Service | Projected Fee Fiscal Year 20-21 | Actual Fee Through 12/31/20 | Actual Fee (bps) | Percentage of Projected Fee Used |
| Investment Management | 29,118,571 | 18,366,136 | 64.4 | 63% |
| Other Professional Services | 1,114,000 | 569,542 | 2.0 | 51% |
| Total | \$ 30,232,571 | \$ 18,935,678 | 66.4 | 63% |

- **Investment management fees** are either driven by contractual agreements or based on assets under management, the amount of capital committed, and/or investment performance. Below is a summary of budget and actual expenses comparison through December 31, 2020. The actual investment management fees were moderately above the mid-year projections due primarily to the underestimation of performance fees for certain funds in fixed income, alternative assets, and inflation hedge.

| Investment Management Services | | | | |
|---------------------------------------|------------------------------------|-----------------------------------|------------------------|--|
| Investment | Projected Fee Fiscal Year 20-21 | Actual Fee Through 12/31/20 | Actual Fee (bps) | Percentage of Projected Fee Used |
| Total Public Equity | \$ 5,823,940 | \$ 2,231,630 | 28.6 | 38% |
| Total Fixed Income | 6,534,501 | 5,636,253 | 50.9 | 86% |
| Total Alternative Assets | 10,750,678 | 6,721,380 | 177.8 | 63% |
| Total Inflation Hedge | 5,778,202 | 3,681,544 | 97.3 | 64% |
| Total Cash Overlay | 231,250 | 95,330 | N/A | 41% |
| Total | \$ 29,118,571 | \$ 18,366,136 | 64.4 | 63% |

- **Other professional service charges** are primarily based on contractual agreements. Actuarial consulting and audit fees were slightly above the budget since most fees were paid during the first half of the fiscal year, following the completion of the annual valuation and triennial audit.

| Other Professional Services | | | | | |
|------------------------------------|-----------------------|--|-----------------------------------|------------------------|--|
| Contractor | Service | Projected Fee Fiscal Year 20- 21 | Actual Fee Through 12/31/20 | Actual Fee (bps) | Percentage of Projected Fee Used |
| Milliman Inc. | Actuarial Consulting | \$ 139,000 | \$ 91,750 | 0.3 | 66% |
| Cheiron Inc. | Actuarial Audit | 90,000 | 54,683 | 0.2 | 61% |
| Verus Investments | Investment Consulting | 535,000 | 248,759 | 0.9 | 46% |
| Northern Trust | Custodian | 350,000 | 174,350 | 0.6 | 50% |
| | Total | \$ 1,114,000 | \$ 569,542 | 2.0 | 51% |

Administrative Budget. About 46%, or \$3.9 million, of the administrative budget were consumed during the first fiscal half year. The following table summarizes all administrative expenses with explanations as to why the actual results of certain items significantly differ from the projected outcomes.

| | Budget Through 6/30/2021 | Actual Through 12/31/2020 | Percentage of Budget Used | Under Budget | Percentage of Budget Remaining |
|-------------------------------------|---|--|--|-------------------------|---|
| Salaries and Benefits | | | | | |
| Salaries | \$ 3,705,944 | \$ 1,852,648 | 50% | \$ 1,853,296 | 50% |
| Benefits | 1,842,223 | 819,852 | 45% | 1,022,371 | 55% |
| Total Salaries and Benefits | 5,548,167 | 2,672,500 | 48% | 2,875,667 | 52% |
| Services and Supplies | | | | | |
| Board Expenses | 8,000 | 2,800 | 35% | 5,200 | 65% |
| Insurance | 72,050 | 34,185 | 47% | 37,865 | 53% |
| Medical record and hearing services | 75,000 | - | 0% | 75,000 | 100% |
| Member Education | 63,750 | 19,450 | 31% | 44,300 | 69% |
| Education and Conference | 98,914 | 13,488 | 14% | 85,426 | 86% |
| Transportation and Lodging | 90,910 | 16,578 | 18% | 74,332 | 82% |
| Property and Equipment | 24,082 | 8,603 | 36% | 15,479 | 64% |
| General Office Supplies | 37,127 | 6,962 | 19% | 30,165 | 81% |
| Postage and Printing | 25,000 | 2,606 | 10% | 22,394 | 90% |
| Leased Facilities | 655,272 | 327,522 | 50% | 327,750 | 50% |
| County Services | 349,711 | 195,620 | 56% | 154,091 | 44% |
| Audit Services | 60,000 | 46,422 | 77% | 13,578 | 23% |
| Other Administration | 125,000 | 7,375 | 6% | 117,625 | 94% |
| Total Services and Supplies | 1,684,816 | 681,611 | 40% | 1,003,205 | 60% |
| Total | \$ 7,232,983 | \$ 3,354,111 | 46% | \$ 3,878,872 | 54% |

Salaries and Benefits – Salaries were perfectly in line with the mid-year expectation. Benefits were slightly below expectations as actual employer contributions to pension and payroll taxes fell short of projections.

Services and Supplies – Most actual expenses were slightly below the mid-year expectations. Significant variances are explained in the following:

- Medical Record and Hearing Services – During the six-month period, none of the members applying for disability were advised to take independent medical evaluation nor were any formal hearings held.
- Member Education – The number of classes held by Financial Knowledge Network LLC, an entity offering financial knowledge to members, was less than anticipated. Payments from “no show” registrants also offset part of the actual expenses incurred.

- “Education and Conference” and “Transportation and Lodging” – Due to the COVID-19 pandemic outbreak, all training and conferences were delivered through virtual environments to mitigate the risk of transmission. This change significantly reduced the overall spending on training, conferences, and related travel and lodging.
- Property and Equipment – The usage for copiers and printers declined sharply since the “working from home” business model was implemented. In addition, requests for new office equipment were sparse.
- General Office Supplies – The need to replenish office supplies diminished as staff continues to work from home.
- Postage and Printing – Mailing of monthly benefit statements was suspended since the outbreak of COVID-19. Traditionally, bulk mail takes place in the second half of the fiscal year when the IRS Form 1099Rs were distributed to members for tax reporting purposes.
- Audit Services – The final audit always takes place in the first half of the fiscal year, and the interim audit in the second half. About two-thirds of the budget were used to defray expenses incurred for the final audit, which is always more costly than the interim.
- Other Administration – A private counsel was hired to handle disability cases, and the actual level of services turned out to be much less than anticipated.

Technology Budget. Actual expenses were substantially below the mid-year expectations in all budget categories. The table below compares the actual and budgeted amounts with explanations for significant variances.

| | <u>Budget Through 6/30/2021</u> | <u>Actual Through 12/31/2020</u> | <u>Percentage of Budget Used</u> | <u>Under Budget</u> | <u>Percentage of Budget Remaining</u> |
|--|---|--|--|--------------------------|---|
| Computer Equipment and Software | \$ 30,000 | \$ 2,733 | 9% | \$ 27,267 | 91% |
| Software License Maintenance | 529,500 | 195,465 | 37% | 334,035 | 63% |
| Imaging | 50,000 | - | 0% | 50,000 | 100% |
| Maintenance Tools & Equipment | 300,000 | - | 0% | 300,000 | 100% |
| Contract IT Services | 306,000 | 68,001 | 22% | 237,999 | 78% |
| Technology Research and Development | 10,000 | - | 0% | 10,000 | 100% |
| Total - Information Technology Budget | <u>\$ 1,225,500</u> | <u>\$ 266,199</u> | 22% | <u>\$ 959,301</u> | 78% |

Note: The depreciation expense of \$418,998 was a non-cash item and not included in the budget-to-actual comparison. The expense was reported in the Statement of Changes in Fiduciary Net Position for financial reporting purposes.

- Computer Equipment and Software – Requests for acquiring or replacing computer equipment and software fell short of expectations.

- Software License Maintenance – Maintenance fees for software licenses are due at different time intervals, and majority of these fees are payable in the second half of the fiscal year.
- Contract IT Services – Most of the budget for this category was allocated to develop a new member mobile application with a better, user friendly interface. The remaining budget was for the upgrade of audio/video, cyber security, and other technologies. The expenses reported were predominantly for the development of the new mobile application.

Since the “working from home” order was put in place, the IT team switched its priorities to support the “working remotely” business model and other time-sensitive projects. As a result, the following projects were delayed:

- Imaging – an Electronic Content Management project converting documents from paper to digital, a highly effective means to save storage costs in the long-run.
- Maintenance Tools & Equipment – a profound project dedicated to enhancing SamCERA’s capacities in handling its workloads as well as creating a robust business continuance and disaster recovery plan.
- Technology Research and Development – an ongoing project focuses on exploring new technologies that may benefit SamCERA and its key stakeholders.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

February 23, 2021

Agenda Item 6.1

TO: Board of Retirement

FROM: Michael Coultrip, Chief Investment Officer 

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

Recommendation

Accept the preliminary performance report dated January 31, 2021.

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 January was 0.2%, bringing the preliminary trailing twelve-month net return ending January 2021 to 10.1%. The preliminary twelve-month net return is above SamCERA's Plan Benchmark return of 9.0% and above SamCERA's Actuarial Assumed Earnings Rate of 6.5%.

U.S. stocks reached record highs during the month, but lost ground during the last week to end the month lower. A short squeeze on heavily shorted names resulted in increased volatility by the end of the month. Global equity markets were mixed during January, with U.S. small-cap and emerging market equity continuing their recent strong performance, while U.S. large-cap and international developed market equity were down on the month. The U.S. equity market (measured by the S&P 500 Index) was down 1%. Small-cap stocks were up an impressive 5.0%. Developed international equity (as measured by MSCI EAFE) was down 1.1% while emerging markets were up 3.1%.

Economic data was mixed. The first estimate of 4th quarter real GDP was higher by 4% on an annualized basis. Both manufacturing and consumer confidence were higher while the labor market continued to show weakness due to COVID-19 impacts.

The general U.S. fixed income market was lower by 0.7% as interest rates rose (and the yield curve steepened). The 10-year U.S. Treasury yield was higher by 15 basis points during the month and ended at 1.07% by month-end. High Yield returns were up 0.3% as high-yield credit spreads narrowed.

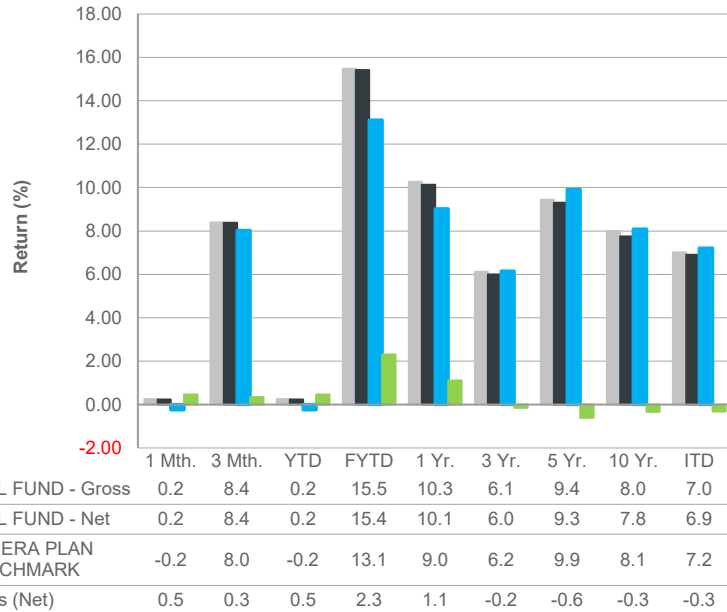
Attachments

Northern Trust Monthly Preliminary Performance Report
Verus Capital Market Update

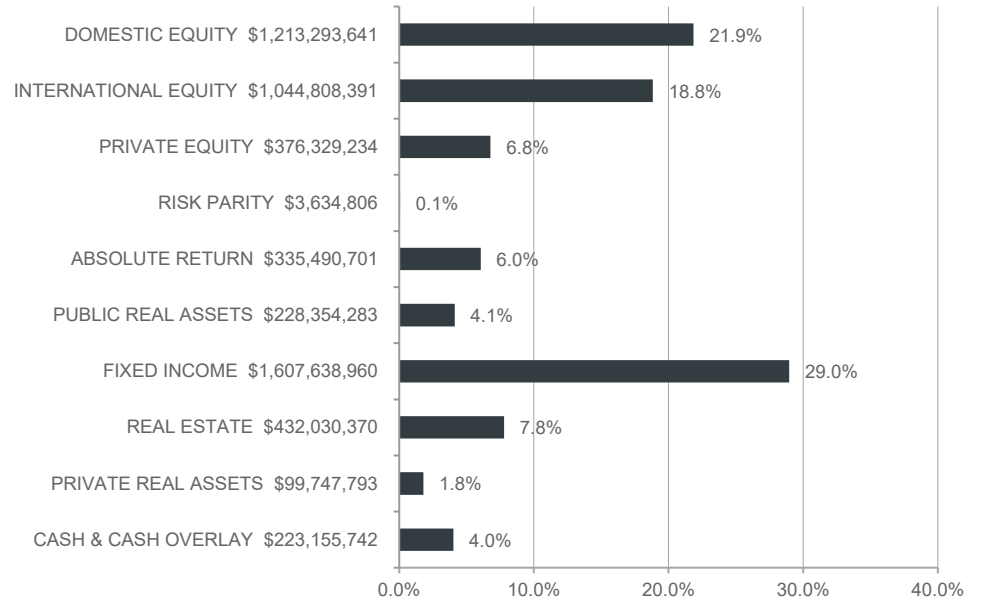
San Mateo County Composite Return Summary January 31, 2021



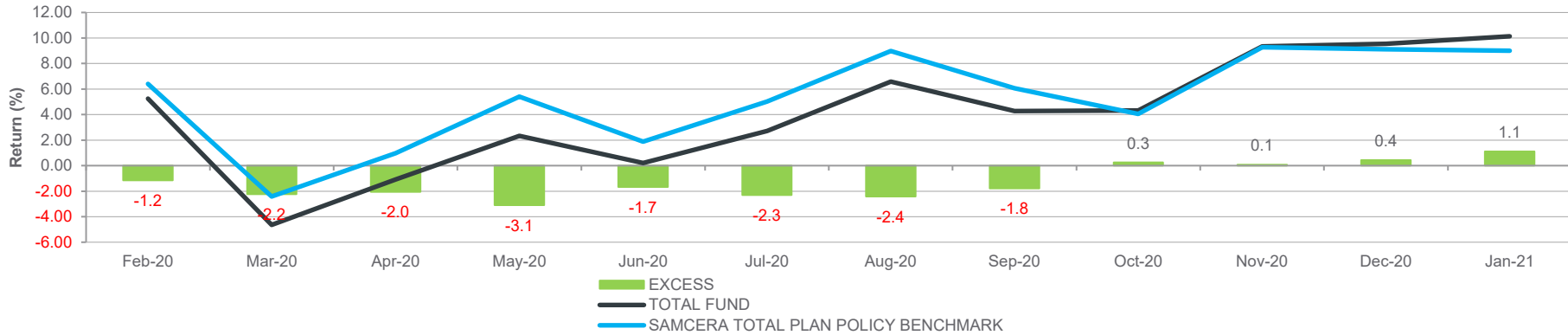
Total Fund Performance



Asset Allocation



Rolling Month End Annual Returns

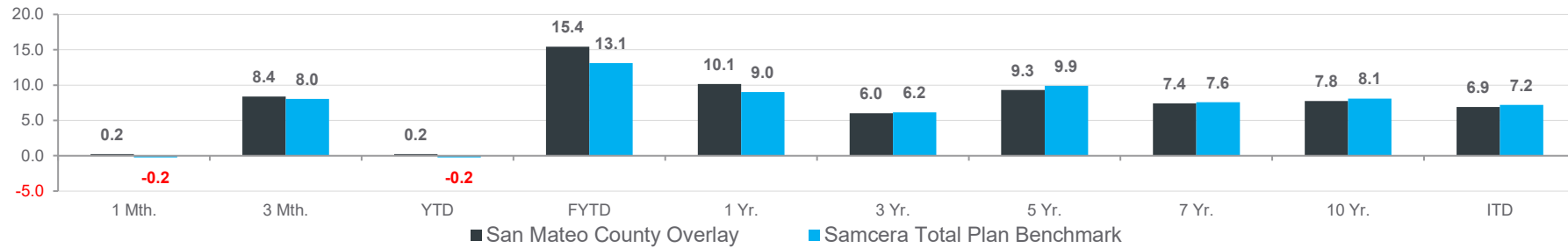


San Mateo County Composite Return Summary

January 31, 2021



Return Comparison



| Composite Returns (Net of Manager Fees) | Market Value (\$) | 1 Mth. | 3 Mth. | YTD | FYTD | 1 Yr. | 3 Yr. | 5 Yr. | 7 Yr. | 10 Yr. | ITD |
|---|-------------------|--------|--------|------|-------|-------|-------|-------|-------|--------|------|
| San Mateo County Overlay | 5,550,459,240 | 0.2 | 8.4 | 0.2 | 15.4 | 10.1 | 6.0 | 9.3 | 7.4 | 7.8 | 6.9 |
| Samcera Total Plan Benchmark | | -0.2 | 8.0 | -0.2 | 13.1 | 9.0 | 6.2 | 9.9 | 7.6 | 8.1 | 7.2 |
| Excess | | 0.5 | 0.3 | 0.5 | 2.3 | 1.1 | -0.2 | -0.6 | -0.2 | -0.3 | -0.3 |
| San Mateo Ex-Clifton Overlay | 5,541,775,156 | 0.2 | 8.3 | 0.2 | 15.4 | 10.1 | 5.9 | 9.2 | 7.3 | 7.7 | 6.8 |
| Samcera Total Plan Benchmark | | -0.2 | 8.0 | -0.2 | 13.1 | 9.0 | 6.2 | 9.9 | 7.6 | 8.1 | 7.2 |
| Excess | | 0.5 | 0.3 | 0.5 | 2.3 | 1.0 | -0.3 | -0.7 | -0.3 | -0.4 | -0.4 |
| Total Equity | 2,258,102,032 | -0.1 | 16.8 | -0.1 | 23.1 | 15.9 | 7.6 | 13.3 | 9.7 | 9.8 | 8.2 |
| Samcera Total Equity Benchmark | | -0.0 | 17.5 | -0.0 | 23.5 | 16.9 | 8.0 | 14.4 | 10.8 | 10.7 | 8.8 |
| Excess | | -0.1 | -0.7 | -0.1 | -0.4 | -1.0 | -0.4 | -1.1 | -1.1 | -0.9 | -0.6 |
| Fixed Income | 1,607,638,960 | -0.1 | 2.4 | -0.1 | 4.7 | 5.3 | 5.1 | 5.9 | 4.6 | 5.0 | 5.6 |
| Samcera Fixed Income Benchmark | | -0.5 | 1.7 | -0.5 | 3.2 | 5.2 | 5.7 | 5.1 | 4.2 | 4.1 | 5.1 |
| Excess | | 0.4 | 0.7 | 0.4 | 1.5 | 0.1 | -0.6 | 0.7 | 0.4 | 0.8 | 0.4 |
| Risk Parity | 3,634,806 | 0.0 | 0.0 | 0.0 | -0.0 | -9.1 | 1.4 | 5.9 | 5.0 | -- | 5.2 |
| Samcera Risk Parity Benchmark | | -0.9 | 10.7 | -0.9 | 15.1 | 12.6 | 7.0 | 10.6 | 8.8 | -- | 9.0 |
| Excess | | 0.9 | -10.7 | 0.9 | -15.1 | -21.7 | -5.6 | -4.7 | -3.8 | -- | -3.9 |

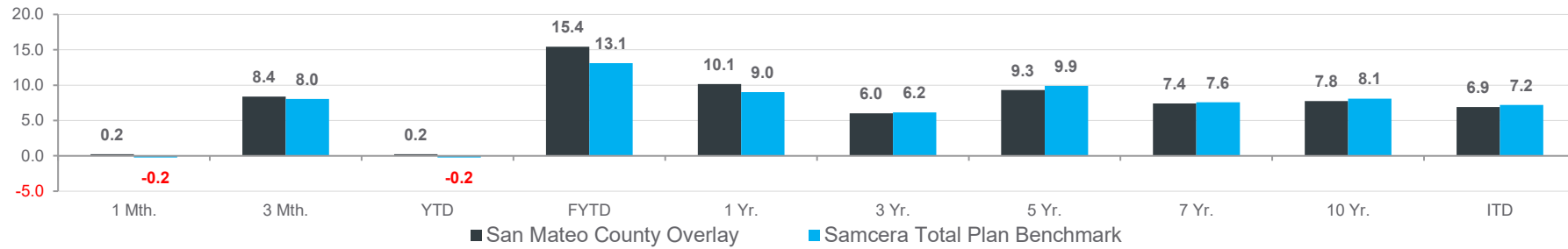


San Mateo County Composite Return Summary

January 31, 2021



Return Comparison



| Composite Returns (Net of Manager Fees) | Market Value (\$) | 1 Mth. | 3 Mth. | YTD | FYTD | 1 Yr. | 3 Yr. | 5 Yr. | 7 Yr. | 10 Yr. | ITD |
|---|-------------------|--------|--------|------|------|-------|-------|-------|-------|--------|------|
| Alternatives | 711,819,935 | 1.2 | 3.2 | 1.2 | 36.5 | 32.3 | 13.0 | 11.2 | 9.4 | 7.8 | 0.3 |
| Samcera Alternatives Benchmark | | -0.8 | 1.5 | -0.8 | 16.6 | 9.5 | 7.9 | 11.0 | 8.3 | 8.6 | 8.0 |
| Excess | | 2.0 | 1.8 | 2.0 | 19.9 | 22.8 | 5.1 | 0.1 | 1.1 | -0.8 | -7.7 |
| Inflation Hedge | 760,132,447 | 1.0 | 4.7 | 1.0 | 6.3 | -5.6 | -0.6 | -- | -- | -- | 3.7 |
| SamCERA Inflation Hedge Index | | -0.0 | 3.6 | -0.0 | 6.5 | -0.3 | 2.1 | -- | -- | -- | 5.0 |
| Excess | | 1.0 | 1.1 | 1.0 | -0.2 | -5.3 | -2.7 | -- | -- | -- | -1.2 |
| Cash | 223,155,742 | 0.1 | 0.1 | 0.1 | 0.4 | 0.7 | 0.9 | 0.9 | 0.7 | 0.7 | 1.8 |
| Samcera Cash Benchmark | | 0.0 | 0.0 | 0.0 | 0.1 | 0.5 | 1.6 | 1.2 | 0.9 | 0.6 | 1.8 |
| Excess | | 0.1 | 0.1 | 0.1 | 0.3 | 0.2 | -0.6 | -0.3 | -0.1 | 0.1 | 0.0 |



San Mateo County Composite Return Summary

January 31, 2021



| Composite Returns (NET) | Market Value (\$) | 1 Mth. | 3 Mth. | YTD | FYTD | 1 Yr. | 3 Yr. | 5 Yr. | 7 Yr. | 10 Yr. | ITD |
|-------------------------------------|-------------------|--------|--------|------|-------|-------|-------|-------|-------|--------|-------|
| Total Equity | 2,258,102,032 | -0.1 | 16.8 | -0.1 | 23.1 | 15.9 | 7.6 | 13.3 | 9.7 | 9.8 | 8.2 |
| Samcera Total Equity Benchmark | | -0.0 | 17.5 | -0.0 | 23.5 | 16.9 | 8.0 | 14.4 | 10.8 | 10.7 | 8.8 |
| Excess | | -0.1 | -0.7 | -0.1 | -0.4 | -1.0 | -0.4 | -1.1 | -1.1 | -0.9 | -0.6 |
| Domestic Equity | 1,213,293,641 | -0.9 | 14.9 | -0.9 | 21.3 | 14.6 | 9.9 | 15.0 | 11.7 | 12.2 | 9.1 |
| Samcera Dom. Equity Benchmark | | -0.4 | 16.7 | -0.4 | 24.7 | 20.5 | 12.4 | 16.8 | 13.0 | 13.4 | 9.7 |
| Excess | | -0.5 | -1.8 | -0.5 | -3.3 | -5.9 | -2.5 | -1.8 | -1.3 | -1.2 | -0.6 |
| Large Cap Equity | 1,122,578,093 | -1.3 | 13.7 | -1.3 | 20.1 | 14.5 | 10.4 | 15.5 | 12.6 | 12.7 | 9.8 |
| Russell 1000 | | -0.8 | 15.5 | -0.8 | 23.4 | 19.8 | 12.5 | 16.7 | 13.4 | 13.6 | 10.4 |
| Excess | | -0.5 | -1.8 | -0.5 | -3.3 | -5.3 | -2.1 | -1.2 | -0.8 | -1.0 | -0.5 |
| Blackrock Russell 1000 | 529,792,003 | -0.9 | 15.6 | -0.9 | 23.9 | 20.5 | 12.7 | -- | -- | -- | 15.9 |
| Russell 1000 | | -0.8 | 15.5 | -0.8 | 23.4 | 19.8 | 12.5 | -- | -- | -- | 15.7 |
| Excess | | -0.0 | 0.0 | -0.0 | 0.5 | 0.7 | 0.2 | -- | -- | -- | 0.2 |
| DE Shaw Commingled Fund | 187,530,355 | -2.8 | 16.3 | -2.8 | 23.7 | 17.8 | 10.9 | 16.6 | -- | -- | 12.8 |
| Russell 1000 | | -0.8 | 15.5 | -0.8 | 23.4 | 19.8 | 12.5 | 16.7 | -- | -- | 12.7 |
| Excess | | -2.0 | 0.8 | -2.0 | 0.2 | -2.0 | -1.6 | -0.1 | -- | -- | 0.1 |
| Acadian US MGD V-SL | 201,270,039 | -0.1 | 11.9 | -0.1 | 14.1 | 3.6 | -- | -- | -- | -- | 13.8 |
| Russell 1000 | | -0.8 | 15.5 | -0.8 | 23.4 | 19.8 | -- | -- | -- | -- | 24.7 |
| Excess | | 0.7 | -3.7 | 0.7 | -9.3 | -16.3 | -- | -- | -- | -- | -10.9 |
| Panagora Defuseq -SL | 203,985,695 | -2.5 | 8.3 | -2.5 | 12.2 | 1.9 | -- | -- | -- | -- | 15.3 |
| Russell 1000 | | -0.8 | 15.5 | -0.8 | 23.4 | 19.8 | -- | -- | -- | -- | 24.7 |
| Excess | | -1.7 | -7.3 | -1.7 | -11.2 | -17.9 | -- | -- | -- | -- | -9.4 |
| Domestic Equity Overlay | 6,591,900 | 14.4 | 42.8 | 14.4 | 53.6 | -- | -- | -- | -- | -- | 79.2 |
| ICE BofAML US 3-Month Treasury Bill | | 0.0 | 0.0 | 0.0 | 0.1 | -- | -- | -- | -- | -- | 0.1 |
| Excess | | 14.4 | 42.8 | 14.4 | 53.6 | -- | -- | -- | -- | -- | 79.1 |
| Small Cap Equity | 97,307,448 | 3.1 | 28.2 | 3.1 | 34.3 | 11.0 | 3.1 | 9.5 | 5.4 | 8.3 | 6.3 |
| Russell 2000 | | 5.0 | 35.2 | 5.0 | 44.8 | 30.2 | 11.1 | 16.5 | 10.6 | 11.8 | 8.7 |
| Excess | | -1.9 | -6.9 | -1.9 | -10.5 | -19.2 | -8.0 | -7.0 | -5.2 | -3.4 | -2.4 |



San Mateo County Composite Return Summary

January 31, 2021



| 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 | 97,307,448 | 3.1 | 28.2 | 3.1 | 34.3 | 11.0 | 3.1 | -- | -- | -- | 8.4 |
| Russell 2000 | | 5.0 | 35.2 | 5.0 | 44.8 | 30.2 | 11.1 | -- | -- | -- | 13.8 |
| Excess | | -1.9 | -6.9 | -1.9 | -10.5 | -19.2 | -8.0 | -- | -- | -- | -5.4 |
| International Equity | 1,044,808,391 | 0.9 | 19.1 | 0.9 | 25.2 | 17.4 | 4.9 | 11.1 | 6.7 | 5.7 | 6.0 |
| SamCERA Custom Hedge Intl | | 0.5 | 18.4 | 0.5 | 22.0 | 12.5 | 2.7 | 10.4 | 5.6 | 4.9 | 5.4 |
| Excess | | 0.4 | 0.7 | 0.4 | 3.2 | 4.9 | 2.1 | 0.7 | 1.1 | 0.8 | 0.6 |
| Baillie Gifford | 361,088,235 | 0.7 | 18.9 | 0.7 | 33.7 | 38.1 | 12.4 | 16.5 | 10.9 | -- | 11.3 |
| MSCI ACWI ex USA Growth | | 0.6 | 16.7 | 0.6 | 26.4 | 24.5 | 8.8 | 14.0 | 9.0 | -- | -- |
| Excess | | 0.1 | 2.2 | 0.1 | 7.3 | 13.6 | 3.7 | 2.5 | 1.9 | -- | -- |
| Blackrock MSCI ACWI ex US IMI | 339,652,639 | 0.1 | 20.1 | 0.1 | 25.3 | -- | -- | -- | -- | -- | 21.2 |
| MS AC WIdxUS IMI Nt | | 0.2 | 20.1 | 0.2 | 25.4 | -- | -- | -- | -- | -- | 21.6 |
| Excess | | -0.0 | 0.0 | -0.0 | -0.1 | -- | -- | -- | -- | -- | -0.4 |
| Mondrian Investment Partners | 343,101,342 | 1.0 | 22.5 | 1.0 | 24.8 | 4.9 | 0.1 | 7.3 | 4.1 | 4.3 | 5.2 |
| MSCI ACWI xUSA Value | | -0.1 | 23.5 | -0.1 | 23.3 | 4.3 | -1.8 | 8.0 | 2.9 | 3.1 | 4.9 |
| Excess | | 1.1 | -1.0 | 1.1 | 1.5 | 0.6 | 1.9 | -0.7 | 1.2 | 1.2 | 0.3 |
| Currency Hedge Futures | 368,759,690 | -0.7 | 3.3 | -0.7 | 6.6 | -- | -- | -- | -- | -- | 8.0 |
| ICE BofAML US 3-Month Treasury Bill | | 0.0 | 0.0 | 0.0 | 0.1 | -- | -- | -- | -- | -- | 0.1 |
| Excess | | -0.8 | 3.3 | -0.8 | 6.5 | -- | -- | -- | -- | -- | 7.9 |
| Currency Hedge Futures Offsets | 368,759,690 | 0.0 | 0.0 | 0.0 | 0.0 | -- | -- | -- | -- | -- | 0.0 |
| ICE BofAML US 3-Month Treasury Bill | | 0.0 | 0.0 | 0.0 | 0.1 | -- | -- | -- | -- | -- | 0.1 |
| Excess | | -0.0 | -0.0 | -0.0 | -0.1 | -- | -- | -- | -- | -- | -0.1 |
| International Equity Overlay | 966,175 | 7.6 | 26.1 | 7.6 | 34.3 | -- | -- | -- | -- | -- | 50.6 |
| ICE BofAML US 3-Month Treasury Bill | | 0.0 | 0.0 | 0.0 | 0.1 | -- | -- | -- | -- | -- | 0.1 |
| Excess | | 7.6 | 26.1 | 7.6 | 34.2 | -- | -- | -- | -- | -- | 50.6 |
| Fixed Income | 1,607,638,960 | -0.1 | 2.4 | -0.1 | 4.7 | 5.3 | 5.1 | 5.9 | 4.6 | 5.0 | 5.6 |
| Samcera Fixed Income Benchmark | | -0.5 | 1.7 | -0.5 | 3.2 | 5.2 | 5.7 | 5.1 | 4.2 | 4.1 | 5.1 |
| Excess | | 0.4 | 0.7 | 0.4 | 1.5 | 0.1 | -0.6 | 0.7 | 0.4 | 0.8 | 0.4 |



San Mateo County Composite Return Summary

January 31, 2021



| Composite Returns (NET) | Market Value (\$) | 1 Mth. | 3 Mth. | YTD | FYTD | 1 Yr. | 3 Yr. | 5 Yr. | 7 Yr. | 10 Yr. | ITD |
|-------------------------------------|-------------------|--------|--------|------|------|-------|-------|-------|-------|--------|------|
| Core Fixed Income | 1,052,860,356 | -0.5 | 1.2 | -0.5 | 2.0 | 5.5 | 5.1 | 4.9 | 4.3 | 4.5 | 5.3 |
| BBG Barclays US Aggregate | | -0.7 | 0.4 | -0.7 | 0.6 | 4.7 | 5.5 | 4.0 | 3.8 | 3.8 | 5.0 |
| Excess | | 0.2 | 0.8 | 0.2 | 1.5 | 0.7 | -0.4 | 0.9 | 0.5 | 0.7 | 0.3 |
| FIAM B Core Bond | 269,825,570 | -0.7 | 1.1 | -0.7 | 2.2 | 7.0 | 6.5 | 5.2 | -- | -- | 5.2 |
| BBG Barclays US Aggregate | | -0.7 | 0.4 | -0.7 | 0.6 | 4.7 | 5.5 | 4.0 | -- | -- | 4.0 |
| Excess | | 0.0 | 0.7 | 0.0 | 1.6 | 2.3 | 1.0 | 1.2 | -- | -- | 1.2 |
| Western Total Return | 198,082,058 | -0.7 | 3.4 | -0.7 | 6.0 | 5.5 | 3.9 | 6.1 | -- | -- | 4.9 |
| BBG Barclays US Aggregate | | -0.7 | 0.4 | -0.7 | 0.6 | 4.7 | 5.5 | 4.0 | -- | -- | 3.9 |
| Excess | | 0.0 | 3.0 | 0.0 | 5.4 | 0.8 | -1.6 | 2.1 | -- | -- | 1.0 |
| Blackrock Inter Gov | 120,020,114 | -0.2 | -0.0 | -0.2 | -0.1 | 4.2 | 4.5 | -- | -- | -- | 3.4 |
| BBG Barclays US Aggregate | | -0.7 | 0.4 | -0.7 | 0.6 | 4.7 | 5.5 | -- | -- | -- | 4.7 |
| Excess | | 0.5 | -0.4 | 0.5 | -0.7 | -0.5 | -1.0 | -- | -- | -- | -1.3 |
| DoubleLine | 231,122,250 | -0.0 | 1.2 | -0.0 | 1.8 | -- | -- | -- | -- | -- | 5.5 |
| BBG Barclays US Aggregate | | -0.7 | 0.4 | -0.7 | 0.6 | -- | -- | -- | -- | -- | 2.9 |
| Excess | | 0.7 | 0.8 | 0.7 | 1.3 | -- | -- | -- | -- | -- | 2.6 |
| NISA Core Bond | 214,159,959 | -0.7 | 0.4 | -0.7 | 0.7 | -- | -- | -- | -- | -- | 2.3 |
| BBG Barclays US Aggregate | | -0.7 | 0.4 | -0.7 | 0.6 | -- | -- | -- | -- | -- | 1.7 |
| Excess | | 0.0 | 0.0 | 0.0 | 0.1 | -- | -- | -- | -- | -- | 0.6 |
| Core Fixed Income Overlay | 19,650,406 | -1.0 | -0.4 | -1.0 | -1.9 | -- | -- | -- | -- | -- | -1.3 |
| ICE BofAML US 3-Month Treasury Bill | | 0.0 | 0.0 | 0.0 | 0.1 | -- | -- | -- | -- | -- | 0.1 |
| Excess | | -1.0 | -0.5 | -1.0 | -2.0 | -- | -- | -- | -- | -- | -1.4 |
| Opportunistic Credit | 554,778,603 | 0.7 | 5.0 | 0.7 | 10.3 | 5.0 | 5.2 | 8.0 | 6.1 | 7.0 | 8.5 |
| BB Barc BA Intermediate HY Ind | | 0.1 | 4.6 | 0.1 | 8.8 | 7.6 | 6.7 | 7.8 | 5.8 | 6.5 | 7.4 |
| Excess | | 0.6 | 0.5 | 0.6 | 1.5 | -2.6 | -1.4 | 0.3 | 0.3 | 0.6 | 1.1 |
| Pimco Private Income | 40,863,927 | 0.0 | -0.0 | 0.0 | 12.8 | 6.2 | -- | -- | -- | -- | 5.9 |
| BB Barc BA Intermediate HY Ind | | 0.1 | 4.6 | 0.1 | 8.8 | 7.6 | -- | -- | -- | -- | 8.2 |
| Excess | | -0.1 | -4.6 | -0.1 | 4.0 | -1.4 | -- | -- | -- | -- | -2.2 |



San Mateo County Composite Return Summary

January 31, 2021



| Composite Returns (NET) | Market Value (\$) | 1 Mth. | 3 Mth. | YTD | FYTD | 1 Yr. | 3 Yr. | 5 Yr. | 7 Yr. | 10 Yr. | ITD |
|--------------------------------|-------------------|--------|--------|------|------|-------|-------|-------|-------|--------|------|
| AG CREDIT SOL FU LP | 11,911,104 | 0.0 | 7.3 | 0.0 | 14.4 | 21.5 | -- | -- | -- | -- | 19.7 |
| BB Barc BA Intermediate HY Ind | | 0.1 | 4.6 | 0.1 | 8.8 | 7.6 | -- | -- | -- | -- | 7.2 |
| Excess | | -0.1 | 2.8 | -0.1 | 5.6 | 13.9 | -- | -- | -- | -- | 12.5 |
| AG CSF ANX DISLOC FD | 15,287,366 | 0.0 | 4.6 | 0.0 | 10.8 | -- | -- | -- | -- | -- | 10.8 |
| BB Barc BA Intermediate HY Ind | | 0.1 | 4.6 | 0.1 | 8.8 | -- | -- | -- | -- | -- | 19.8 |
| Excess | | -0.1 | 0.0 | -0.1 | 1.9 | -- | -- | -- | -- | -- | -9.0 |
| AG Opportunistic Whole Loan | 1,969,914 | 0.0 | 7.3 | 0.0 | 17.2 | -9.0 | 12.6 | 11.2 | -- | -- | 8.2 |
| BB Barc BA Intermediate HY Ind | | 0.1 | 4.6 | 0.1 | 8.8 | 7.6 | 6.7 | 7.8 | -- | -- | 5.6 |
| Excess | | -0.1 | 2.7 | -0.1 | 8.4 | -16.6 | 6.0 | 3.4 | -- | -- | 2.6 |
| Angelo Gordon | 34,270 | 0.0 | 10.8 | 0.0 | 76.6 | 51.4 | 32.8 | 24.8 | 20.2 | -- | 18.9 |
| BB Barc BA Intermediate HY Ind | | 0.1 | 4.6 | 0.1 | 8.8 | 7.6 | 6.7 | 7.8 | 5.8 | -- | 5.8 |
| Excess | | -0.1 | 6.2 | -0.1 | 67.8 | 43.8 | 26.1 | 17.0 | 14.4 | -- | 13.1 |
| Blackrock Direct Lending Feede | 6,302,980 | 0.6 | 5.0 | 0.6 | 10.9 | 10.3 | -- | -- | -- | -- | 1.6 |
| BB Barc BA Intermediate HY Ind | | 0.1 | 4.6 | 0.1 | 8.8 | 7.6 | -- | -- | -- | -- | 8.8 |
| Excess | | 0.5 | 0.4 | 0.5 | 2.1 | 2.7 | -- | -- | -- | -- | -7.3 |
| Beach Point Select Fund | 86,102,514 | 2.1 | 9.3 | 2.1 | 18.0 | 12.1 | 8.5 | 10.3 | -- | -- | 8.8 |
| BB Barc BA Intermediate HY Ind | | 0.1 | 4.6 | 0.1 | 8.8 | 7.6 | 6.7 | 7.8 | -- | -- | 5.9 |
| Excess | | 2.0 | 4.7 | 2.0 | 9.2 | 4.5 | 1.8 | 2.5 | -- | -- | 2.9 |
| Brigade Cap Mngmt | 100,054,742 | 3.1 | 11.1 | 3.1 | 18.7 | 6.5 | 4.4 | 9.3 | 4.8 | 6.0 | 6.4 |
| BB Barc BA Intermediate HY Ind | | 0.1 | 4.6 | 0.1 | 8.8 | 7.6 | 6.7 | 7.8 | 5.8 | 6.5 | 6.8 |
| Excess | | 3.1 | 6.5 | 3.1 | 9.9 | -1.1 | -2.3 | 1.6 | -1.0 | -0.5 | -0.4 |
| White Oak YSF V | 34,243,296 | 0.0 | -- | 0.0 | -- | -- | -- | -- | -- | -- | 0.0 |
| BB Barc BA Intermediate HY Ind | | 0.1 | -- | 0.1 | -- | -- | -- | -- | -- | -- | 1.4 |
| Excess | | -0.1 | -- | -0.1 | -- | -- | -- | -- | -- | -- | -1.4 |
| White Oak Yield Spec | 34,191,325 | 0.0 | 1.5 | 0.0 | 4.2 | 5.7 | 6.3 | -- | -- | -- | -- |
| BB Barc BA Intermediate HY Ind | | 0.1 | 4.6 | 0.1 | 8.8 | 7.6 | 6.7 | -- | -- | -- | 6.4 |
| Excess | | -0.1 | -3.0 | -0.1 | -4.6 | -1.9 | -0.3 | -- | -- | -- | -- |



San Mateo County Composite Return Summary

January 31, 2021



| 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 | 133,390,174 | -0.4 | 3.8 | -0.4 | 6.6 | 4.1 | 5.8 | -- | -- | -- | 5.4 |
| BB Barc BA Intermediate HY Ind | | 0.1 | 4.6 | 0.1 | 8.8 | 7.6 | 6.7 | -- | -- | -- | 6.0 |
| Excess | | -0.5 | -0.7 | -0.5 | -2.2 | -3.5 | -0.9 | -- | -- | -- | -0.6 |
| TCP Direct Lending VIII | 32,471,367 | 1.3 | 3.8 | 1.3 | 7.0 | 7.3 | 5.1 | -- | -- | -- | -- |
| BB Barc BA Intermediate HY Ind | | 0.1 | 4.6 | 0.1 | 8.8 | 7.6 | 6.7 | -- | -- | -- | 6.8 |
| Excess | | 1.2 | -0.7 | 1.2 | -1.9 | -0.3 | -1.6 | -- | -- | -- | -- |
| Franklin Templeton | 57,955,625 | -1.3 | -0.9 | -1.3 | -1.0 | -8.6 | -3.1 | 0.9 | 0.4 | 2.4 | 2.2 |
| BB Barclays Multiverse Index | | -0.9 | 2.5 | -0.9 | 5.4 | 6.8 | 4.1 | 4.7 | 2.8 | 2.9 | 2.9 |
| Excess | | -0.4 | -3.4 | -0.4 | -6.4 | -15.4 | -7.2 | -3.7 | -2.5 | -0.5 | -0.7 |
| Risk Parity | 3,634,806 | 0.0 | 0.0 | 0.0 | -0.0 | -9.1 | 1.4 | 5.9 | 5.0 | -- | 5.2 |
| Samcera Risk Parity Benchmark | | -0.9 | 10.7 | -0.9 | 15.1 | 12.6 | 7.0 | 10.6 | 8.8 | -- | 9.0 |
| Excess | | 0.9 | -10.7 | 0.9 | -15.1 | -21.7 | -5.6 | -4.7 | -3.8 | -- | -3.9 |
| Panagora | 3,634,806 | 0.0 | 0.0 | 0.0 | 0.0 | -6.7 | 2.3 | 6.2 | -- | -- | 5.0 |
| Samcera Risk Parity Benchmark | | -0.9 | 10.7 | -0.9 | 15.1 | 12.6 | 7.0 | 10.6 | -- | -- | 8.2 |
| Excess | | 0.9 | -10.7 | 0.9 | -15.1 | -19.3 | -4.7 | -4.3 | -- | -- | -3.2 |
| Alternatives | 711,819,935 | 1.2 | 3.2 | 1.2 | 36.5 | 32.3 | 13.0 | 11.2 | 9.4 | 7.8 | 0.3 |
| Samcera Alternatives Benchmark | | -0.8 | 1.5 | -0.8 | 16.6 | 9.5 | 7.9 | 11.0 | 8.3 | 8.6 | 8.0 |
| Excess | | 2.0 | 1.8 | 2.0 | 19.9 | 22.8 | 5.1 | 0.1 | 1.1 | -0.8 | -7.7 |
| Private Equity | 376,329,234 | 2.5 | 3.6 | 2.5 | 64.2 | 71.8 | 33.2 | 24.6 | 21.7 | -0.1 | -8.2 |
| Samcera PE Benchmark | | -1.9 | 1.7 | -1.9 | 31.9 | 13.0 | 9.5 | 16.2 | 13.8 | 14.9 | 15.6 |
| Excess | | 4.4 | 1.9 | 4.4 | 32.4 | 58.8 | 23.8 | 8.4 | 7.9 | -15.0 | -23.8 |
| Absolute Return | 335,490,701 | -0.5 | 2.8 | -0.5 | 4.5 | -7.8 | -8.2 | -3.6 | 0.2 | -- | 0.9 |
| Samcera SOFR + 4% | | 0.3 | 1.0 | 0.3 | 2.4 | 4.5 | 5.6 | 5.3 | 5.0 | -- | 4.8 |
| Excess | | -0.9 | 1.8 | -0.9 | 2.1 | -12.3 | -13.8 | -8.9 | -4.7 | -- | -3.8 |
| AQR Delta XN | 5,045,643 | 0.0 | 0.0 | 0.0 | 0.2 | -24.7 | -18.4 | -10.1 | -4.5 | -- | -2.5 |
| Samcera SOFR + 4% | | 0.3 | 1.0 | 0.3 | 2.4 | 4.5 | 5.6 | 5.3 | 5.0 | -- | 4.8 |
| Excess | | -0.3 | -1.0 | -0.3 | -2.2 | -29.2 | -24.0 | -15.4 | -9.5 | -- | -7.3 |



San Mateo County Composite Return Summary

January 31, 2021



| Composite Returns (NET) | Market Value (\$) | 1 Mth. | 3 Mth. | YTD | FYTD | 1 Yr. | 3 Yr. | 5 Yr. | 7 Yr. | 10 Yr. | ITD |
|--------------------------------|-------------------|--------|--------|------|------|-------|-------|-------|-------|--------|------|
| Aberdeen Std GARS | 80,466,153 | -1.1 | 2.9 | -1.1 | 6.6 | 4.4 | 2.8 | 2.7 | -- | -- | 2.1 |
| Samcera SOFR + 4% | | 0.3 | 1.0 | 0.3 | 2.4 | 4.5 | 5.6 | 5.3 | -- | -- | 5.2 |
| Excess | | -1.4 | 1.9 | -1.4 | 4.2 | -0.1 | -2.8 | -2.6 | -- | -- | -3.2 |
| Graham Global Investment | 76,769,512 | -1.3 | 2.3 | -1.3 | 5.9 | 2.4 | -- | -- | -- | -- | 2.4 |
| Samcera SOFR +4% | | 0.3 | 1.0 | 0.3 | 2.4 | 4.5 | -- | -- | -- | -- | 4.5 |
| Excess | | -1.6 | 1.3 | -1.6 | 3.6 | -2.1 | -- | -- | -- | -- | -2.1 |
| PIMCO MAARS Fund L.P. | 71,408,687 | 1.2 | 3.1 | 1.2 | 1.6 | -- | -- | -- | -- | -- | 3.6 |
| Samcera SOFR +4% | | 0.3 | 1.0 | 0.3 | 2.4 | -- | -- | -- | -- | -- | 3.6 |
| Excess | | 0.9 | 2.0 | 0.9 | -0.8 | -- | -- | -- | -- | -- | -0.0 |
| Acadian MAAR Fund LLC | 45,240,230 | -1.3 | 1.7 | -1.3 | -- | -- | -- | -- | -- | -- | 0.5 |
| Samcera SOFR +4% | | 0.3 | 1.0 | 0.3 | -- | -- | -- | -- | -- | -- | 1.4 |
| Excess | | -1.6 | 0.7 | -1.6 | -- | -- | -- | -- | -- | -- | -0.8 |
| CFM SYS Global Macro Fund | 56,560,477 | -0.0 | 5.2 | -0.0 | -- | -- | -- | -- | -- | -- | 5.2 |
| Samcera SOFR +4% | | 0.3 | 1.0 | 0.3 | -- | -- | -- | -- | -- | -- | 1.4 |
| Excess | | -0.3 | 4.2 | -0.3 | -- | -- | -- | -- | -- | -- | 3.8 |
| Inflation Hedge | 760,132,447 | 1.0 | 4.7 | 1.0 | 6.3 | -5.6 | -0.6 | -- | -- | -- | 3.7 |
| SamCERA Inflation Hedge Index | | -0.0 | 3.6 | -0.0 | 6.5 | -0.3 | 2.1 | -- | -- | -- | 5.0 |
| Excess | | 1.0 | 1.1 | 1.0 | -0.2 | -5.3 | -2.7 | -- | -- | -- | -1.2 |
| Real Estate | 432,030,370 | 1.6 | 1.6 | 1.6 | 2.0 | 0.1 | 5.0 | -- | -- | -- | 6.6 |
| Samcera NCREIF ODCE EW (gross) | | 0.0 | 1.4 | 0.0 | 1.9 | 1.6 | 5.3 | -- | -- | -- | 6.3 |
| Excess | | 1.6 | 0.2 | 1.6 | 0.0 | -1.5 | -0.3 | -- | -- | -- | 0.3 |
| Invesco Core Real Estate | 262,523,778 | 1.5 | 1.5 | 1.5 | 2.0 | -1.9 | 4.3 | 6.0 | 8.1 | 9.5 | 7.2 |
| Samcera NCREIF ODCE EW (gross) | | 0.0 | 1.4 | 0.0 | 1.9 | 1.6 | 5.3 | 6.6 | 8.6 | 10.0 | 7.3 |
| Excess | | 1.5 | 0.2 | 1.5 | 0.1 | -3.5 | -0.9 | -0.6 | -0.5 | -0.5 | -0.1 |
| Invesco US Val IV | 14,947,299 | 5.7 | 5.7 | 5.7 | 1.8 | 2.5 | 9.7 | 12.5 | -- | -- | 11.1 |
| Samcera NCREIF ODCE EW (gross) | | 0.0 | 1.4 | 0.0 | 1.9 | 1.6 | 5.3 | 6.6 | -- | -- | 7.0 |
| Excess | | 5.7 | 4.3 | 5.7 | -0.1 | 0.9 | 4.4 | 6.0 | -- | -- | 4.1 |



San Mateo County Composite Return Summary

January 31, 2021



| Composite Returns (NET) | Market Value (\$) | 1 Mth. | 3 Mth. | YTD | FYTD | 1 Yr. | 3 Yr. | 5 Yr. | 7 Yr. | 10 Yr. | ITD |
|-------------------------------------|-------------------|--------|--------|------|------|-------|-------|-------|-------|--------|------|
| PGIM Real Estate US Debt Fund | 84,802,268 | 1.2 | 1.2 | 1.2 | 2.5 | 4.6 | 5.8 | -- | -- | -- | 4.8 |
| Samcera NCREIF ODCE EW (gross) | | 0.0 | 1.4 | 0.0 | 1.9 | 1.6 | 5.3 | -- | -- | -- | 5.6 |
| Excess | | 1.2 | -0.1 | 1.2 | 0.6 | 3.0 | 0.5 | -- | -- | -- | -0.7 |
| Invesco US VAL V | 18,716,432 | 5.3 | 5.3 | 5.3 | 0.7 | 1.5 | -- | -- | -- | -- | 3.9 |
| Samcera NCREIF ODCE EW (gross) | | 0.0 | 1.4 | 0.0 | 1.9 | 1.6 | -- | -- | -- | -- | -- |
| Excess | | 5.3 | 4.0 | 5.3 | -1.2 | -0.1 | -- | -- | -- | -- | -- |
| Harrison Street Core Property | 51,040,593 | 0.2 | 0.2 | 0.2 | 1.0 | 2.1 | -- | -- | -- | -- | 2.0 |
| Samcera NCREIF ODCE EW (gross) | | 0.0 | 1.4 | 0.0 | 1.9 | 1.6 | -- | -- | -- | -- | 1.4 |
| Excess | | 0.2 | -1.2 | 0.2 | -1.0 | 0.6 | -- | -- | -- | -- | 0.5 |
| Public Real Assets | 228,354,283 | 0.4 | 13.1 | 0.4 | 16.4 | -11.6 | -6.2 | -- | -- | -- | -- |
| SamCera Liquid Real Asset Inde | | 0.4 | 13.3 | 0.4 | 16.8 | 0.4 | -0.6 | -- | -- | -- | 5.4 |
| Excess | | -0.0 | -0.2 | -0.0 | -0.4 | -11.9 | -5.6 | -- | -- | -- | -- |
| SSGA CST REAL ASSET NL | 228,354,283 | 0.4 | 13.1 | 0.4 | 16.4 | -0.6 | -1.2 | -- | -- | -- | -- |
| SamCera Liquid Real Asset Inde | | 0.4 | 13.3 | 0.4 | 16.8 | 0.4 | -0.6 | -- | -- | -- | 4.0 |
| Excess | | -0.0 | -0.2 | -0.0 | -0.4 | -0.9 | -0.6 | -- | -- | -- | -- |
| Private Real Assets | 99,747,793 | -0.2 | 1.1 | -0.2 | 5.4 | -0.4 | -1.8 | -- | -- | -- | 6.0 |
| SamCERA Private Real Asset Idx | | -0.7 | -1.5 | -0.7 | 8.4 | -5.7 | 0.0 | -- | -- | -- | 4.1 |
| Excess | | 0.4 | 2.6 | 0.4 | -2.9 | 5.3 | -1.8 | -- | -- | -- | 1.9 |
| Cash Overlay | 8,684,084 | 0.0 | 0.0 | 0.0 | 0.1 | -- | -- | -- | -- | -- | 0.2 |
| ICE BofAML US 3-Month Treasury Bill | | 0.0 | 0.0 | 0.0 | 0.1 | -- | -- | -- | -- | -- | 0.1 |
| Excess | | -0.0 | 0.0 | -0.0 | 0.1 | -- | -- | -- | -- | -- | 0.1 |
| General Account | 124,704,401 | 0.0 | 0.0 | 0.0 | -0.0 | 0.3 | 1.6 | 1.3 | 1.0 | 0.8 | 1.9 |
| County Treasury Pool | 43,258,279 | 0.2 | 0.2 | 0.2 | 1.0 | 1.5 | 1.8 | 1.5 | 1.2 | 1.1 | 2.6 |
| Currency Hedge Cash Overlay | 46,508,969 | 0.0 | 0.0 | 0.0 | 0.1 | -- | -- | -- | -- | -- | 0.1 |



San Mateo County Composite Return Summary

January 31, 2021



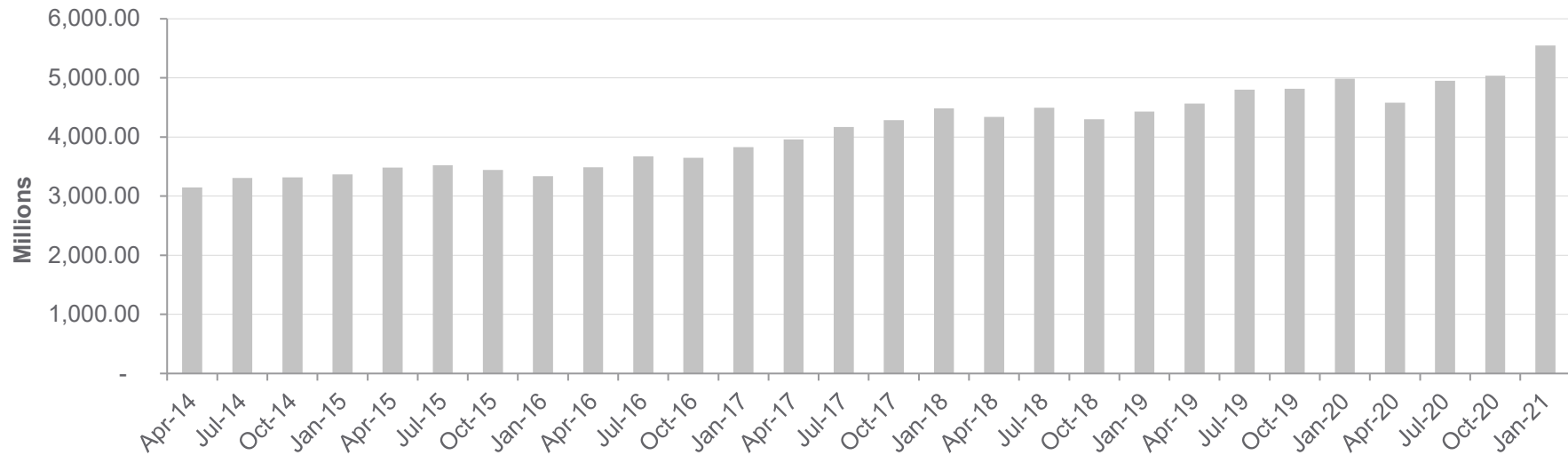
| Composite Returns (NET) | Market Value (\$) | 1 Mth. | 3 Mth. | YTD | FYTD | 1 Yr. | 3 Yr. | 5 Yr. | 7 Yr. | 10 Yr. | ITD |
|------------------------------|-------------------|--------|--------|------|------|-------|-------|-------|-------|--------|------|
| San Mateo County Overlay | 5,550,459,240 | 0.2 | 8.4 | 0.2 | 15.4 | 10.1 | 6.0 | 9.3 | 7.4 | 7.8 | 6.9 |
| Samcera Total Plan Benchmark | | -0.2 | 8.0 | -0.2 | 13.1 | 9.0 | 6.2 | 9.9 | 7.6 | 8.1 | 7.2 |
| Excess | | 0.5 | 0.3 | 0.5 | 2.3 | 1.1 | -0.2 | -0.6 | -0.2 | -0.3 | -0.3 |



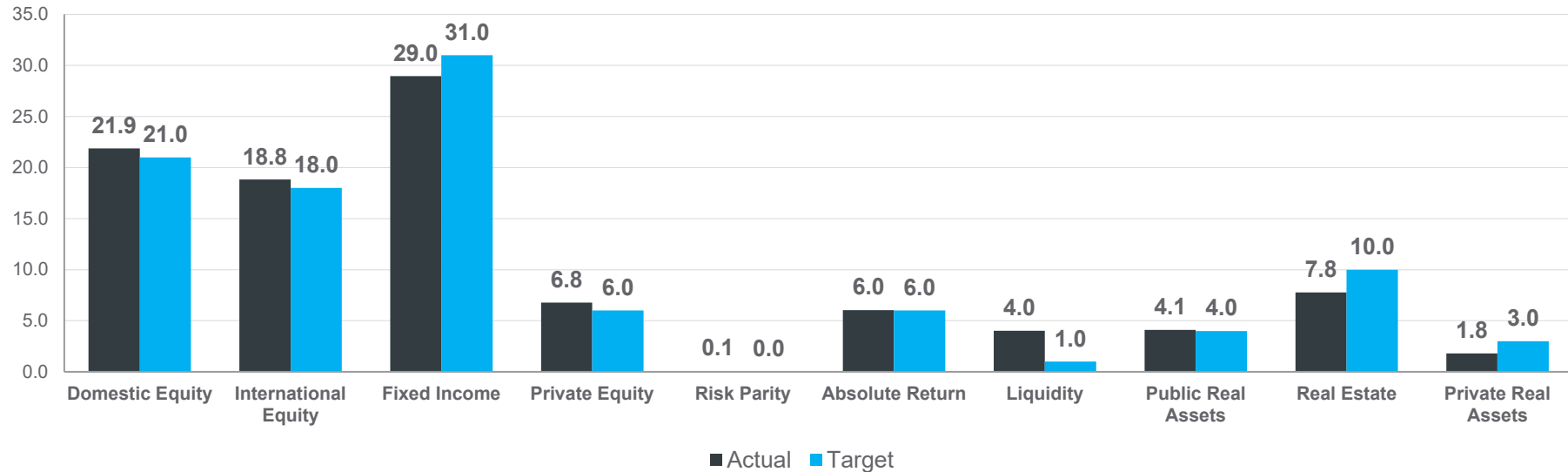
Record of Asset Growth

| | Three Months | One Year |
|------------------------|---------------|---------------|
| TOTAL FUND | | |
| Beginning Market Value | 5,037,874,533 | 4,986,537,732 |
| Contributions | 150,986,797 | 753,367,640 |
| Withdrawals | -61,052,011 | -774,927,420 |
| Income Received | 15,974,298 | 65,822,581 |
| Gain/Loss | 407,293,248 | 438,781,216 |
| Ending Market Value | 5,550,459,240 | 5,550,459,240 |

Net Asset Values Over Time (\$000)

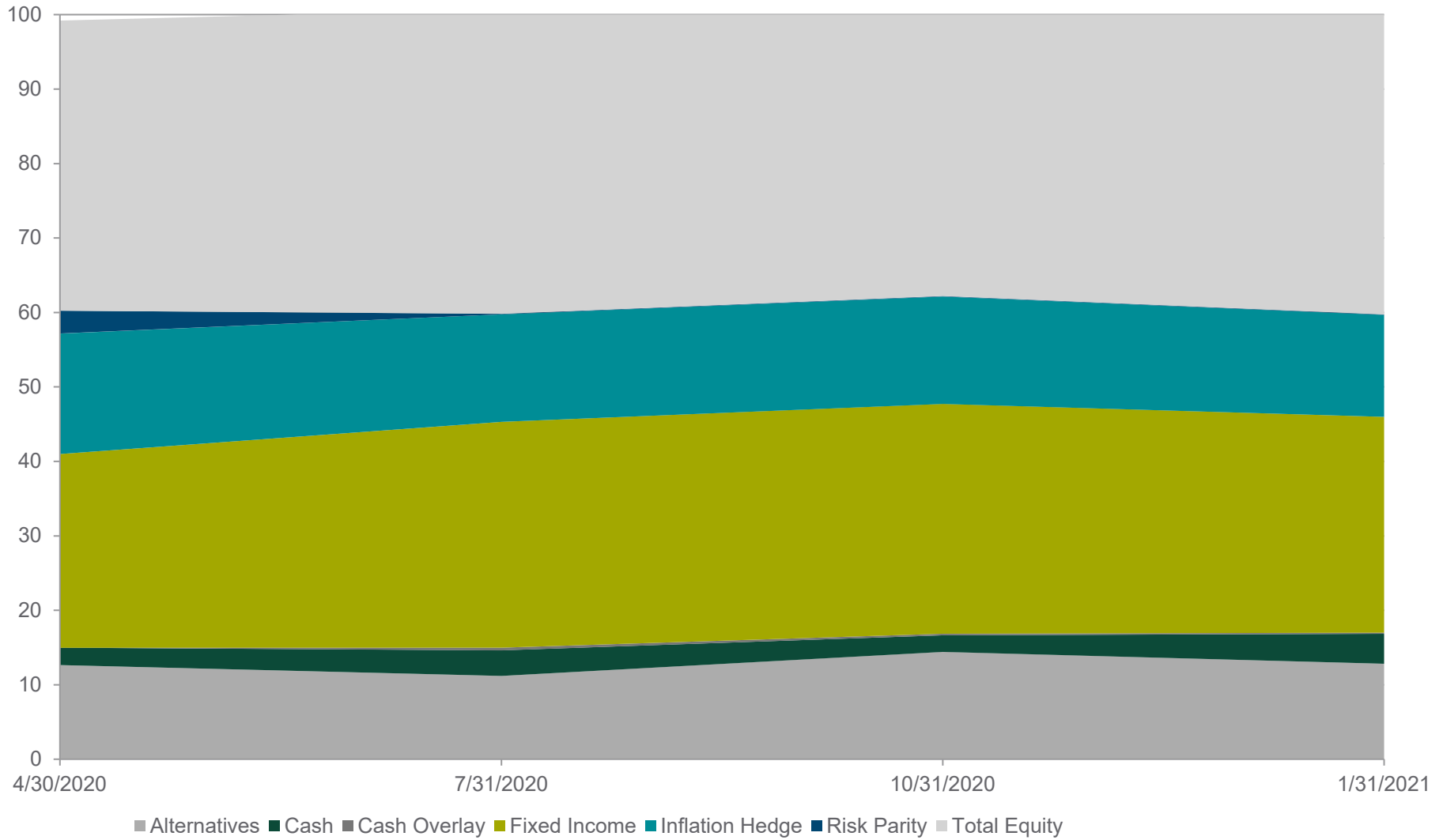


Actual vs Target Weights

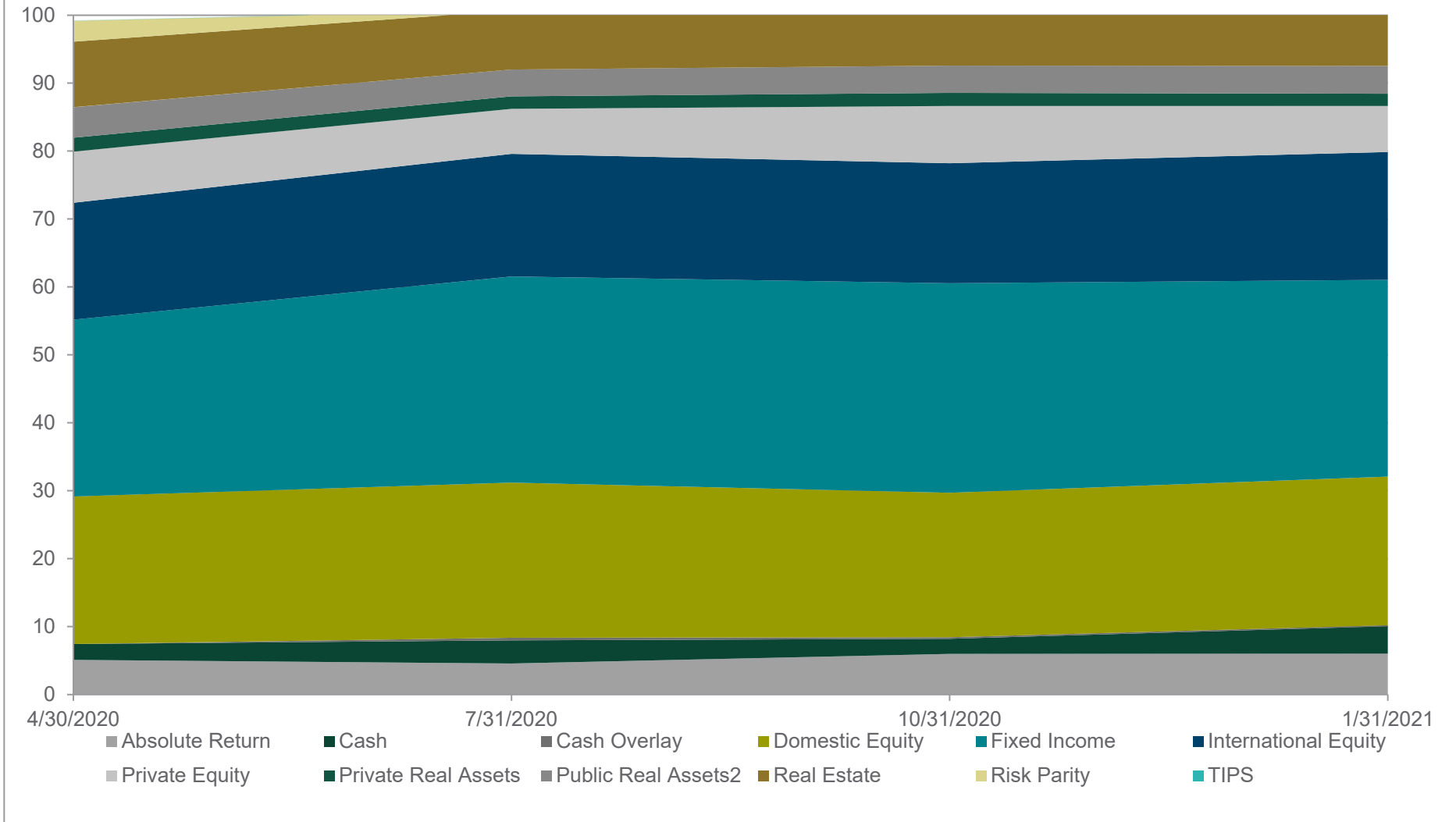


| | Min | Actual | Target | Deviation | Max |
|-----------------------------|------|--------|--------|-----------|------|
| Domestic Equity | 19.0 | 21.9 | 21.0 | 0.9 | 23.0 |
| International Equity | 16.0 | 18.8 | 18.0 | 0.8 | 20.0 |
| Fixed Income | 29.0 | 29.0 | 31.0 | -2.0 | 33.0 |
| Private Equity | 4.0 | 6.8 | 6.0 | 0.8 | 8.0 |
| Risk Parity | 0.0 | 0.1 | 0.0 | 0.1 | 0.0 |
| Absolute Return | 4.0 | 6.0 | 6.0 | 0.0 | 8.0 |
| Liquidity | 0.0 | 4.0 | 1.0 | 3.0 | 2.0 |
| Public Real Assets | 2.0 | 4.1 | 4.0 | 0.1 | 6.0 |
| Real Estate | 8.0 | 7.8 | 10.0 | -2.2 | 12.0 |
| Private Real Assets | 1.0 | 1.8 | 3.0 | -1.2 | 5.0 |

Asset Allocation over Time



Sub-Asset Class Allocation Over Time



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**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**

JANUARY 2021
Capital Markets Update

Market commentary

U.S. ECONOMICS

- Nonfarm payrolls grew by just 49,000 jobs in January, missing the median economist estimate of 105,000 jobs. The pace of the labor market recovery has slowed in recent months, and total nonfarm payrolls remain about 10 million below their level in January 2020. The unemployment rate fell from 6.7% to 6.3%, primarily due to another 406,000 workers leaving the labor force.
- In the fourth quarter, U.S. real GDP contracted -2.5% year-over-year, and marked its largest contraction since 1946. Looking ahead, the IMF has projected U.S. GDP to grow 5.1% in 2021, and 2.5% in 2022.
- The NAHB Housing Market Index fell for the second straight month in January, indicating cooling single-family homebuilder confidence. The decline in sentiment suggests that single-family housing starts may decelerate in the near-term.

U.S. EQUITIES

- The S&P 500 Price Index fell -1.0% over the first month of the year. The price index reached record highs of 3855 on January 25th before quickly selling off to 3714 to close the month in the red.
- With 37% of S&P 500 companies reporting earnings, 82% have posted positive earnings surprise. Despite the average earning beat of roughly 13.6% so far, earnings for the overall Index are down -2.3% over the full year.
- Of the companies who have reported fourth quarter results, five sectors are reporting year-over-year earnings growth. The materials, information technology, and financials sectors have experienced the largest year-over-year earnings growth.

U.S. FIXED INCOME

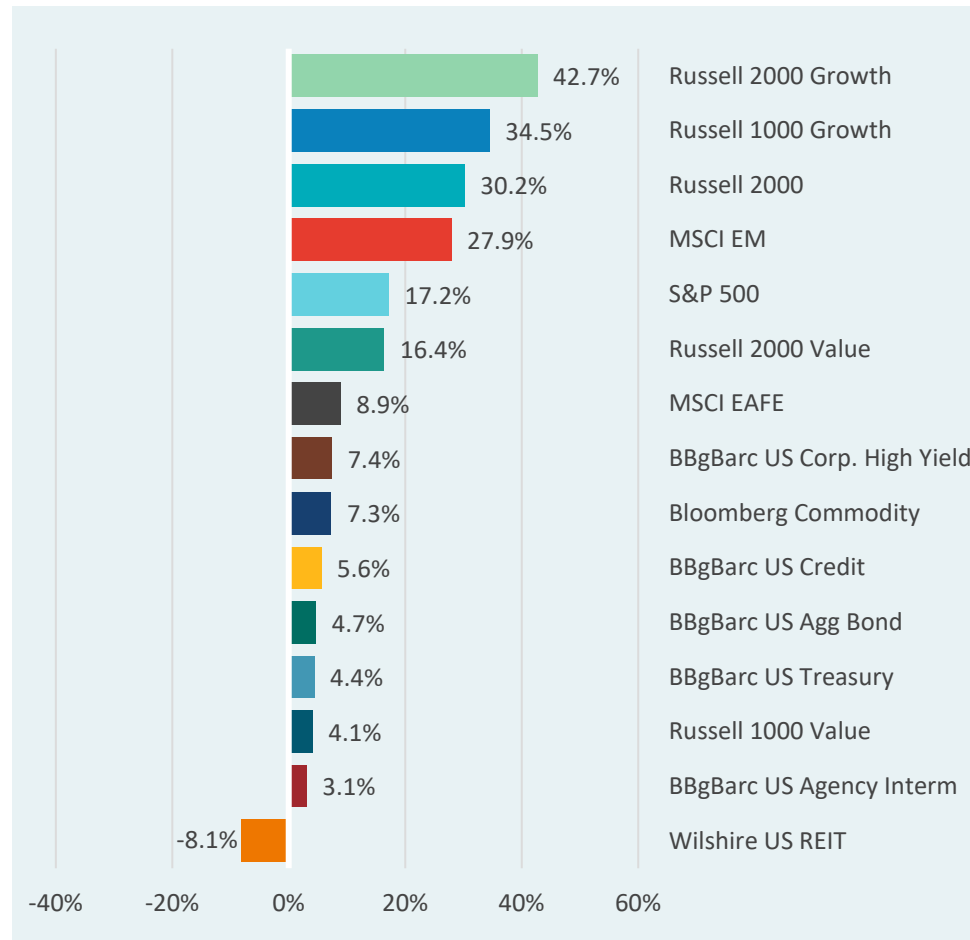
- The Federal Reserve stood by its accommodative policy as the pace of the economic recovery moderated. The Federal Open Market Committee left both the range for federal funds (0-0.25%) and the pace of monthly purchases of Treasuries and agency mortgage-backed securities (\$120B) unchanged in January's meeting. Policymakers noted the pace of the recovery was dependent on the course of the virus and progress on inoculation.
- The Biden administration unveiled a \$1.9 trillion economic relief proposal, which included stimulus checks, additional unemployment benefits, and rental and small business assistance.
- On a year-over-year basis, both headline and core CPI rose 1.4% just under the expectation of 1.5%. Services, which accounts for roughly 60% of the core inflationary basket, rose 1.3% over the year, and marked the slowest growth in prices since late 2010.

INTERNATIONAL MARKETS

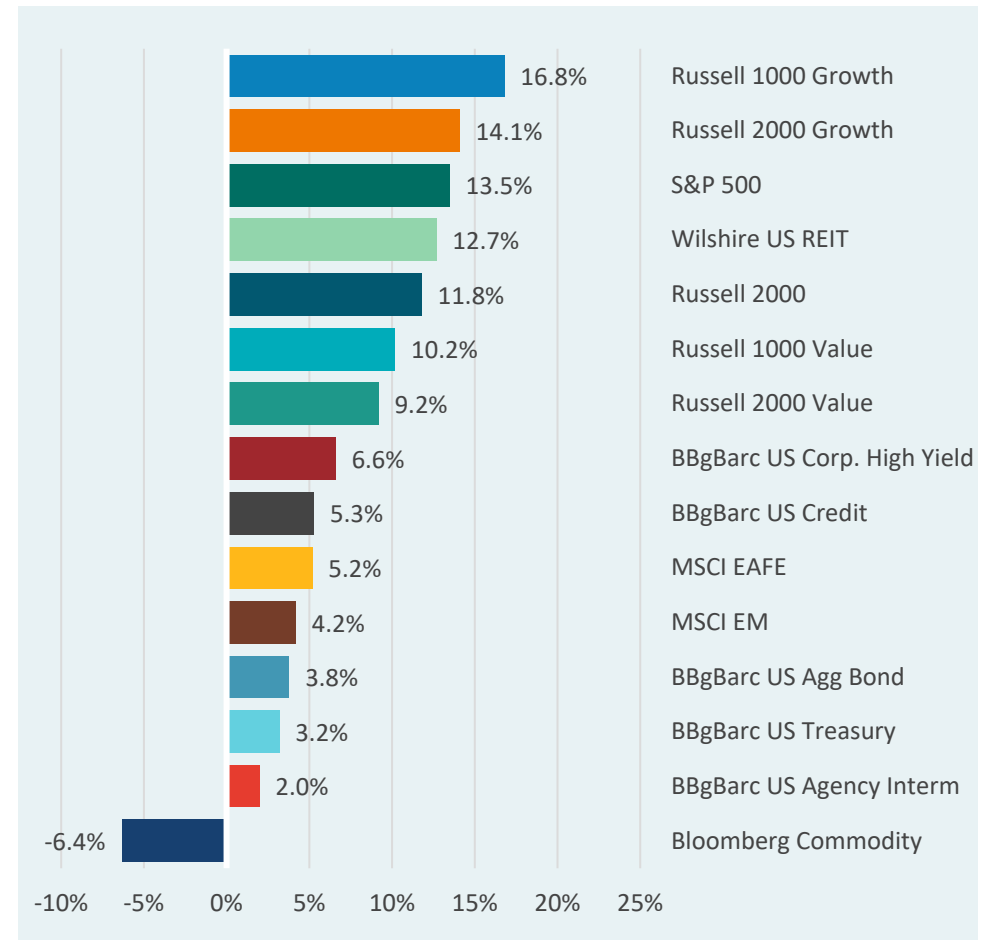
- The global vaccination campaign picked up steam over the course of the month, though progress has varied widely from country to country. The number of vaccine doses administered around the globe grew from just over 10 million to just over 98 million.
- MSCI EM Asia (+4.3%) was the top performing index among the major global equity indices. Only U.S. small-cap stocks (Russell 2000 +5.0%) performed better over the course of the month.
- Italian yields fell 10 basis points to 0.5% and Germany yields rose 10 basis points to -0.5%. The spread between Italian and German bonds is a key metric of political risk and is testing new lows.

Major asset class returns

ONE YEAR ENDING JANUARY



TEN YEARS ENDING JANUARY



*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 1/31/21

Source: Morningstar, as of 1/31/21

U.S. large cap equities

- The S&P 500 Index started the year in the red and ended the month down -1.0%. The sectors that proved to be the biggest headwinds for the index over the month were the consumer staples (-5.2%), industrials (-4.3%) and Materials (-2.3%) sectors.
- Only four S&P 500 sectors posted a positive return in January, and the energy (+3.8%), health care (+1.4%), and real estate (+0.5%) sectors were the top performers. The Real Estate and Energy sectors are the lowest-weighted in the overall index and were unable to provide much support for performance.
- Consumer staples stocks (-5.2%) lagged consumer discretionary stocks (+0.4%) by 5.6%. Consumer discretionary stocks tend to do well when the economy is strong, and people have more money to spend while consumer staples stocks tend to perform better in more uncertain economic environments.
- Volatility rose over the month of January and the VIX Index of implied volatility spiked 14.2 points on January 27th to an intra-month high of 37.2 points. The Index closed the month at 33.1 more than 45% higher than where the index closed the month before.

S&P 500 PRICE INDEX



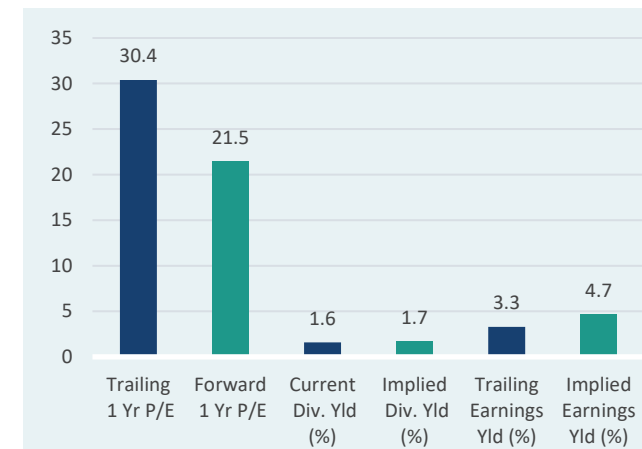
Source: Bloomberg, as of 1/31/21

IMPLIED VOLATILITY (VIX INDEX)



Source: CBOE, as of 1/31/21

S&P 500 VALUATION SNAPSHOT

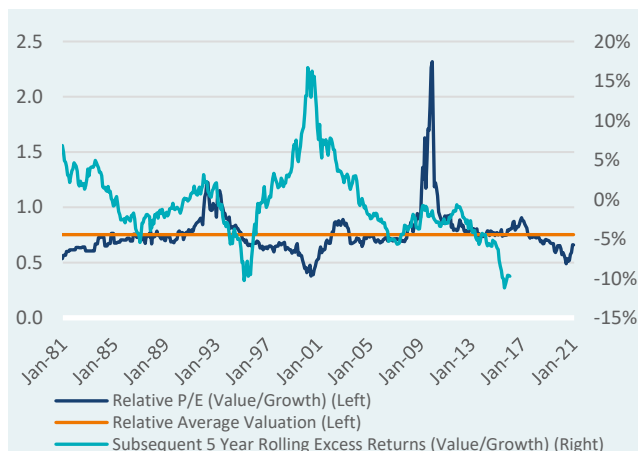


Source: Bloomberg, as of 1/31/21

Domestic equity size and style

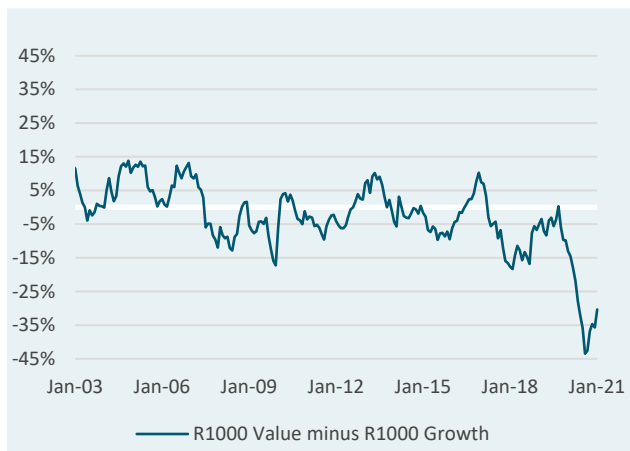
- Small-cap equities (Russell 2000 Index +5.0%) extended their rally and outperformed large-cap equities (Russell 1000 Index -0.8%) in a volatile month for the U.S. equity market. By month-end, the 1-year trailing outperformance of small-caps relative to large-caps (+10.3%) was the largest since early 2017.
- Bullish speculation from retail investors on Robinhood sparked squeezes on a number of heavily-short small-cap companies. GameStop and several other stocks saw price gains of several hundred percent before plunging back to more-normal levels.
- Growth stocks (Russell 3000 Growth -0.4%) etched out a higher return than value style stocks (Russell 3000 Value -0.5%) in January. The sectors which are more heavily-weighted in the value index, such as consumer staples, industrials and financials performed poorly over the month.
- Within small cap stocks, the value factor (Russell 2000 Value +5.3%) outperformed the growth factor (Russell 2000 Growth +4.8%). The outperformance of value was likely aided by strong returns in energy and losses in lower-weighted information technology companies.

VALUE VS. GROWTH RELATIVE VALUATIONS



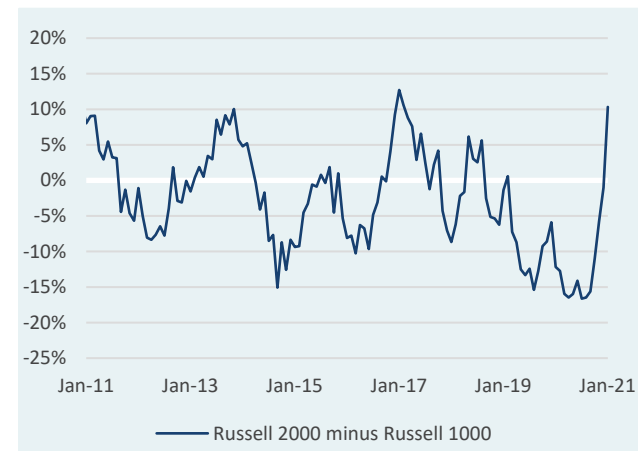
Source: FTSE, Bloomberg, as of 1/31/21

VALUE VS. GROWTH 1-YR ROLLING RELATIVE PERFORMANCE



Source: FTSE, Bloomberg, as of 1/31/21

SMALL VS. LARGE 1-YR ROLLING RELATIVE PERFORMANCE

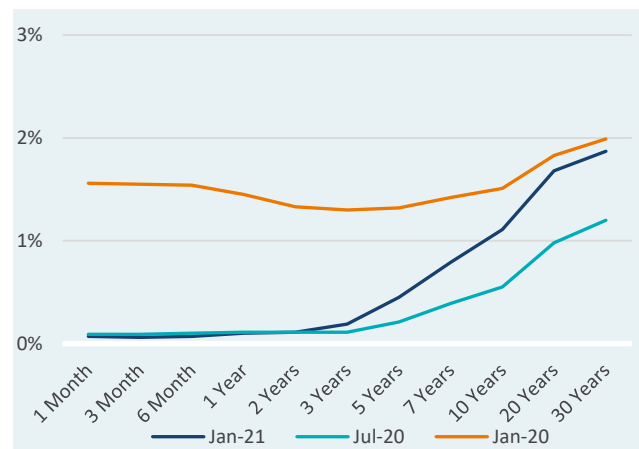


Source: FTSE, Bloomberg, as of 1/31/21

Fixed income

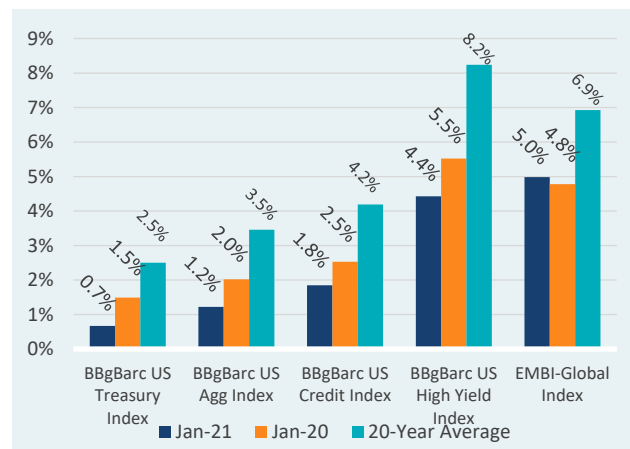
- The yield curve continued to steepen in January, as the 30-year U.S. Treasury yield rose 22 basis points to 1.87% and the 2-year yield fell another basis point to 0.11%. Historically, steepening of the yield curve has represented a positive sign for future economic growth and inflation.
- The five-year breakeven inflation rate rose 20 basis points to 2.2%, indicating that the market has priced inflation to come in around 2.2% per year over the next five. However, the Fed has also added a massive amount of TIPS to its own balance sheet, which could be contributing to the surge in priced inflation.
- High yield credit spreads compressed another two basis points to 3.8% over the month of January. The ICE BofA US High Yield Index Option-Adjusted Spread is now only 56 basis points above the lowest level since the Global Financial Crisis.
- High investor appetite for junk bonds has pushed yields on CCC-rated debt to the lowest level in history (ICE BofA CCC & Lower US High Yield Index 7.8%). It appears that in the current environment, investors have shown a willingness to reach out in terms of credit quality for a chance at boosting returns.

U.S. TREASURY YIELD CURVE



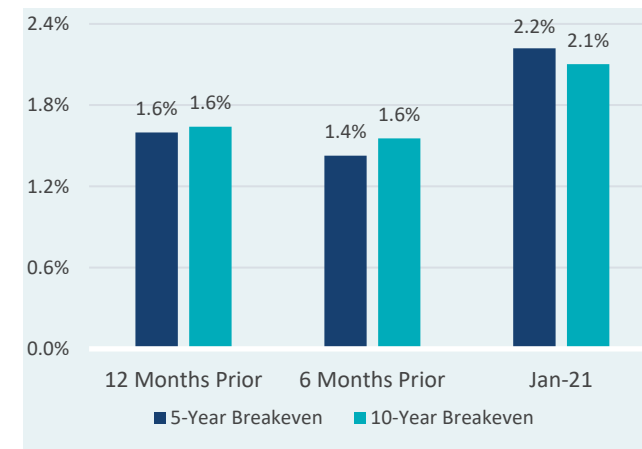
Source: Bloomberg, as of 1/31/21

NOMINAL YIELDS



Source: Morningstar, as of 1/31/21

BREAKEVEN INFLATION RATES

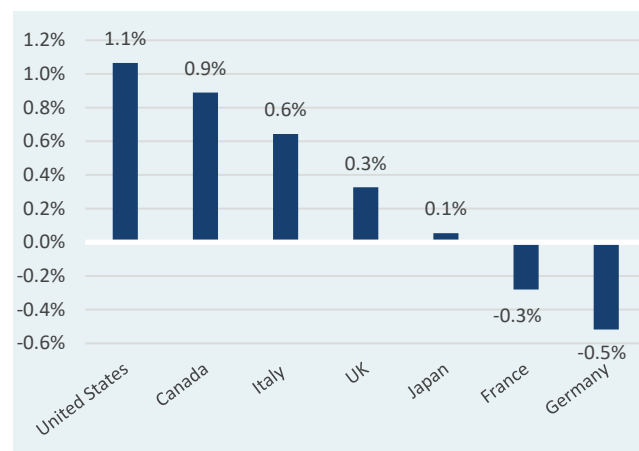


Source: Bloomberg, as of 1/31/21

Global markets

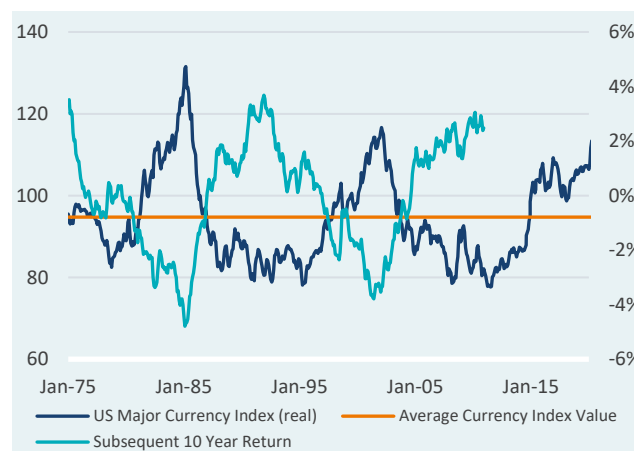
- Global equities (MSCI ACWI -0.5%) took a step back in January, and international developed equities (MSCI EAFE -1.1%) underperformed. Countries in the Eurozone (MSCI Europe -1.4%) underperformed other international developed countries including the U.K. (MSCI UK -0.2%) and Japan (MSCI Japan -1.0%).
- Emerging market equities outperformed global equities over the month. The MSCI Emerging Markets index posted a +3.1% return, supported by Chinese equities, which posted a +7.4% return in U.S. dollar terms. China is likely to be the only major economy to avoid real GDP contraction in 2020.
- The U.S. Dollar Spot Index advanced 72 basis points while the Yen depreciated -1.4% relative to the U.S. dollar. The weaker Yen provided headwinds for U.S. investors in Japanese equities as the MSCI Japan Local Index outperformed the return experienced by unhedged U.S. investors in Japanese equities by 1.4%.
- U.S. credit outperformed global risky credit in January. While the BBgBarc U.S. Agg Bond Index faded -0.7% over the month, it held up better than hard-currency denominated emerging market debt (JPM EMBI Global Diversified Index -1.1%).

GLOBAL SOVEREIGN 10-YEAR YIELDS



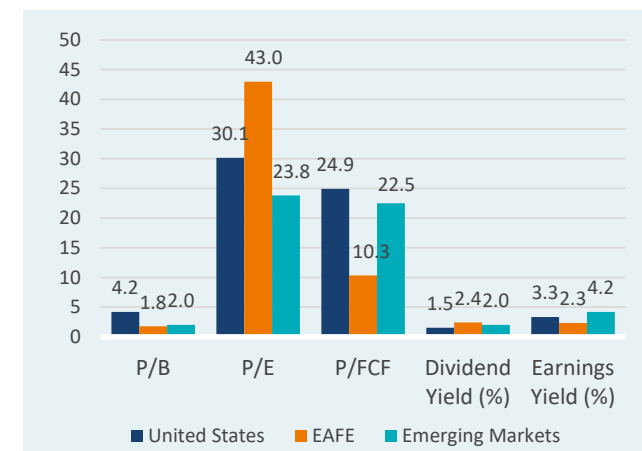
Source: Bloomberg, as of 1/31/21

U.S. DOLLAR MAJOR CURRENCY INDEX



Source: Federal Reserve, as of 1/31/21

MSCI VALUATION METRICS (3-MONTH AVG)



Source: Bloomberg, as of 1/31/21

Commodities

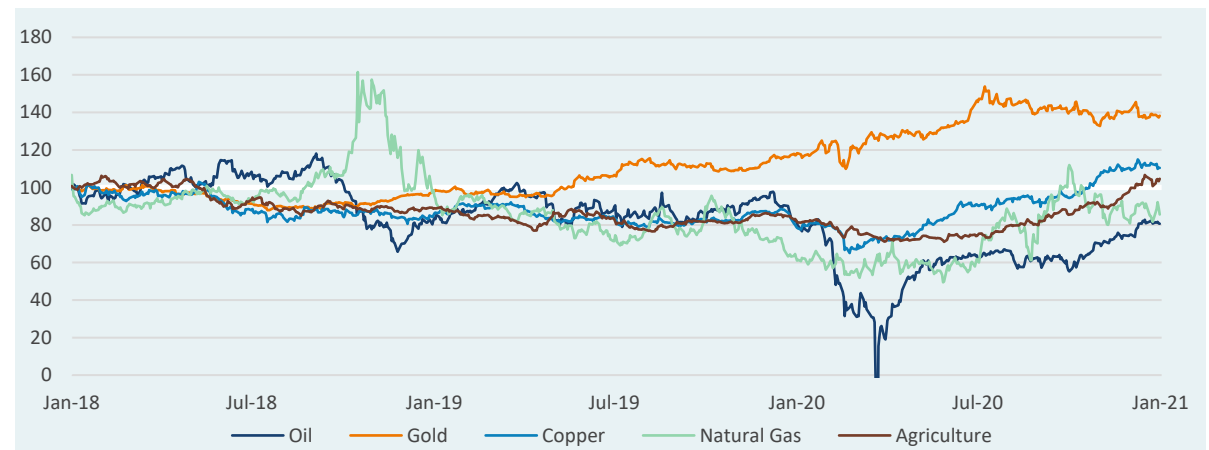
- The Bloomberg Commodity Index rose +2.6% in January. Grains (+7.6%) and energy (+5.5%) continued their run higher and helped the index post a positive return over the month. The Precious Metals sector (-1.6%) presented the largest headwinds for the broad commodity basket.
- The Bloomberg Energy Sub-Index (+5.5%) showed positive returns over the month predominately due to rising gasoline prices. Brent crude oil prices gained +7.9% over the month as Saudi officials committed to voluntary output cuts. By month-end, oil was trading above the five-year average price of \$55.61 per barrel.
- The Bloomberg Grains sub-index was the top-performing asset class and posted its sixth consecutive month of gains. Prices for front-month corn futures contracts (+13.9%) rose for the sixth consecutive month, and the price of corn has risen 58.2% over the last six months. Front-month contracts for soybeans (+4.2%) rose for the seventh consecutive month and over this time period prices have risen 62.9%.
- Precious metals (-1.6%) were the only major commodities sub-index to post a negative return over the month. Gold sold off over the month and spot prices declined -2.2% to \$1848 per ounce.

INDEX AND SECTOR PERFORMANCE

| | Month | QTD | YTD | 1 Year | 3 Year | 5 Year | 10 Year |
|-----------------------------|-------|-------|-------|--------|--------|--------|---------|
| Bloomberg Commodity | 2.6 | 2.6 | 2.6 | 7.3 | (2.3) | 1.9 | (6.4) |
| Bloomberg Agriculture | 4.8 | 4.8 | 4.8 | 29.0 | 3.0 | 0.3 | (5.5) |
| Bloomberg Energy | 5.5 | 5.5 | 5.5 | (29.1) | (17.4) | (6.7) | (15.2) |
| Bloomberg Grains | 7.6 | 7.6 | 7.6 | 33.9 | 4.8 | (0.5) | (5.1) |
| Bloomberg Industrial Metals | 0.0 | 0.0 | 0.0 | 25.5 | 0.0 | 9.5 | (3.7) |
| Bloomberg Livestock | 1.4 | 1.4 | 1.4 | (12.8) | (10.1) | (6.6) | (5.5) |
| Bloomberg Petroleum | 7.2 | 7.2 | 7.2 | (25.0) | (12.9) | (0.4) | (10.7) |
| Bloomberg Precious Metals | (1.6) | (1.6) | (1.6) | 19.7 | 10.6 | 9.9 | 1.4 |
| Bloomberg Softs | 0.1 | 0.1 | 0.1 | 8.5 | (3.5) | (2.3) | (10.3) |

Source: Morningstar, as of 1/31/21

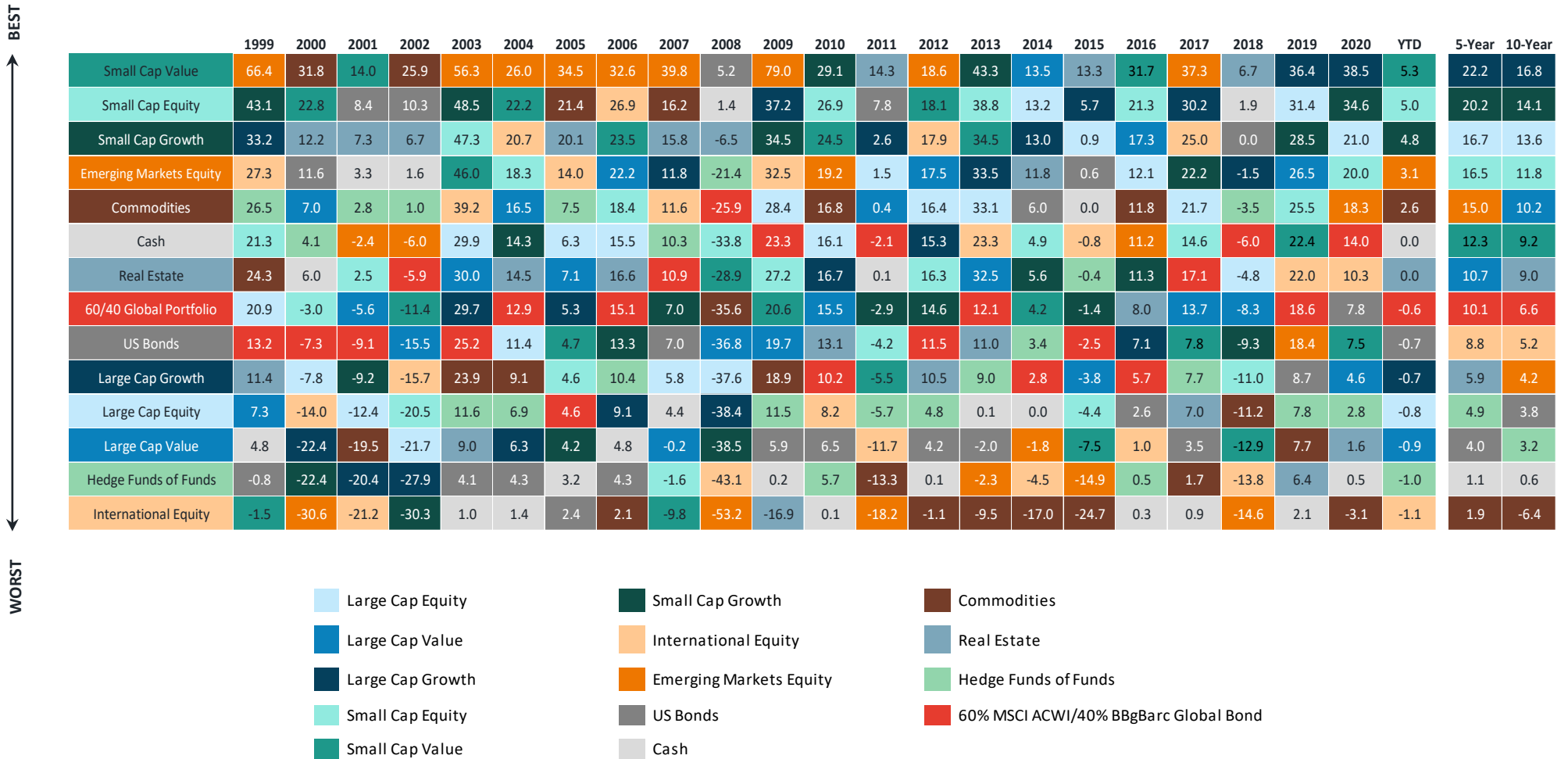
COMMODITY PERFORMANCE



Source: Bloomberg, as of 1/31/21

Appendix

Periodic table of returns



WORST

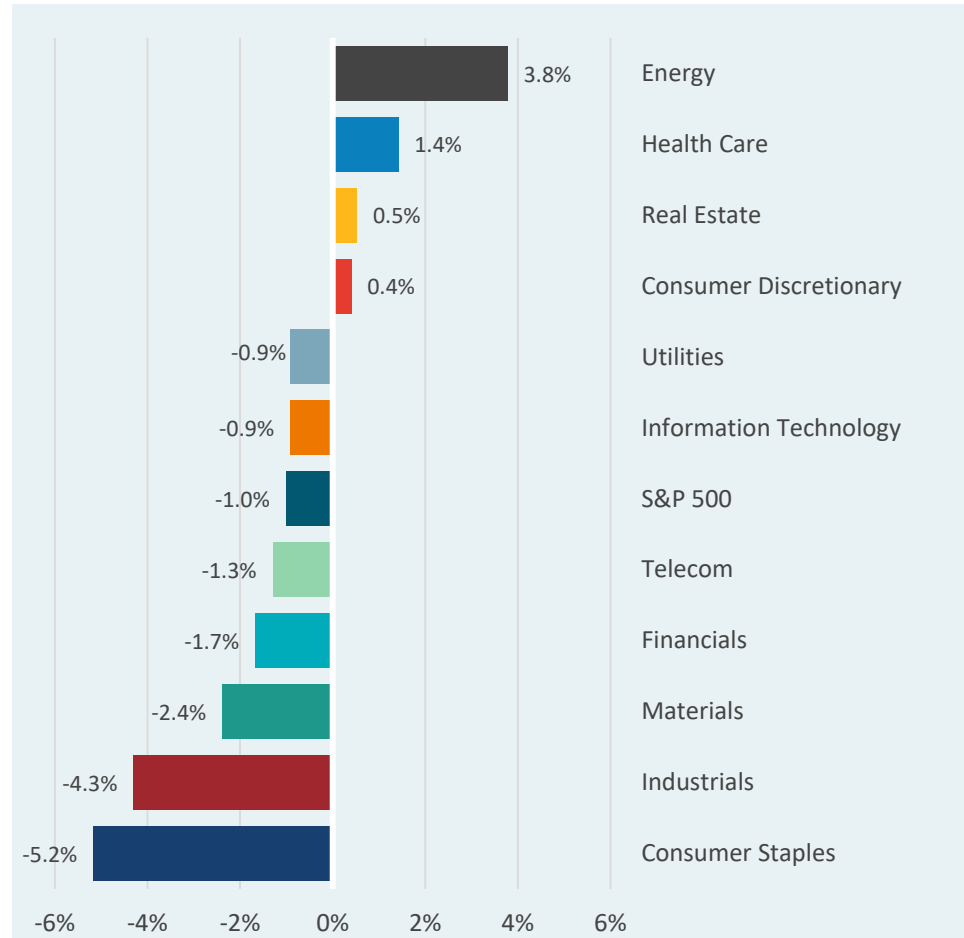
BEST



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 12/31/20.

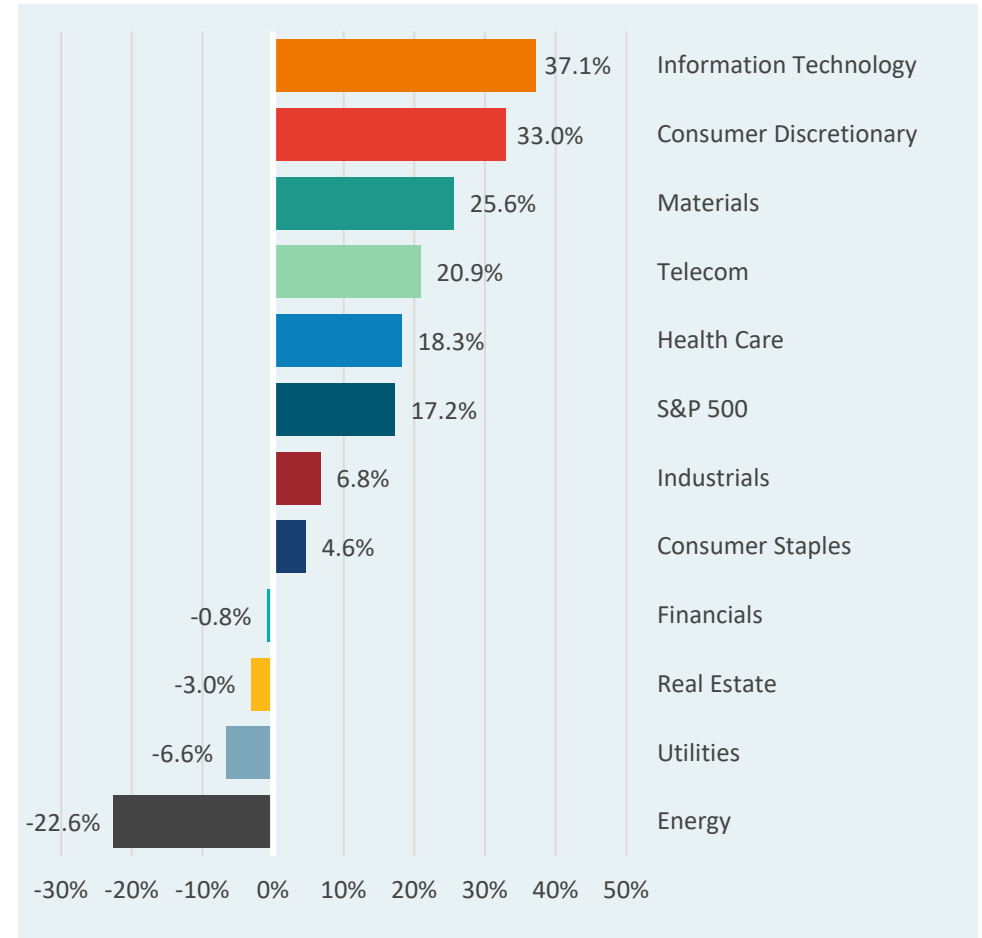
S&P 500 sector returns

QTD



Source: Morningstar, as of 1/31/21

ONE YEAR ENDING JANUARY



Source: Morningstar, as of 1/31/21

Detailed index returns

DOMESTIC EQUITY

| | Month | QTD | YTD | 1 Year | 3 Year | 5 Year | 10 Year |
|------------------------|-------|-------|-------|--------|--------|--------|---------|
| Core Index | | | | | | | |
| S&P 500 | (1.0) | (1.0) | (1.0) | 17.2 | 11.7 | 16.2 | 13.5 |
| S&P 500 Equal Weighted | (0.8) | (0.8) | (0.8) | 14.0 | 8.5 | 14.1 | 12.3 |
| DJ Industrial Average | (2.0) | (2.0) | (2.0) | 8.5 | 7.1 | 15.5 | 12.4 |
| Russell Top 200 | (1.0) | (1.0) | (1.0) | 20.6 | 13.4 | 17.4 | 14.2 |
| Russell 1000 | (0.8) | (0.8) | (0.8) | 19.8 | 12.5 | 16.7 | 13.6 |
| Russell 2000 | 5.0 | 5.0 | 5.0 | 30.2 | 11.1 | 16.5 | 11.8 |
| Russell 3000 | (0.4) | (0.4) | (0.4) | 20.5 | 12.4 | 16.7 | 13.5 |
| Russell Mid Cap | (0.3) | (0.3) | (0.3) | 17.7 | 10.1 | 14.9 | 12.1 |
| Style Index | | | | | | | |
| Russell 1000 Growth | (0.7) | (0.7) | (0.7) | 34.5 | 19.9 | 22.2 | 16.8 |
| Russell 1000 Value | (0.9) | (0.9) | (0.9) | 4.1 | 4.4 | 10.7 | 10.2 |
| Russell 2000 Growth | 4.8 | 4.8 | 4.8 | 42.7 | 16.5 | 20.2 | 14.1 |
| Russell 2000 Value | 5.3 | 5.3 | 5.3 | 16.4 | 5.1 | 12.3 | 9.2 |

INTERNATIONAL EQUITY

| | | | | | | | |
|------------------------|-------|-------|-------|--------|-------|------|-------|
| Broad Index | | | | | | | |
| MSCI ACWI | (0.5) | (0.5) | (0.5) | 17.0 | 7.9 | 13.6 | 8.9 |
| MSCI ACWI ex US | 0.2 | 0.2 | 0.2 | 14.0 | 3.1 | 10.5 | 4.8 |
| MSCI EAFE | (1.1) | (1.1) | (1.1) | 8.9 | 2.2 | 8.8 | 5.2 |
| MSCI EM | 3.1 | 3.1 | 3.1 | 27.9 | 4.4 | 15.0 | 4.2 |
| MSCI EAFE Small Cap | (0.4) | (0.4) | (0.4) | 15.3 | 3.0 | 11.1 | 7.7 |
| Style Index | | | | | | | |
| MSCI EAFE Growth | (1.4) | (1.4) | (1.4) | 17.4 | 7.5 | 11.7 | 7.3 |
| MSCI EAFE Value | (0.8) | (0.8) | (0.8) | 0.2 | (3.2) | 5.8 | 2.8 |
| Regional Index | | | | | | | |
| MSCI UK | (0.2) | (0.2) | (0.2) | (7.2) | (3.4) | 3.8 | 2.8 |
| MSCI Japan | (1.0) | (1.0) | (1.0) | 14.9 | 4.1 | 10.3 | 6.4 |
| MSCI Europe | (1.4) | (1.4) | (1.4) | 6.5 | 1.3 | 7.9 | 4.8 |
| MSCI EM Asia | 4.3 | 4.3 | 4.3 | 40.2 | 7.7 | 17.2 | 7.2 |
| MSCI EM Latin American | (6.7) | (6.7) | (6.7) | (14.8) | (8.0) | 8.4 | (3.7) |

FIXED INCOME

| | Month | QTD | YTD | 1 Year | 3 Year | 5 Year | 10 Year |
|-----------------------------|-------|-------|-------|--------|--------|--------|---------|
| Broad Index | | | | | | | |
| BBgBarc US TIPS | 0.3 | 0.3 | 0.3 | 9.1 | 6.3 | 4.8 | 3.8 |
| BBgBarc US Treasury Bills | 0.0 | 0.0 | 0.0 | 0.6 | 1.6 | 1.2 | 0.7 |
| BBgBarc US Agg Bond | (0.7) | (0.7) | (0.7) | 4.7 | 5.5 | 4.0 | 3.8 |
| Duration | | | | | | | |
| BBgBarc US Treasury 1-3 Yr | 0.0 | 0.0 | 0.0 | 2.6 | 2.9 | 1.8 | 1.3 |
| BBgBarc US Treasury Long | (3.6) | (3.6) | (3.6) | 6.2 | 9.7 | 6.0 | 7.6 |
| BBgBarc US Treasury | (1.0) | (1.0) | (1.0) | 4.4 | 5.3 | 3.1 | 3.2 |
| Issuer | | | | | | | |
| BBgBarc US MBS | 0.1 | 0.1 | 0.1 | 3.2 | 4.2 | 2.8 | 3.0 |
| BBgBarc US Corp. High Yield | 0.3 | 0.3 | 0.3 | 7.4 | 6.1 | 9.0 | 6.6 |
| BBgBarc US Agency Interm | (0.1) | (0.1) | (0.1) | 3.1 | 3.5 | 2.3 | 2.0 |
| BBgBarc US Credit | (1.2) | (1.2) | (1.2) | 5.6 | 6.7 | 6.1 | 5.3 |

OTHER

| | | | | | | | |
|------------------------|-------|-------|-------|--------|--------|-------|-------|
| Index | | | | | | | |
| Bloomberg Commodity | 2.6 | 2.6 | 2.6 | 7.3 | (2.3) | 1.9 | (6.4) |
| Wilshire US REIT | 0.5 | 0.5 | 0.5 | (8.1) | 4.8 | 5.7 | 12.7 |
| CS Leveraged Loans | 1.3 | 1.3 | 1.3 | 3.5 | 4.1 | 4.6 | 5.0 |
| Alerian MLP | 5.8 | 5.8 | 5.8 | (23.0) | (13.7) | (3.2) | (1.8) |
| Regional Index | | | | | | | |
| JPM EMBI Global Div | (1.1) | (1.1) | (1.1) | 2.6 | 4.7 | 6.9 | 6.2 |
| JPM GBI-EM Global Div | (1.1) | (1.1) | (1.1) | 2.9 | 1.1 | 6.4 | 1.5 |
| Hedge Funds | | | | | | | |
| HFRI Composite | 0.9 | 0.9 | 0.9 | 13.3 | 5.1 | 6.9 | 4.2 |
| HFRI FOF Composite | (1.0) | (1.0) | (1.0) | 9.4 | 3.7 | 4.9 | 3.2 |
| Currency (Spot) | | | | | | | |
| Euro | (0.7) | (0.7) | (0.7) | 9.6 | (0.8) | 2.3 | (1.2) |
| Pound Sterling | 0.5 | 0.5 | 0.5 | 4.2 | (1.2) | (0.6) | (1.5) |
| Yen | (1.4) | (1.4) | (1.4) | 3.5 | 1.4 | 2.9 | (2.4) |

Source: Morningstar, HFRI, as of 1/31/21

Detailed private market returns

Comparison to public market index returns

| Private Equity Pooled IRRs | 1 Year | 3 Year | 5 Year | 10 Year |
|--|--------|--------|--------|---------|
| Global Private Equity FoFs & Secondary Funds | 12.3 | 12.2 | 10.4 | 11.9 |
| Global Private Equity Direct Funds * | 20.4 | 16.2 | 14.8 | 14.6 |
| U.S. Private Equity Direct Funds * | 21.0 | 17.6 | 15.0 | 16.0 |
| Europe Private Equity Direct Funds * | 18.6 | 14.2 | 16.3 | 12.7 |
| Asia Private Equity Direct Funds * | 19.9 | 14.3 | 13.8 | 13.3 |

| Public Index Time-weighted Returns | 1 Year | 3 Year | 5 Year | 10 Year |
|------------------------------------|--------|--------|--------|---------|
| MSCI World | 10.4 | 7.7 | 10.5 | 9.4 |
| S&P 500 | 15.1 | 12.3 | 14.1 | 13.7 |
| MSCI Europe | (0.8) | (0.6) | 4.2 | 4.3 |
| MSCI AC Asia Pacific | 11.2 | 4.3 | 9.1 | 5.6 |

| Private Real Estate Pooled IRRs | 1 Year | 3 Year | 5 Year | 10 Year |
|---------------------------------|--------|--------|--------|---------|
| U.S. All Private Real Estate | 0.5 | 6.6 | 7.9 | 12.2 |

| Public Index Time-weighted Returns | 1 Year | 3 Year | 5 Year | 10 Year |
|------------------------------------|--------|--------|--------|---------|
| FTSE NAREIT Equity REIT | (18.2) | 0.2 | 3.9 | 7.9 |

| Private Credit Pooled IRRs | 1 Year | 3 Year | 5 Year | 10 Year |
|----------------------------|--------|--------|--------|---------|
| U.S. All Private Debt ** | 3.7 | 6.4 | 8.2 | 10.2 |

| Public Index Time-weighted Returns | 1 Year | 3 Year | 5 Year | 10 Year |
|--|--------|--------|--------|---------|
| S&P / LSTA U.S. Leveraged Loan 100 Index | 1.7 | 3.4 | 4.1 | 4.1 |

| Private Real Assets Pooled IRRs | 1 Year | 3 Year | 5 Year | 10 Year |
|---------------------------------|--------|--------|--------|---------|
| Global Nature Resources *** | (20.2) | (7.5) | (2.8) | (0.0) |
| Global Infrastructure | 6.6 | 8.5 | 10.7 | 9.6 |

| Public Index Time-weighted Returns | 1 Year | 3 Year | 5 Year | 10 Year |
|------------------------------------|--------|--------|--------|---------|
| S&P Global Natural Resources | (9.5) | (2.8) | 6.7 | 0.2 |
| S&P Global Infrastructure | (13.9) | (1.4) | 4.5 | 5.5 |

Source: Pooled IRRs are from Thompson Reuters C/A and Time-weighted Returns are from Investment Metrics, as of September 30th, 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

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SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

February 23, 2021

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 December 31, 2020

Recommendation

Accept Verus Advisory's quarterly performance report for the period ended December 31, 2020.

Discussion

The SamCERA net 4th quarter total return was +9.5%, which was 150 bps higher than the +8.0% policy benchmark return. The Verus 4th Quarter 2020 Performance Summary is attached. The full 4th quarter Verus board performance report is not ready for distribution as of the mailing date. It will be sent to the Board before the Board meeting.

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

Attachment

Verus 4th Quarter 2020 Performance Summary



**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**



PERIOD ENDING: DECEMBER 31, 2020

Investment Performance Review for

San Mateo County Employees' Retirement Association

Table of Contents



VERUSINVESTMENTS.COM

SEATTLE 206-622-3700

LOS ANGELES 310-297-1777

SAN FRANCISCO 415-362-3484

PITTSBURGH 412-784-6678

Market Environment

TAB I

Alternatives

TAB VI

Total Fund

TAB II

Inflation Hedge

TAB VII

US Equity

TAB III

Appendix

TAB VIII

International Equity

TAB IV

Fixed Income

TAB V

4th quarter summary

THE ECONOMIC CLIMATE

- Real GDP grew at a -2.8% rate year-over-year in the third quarter (+33.4% quarterly annualized rate) as the U.S. economy recovered much of the economic activity lost in the second quarter.
- Joe Biden was elected President of the United States. The market seemed to interpret a Biden win as a mild positive for risk assets, on the expectation of larger economic stimulus. Democrats also took both seats in the Georgia run-off election, completing the party's "Blue Wave".
- Several new, more-infectious strains of COVID-19 emerged and spread around the world, though experts remain confident in the efficacy of the currently-approved arsenal of vaccines.

PORTFOLIO IMPACTS

- Emerging market equities (+19.7%) outperformed U.S. (+12.1%) and international developed equities (+16.0%) once again in Q4. Latin American equities showed significant outperformance (+34.8%), after years of lagging behind other emerging markets.
- The U.S. 10-year TIPS breakeven inflation rate headed notably higher over the quarter, from 1.6% in September to 2.0% in December. Although U.S. inflation is lower than pre-pandemic levels, market pricing for inflation is the highest since 2018.

THE INVESTMENT CLIMATE

- Congress passed an omnibus spending bill, including \$900 billion earmarked for COVID-19 relief. Key features of the package included a re-up of the Paycheck Protection Program, \$600 stimulus checks for most individuals, and \$300 per week in additional unemployment benefits over a 10-week period.
- According to FactSet, S&P 500 Q4 earnings are expected to be down -8.8%. This estimate improved from the -12.7% drop expected on September 30th. For full year 2020, analysts are expecting a -13.3% earnings decline.

ASSET ALLOCATION ISSUES

- U.S. equities delivered +12.1% during the quarter, ending the year at an all-time-high. The S&P 500 was one of the strongest equity markets in 2020, up +18.4% despite an earnings recession and considerable uncertainty.
- Weakness in the U.S. dollar remained a theme in Q4, and the Bloomberg Dollar Spot Index fell to a two and a half year low. Analysts attributed some of the weakness in the US dollar to lower relative real yields in the U.S.
- Within the U.S. market, a sizable rotation occurred in Q4 as certain sectors that had been beaten-down during the pandemic performed strongly. Rising energy prices boosted the Energy sector, while higher interest rates improved the outlook for Financials.

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

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

U.S. economics summary

- Real GDP grew at a -2.8% rate year-over-year in the third quarter (+33.4% quarterly annualized rate) as the U.S. economy recovered much of the economic activity lost in the second quarter.
- The Atlanta Fed’s forecast for fourth quarter growth was 7.4% quarter-over-quarter, as of January 15th, suggesting further economy expansion.
- Joe Biden was elected President of the United States in November. Jon Ossoff and Raphael Warnock both won in the Georgia Senate runoff elections in January, which ensured democratic control of both the White House and the Senate with V.P.-elect Kamala Harris as the swing vote. The wins completed the democratic “Blue Wave” many have associated with extensive fiscal support. Slim democratic majorities in both chambers of Congress, however, may constrain Biden’s policy scope.
- After impressive employment gains in Q3, the recovery appeared to be stalling in recent months. Unemployment fell from 7.8% in September to 6.7% in December.
- Consumer sentiment remained stubbornly low, despite broad recoveries in consumer spending, auto sales, and the housing market.
- Home sales activity continued to grow at an extremely fast pace in the fourth quarter, as record-low interest rates and the work-from-home environment fueled demand. Existing home sales were 25.8% higher than one-year prior.
- Several new, more-infectious strains of COVID-19 emerged and spread around the world, though experts remain confident in the efficacy of the currently-approved arsenal of vaccines. The global vaccination campaign began in December, and 44 million doses have been distributed so far.

| | Most Recent | 12 Months Prior |
|---|------------------------|---------------------------|
| GDP (YoY) | (2.8%) 9/30/20 | 2.1% 9/30/19 |
| Inflation (CPI YoY, Core) | 1.6% 12/31/20 | 2.3% 12/31/19 |
| Expected Inflation (5yr-5yr forward) | 2.0% 12/31/20 | 1.8% 12/31/19 |
| Fed Funds Target Range | 0% – 0.25% 12/31/20 | 1.50% – 1.75% 12/31/19 |
| 10-Year Rate | 0.9% 12/31/20 | 1.9% 12/31/19 |
| U-3 Unemployment | 6.7% 12/31/20 | 3.5% 12/31/19 |
| U-6 Unemployment | 11.7% 12/31/20 | 6.7% 12/31/19 |

International economics summary

- Economic growth in Q3, although negative on a year-over-year basis, painted an optimistic picture of the recovery. Consumers and businesses around the world have attempted to continue on, despite recent lockdowns, restrictions, and safety concerns. GDP growth figures have improved markedly from the depths of Q2. Most economies have recovered more than half of lost activity experienced during the prior quarter.
- European Union leaders agreed on a historic €1.8 trillion budget-and-recovery plan for 2021-2027, paving the way for a €750-billion pandemic relief package which will be financed by joint debt issuance.
- U.K. and E.U. officials reached an official trade deal at the 11th hour before the December 31st, 2020 conclusion of the transition period following Britain’s official cutting of ties with the E.U. last January. The

agreement marked the beginning of a new chapter in the history of British relations with Europe.

- Governments have taken different approaches to supporting workers, and while many approaches have had similar economic effects, they have often had drastically different impacts on official unemployment figures. We believe official unemployment figures are of limited value in this environment—more in-depth analysis is likely required.
- The pandemic placed downward pressure on inflation. Since then, inflation levels have generally remained muted in developed markets while recovering moderately in emerging economies. China appears to be an outlier, as inflation has recently dipped below zero. This move was fueled by falling pork prices, which had been moving higher in recent years and pushing up inflation.

| Area | GDP (Real, YoY) | Inflation (CPI, YoY) | Unemployment |
|------------------|--------------------|-------------------------|-------------------|
| United States | (2.8%) 9/30/20 | 1.4% 12/31/20 | 6.7% 12/31/20 |
| Eurozone | (4.3%) 9/30/20 | (0.3%) 12/31/20 | 8.3% 11/30/20 |
| Japan | (5.7%) 9/30/20 | (1.3%) 12/31/20 | 2.8% 11/30/20 |
| BRICS Nations | 1.9% 9/30/20 | 1.5% 12/31/20 | 5.1% 12/31/20 |
| Brazil | (3.9%) 9/30/20 | 4.5% 12/31/20 | 14.3% 10/31/20 |
| Russia | (3.4%) 9/30/20 | 4.9% 12/31/20 | 6.1% 11/30/20 |
| India | (7.5%) 9/30/20 | 4.6% 12/31/20 | 9.1% 12/31/20 |
| China | 2.3% 12/31/20 | 0.2% 12/31/20 | 4.2% 12/31/20 |

NOTE: India lacks reliable government unemployment data. Unemployment rate shown above is estimated from the Centre for Monitoring Indian Economy

Equity environment

- U.S. equities delivered +12.1% during the quarter, ending the year at an all-time-high. The S&P 500 was one of the strongest equity markets in 2020, up +18.4% despite an earnings recession and considerable economic uncertainty.
- Emerging market equities (MSCI EM +19.7%) once again outperformed U.S. (S&P 500 +12.1%) and international developed equities (MSCI EAFE +16.0%) in Q4. Latin American equities showed significant outperformance during the quarter (MSCI Latin America +34.8%), after years of lagging behind other emerging markets.
- According to FactSet, S&P 500 Q4 earnings are expected to be down -8.8%. This estimate improved materially from the -12.7% drop expected on September 30th. Analysts are expecting a -13.3% earnings decline for full-year 2020.
- The Cboe VIX Index remained rangebound in the fourth quarter, ending the year at 22.8. Priced volatility is moderately elevated relative to the longer-term average of 19.
- Weakness in the U.S. dollar relative to both emerging market and developed market currencies remained a theme during the fourth quarter, as the Bloomberg Dollar Spot Index fell to a two and a half year low. Analysts attributed some of the weakness in the greenback to lower relative real yields in the United States, as nominal Treasury yields picked up.
- Within the index, a sizable rotation occurred in Q4 as certain sectors that had been beaten-down during the pandemic performed strongly. Rising energy prices boosted the Energy sector, while higher interest rates on the longer end of the yield curve improved the outlook for Financials.

| | QTD TOTAL RETURN | | 1 YEAR TOTAL RETURN | |
|--|------------------|----------|---------------------|----------|
| | (unhedged) | (hedged) | (unhedged) | (hedged) |
| US Large Cap (S&P 500) | 12.1% | | 18.4% | |
| US Small Cap (Russell 2000) | 31.4% | | 20.0% | |
| US Large Value (Russell 1000 Value) | 16.3% | | 2.8% | |
| US Large Growth (Russell 1000 Growth) | 11.4% | | 38.5% | |
| International Large (MSCI EAFE) | 16.0% | 11.9% | 7.8% | 2.5% |
| Eurozone (Euro Stoxx 50) | 16.2% | 12.2% | 5.5% | (1.2%) |
| U.K. (FTSE 100) | 17.2% | 11.4% | (8.9%) | (10.2%) |
| Japan (NIKKEI 225) | 21.1% | 18.8% | 24.2% | 19.4% |
| Emerging Markets (MSCI Emerging Markets) | 19.7% | 16.0% | 18.3% | 19.6% |

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 12/31/20

Domestic equity

U.S. equities delivered +12.1% during the quarter, ending the year at an all-time-high. The S&P 500 was one of the strongest equity markets in 2020, up +18.4% despite an earnings recession and considerable economic uncertainty.

Within the index, a sizable rotation occurred in Q4 as certain sectors that had been beaten-down during the pandemic performed strongly. Rising energy prices boosted the Energy sector, while higher interest rates improved the outlook for Financials. It remains to be seen whether certain consumer habits displayed during the pandemic (online shopping and heightened social media usage, for example) begin reverting to previous levels as the world moves back to normalcy or if

instead, these new habits become more permanent in nature. The answer to this question has important implications for future intra-sector performance.

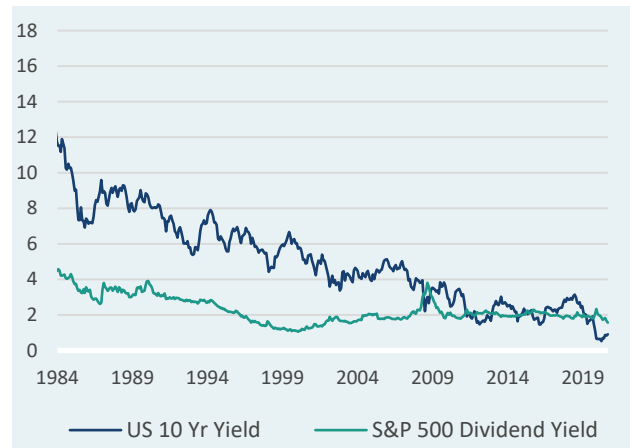
As equities move higher, it is difficult not to notice a disconnect between the US. market and the economy. We believe this rally is the result of a confluence of forces. Ultra-low interest rates, extremely accommodative monetary and fiscal policy, plus the implicit guarantee that further economic weakness will be met with more support and stimulus, seems to be creating a new type of “Goldilocks market” that harkens back to the post-Global Financial Crisis market expansion.

S&P 500 INDEX



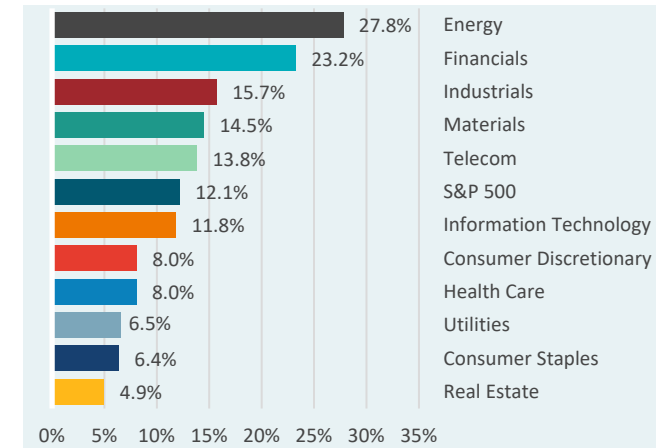
Source: Standard & Poor's, as of 12/31/20

DIVIDEND YIELD VS BOND YIELD



Source: Standard & Poor's, as of 12/31/20

Q4 SECTOR PERFORMANCE



Source: Standard & Poor's, as of 12/31/20

Domestic equity size & style

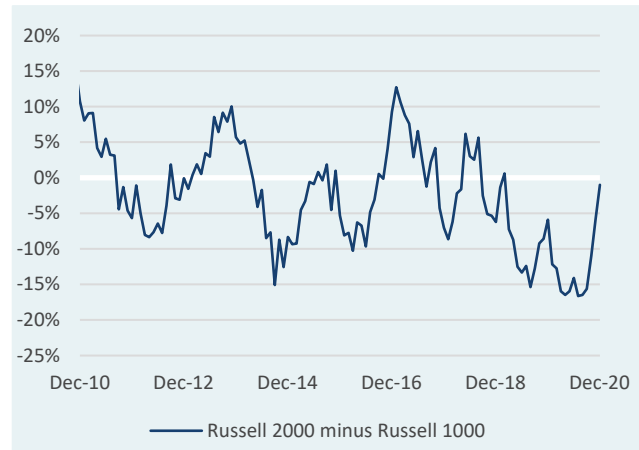
U.S. value stocks beat growth stocks during the fourth quarter (Russell 1000 Value +16.3%, Russell 1000 Growth +11.4%), reversing an extended run of value underperformance. The moderate bounce in value stock performance appeared to be partly driven by sector movements. Energy, Financials, and Materials sectors tend to contain an outsized number of value stocks. These sectors were among the top performers in Q4. Small cap stocks delivered sizable outperformance over large cap stocks (Russell 2000 +31.4%, Russell 1000 +13.7%).

A variety of risks seem to be boiling up around large U.S. technology companies. Given the significant market role that

these businesses play, along with their *growth* rather than *value* characteristics, this regulatory risk could have implications for 2021. First, it is easy to argue that firms such as Google, Amazon, and Facebook have exercised some degree of monopoly power (the FTC recently sued Facebook for alleged illegal monopolistic conduct, and numerous other investigations abound). Further anti-trust actions are likely to come. Second, in recent years there has been a degree of bipartisan consensus that social media companies are doing a poor job of moderating content (though each political party has very different ideas as to the appropriate solution). These risks, which rest perhaps solely on the shoulders of “growth stocks”, will be worth watching in 2021.

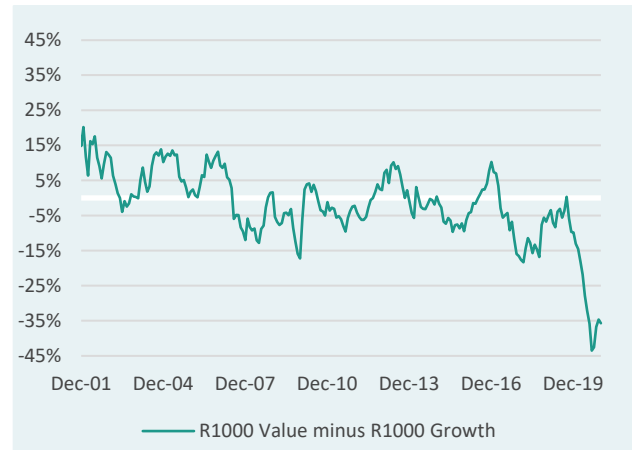
Sector performance has fueled dramatic negative performance of the value premium

SMALL CAP VS LARGE CAP (YOY)



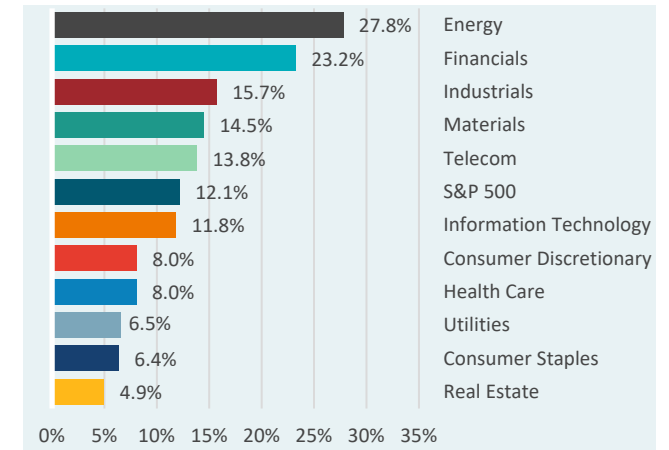
Source: FTSE, as of 12/31/20

VALUE VS GROWTH (YOY)



Source: FTSE, as of 12/31/20

Q4 SECTOR PERFORMANCE



Source: Standard & Poor's, as of 12/31/20

International developed equity

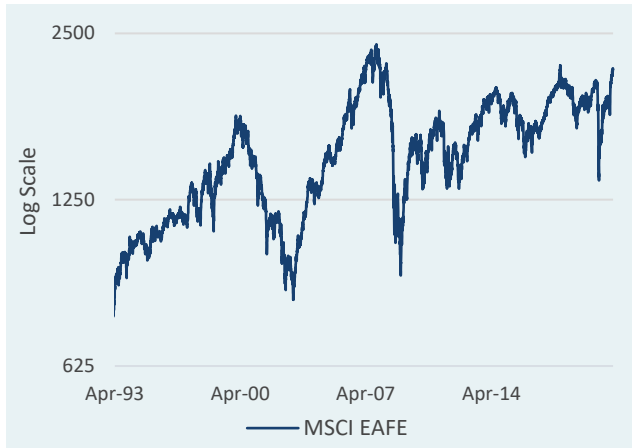
International equities delivered exceptional performance in the fourth quarter, as most global markets have now fully recovered from the March drawdown. The MSCI EAFE Index (+16.0%) outperformed the S&P 500 Index (+12.1%) while lagging the MSCI Emerging Markets Index (+19.7). Continuing U.S. dollar weakness was a notable theme, boosting international equity performance by 5% over the past year.

The recent depreciation of the U.S. dollar has acted as a tailwind to many unhedged international investments. The MSCI EAFE Index unhedged returned 16.0% in Q4, compared

to 11.9% if currency had been hedged. The three largest currency exposures embedded in the MSCI EAFE Index—the euro (32%), the yen (26%), and the pound sterling (13%)—appreciated +4.3%, +2.2%, and +5.7% relative to the U.S. dollar during the quarter, respectively.

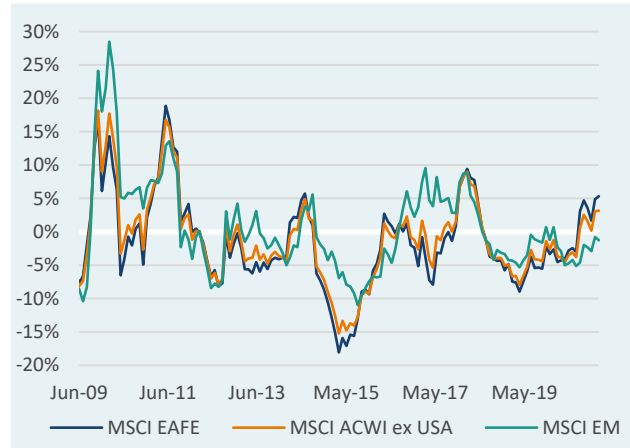
European equities (+17.2%) outperformed Hong Kong (+15.5%) and Japanese (+15.3%) equities in Q4, supported by strong performance in Austria (+47.3%) and Spain (+27.7%). In Oceania, Australia posted solid returns (+22.9%), which were bolstered by a firmer Australian dollar.

INTERNATIONAL DEVELOPED EQUITIES



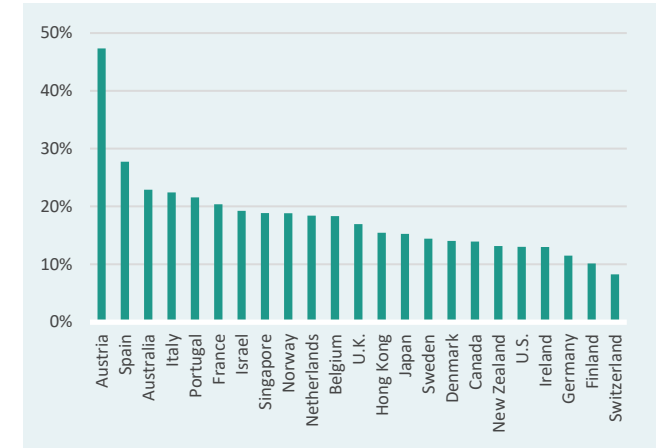
Source: MSCI, as of 12/31/20

EFFECT OF CURRENCY (1-YEAR ROLLING)



Source: MSCI, as of 12/31/20

Q4 2020 PERFORMANCE (ALL IN USD)



Source: MSCI, Bloomberg, as of 12/31/20

Emerging market equity

Emerging market equities (MSCI EM +19.7%) outperformed U.S. (S&P 500 +12.1%) and international developed equities (MSCI EAFE +16.0%) once again in Q4. Latin American equities showed significant outperformance during the quarter (MSCI Latin America +34.8%), after years of lagging behind other emerging markets.

The pandemic placed downward pressure on inflation earlier in 2020. Since then, the rate of price movement has recovered in many markets. China appears to be an outlier, as inflation recently dipped below zero. This move was fueled by falling pork prices, which had been moving higher

in recent years and causing above-average levels of inflation.

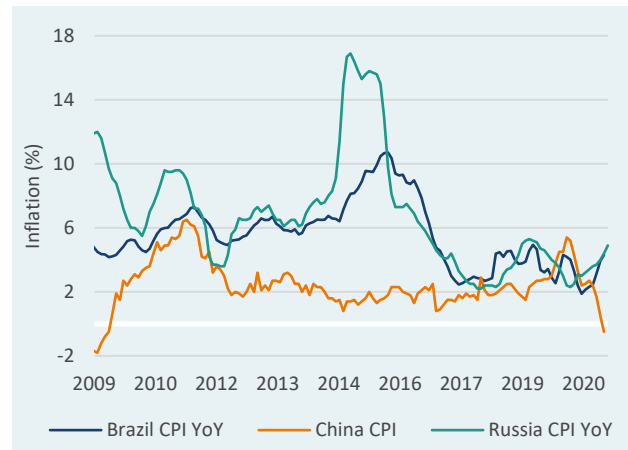
Emerging market currencies sold off significantly during the beginning of the year as investors bid up safe-haven currencies, including the U.S. dollar, amid unprecedented economic and market uncertainty. Since March, however, the embedded currency portfolio of the MSCI Emerging Markets Index began to recover significantly and ended the year nearly on par with where it had started. Continued appreciation of emerging market currencies could provide tailwinds for unhedged U.S. investors in the asset class.

EMERGING MARKET EQUITY



Source: MSCI, as of 12/31/20

INFLATION (YOY)



Source: Bloomberg, as of 12/31/20 or most recent data

MSCI EM INDEX EMBEDDED CURRENCY



Source: Bloomberg, as of 12/31/20

Interest rate environment

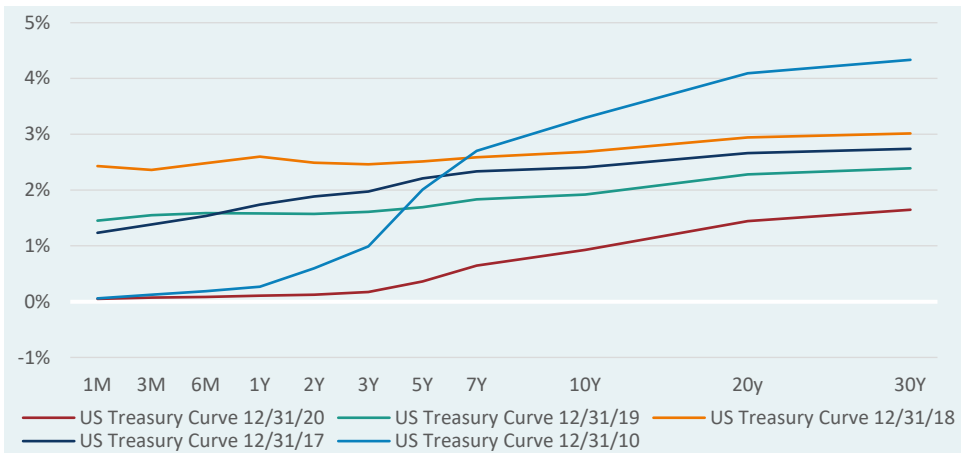
- Longer-dated U.S. Treasury yields moved upward in the fourth quarter, with the U.S. 10-year rising above 1.0% to begin 2021. Higher interest rates may place pressure on equity valuations if this trend continues. The yield of shorter-dated bonds and cash has not moved and is expected to stay near zero.
- Ten-year breakeven inflation rates rallied from 1.6% to 2.0% in Q4, likely propelled higher by expectations that Biden’s fiscal approach paired with vaccine rollouts will result in higher longer-term growth and inflation. The rise in priced inflation outpaced the rise in nominal Treasury yields, leading the 10-year U.S. real yield to decline from -0.95% to -1.07%, near record lows.
- Officials at the Federal Reserve remained committed to a \$120 billion monthly pace of bond purchases until there is “substantial progress” toward employment and inflation objectives. Fed Chair Powell left the door open to adjusting the pace of those purchases as necessary, and stated that the Fed would “let the world know...well in advance of active consideration of beginning a gradual taper of asset purchases.”
- The European Central Bank expanded the size of its Pandemic Emergency Purchase Program (PEPP) by €500 billion, bringing the new total to €1.85 trillion. The ECB also extended the horizon for purchases under PEPP to March 2022, and the timeline for reinvestment of maturing PEPP assets to the end of 2023.
- Joe Biden nominated Janet Yellen, Jerome Powell’s predecessor, as U.S. Treasury Secretary. Throughout the pandemic, central bankers have been calling for further coordination of fiscal and monetary action, and Yellen’s nomination could represent the next step down that path.

| Area | Short Term (3M) | 10-Year |
|---------------|-----------------|---------|
| United States | 0.06% | 0.91% |
| Germany | (0.83%) | (0.57%) |
| France | (0.77%) | (0.34%) |
| Spain | (0.83%) | 0.04% |
| Italy | (0.65%) | 0.54% |
| Greece | (0.38%) | 0.62% |
| U.K. | (0.06%) | 0.20% |
| Japan | (0.12%) | 0.02% |
| Australia | 0.02% | 0.97% |
| China | 2.28% | 3.14% |
| Brazil | 2.00% | 6.91% |
| Russia | 3.54% | 6.01% |

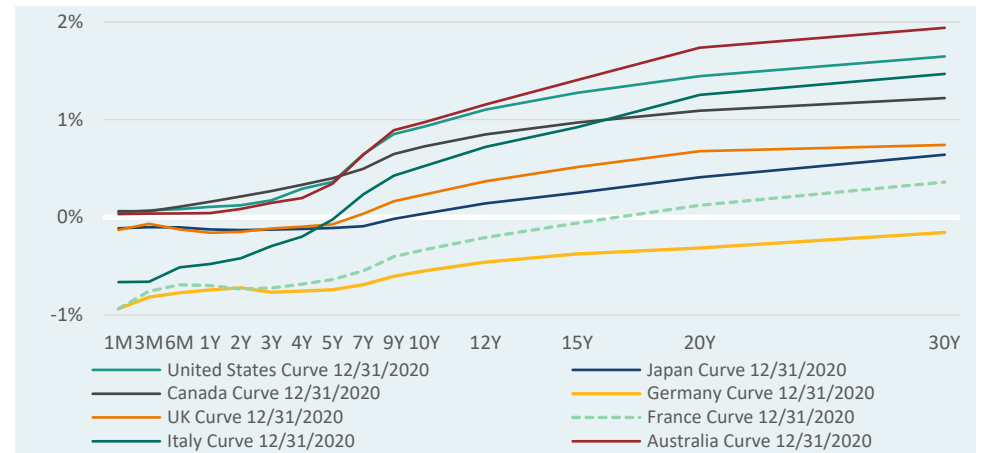
Source: Bloomberg, as of 12/31/20

Yield environment

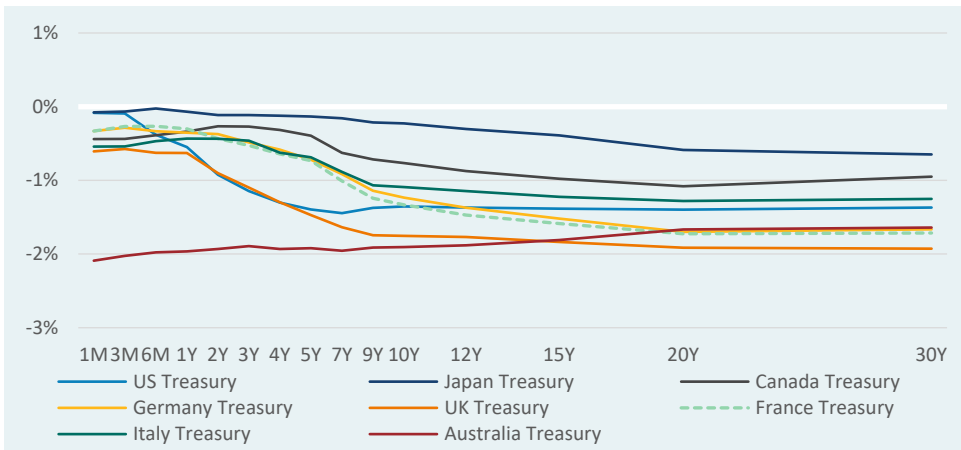
U.S. YIELD CURVE



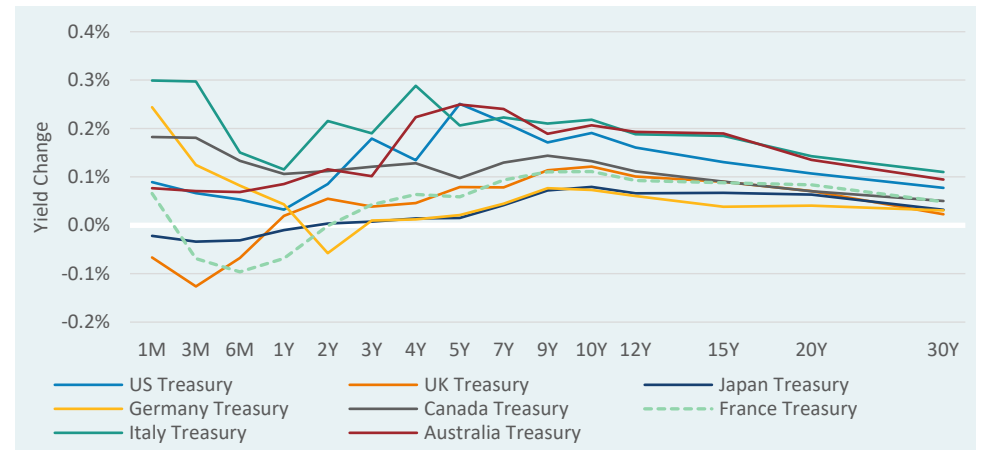
GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



Source: Bloomberg, as of 12/31/20

Currency

Weakness in the U.S. dollar relative to both emerging market and developed market currencies remained a theme in the fourth quarter, as the Bloomberg Dollar Spot Index fell to a two and a half year low. Analysts attributed some of the weakness of the greenback to lower relative real yields in the United States, as nominal Treasury yields rose less than inflation expectations. Many in the industry have made calls for a continuation of dollar weakness into 2021. If that weakness were to materialize, it would supply significant tailwinds for unhedged U.S. investors in non-U.S. equities. We continue to believe that unhedged currency exposure results in uncompensated risk, which is a suboptimal approach for many investors.

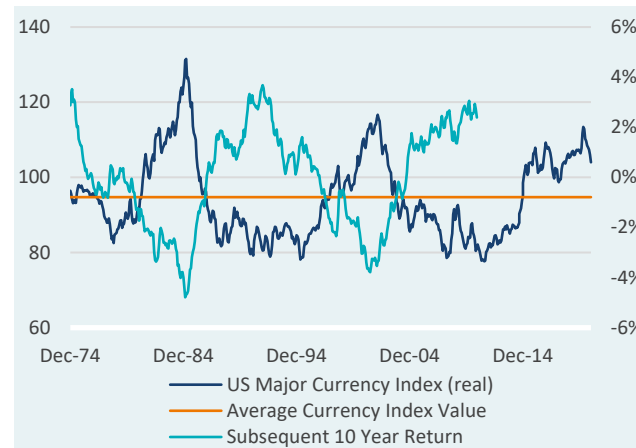
The onshore Chinese renminbi rallied significantly over the fourth quarter. The strength has been primarily credited to the apparently-blistering pace of China's recovery from pandemic-related disruptions, which has fueled capital inflows from offshore investors. Looking ahead, the election of Joe Biden has been viewed largely as constructive for the yuan, as the expectation remains that Biden's stance on China will be less confrontational than his predecessor's, reducing trade tensions. On the other hand, the rising value of the yuan may make China's exports less-affordable for Europeans still recovering from the pandemic. This dynamic has stoked speculation that the People's Bank of China might soon step in to cool the rally.

BLOOMBERG DOLLAR SPOT INDEX



Source: Bloomberg, as of 12/31/20

USD CURRENCY LEVEL & SUBSEQUENT RETURN



Source: Federal Reserve, as of 12/31/20

USD/CNY CROSS RATE



Source: Bloomberg, as of 12/31/20

- The Total Fund, net of manager fees, returned 9.5% in the fourth quarter of 2020 and ranked in the 66th percentile among other public plans greater than \$1 billion (median of 10.1%). It beat the policy index return of 8.0%. The Total Fund ex Overlay returned 9.5% for the quarter. The Total Fund one-year return of 9.2% lagged the policy index return of 9.3% and ranked in the 75th percentile of its peer universe. The three-year return of 6.7% (84th percentile) lagged the median large public plan (7.4%) and the policy index (7.3%).

- Fourth quarter results were enhanced by the following factors:
 1. Brigade rose 8.4% beating its index (4.9%). Bank Loans and High Yield positions contributed to outperformance gaining 3.1% and 4.2% respectively.
 2. The private equity composite gained 29.4% for the quarter providing a significant tailwind to relative total performance. The composite gained 70.2% in 2020 vs its index which rose 18%.
 3. DE Shaw Broad Market Core Alpha gained 17.6% beating the Russell 1000 (13.7%). This brought the 1-year return to 20.2% slightly underperforming the index but ranking in the top quartile of its peers.
 4. Western TRU gained 4% beating the BB US Agg which rose 0.7%. Western's high yield and investment grade corporate bond positions contributed to their relative performance.

- Fourth quarter results were hindered by the following factors:
 1. Acadian Managed Vol gained 9.4% and PanAgora gained 10.0% trailing the Russell 1000 (13.7%). The low vol managers did better than previous quarters but still lagged due to a strong market.
 2. Franklin Templeton Global Bond rose 0.8% trailing the BB Multiverse which gained 3.5%. Net negative positions in the Euro, Australian Dollar, and Mexican Peso hurt Q4 performance.

Total Fund
Performance Summary (Net of Fees)

Period Ending: December 31, 2020

| | 3 Mo (%) | Rank* | Fiscal YTD (%) | Rank | 1 Yr (%) | Rank | 2 Yrs (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank |
|--|-------------|-----------|----------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|
| Total Fund** | 9.5 | 66 | 15.3 | 56 | 9.2 | 75 | 12.7 | 73 | 6.7 | 84 | 8.6 | 82 | 7.9 | 51 |
| <i>Policy Index¹</i> | 8.0 | 96 | 13.9 | 85 | 9.3 | 70 | 13.1 | 64 | 7.3 | 54 | 9.2 | 42 | 8.3 | 36 |
| <i>InvMetrics Public DB > \$1B Net Median</i> | 10.1 | | 15.5 | | 10.8 | | 14.0 | | 7.4 | | 9.0 | | 7.9 | |
| Total Fund ex Overlay | 9.5 | 66 | 15.3 | 56 | 9.1 | 76 | 12.6 | 78 | 6.6 | 85 | 8.5 | 84 | 7.8 | 56 |
| <i>Policy Index¹</i> | 8.0 | 96 | 13.9 | 85 | 9.3 | 70 | 13.1 | 64 | 7.3 | 54 | 9.2 | 42 | 8.3 | 36 |
| <i>InvMetrics Public DB > \$1B Net Median</i> | 10.1 | | 15.5 | | 10.8 | | 14.0 | | 7.4 | | 9.0 | | 7.9 | |
| Public Equity | 15.0 | 69 | 23.0 | 82 | 13.7 | 77 | 19.8 | 82 | 9.1 | 83 | 11.6 | 84 | 9.9 | 64 |
| <i>Blended Public Equity Index¹</i> | 14.9 | 72 | 23.5 | 75 | 15.7 | 62 | 21.1 | 61 | 9.8 | 68 | 12.5 | 49 | 10.3 | 51 |
| <i>InvMetrics All DB Total Eq Net Median</i> | 15.7 | | 25.1 | | 16.4 | | 21.7 | | 10.5 | | 12.5 | | 10.4 | |
| US Equity | 14.0 | 89 | 22.2 | 93 | 14.2 | 87 | 21.3 | 86 | 11.6 | 78 | 13.3 | 78 | 12.3 | 67 |
| <i>Blended US Equity Index¹</i> | 14.7 | 75 | 25.2 | 44 | 20.9 | 21 | 25.9 | 18 | 14.5 | 17 | 15.5 | 14 | 13.6 | 14 |
| <i>Russell 3000</i> | 14.7 | 75 | 25.2 | 44 | 20.9 | 21 | 25.9 | 18 | 14.5 | 17 | 15.4 | 15 | 13.8 | 10 |
| <i>InvMetrics All DB US Eq Net Median</i> | 15.5 | | 25.1 | | 18.3 | | 24.1 | | 13.0 | | 14.3 | | 12.8 | |
| Large Cap Equity | 12.9 | 44 | 21.4 | 56 | 15.0 | 47 | 22.0 | 48 | 12.6 | 44 | 14.4 | 40 | 13.1 | 41 |
| <i>Russell 1000</i> | 13.7 | 37 | 24.5 | 28 | 21.0 | 34 | 26.1 | 34 | 14.8 | 33 | 15.6 | 30 | 14.0 | 30 |
| <i>eV US Large Cap Equity Net Median</i> | 12.5 | | 22.1 | | 14.0 | | 21.5 | | 11.3 | | 13.0 | | 12.5 | |
| <i>Acadian US MGD V</i> | 9.4 | 83 | 14.0 | 94 | 2.8 | 97 | 13.5 | 94 | -- | -- | -- | -- | -- | -- |
| <i>BlackRock Russell 1000</i> | 13.7 | 21 | 24.4 | 15 | 21.0 | 19 | 26.1 | 17 | 14.8 | 15 | -- | -- | -- | -- |
| <i>DE Shaw</i> | 17.6 | 4 | 27.1 | 7 | 20.2 | 22 | 23.9 | 31 | 13.5 | 29 | 15.8 | 11 | 14.5 | 7 |
| <i>PanAgora Defuseq</i> | 10.0 | 78 | 15.0 | 92 | 4.9 | 92 | 16.5 | 84 | -- | -- | -- | -- | -- | -- |
| <i>Russell 1000</i> | 13.7 | 21 | 24.5 | 14 | 21.0 | 19 | 26.1 | 17 | 14.8 | 15 | 15.6 | 12 | 14.0 | 12 |
| <i>eV US Large Cap Core Equity Net Median</i> | 11.6 | | 20.6 | | 14.1 | | 21.7 | | 11.5 | | 13.2 | | 12.7 | |

* 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: December 31, 2020

| | 3 Mo (%) | Rank | Fiscal YTD (%) | Rank | 1 Yr (%) | Rank | 2 Yrs (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank |
|---|-------------|-----------|----------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|------------|-----------|
| Small Cap Equity | 27.4 | 55 | 30.2 | 77 | 2.6 | 81 | 11.9 | 84 | 2.9 | 78 | 7.6 | 85 | 8.4 | 84 |
| <i>Russell 2000</i> | 31.4 | 24 | 37.9 | 31 | 20.0 | 40 | 22.7 | 40 | 10.2 | 41 | 13.3 | 42 | 11.2 | 45 |
| <i>eV US Small Cap Equity Net Median</i> | 27.8 | | 34.4 | | 14.2 | | 19.2 | | 7.9 | | 11.9 | | 10.7 | |
| QMA US Small Cap | 27.4 | 48 | 30.2 | 74 | 2.6 | 95 | 11.9 | 94 | 2.9 | 92 | -- | -- | -- | -- |
| <i>Russell 2000</i> | 31.4 | 15 | 37.9 | 23 | 20.0 | 30 | 22.7 | 35 | 10.2 | 33 | 13.3 | 35 | 11.2 | 45 |
| <i>eV US Small Cap Core Equity Net Median</i> | 27.4 | | 33.3 | | 14.8 | | 19.5 | | 8.6 | | 12.0 | | 11.0 | |
| Domestic Equity Overlay | 30.0 | -- | 41.1 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| International Equity | 16.2 | 77 | 24.0 | 81 | 13.0 | 47 | 18.0 | 44 | 6.3 | 32 | 9.5 | 43 | 5.7 | 50 |
| <i>Blended International Equity Index¹</i> | 15.1 | 87 | 21.4 | 95 | 9.5 | 79 | 15.5 | 79 | 4.4 | 75 | 8.9 | 63 | 5.3 | 67 |
| <i>MSCI EAFE Gross</i> | 16.1 | 79 | 21.8 | 93 | 8.3 | 87 | 15.2 | 81 | 4.8 | 68 | 8.0 | 83 | 6.0 | 40 |
| <i>InvMetrics All DB ex-US Eq Net Median</i> | 17.4 | | 25.9 | | 12.6 | | 17.5 | | 5.3 | | 9.3 | | 5.7 | |
| Baillie Gifford | 17.1 | 32 | 32.5 | 26 | 33.7 | 30 | 33.6 | 21 | 14.1 | 22 | 14.5 | 29 | -- | -- |
| <i>MSCI ACWI ex US¹</i> | 17.1 | 32 | 24.5 | 81 | 11.1 | 96 | 16.5 | 98 | 5.4 | 97 | 9.4 | 93 | -- | -- |
| <i>MSCI ACWI ex US Growth</i> | 14.0 | 70 | 25.6 | 73 | 22.6 | 65 | 25.2 | 66 | 10.4 | 63 | 12.4 | 65 | -- | -- |
| <i>eV ACWI ex-US Growth Equity Net Median</i> | 15.4 | | 28.6 | | 25.3 | | 27.8 | | 11.6 | | 13.5 | | 8.6 | |
| Mondrian | 19.3 | 50 | 23.6 | 57 | 0.0 | 62 | 9.1 | 54 | 1.6 | 38 | 6.2 | 56 | 4.4 | 30 |
| <i>MSCI ACWI ex USA Value Gross</i> | 20.5 | 41 | 23.4 | 57 | -0.2 | 63 | 7.8 | 61 | 0.2 | 53 | 6.3 | 56 | 3.4 | 74 |
| <i>MSCI ACWI ex USA Gross</i> | 17.1 | 66 | 24.5 | 52 | 11.1 | 9 | 16.5 | 12 | 5.4 | 11 | 9.4 | 17 | 5.4 | 23 |
| <i>eV ACWI ex-US Value Equity Net Median</i> | 19.2 | | 25.0 | | 1.3 | | 9.3 | | 0.7 | | 6.5 | | 4.2 | |
| BlackRock MSCI ACWI EX-US IMI¹ | 17.2 | 39 | 25.2 | 69 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| <i>MSCI ACWI ex USA IMI</i> | 17.2 | 39 | 25.2 | 69 | 11.1 | 72 | 16.3 | 71 | 4.8 | 75 | 9.0 | 68 | 5.1 | 82 |
| <i>eV ACWI ex-US All Cap Core Eq Net Median</i> | 16.1 | | 27.0 | | 16.1 | | 20.1 | | 6.5 | | 9.9 | | 6.7 | |
| Int'l Equity Currency Overlay | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| International Equity Overlay | 4.0 | -- | 17.3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

* Funded June 2020.

1. See Appendix for Benchmark History.

Total Fund
Performance Summary (Net of Fees)

Period Ending: December 31, 2020

| | 3 Mo (%) | Rank | Fiscal YTD (%) | Rank | 1 Yr (%) | Rank | 2 Yrs (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank |
|---|------------|-----------|----------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|
| Fixed Income | 2.4 | 44 | 4.6 | 36 | 6.8 | 61 | 7.7 | 61 | 5.2 | 54 | 5.8 | 30 | 5.0 | 26 |
| <i>Blended Fixed Income Index¹</i> | 2.0 | 52 | 3.7 | 53 | 7.0 | 56 | 8.9 | 36 | 5.6 | 37 | 5.4 | 40 | 4.2 | 55 |
| <i>InvMetrics All DB Total Fix Inc Net Median</i> | 2.1 | | 3.7 | | 7.6 | | 8.2 | | 5.2 | | 5.0 | | 4.3 | |
| Core Fixed | 1.2 | -- | 2.5 | -- | 7.7 | -- | 7.8 | -- | 5.1 | -- | 4.9 | -- | 4.4 | -- |
| <i>BBgBarc US Aggregate TR</i> | 0.7 | -- | 1.3 | -- | 7.5 | -- | 8.1 | -- | 5.3 | -- | 4.4 | -- | 3.8 | -- |
| <i>BlackRock Intermediate Govt</i> | -0.2 | 63 | 0.1 | 65 | 6.0 | 63 | 5.6 | 68 | 4.3 | 51 | -- | -- | -- | -- |
| <i>BBgBarc US Govt Int TR</i> | -0.2 | 64 | 0.0 | 68 | 5.7 | 66 | 5.5 | 71 | 4.1 | 56 | 2.9 | 59 | 2.5 | 72 |
| <i>BBgBarc US Aggregate TR</i> | 0.7 | 1 | 1.3 | 4 | 7.5 | 30 | 8.1 | 1 | 5.3 | 6 | 4.4 | 1 | 3.8 | 2 |
| <i>eV US Government Fixed Inc Net Median</i> | -0.1 | | 0.3 | | 6.5 | | 6.5 | | 4.3 | | 3.6 | | 3.1 | |
| <i>DoubleLine[*]</i> | 0.0 | 99 | 1.7 | 58 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| <i>BBgBarc US Aggregate TR</i> | 0.7 | 62 | 1.3 | 66 | 7.5 | 6 | 8.1 | 1 | 5.3 | 6 | 4.4 | 22 | 3.8 | 52 |
| <i>eV US Securitized Fixed Inc Net Median</i> | 0.9 | | 2.0 | | 3.6 | | 5.0 | | 3.8 | | 3.6 | | 3.9 | |
| <i>FIAM Bond</i> | 1.4 | 21 | 2.8 | 19 | 9.9 | 11 | 9.8 | 8 | 6.3 | 8 | 5.5 | 8 | 4.6 | 16 |
| <i>NISA Core Bond^{**}</i> | 0.6 | 81 | 1.4 | 82 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| <i>BBgBarc US Aggregate TR</i> | 0.7 | 81 | 1.3 | 86 | 7.5 | 75 | 8.1 | 74 | 5.3 | 70 | 4.4 | 75 | 3.8 | 74 |
| <i>eV US Core Fixed Inc Net Median</i> | 1.0 | | 2.1 | | 8.2 | | 8.6 | | 5.6 | | 4.7 | | 4.1 | |
| <i>Western TRU</i> | 4.0 | 2 | 6.5 | 2 | 6.1 | 97 | 7.7 | 87 | 4.0 | 98 | 5.2 | 15 | -- | -- |
| <i>3-Month Libor Total Return USD</i> | 0.1 | 99 | 0.1 | 99 | 0.6 | 99 | 1.5 | 99 | 1.8 | 99 | 1.5 | 99 | 0.9 | 99 |
| <i>BBgBarc US Aggregate TR</i> | 0.7 | 81 | 1.3 | 86 | 7.5 | 75 | 8.1 | 74 | 5.3 | 70 | 4.4 | 75 | 3.8 | 74 |
| <i>eV US Core Fixed Inc Net Median</i> | 1.0 | | 2.1 | | 8.2 | | 8.6 | | 5.6 | | 4.7 | | 4.1 | |
| <i>Core Fixed Income Overlay</i> | -0.6 | -- | -0.9 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

* Funded March 2020.

** Funded May 2020.

1. See Appendix for Benchmark History.

Total Fund
Performance Summary (Net of Fees)

Period Ending: December 31, 2020

| | 3 Mo (%) | Rank | Fiscal YTD (%) | Rank | 1 Yr (%) | Rank | 2 Yrs (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank |
|--|------------|-----------|----------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|------------|-----------|
| Opportunistic Credit | 5.1 | -- | 9.1 | -- | 5.3 | -- | 7.4 | -- | 5.4 | -- | 7.9 | -- | 7.6 | -- |
| <i>BBgBarc BA Intermediate HY¹</i> | 4.9 | -- | 8.7 | -- | 7.7 | -- | 11.1 | -- | 6.6 | -- | 7.6 | -- | 6.0 | -- |
| AG CSF Annex Dislocation Fund⁺ | 8.8 | -- | 14.3 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| <i>BBgBarc BA Intermediate HY</i> | 4.9 | -- | 8.7 | -- | 7.7 | -- | 11.1 | -- | 6.6 | -- | 7.6 | -- | 6.0 | -- |
| Angelo Gordon Opportunistic ⁺ | 12.1 | -- | 19.4 | -- | -2.8 | -- | 4.4 | -- | 9.7 | -- | 10.7 | -- | -- | -- |
| Angelo Gordon STAR ⁺ | -1.2 | -- | 1.2 | -- | 0.8 | -- | 8.1 | -- | 12.5 | -- | 12.4 | -- | -- | -- |
| <i>BBgBarc US Aggregate TR</i> | 0.7 | -- | 1.3 | -- | 7.5 | -- | 8.1 | -- | 5.3 | -- | 4.4 | -- | 3.8 | -- |
| Angelo Gordon Credit Solutions ⁺ | 9.7 | 1 | 16.4 | 1 | 3.4 | 86 | -- | -- | -- | -- | -- | -- | -- | -- |
| <i>BBgBarc BA Intermediate HY</i> | 4.9 | 77 | 8.7 | 80 | 7.7 | 19 | 11.1 | 15 | 6.6 | 12 | 7.6 | 46 | 6.0 | 70 |
| <i>eV US High Yield Fixed Inc Net Median</i> | 5.8 | | 10.5 | | 5.8 | | 9.8 | | 5.4 | | 7.5 | | 6.3 | |
| Beach Point Select | 8.4 | 3 | 15.8 | 3 | 9.8 | 4 | 11.3 | 13 | 7.7 | 2 | 9.5 | 3 | -- | -- |
| <i>BBgBarc BA Intermediate HY</i> | 4.9 | 77 | 8.7 | 80 | 7.7 | 19 | 11.1 | 15 | 6.6 | 12 | 7.6 | 46 | 6.0 | 70 |
| <i>eV US High Yield Fixed Inc Net Median</i> | 5.8 | | 10.5 | | 5.8 | | 9.8 | | 5.4 | | 7.5 | | 6.3 | |
| Brigade Capital | 8.4 | 3 | 15.1 | 4 | 3.8 | 83 | 6.4 | 86 | 3.9 | 90 | 8.2 | 21 | 5.7 | 80 |
| <i>BBgBarc BA Intermediate HY</i> | 4.9 | 77 | 8.7 | 80 | 7.7 | 19 | 11.1 | 15 | 6.6 | 12 | 7.6 | 46 | 6.0 | 70 |
| 50% Barclays HY/ 50% Bank Loan | 5.0 | 72 | 9.6 | 72 | 4.9 | 68 | 8.0 | 74 | 5.1 | 63 | 6.9 | 67 | 5.6 | 80 |
| <i>eV US High Yield Fixed Inc Net Median</i> | 5.8 | | 10.5 | | 5.8 | | 9.8 | | 5.4 | | 7.5 | | 6.3 | |
| PIMCO Diversified | 4.5 | 83 | 7.3 | 90 | 6.5 | 38 | 9.6 | 52 | 6.0 | 28 | -- | -- | -- | -- |
| <i>Blended PIMCO Diversified Index</i> | 4.5 | 83 | 7.2 | 90 | 6.6 | 37 | 10.1 | 40 | 5.8 | 36 | 6.9 | 66 | 6.1 | 66 |
| <i>BBgBarc BA Intermediate HY</i> | 4.9 | 77 | 8.7 | 80 | 7.7 | 19 | 11.1 | 15 | 6.6 | 12 | 7.6 | 46 | 6.0 | 70 |
| <i>eV US High Yield Fixed Inc Net Median</i> | 5.8 | | 10.5 | | 5.8 | | 9.8 | | 5.4 | | 7.5 | | 6.3 | |
| Franklin Templeton | 0.8 | 97 | 0.3 | 99 | -5.5 | 99 | -2.3 | 99 | -1.5 | 99 | 1.4 | 99 | 2.4 | 90 |
| <i>BBgBarc Multiverse TR</i> | 3.5 | 71 | 6.3 | 71 | 9.0 | 41 | 8.1 | 71 | 4.8 | 66 | 5.0 | 69 | 3.0 | 77 |
| <i>eV All Global Fixed Inc Net Median</i> | 4.7 | | 8.2 | | 7.7 | | 9.2 | | 5.3 | | 5.8 | | 4.3 | |

⁺ Preliminary return as of 12/31/2020.

^{*} Funded April 2020.

1. See Appendix for Benchmark History.

Total Fund
Performance Summary (Net of Fees)

Period Ending: December 31, 2020

| | 3 Mo (%) | Rank | Fiscal YTD (%) | Rank | 1 Yr (%) | Rank | 2 Yrs (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank |
|---|-------------|-----------|----------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|
| Private Credit | 2.1 | -- | 5.4 | -- | 6.5 | -- | 7.1 | -- | 7.3 | -- | -- | -- | -- | -- |
| <i>Cliffwater Direct Lending Index*</i> | 3.5 | -- | 7.2 | -- | 5.3 | -- | 7.1 | -- | 7.4 | -- | 8.4 | -- | 9.3 | -- |
| Blackrock DL Feeder IX-U*+ | 0.8 | 99 | 4.5 | 99 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| <i>Cliffwater Direct Lending Index</i> | 3.5 | 93 | 7.2 | 90 | 5.3 | 63 | 7.1 | 80 | 7.4 | 4 | 8.4 | 17 | 9.3 | 1 |
| <i>eV US High Yield Fixed Inc Net Median</i> | 5.8 | | 10.5 | | 5.8 | | 9.8 | | 5.4 | | 7.5 | | 6.3 | |
| PIMCO Private Income | 4.0 | 90 | 9.4 | 75 | 7.7 | 19 | -- | -- | -- | -- | -- | -- | -- | -- |
| <i>BBgBarc BA Intermediate HY</i> | 4.9 | 77 | 8.7 | 80 | 7.7 | 19 | 11.1 | 15 | 6.6 | 12 | 7.6 | 46 | 6.0 | 70 |
| <i>Cliffwater Direct Lending Index</i> | 3.5 | 93 | 7.2 | 90 | 5.3 | 63 | 7.1 | 80 | 7.4 | 4 | 8.4 | 17 | 9.3 | 1 |
| <i>eV US High Yield Fixed Inc Net Median</i> | 5.8 | | 10.5 | | 5.8 | | 9.8 | | 5.4 | | 7.5 | | 6.3 | |
| TCP Direct Lending VIII* | 2.6 | 96 | 5.4 | 98 | 6.4 | 40 | 6.7 | 85 | 6.8 | 9 | -- | -- | -- | -- |
| White Oak Yield* | 0.0 | 99 | 1.6 | 99 | 3.3 | 86 | 5.5 | 95 | 6.6 | 13 | -- | -- | -- | -- |
| White Oak YSF V** | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| <i>Cliffwater Direct Lending Index</i> | 3.5 | 93 | 7.2 | 90 | 5.3 | 63 | 7.1 | 80 | 7.4 | 4 | 8.4 | 17 | 9.3 | 1 |
| <i>eV US High Yield Fixed Inc Net Median</i> | 5.8 | | 10.5 | | 5.8 | | 9.8 | | 5.4 | | 7.5 | | 6.3 | |
| Alternatives | 18.6 | -- | 36.1 | -- | 31.9 | -- | 19.1 | -- | 13.3 | -- | 11.7 | -- | -9.2 | -- |
| <i>Blended Alternatives Index¹</i> | 5.6 | -- | 17.3 | -- | 11.8 | -- | 9.1 | -- | 9.3 | -- | 10.7 | -- | 8.7 | -- |
| Private Equity*** ** | 29.4 | 1 | 62.5 | 1 | 70.2 | 1 | 41.0 | 1 | 32.7 | 2 | 25.0 | 2 | -2.6 | 99 |
| <i>Blended Private Equity Index¹</i> | 10.2 | 20 | 33.9 | 3 | 18.0 | 22 | 11.8 | 33 | 12.2 | 41 | 15.2 | 17 | 15.2 | 14 |
| <i>InvMetrics All DB Private Eq Net Median</i> | 6.8 | | 12.9 | | 9.7 | | 9.4 | | 10.0 | | 10.1 | | 9.9 | |

* Preliminary return as of 12/31/2020.

* Funded March 2020.

** Funded December 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: December 31, 2020

| | 3 Mo (%) | Rank | Fiscal YTD (%) | Rank | 1 Yr (%) | Rank | 2 Yrs (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank |
|---|------------|-----------|----------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|------------|-----------|
| Hedge Fund/Absolute Return | 3.1 | 86 | 5.3 | 85 | -7.0 | 91 | -4.8 | 96 | -7.2 | 99 | -3.3 | 98 | -- | -- |
| <i>Libor 1 month +4%</i> | 1.0 | 91 | 2.1 | 92 | 4.5 | 65 | 5.4 | 67 | 5.6 | 39 | 5.3 | 38 | 4.8 | 36 |
| <i>InvMetrics All DB Hedge Funds Net Median</i> | 7.2 | | 12.3 | | 5.4 | | 7.7 | | 4.9 | | 4.3 | | 4.0 | |
| Aberdeen Standard GARS | 3.6 | 70 | 7.8 | 61 | 7.7 | 47 | 8.4 | 42 | 3.5 | 52 | 2.4 | 72 | -- | -- |
| Acadian MAAR Fund LLC** | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| CFM Systematic Global Macro** | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| Graham Quant Macro* | 4.5 | 65 | 7.3 | 63 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| PIMCO MAARS Fund LP*** | 0.4 | 88 | 0.4 | 88 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| <i>Libor 1 month +4%</i> | 1.0 | 86 | 2.1 | 81 | 4.5 | 59 | 5.4 | 59 | 5.6 | 40 | 5.3 | 50 | 4.8 | 50 |
| <i>eV Alt All Multi-Strategy Median</i> | 6.3 | | 10.1 | | 6.9 | | 7.1 | | 3.7 | | 5.3 | | 4.7 | |
| Inflation Hedge | 4.4 | -- | 6.5 | -- | -6.9 | -- | 0.3 | -- | -0.3 | -- | -- | -- | -- | -- |
| <i>Blended Inflation Hedge Index¹</i> | 5.1 | -- | 9.5 | -- | -0.6 | -- | 4.2 | -- | 2.6 | -- | -- | -- | -- | -- |
| Real Estate | 1.7 | 24 | 1.9 | 49 | 0.3 | 70 | 3.4 | 53 | 5.1 | 30 | 6.4 | 19 | 9.7 | 11 |
| <i>NCREIF ODCE</i> | 1.3 | 48 | 1.8 | 52 | 1.2 | 33 | 3.2 | 55 | 4.9 | 36 | 6.2 | 24 | 9.9 | 8 |
| <i>InvMetrics All DB Real Estate Pub Net Median</i> | 1.3 | | 1.9 | | 0.7 | | 3.5 | | 4.6 | | 5.4 | | 8.9 | |
| Harrison Street Core Property**** | 1.2 | -- | 2.4 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| <i>NCREIF ODCE</i> | 1.3 | -- | 1.8 | -- | 1.2 | -- | 3.2 | -- | 4.9 | -- | 6.2 | -- | 9.9 | -- |
| Invesco | 1.6 | -- | 1.2 | -- | -1.8 | -- | 2.1 | -- | 4.3 | -- | 6.0 | -- | 9.4 | -- |
| <i>NCREIF ODCE</i> | 1.3 | -- | 1.8 | -- | 1.2 | -- | 3.2 | -- | 4.9 | -- | 6.2 | -- | 9.9 | -- |
| Invesco US Val IV | 5.5 | -- | 6.5 | -- | 2.4 | -- | 7.9 | -- | 9.1 | -- | 9.1 | -- | -- | -- |
| <i>NCREIF ODCE</i> | 1.3 | -- | 1.8 | -- | 1.2 | -- | 3.2 | -- | 4.9 | -- | 6.2 | -- | 9.9 | -- |
| <i>NCREIF ODCE + 2%</i> | 1.8 | -- | 2.8 | -- | 3.2 | -- | 5.3 | -- | 7.0 | -- | 8.3 | -- | 12.1 | -- |

* Funded February 2020.

** Funded October 2020.

*** Funded April 2020.

**** Funded January 2020.

1. See Appendix for Benchmark History.

Total Fund
Performance Summary (Net of Fees)

Period Ending: December 31, 2020

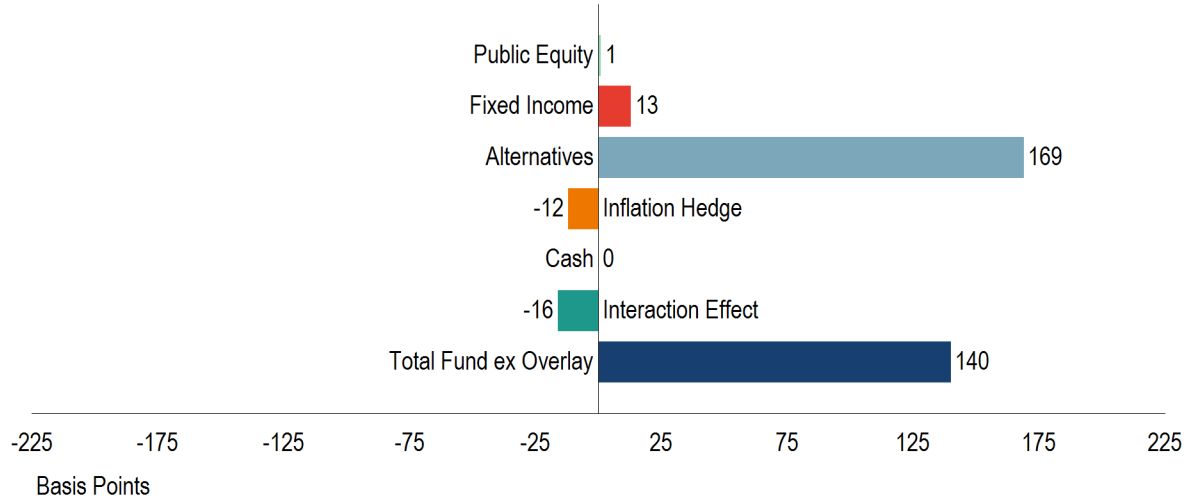
| | 3 Mo (%) | Rank | Fiscal YTD (%) | Rank | 1 Yr (%) | Rank | 2 Yrs (%) | Rank | 3 Yrs (%) | Rank | 5 Yrs (%) | Rank | 10 Yrs (%) | Rank |
|--|-------------|-----------|----------------|-----------|--------------|-----------|-------------|-----------|-------------|-----------|------------|-----------|------------|-----------|
| Invesco US Val V | 5.3 | -- | 4.7 | -- | 1.2 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| <i>NCREIF ODCE</i> | 1.3 | -- | 1.8 | -- | 1.2 | -- | 3.2 | -- | 4.9 | -- | 6.2 | -- | 9.9 | -- |
| <i>NCREIF ODCE + 2%</i> | 1.8 | -- | 2.8 | -- | 3.2 | -- | 5.3 | -- | 7.0 | -- | 8.3 | -- | 12.1 | -- |
| PGIM RE US Debt Fund | 1.2 | -- | 2.5 | -- | 4.5 | -- | 5.3 | -- | 5.5 | -- | -- | -- | -- | -- |
| <i>NCREIF ODCE</i> | 1.3 | -- | 1.8 | -- | 1.2 | -- | 3.2 | -- | 4.9 | -- | 6.2 | -- | 9.9 | -- |
| Private Real Asset** | 1.3 | -- | 7.6 | -- | -0.5 | -- | -5.9 | -- | -2.5 | -- | 5.4 | -- | -- | -- |
| <i>Blended Private Real Asset Index¹</i> | 9.0 | -- | 27.8 | -- | -4.8 | -- | -0.5 | -- | -1.4 | -- | 2.8 | -- | -- | -- |
| <i>Blended Secondary CA Private RA Index¹</i> | 2.6 | -- | 6.3 | -- | -7.2 | -- | -4.3 | -- | 0.3 | -- | 3.9 | -- | -- | -- |
| Public Real Assets | 11.5 | -- | 16.0 | -- | -14.5 | -- | -0.9 | -- | -5.1 | -- | -- | -- | -- | -- |
| <i>Blended Public Real Asset Index¹</i> | 11.6 | -- | 16.0 | -- | -4.7 | -- | 5.1 | -- | -0.3 | -- | 4.0 | -- | -- | -- |
| SSgA Custom Real Asset | 11.5 | -- | 16.0 | -- | -4.8 | -- | 5.1 | -- | -0.3 | -- | -- | -- | -- | -- |
| <i>SSgA Custom Real Asset Index¹</i> | 11.6 | -- | 16.0 | -- | -4.7 | -- | 5.1 | -- | -0.3 | -- | -- | -- | -- | -- |
| Cash | 0.1 | -- | 0.3 | -- | 0.7 | -- | 0.9 | -- | 1.0 | -- | 0.9 | -- | 0.8 | -- |
| <i>91 Day T-Bills</i> | 0.0 | -- | 0.0 | -- | 0.5 | -- | 1.3 | -- | 1.5 | -- | 1.1 | -- | 0.6 | -- |
| General Account | 0.1 | -- | 0.3 | -- | 1.1 | -- | 2.1 | -- | 3.0 | -- | 2.4 | -- | 1.5 | -- |
| Treasury & LAIF | 0.6 | -- | 0.8 | -- | 1.5 | -- | 2.3 | -- | 3.1 | -- | 2.3 | -- | 1.5 | -- |
| <i>91 Day T-Bills</i> | 0.0 | -- | 0.0 | -- | 0.5 | -- | 1.3 | -- | 1.5 | -- | 1.1 | -- | 0.6 | -- |
| Currency Hedge Cash Overlay | -0.1 | -- | -0.2 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

** Returns are one-quarter lag.

1. See Appendix for Benchmark History.

Total Fund ex Overlay
Performance Attribution

Period Ending: December 31, 2020

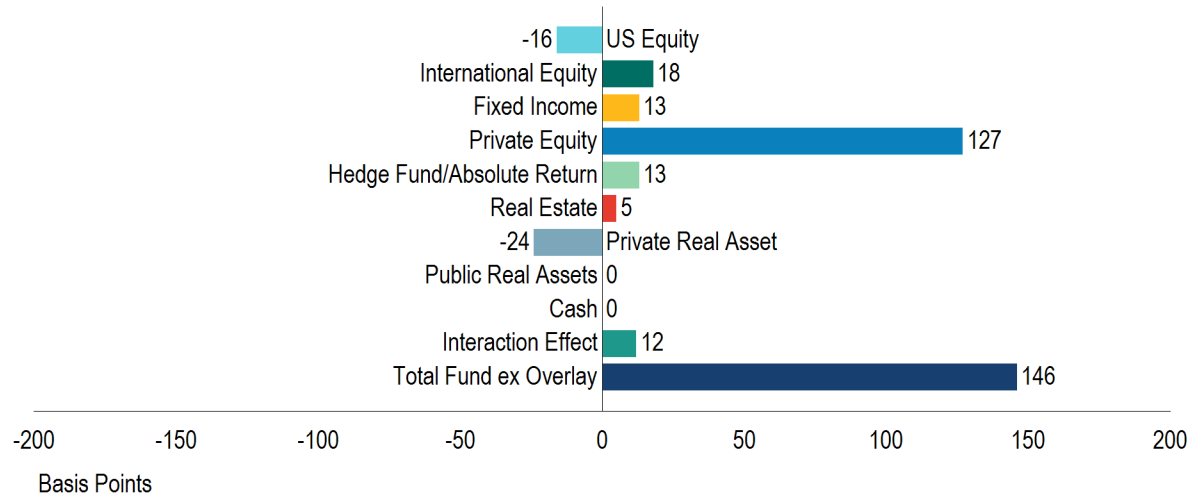


| | Wtd. Actual Return | Wtd. Index Return | Excess Return | Selection Effect | Allocation Effect | Interaction * | Total Effects |
|-----------------|--------------------|-------------------|---------------|------------------|-------------------|---------------|---------------|
| Public Equity | 14.96% | 14.88% | 0.08% | 0.01% | -0.02% | 0.01% | 0.00% |
| Fixed Income | 2.42% | 2.03% | 0.39% | 0.13% | 0.05% | -0.01% | 0.17% |
| Alternatives | 18.65% | 5.64% | 13.01% | 1.69% | -0.15% | -0.18% | 1.35% |
| Inflation Hedge | 4.41% | 5.08% | -0.67% | -0.12% | 0.09% | 0.01% | -0.01% |
| Cash | 0.14% | 0.02% | 0.12% | 0.00% | -0.11% | 0.00% | -0.10% |
| Total | 9.38% | 7.98% | 1.40% | 1.71% | -0.15% | -0.16% | 1.40% |

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

Total Fund ex Overlay
Performance Attribution

Period Ending: December 31, 2020

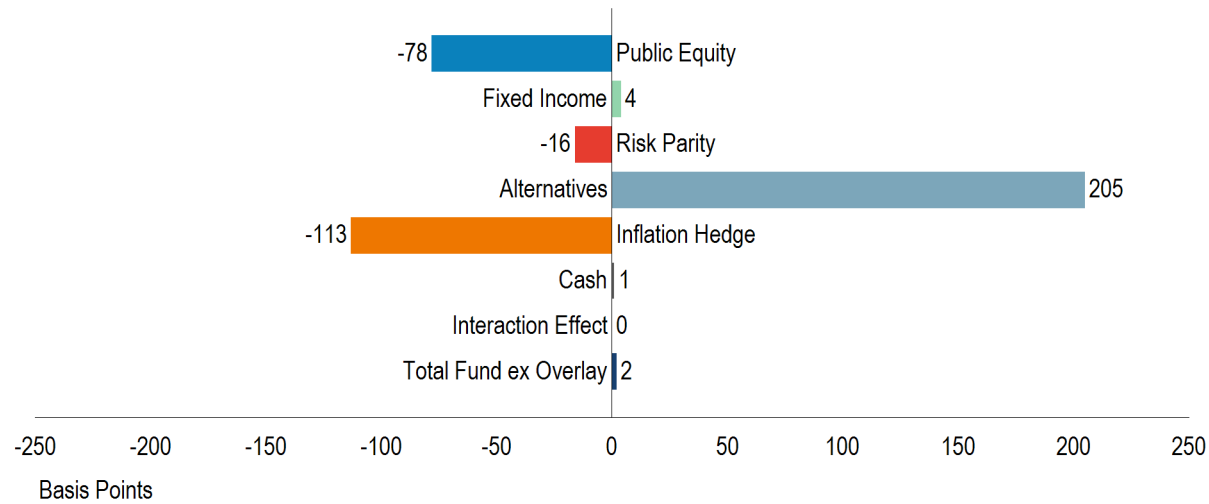


| | Wtd. Actual Return | Wtd. Index Return | Excess Return | Selection Effect | Allocation Effect | Interaction * Effects | Total Effects |
|----------------------------|-----------------------|----------------------|------------------|---------------------|----------------------|--------------------------|------------------|
| US Equity | 13.95% | 14.68% | -0.73% | -0.16% | 0.00% | 0.01% | -0.16% |
| International Equity | 16.17% | 15.12% | 1.05% | 0.18% | -0.02% | 0.00% | 0.16% |
| Fixed Income | 2.42% | 2.03% | 0.39% | 0.13% | 0.05% | -0.01% | 0.17% |
| Private Equity | 29.44% | 10.20% | 19.24% | 1.27% | -0.04% | 0.05% | 1.28% |
| Hedge Fund/Absolute Return | 3.10% | 1.04% | 2.05% | 0.13% | 0.00% | 0.00% | 0.13% |
| Real Estate | 1.74% | 1.29% | 0.45% | 0.05% | 0.12% | -0.01% | 0.16% |
| Private Real Asset | 1.26% | 8.97% | -7.71% | -0.24% | -0.01% | 0.09% | -0.17% |
| Public Real Assets | 11.50% | 11.59% | -0.09% | 0.00% | 0.00% | 0.00% | 0.00% |
| Cash | 0.14% | 0.02% | 0.12% | 0.00% | -0.11% | 0.00% | -0.11% |
| Total | 9.44% | 7.98% | 1.46% | 1.35% | -0.01% | 0.12% | 1.46% |

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: December 31, 2020

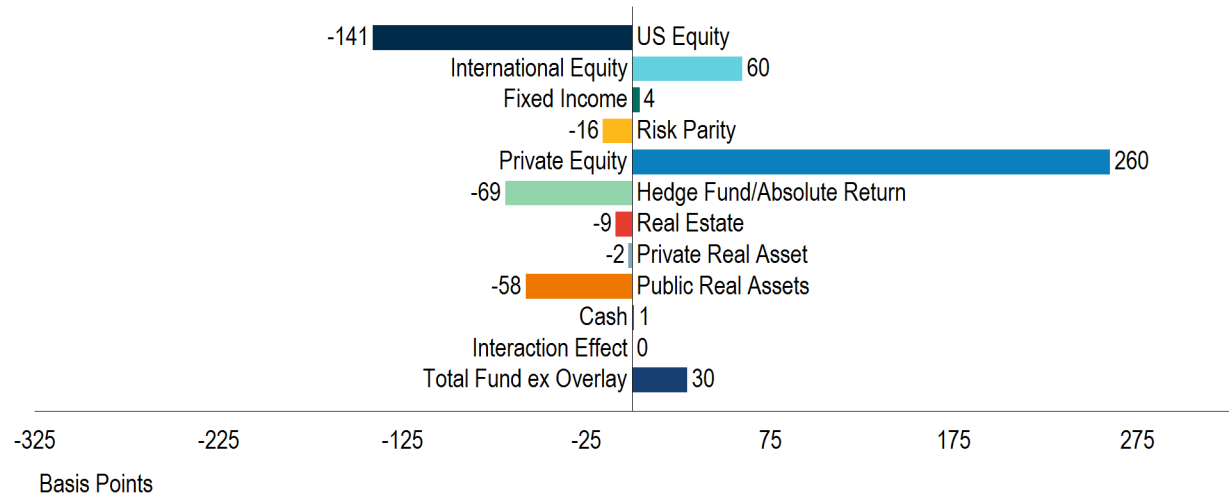


| | Wtd. Actual Return | Wtd. Index Return | Excess Return | Selection Effect | Allocation Effect | Interaction* | Total Effects |
|-----------------|--------------------|-------------------|---------------|------------------|-------------------|--------------|---------------|
| Public Equity | 13.72% | 15.68% | -1.96% | -0.78% | 0.00% | 0.00% | -0.78% |
| Fixed Income | 6.84% | 7.02% | -0.18% | 0.04% | 0.00% | 0.00% | 0.04% |
| Risk Parity | -- | -- | -- | -0.16% | 0.00% | 0.00% | -0.16% |
| Alternatives | 31.93% | 11.81% | 20.12% | 2.05% | 0.00% | 0.00% | 2.05% |
| Inflation Hedge | -6.90% | -0.60% | -6.30% | -1.13% | 0.00% | 0.00% | -1.13% |
| Cash | 0.66% | 0.45% | 0.21% | 0.01% | 0.00% | 0.00% | 0.01% |
| Total | 9.30% | 9.28% | 0.02% | 0.02% | 0.00% | 0.00% | 0.02% |

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

Total Fund ex Overlay
Performance Attribution (1 Year)

Period Ending: December 31, 2020



| | Wtd. Actual Return | Wtd. Index Return | Excess Return | Selection Effect | Allocation Effect | Interaction * | Total Effects |
|----------------------------|--------------------|-------------------|---------------|------------------|-------------------|---------------|---------------|
| US Equity | 14.17% | 20.89% | -6.71% | -1.41% | 0.00% | 0.00% | -1.41% |
| International Equity | 13.03% | 9.54% | 3.49% | 0.60% | 0.00% | 0.00% | 0.60% |
| Fixed Income | 6.84% | 7.02% | -0.18% | 0.04% | 0.00% | 0.00% | 0.04% |
| Risk Parity | -- | -- | -- | -0.16% | 0.00% | 0.00% | -0.16% |
| Private Equity | 70.15% | 18.00% | 52.15% | 2.60% | 0.00% | 0.00% | 2.60% |
| Hedge Fund/Absolute Return | -6.98% | 4.48% | -11.46% | -0.69% | 0.00% | 0.00% | -0.69% |
| Real Estate | 0.25% | 1.17% | -0.92% | -0.09% | 0.00% | 0.00% | -0.09% |
| Private Real Asset | -0.52% | -4.84% | 4.31% | -0.02% | 0.00% | 0.00% | -0.02% |
| Public Real Assets | -14.45% | -4.65% | -9.80% | -0.58% | 0.00% | 0.00% | -0.58% |
| Cash | 0.66% | 0.45% | 0.21% | 0.01% | 0.00% | 0.00% | 0.01% |
| Total | 9.31% | 9.01% | 0.30% | 0.30% | 0.00% | 0.00% | 0.30% |

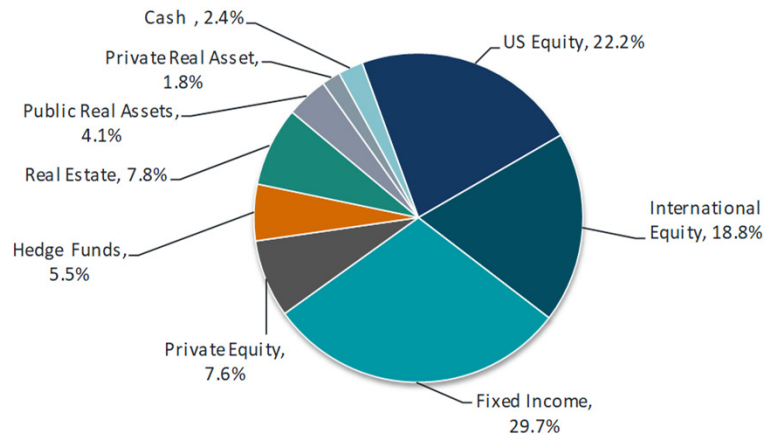
Attribution does not include the impact of the Parametric Minneapolis strategy. Risk Parity closed June 2020.
* Interaction Effects include Residual Effects.

Total Fund

Asset Allocation Analysis

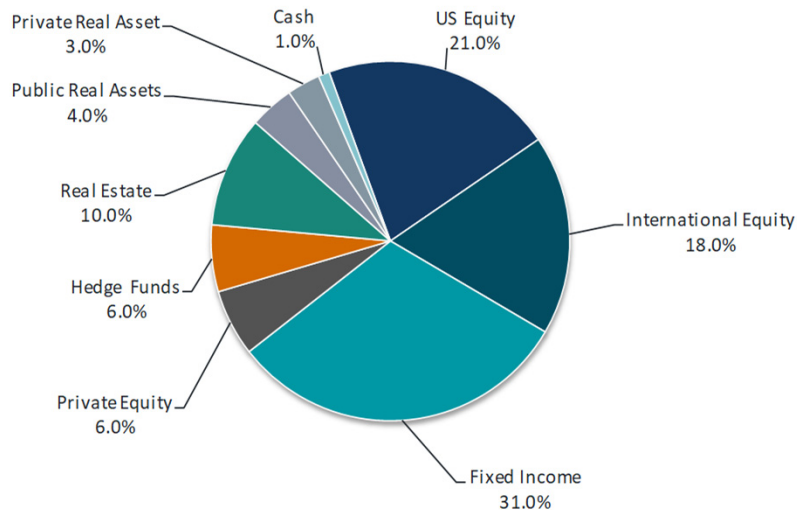
Period Ending: December 31, 2020

Current w/ Overlay



| ASSET ALLOCATION | MARKET VALUE W/ OVERLAY | W/ OVERLAY | W/O OVERLAY |
|----------------------|-------------------------|---------------|---------------|
| US Equity | 1,228,754,344 | 22.2% | 21.7% |
| International Equity | 1,037,932,560 | 18.8% | 18.5% |
| Fixed Income | 1,642,274,631 | 29.7% | 28.9% |
| Private Equity | 422,412,520 | 7.6% | 7.6% |
| Hedge Funds | 306,957,470 | 5.5% | 5.5% |
| Real Estate | 431,340,649 | 7.8% | 7.8% |
| Public Real Assets | 227,469,523 | 4.1% | 4.1% |
| Private Real Asset | 101,239,090 | 1.8% | 1.8% |
| Cash | 134,783,923 | 2.4% | 4.0% |
| TOTAL | 5,533,164,711 | 100.0% | 100.0% |

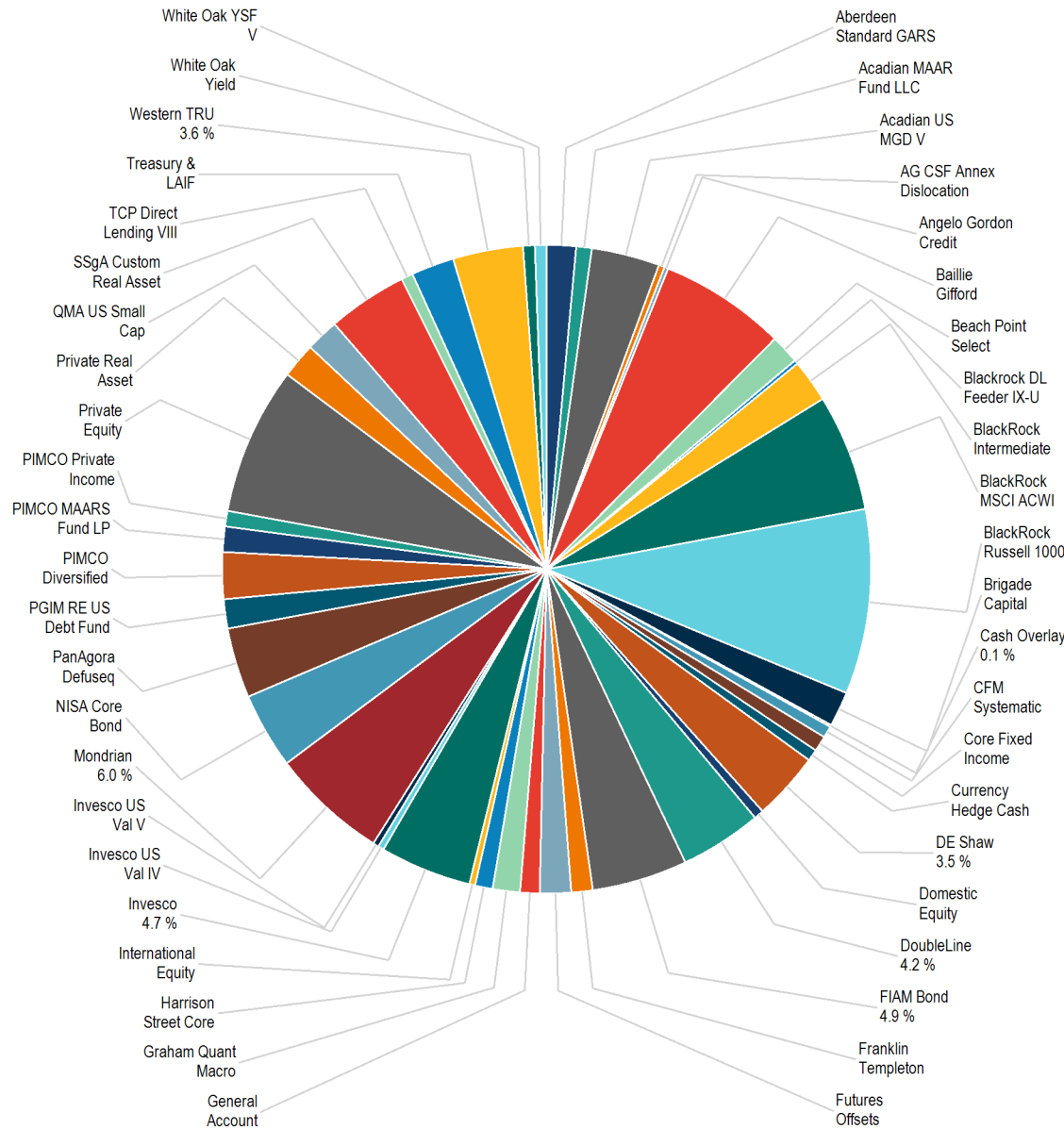
Target



| ASSET ALLOCATION | W/ OVERLAY | TARGET | DIFF |
|----------------------|---------------|---------------|-------------|
| US Equity | 22.2% | 21.0% | 1.2% |
| International Equity | 18.8% | 18.0% | 0.8% |
| Fixed Income | 29.7% | 31.0% | -1.3% |
| Private Equity | 7.6% | 6.0% | 1.6% |
| Hedge Funds | 5.5% | 6.0% | -0.5% |
| Real Estate | 7.8% | 10.0% | -2.2% |
| Public Real Assets | 4.1% | 4.0% | 0.1% |
| Private Real Asset | 1.8% | 3.0% | -1.2% |
| Cash | 2.4% | 1.0% | 1.4% |
| TOTAL | 100.0% | 100.0% | 0.0% |

Total Fund Manager Allocation Analysis

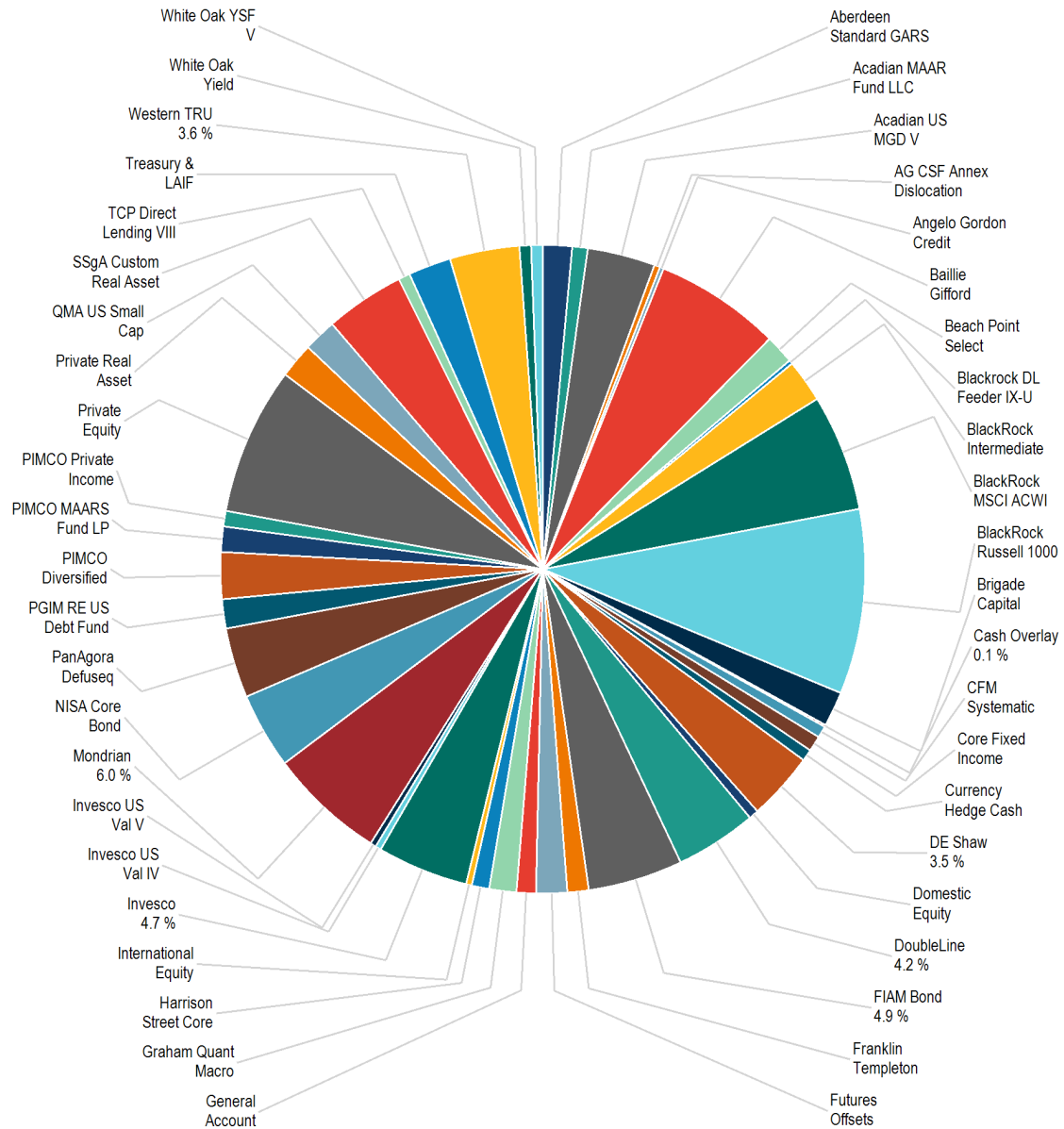
Period Ending: December 31, 2020



| Name | Market Value | % of Portfolio |
|--------------------------------|---------------|----------------|
| Acadian US MGD V | \$191,477,933 | 3% |
| BlackRock Russell 1000 | \$524,329,890 | 9% |
| DE Shaw | \$192,813,443 | 3% |
| PanAgora Defuseq | \$199,107,070 | 4% |
| QMA US Small Cap | \$94,367,708 | 2% |
| Domestic Equity Overlay | \$26,658,300 | 0% |
| Baillie Gifford | \$358,270,630 | 6% |
| Mondrian | \$329,618,427 | 6% |
| BlackRock MSCI ACWI EX-US IMI | \$334,258,417 | 6% |
| Int'l Equity Currency Overlay | \$0 | 0% |
| International Equity Overlay | \$15,785,087 | 0% |
| BlackRock Intermediate Govt | \$120,278,426 | 2% |
| DoubleLine | \$231,202,223 | 4% |
| FIAM Bond | \$271,676,815 | 5% |
| NISA Core Bond | \$215,702,605 | 4% |
| Western TRU | \$199,438,034 | 4% |
| Core Fixed Income Overlay | \$43,985,867 | 1% |
| AG CSF Annex Dislocation Fund | \$17,541,450 | 0% |
| Angelo Gordon Opportunistic | \$2,598,807 | 0% |
| Angelo Gordon STAR | \$31,800 | 0% |
| Angelo Gordon Credit Solutions | \$13,124,580 | 0% |
| Beach Point Select | \$84,463,914 | 2% |
| Brigade Capital | \$97,013,974 | 2% |
| PIMCO Diversified | \$134,338,857 | 2% |
| Franklin Templeton | \$58,718,812 | 1% |
| Blackrock DL Feeder IX-U | \$9,275,073 | 0% |
| PIMCO Private Income | \$42,506,912 | 1% |
| TCP Direct Lending VIII | \$32,471,367 | 1% |
| White Oak Yield | \$34,191,325 | 1% |
| White Oak YSF V | \$33,713,789 | 1% |

Total Fund Manager Allocation Analysis

Period Ending: December 31, 2020



| Name | Market Value | % of Portfolio |
|-------------------------------|------------------------|----------------|
| Private Equity | \$422,412,520 | 8% |
| Aberdeen Standard GARS | \$81,329,035 | 1% |
| Acadian MAAR Fund LLC | \$45,822,221 | 1% |
| CFM Systematic Global Macro | \$31,559,539 | 1% |
| Graham Quant Macro | \$77,719,575 | 1% |
| PIMCO MAARS Fund LP | \$70,527,099 | 1% |
| Harrison Street Core Property | \$51,180,898 | 1% |
| Invesco | \$262,524,177 | 5% |
| Invesco US Val IV | \$14,947,299 | 0% |
| Invesco US Val V | \$17,562,148 | 0% |
| PGIM RE US Debt Fund | \$85,126,127 | 2% |
| Private Real Asset | \$101,239,090 | 2% |
| SSgA Custom Real Asset | \$227,469,523 | 4% |
| General Account | \$56,795,968 | 1% |
| Treasury & LAIF | \$122,782,248 | 2% |
| Transition Account | \$9 | 0% |
| Currency Hedge Cash Overlay | \$33,725,797 | 1% |
| Cash Overlay | \$7,909,155 | 0% |
| Futures Offsets (SMCE02001) | -\$86,429,254 | -2% |
| Total | \$5,533,164,711 | 100% |

Statistics Summary

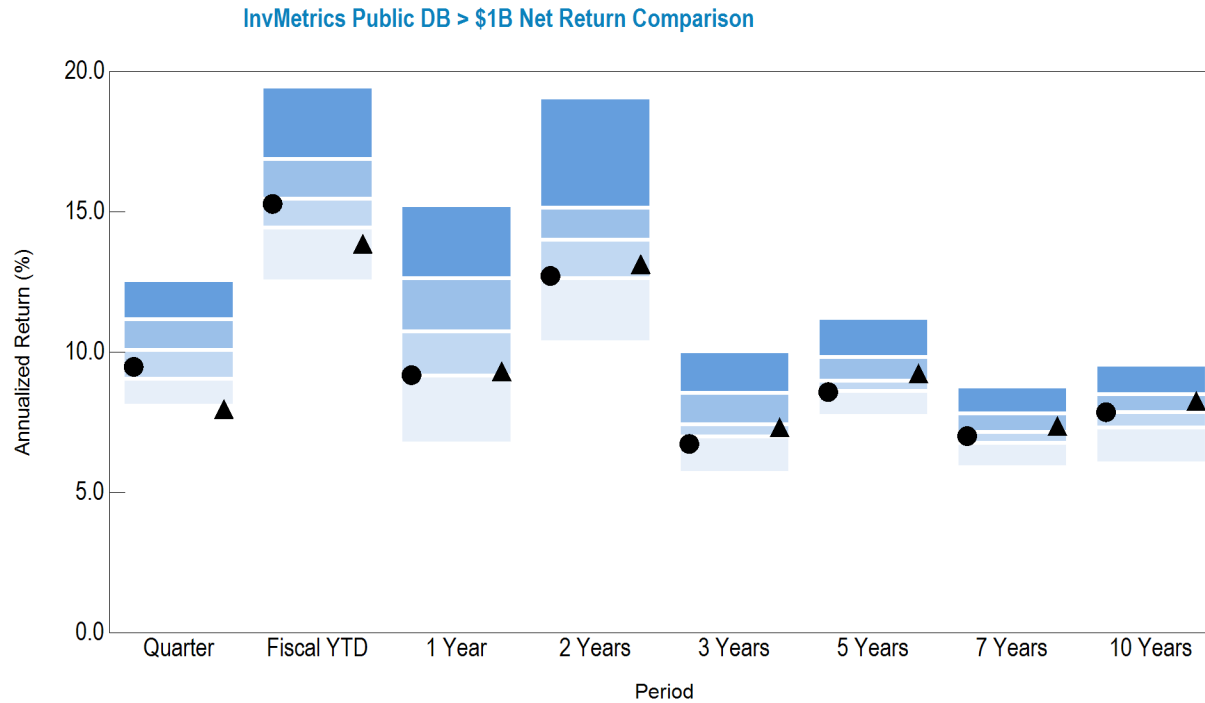
3 Years

| | Anlzd Return | Anlzd Return Rank | Anlzd Standard Deviation | Anlzd Standard Deviation Rank | Sharpe Ratio | Sharpe Ratio Rank | Information Ratio | Information Ratio Rank | Tracking Error | Tracking Error Rank |
|--|--------------|-------------------|--------------------------|-------------------------------|--------------|-------------------|-------------------|------------------------|----------------|---------------------|
| Total Fund | 6.7% | 84 | 9.6% | 32 | 0.5 | 63 | -0.3 | 46 | 2.0% | 68 |
| Policy Index | 7.3% | 54 | 9.5% | 30 | 0.6 | 43 | -- | -- | 0.0% | 1 |
| InvMetrics Public DB > \$1B Net Median | 7.4% | -- | 10.7% | -- | 0.6 | -- | -0.4 | -- | 1.3% | -- |

Statistics Summary

5 Years

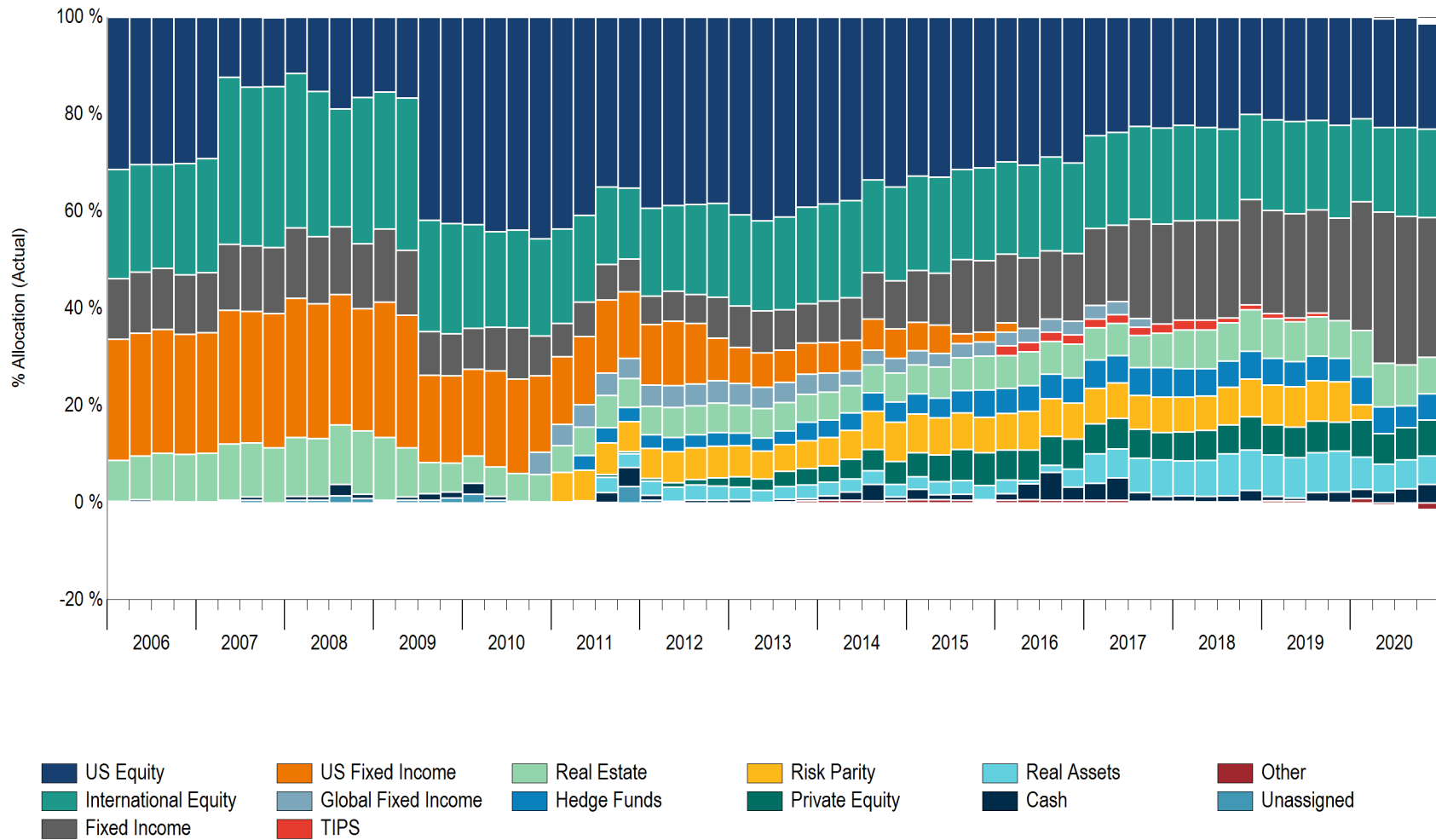
| | Anlzd Return | Anlzd Return Rank | Anlzd Standard Deviation | Anlzd Standard Deviation Rank | Sharpe Ratio | Sharpe Ratio Rank | Information Ratio | Information Ratio Rank | Tracking Error | Tracking Error Rank |
|--|--------------|-------------------|--------------------------|-------------------------------|--------------|-------------------|-------------------|------------------------|----------------|---------------------|
| Total Fund | 8.6% | 82 | 8.0% | 34 | 0.9 | 45 | -0.4 | 58 | 1.7% | 66 |
| Policy Index | 9.2% | 42 | 8.0% | 37 | 1.0 | 30 | -- | -- | 0.0% | 1 |
| InvMetrics Public DB > \$1B Net Median | 9.0% | -- | 8.8% | -- | 0.9 | -- | -0.2 | -- | 1.3% | -- |



| | Quarter | Fiscal YTD | 1 Year | 2 Years | 3 Years | 5 Years | 7 Years | 10 Years |
|----------------------|----------|------------|----------|-----------|----------|----------|----------|----------|
| Return (Rank) | | | | | | | | |
| 5th Percentile | 12.6 | 19.5 | 15.2 | 19.1 | 10.0 | 11.2 | 8.8 | 9.6 |
| 25th Percentile | 11.2 | 16.9 | 12.7 | 15.2 | 8.6 | 9.9 | 7.8 | 8.5 |
| Median | 10.1 | 15.5 | 10.8 | 14.0 | 7.4 | 9.0 | 7.2 | 7.9 |
| 75th Percentile | 9.1 | 14.4 | 9.2 | 12.6 | 7.0 | 8.6 | 6.8 | 7.3 |
| 95th Percentile | 8.1 | 12.5 | 6.8 | 10.4 | 5.7 | 7.7 | 5.9 | 6.0 |
| # of Portfolios | 80 | 80 | 80 | 80 | 80 | 80 | 78 | 73 |
| ● Total Fund | 9.5 (66) | 15.3 (56) | 9.2 (75) | 12.7 (73) | 6.7 (84) | 8.6 (82) | 7.0 (61) | 7.9 (51) |
| ▲ Policy Index | 8.0 (96) | 13.9 (85) | 9.3 (70) | 13.1 (64) | 7.3 (54) | 9.2 (42) | 7.4 (42) | 8.3 (36) |

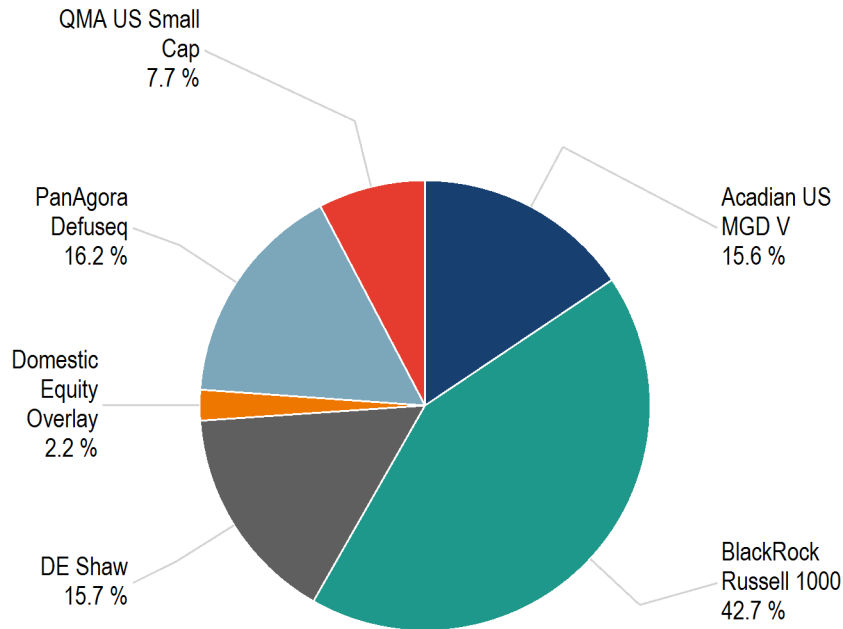
Total Fund
Asset Allocation History

Period Ending: December 31, 2020



US Equity
 Manager Allocation Analysis

Period Ending: December 31, 2020



| | Actual \$ | Actual % | Manager Contribution to Excess Return % |
|-------------------------------------|------------------------|---------------|---|
| Acadian US MGD V | \$191,477,933 | 15.6% | -0.7% |
| BlackRock Russell 1000 | \$524,329,890 | 42.7% | 0.0% |
| DE Shaw | \$192,813,443 | 15.7% | 0.6% |
| PanAgora Defuseq | \$199,107,070 | 16.2% | -0.6% |
| QMA US Small Cap | \$94,367,708 | 7.7% | -0.3% |
| Domestic Equity Overlay | \$26,658,300 | 2.2% | 0.0% |
| Actual vs. Policy Weight Difference | | | 0.2% |
| Total | \$1,228,754,344 | 100.0% | -0.7% |

Statistics Summary

3 Years

| | Anlzd Return | Anlzd Standard Deviation | Sharpe Ratio | Information Ratio | Tracking Error |
|-------------------------|--------------|--------------------------|--------------|-------------------|----------------|
| US Equity | 11.6% | 19.0% | 0.5 | -2.0 | 1.5% |
| Blended US Equity Index | 14.5% | 19.7% | 0.7 | -- | 0.0% |
| Russell 3000 | 14.5% | 19.7% | 0.7 | -- | 0.0% |

Statistics Summary

3 Years

| | Anlzd Return | Anlzd Standard Deviation | Sharpe Ratio | Information Ratio | Tracking Error |
|------------------------|--------------|--------------------------|--------------|-------------------|----------------|
| Large Cap Equity | 12.6% | 18.4% | 0.6 | -1.4 | 1.7% |
| Russell 1000 | 14.8% | 19.4% | 0.7 | -- | 0.0% |
| BlackRock Russell 1000 | 14.8% | 19.4% | 0.7 | 0.5 | 0.0% |
| Russell 1000 | 14.8% | 19.4% | 0.7 | -- | 0.0% |
| DE Shaw | 13.5% | 19.5% | 0.6 | -0.5 | 2.8% |
| Russell 1000 | 14.8% | 19.4% | 0.7 | -- | 0.0% |
| Small Cap Equity | 2.9% | 27.0% | 0.1 | -1.8 | 4.1% |
| Russell 2000 | 10.2% | 25.6% | 0.3 | -- | 0.0% |
| QMA US Small Cap | 2.9% | 27.0% | 0.1 | -1.8 | 4.1% |
| Russell 2000 | 10.2% | 25.6% | 0.3 | -- | 0.0% |

Statistics Summary

5 Years

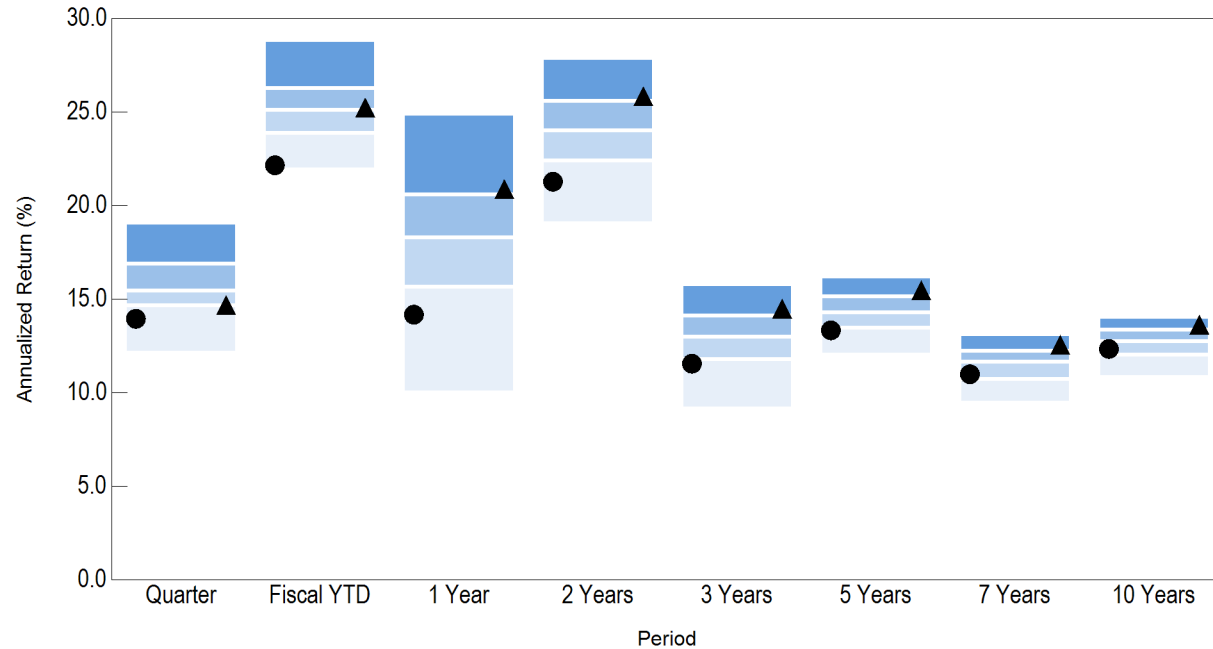
| | Anlzd Return | Anlzd Standard Deviation | Sharpe Ratio | Information Ratio | Tracking Error |
|-------------------------|--------------|-----------------------------|--------------|-------------------|----------------|
| US Equity | 13.3% | 15.6% | 0.8 | -1.7 | 1.3% |
| Blended US Equity Index | 15.5% | 16.1% | 0.9 | -- | 0.0% |
| Russell 3000 | 15.4% | 16.0% | 0.9 | -0.3 | 0.1% |

Statistics Summary

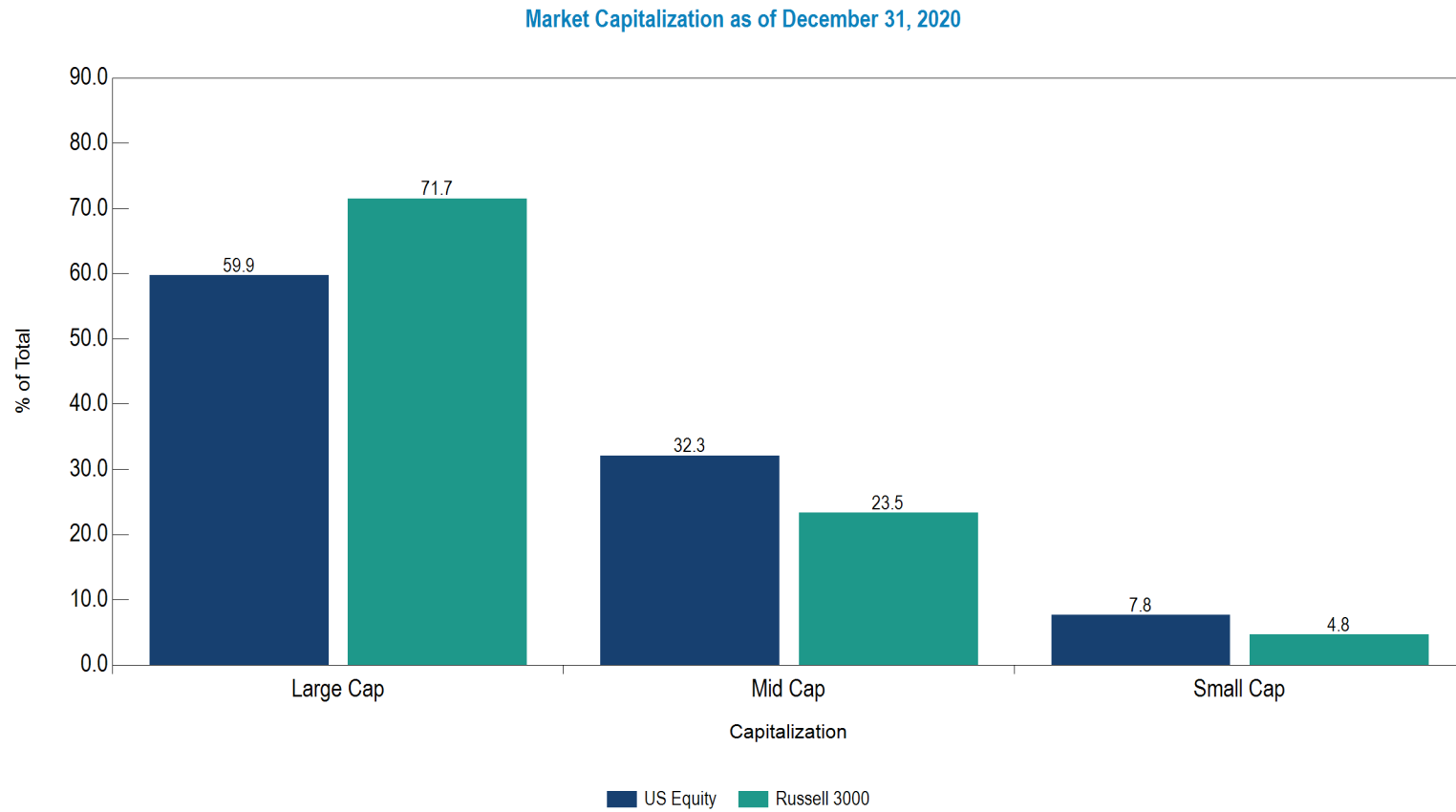
5 Years

| | Anlzd Return | Anlzd Standard Deviation | Sharpe Ratio | Information Ratio | Tracking Error |
|------------------|--------------|--------------------------|--------------|-------------------|----------------|
| Large Cap Equity | 14.4% | 15.0% | 0.9 | -0.8 | 1.6% |
| Russell 1000 | 15.6% | 15.7% | 0.9 | -- | 0.0% |
| DE Shaw | 15.8% | 15.9% | 0.9 | 0.1 | 2.6% |
| Russell 1000 | 15.6% | 15.7% | 0.9 | -- | 0.0% |
| Small Cap Equity | 7.6% | 22.4% | 0.3 | -1.5 | 3.7% |
| Russell 2000 | 13.3% | 21.5% | 0.6 | -- | 0.0% |

InvMetrics All DB US Eq Net Return Comparison



| | Return (Rank) | | | | | | | |
|---------------------------|---------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|
| | Quarter | Fiscal YTD | 1 Year | 2 Years | 3 Years | 5 Years | 7 Years | 10 Years |
| 5th Percentile | 19.1 | 28.8 | 24.9 | 27.9 | 15.8 | 16.2 | 13.1 | 14.1 |
| 25th Percentile | 16.9 | 26.3 | 20.6 | 25.6 | 14.1 | 15.2 | 12.3 | 13.4 |
| Median | 15.5 | 25.1 | 18.3 | 24.1 | 13.0 | 14.3 | 11.7 | 12.8 |
| 75th Percentile | 14.7 | 23.9 | 15.7 | 22.4 | 11.8 | 13.5 | 10.8 | 12.1 |
| 95th Percentile | 12.2 | 22.0 | 10.0 | 19.1 | 9.2 | 12.1 | 9.5 | 10.8 |
| # of Portfolios | 543 | 543 | 543 | 538 | 534 | 506 | 474 | 380 |
| ● US Equity | 14.0 (89) | 22.2 (93) | 14.2 (87) | 21.3 (86) | 11.6 (78) | 13.3 (78) | 11.0 (70) | 12.3 (67) |
| ▲ Blended US Equity Index | 14.7 (75) | 25.2 (44) | 20.9 (21) | 25.9 (18) | 14.5 (17) | 15.5 (14) | 12.6 (16) | 13.6 (14) |



See appendix for the market capitalization breakpoints.

Characteristics

| | Portfolio | Russell 3000 |
|---------------------------------|-----------|--------------|
| Number of Holdings | 2,965 | 3,058 |
| Weighted Avg. Market Cap. (\$B) | 288.5 | 407.2 |
| Median Market Cap. (\$B) | 3.9 | 2.0 |
| Price To Earnings | 26.6 | 29.1 |
| Price To Book | 4.1 | 4.4 |
| Price To Sales | 2.3 | 2.7 |
| Return on Equity (%) | 17.1 | 16.0 |
| Yield (%) | 1.6 | 1.4 |

Top Holdings

| | |
|----------------------------|------|
| APPLE INC | 3.7% |
| MICROSOFT CORP | 3.3% |
| AMAZON.COM INC | 2.2% |
| FACEBOOK INC | 1.3% |
| ALPHABET INC | 1.2% |
| PROCTER & GAMBLE CO (THE) | 1.1% |
| JOHNSON & JOHNSON | 1.1% |
| VERIZON COMMUNICATIONS INC | 1.0% |
| WALT DISNEY CO (THE) | 0.8% |
| CISCO SYSTEMS INC | 0.8% |

Best Performers

| | Return % |
|------------------------------------|----------|
| FTS INTERNATIONAL INC (FTSI) | 478.3% |
| FUELCELL ENERGY INC (FCEL) | 422.0% |
| SILVERGATE CAPITAL CORP (SI) | 416.0% |
| APTEVO THERAPEUTICS INC (APVO) | 382.2% |
| MAGNITE INC (MGNI) | 342.2% |
| ALTUS MIDSTREAM CO (ALTM) | 327.2% |
| SM ENERGY CO (SM) | 287.3% |
| SOLID BIOSCIENCES INC (SLDB) | 273.4% |
| FIVE PRIME THERAPEUTICS INC (FPRX) | 261.9% |
| ARVINAS INC (ARVN) | 259.7% |

Worst Performers

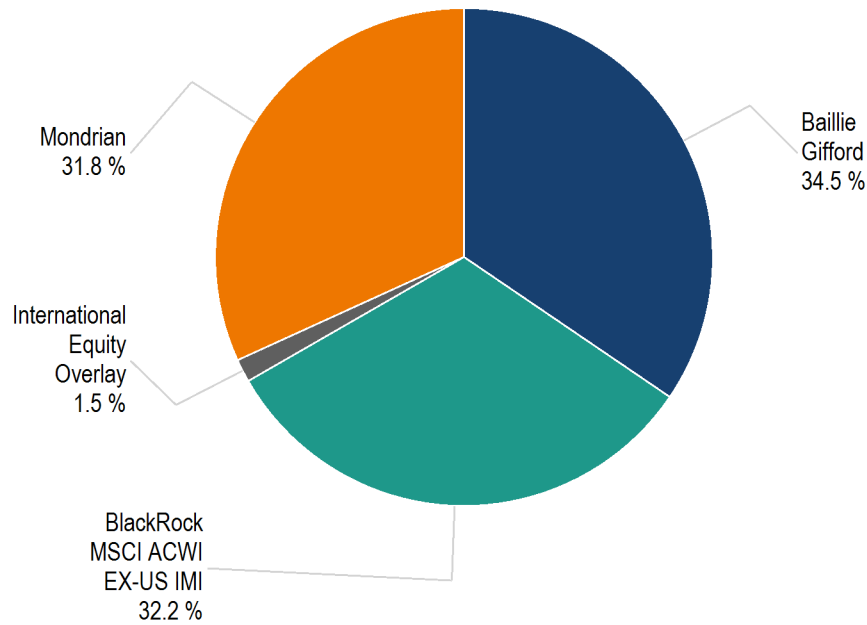
| | Return % |
|--------------------------------------|----------|
| GULFPORT ENERGY CORP (GPORQ) | -92.1% |
| FRANCESSAS HOLDINGS CORP (FRANQ) | -81.5% |
| APREA THERAPEUTICS INC (APRE) | -79.6% |
| MALLINCKRODT PLC (MNKKQ) | -79.3% |
| VIVUS INC (VVUSQ) | -69.1% |
| CATABASIS PHARMACEUTICALS INC (CATB) | -65.4% |
| BAUDAX BIO INC (BXRQ) | -63.5% |
| ASSEMBLY BIOSCIENCES INC (ASMB) | -63.2% |
| OVID THERAPEUTICS INC (OVID) | -59.8% |
| AMC ENTERTAINMENT HOLDINGS INC (AMC) | -55.0% |

US Equity Performance Attribution vs. Russell 3000

| | Attribution Effects | | | | Returns | | Sector Weights | | | | |
|------------------------|---------------------|------------------|-------------------|---------------------|--------------|-----------|----------------|--------------|--------------|---------------|---------------|
| | Total Effects | Selection Effect | Allocation Effect | Interaction Effects | Portfolio | Benchmark | Portfolio | Benchmark | | | |
| Energy | 0.0% | 0.0% | 0.0% | 0.0% | 30.2% | 29.4% | 1.7% | 1.7% | | | |
| Materials | -0.1% | -0.1% | 0.0% | 0.0% | 13.3% | 17.3% | 3.6% | 2.8% | | | |
| Industrials | -0.2% | -0.1% | 0.0% | 0.0% | 16.7% | 18.3% | 8.6% | 9.0% | | | |
| Consumer Discretionary | 0.1% | 0.1% | 0.0% | 0.0% | 15.4% | 14.3% | 11.8% | 12.4% | | | |
| Consumer Staples | -0.5% | -0.1% | -0.3% | -0.1% | 4.7% | 7.0% | 10.0% | 6.3% | | | |
| Health Care | 0.1% | 0.1% | -0.1% | 0.0% | 11.1% | 10.2% | 15.9% | 14.5% | | | |
| Financials | 0.0% | 0.2% | -0.2% | 0.0% | 27.0% | 24.6% | 8.2% | 9.9% | | | |
| Information Technology | 0.5% | 0.6% | 0.0% | -0.1% | 16.1% | 13.8% | 23.1% | 27.3% | | | |
| Communication Services | 0.1% | 0.1% | 0.0% | 0.0% | 16.1% | 15.4% | 9.6% | 9.9% | | | |
| Utilities | -0.1% | -0.1% | -0.1% | 0.0% | 6.1% | 8.0% | 4.0% | 2.9% | | | |
| Real Estate | 0.0% | 0.0% | 0.0% | 0.0% | 10.2% | 9.3% | 3.2% | 3.3% | | | |
| Cash | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | -- | 0.3% | 0.0% | | | |
| Unclassified | 0.0% | 0.0% | 0.0% | 0.0% | 15.2% | -- | 0.0% | 0.0% | | | |
| Portfolio | -0.1% | = | 0.8% | + | -0.6% | + | -0.3% | 14.5% | 14.6% | 100.0% | 100.0% |

U.S. Effective Style Map





| | Actual \$ | Actual % | Manager Contribution to Excess Return % |
|-------------------------------------|------------------------|---------------|---|
| Baillie Gifford | \$358,270,630 | 34.5% | 0.0% |
| Mondrian | \$329,618,427 | 31.8% | -0.4% |
| BlackRock MSCI ACWI EX-US IMI | \$334,258,417 | 32.2% | 0.0% |
| International Equity Overlay | \$15,785,087 | 1.5% | 0.0% |
| Actual vs. Policy Weight Difference | | | 1.4% |
| Total | \$1,037,932,560 | 100.0% | 1.0% |

Statistics Summary

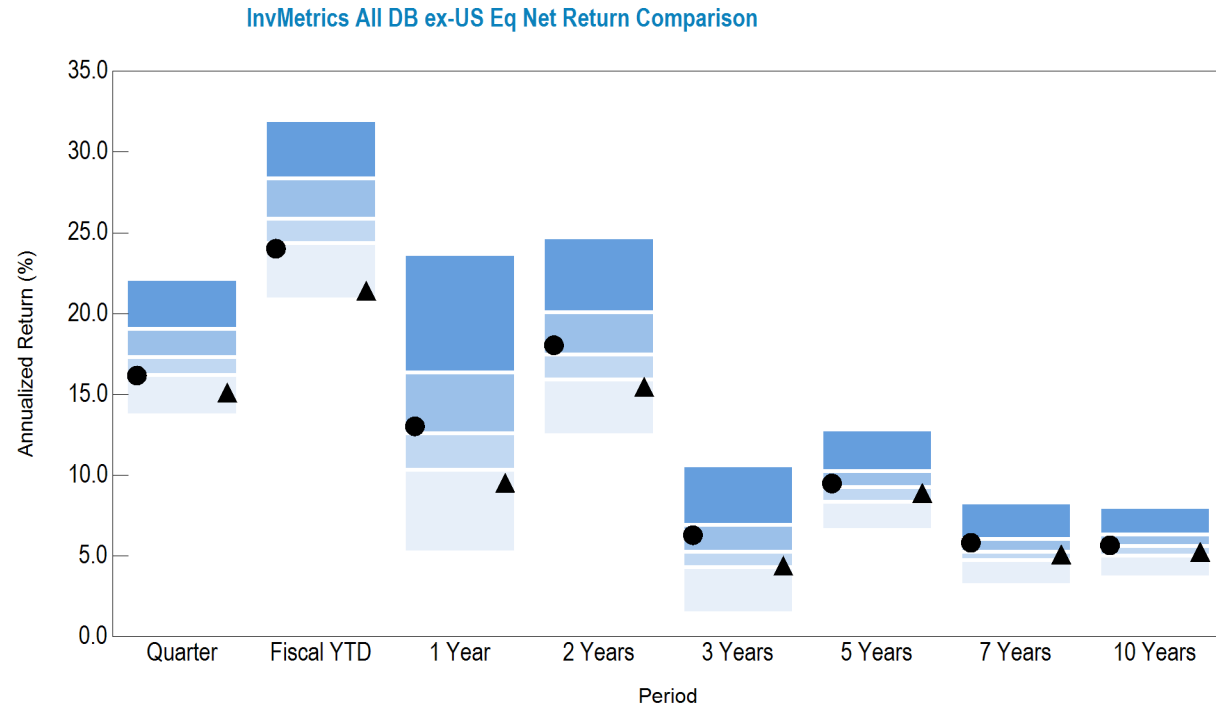
3 Years

| | Anlzd Return | Anlzd Standard Deviation | Sharpe Ratio | Information Ratio | Tracking Error |
|------------------------------------|--------------|--------------------------|--------------|-------------------|----------------|
| International Equity | 6.3% | 17.3% | 0.3 | 1.3 | 1.4% |
| Blended International Equity Index | 4.4% | 17.3% | 0.2 | -- | 0.0% |
| Baillie Gifford | 14.1% | 19.0% | 0.7 | 1.5 | 6.0% |
| MSCI ACWI ex US | 5.4% | 18.2% | 0.2 | -- | 0.0% |
| Mondrian | 1.6% | 19.5% | 0.0 | 0.6 | 2.5% |
| MSCI ACWI ex USA Value Gross | 0.2% | 20.6% | -0.1 | -- | 0.0% |

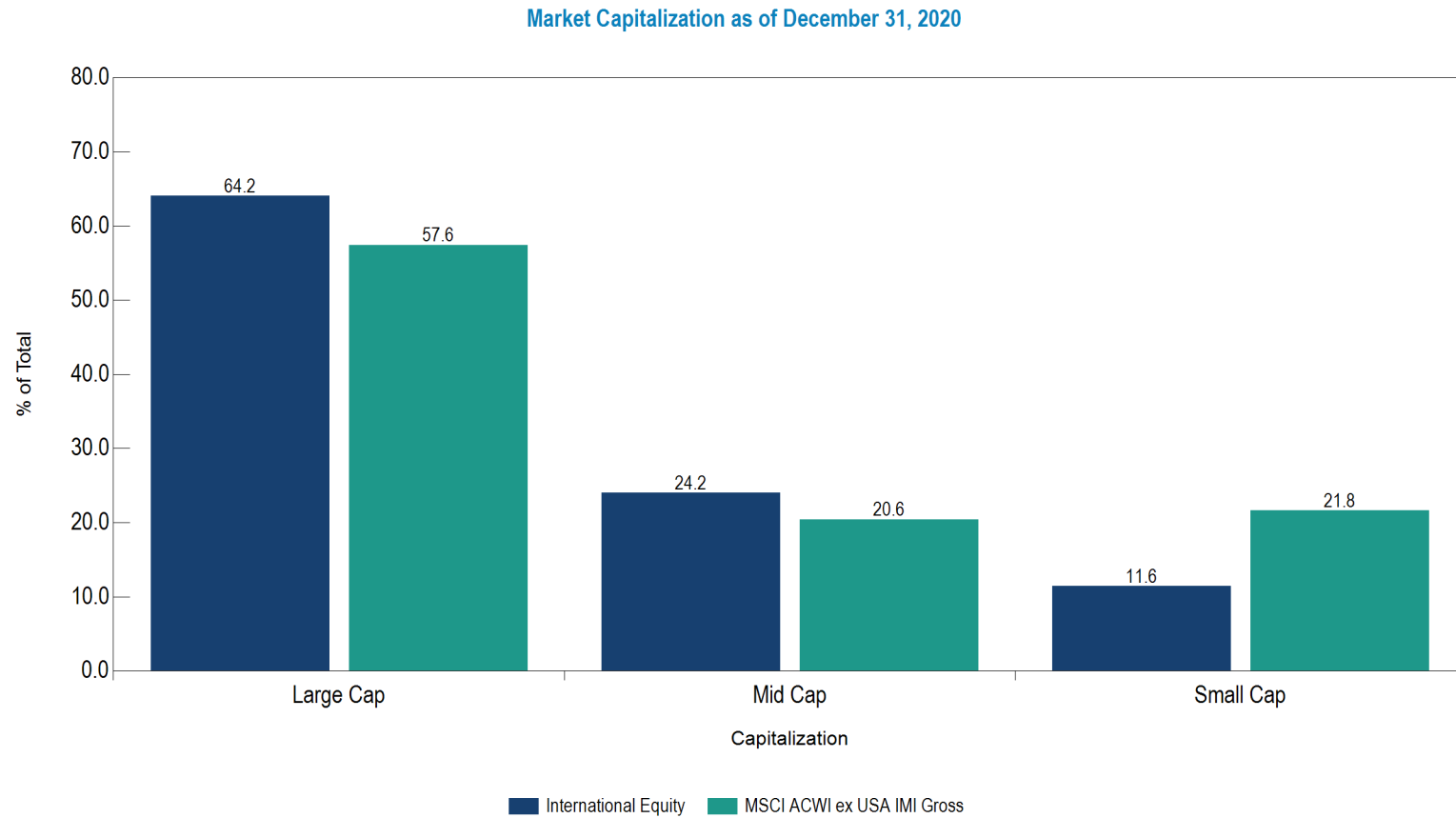
Statistics Summary

5 Years

| | Anlzd Return | Anlzd Standard Deviation | Sharpe Ratio | Information Ratio | Tracking Error |
|------------------------------------|--------------|--------------------------|--------------|-------------------|----------------|
| International Equity | 9.5% | 14.7% | 0.6 | 0.4 | 1.7% |
| Blended International Equity Index | 8.9% | 14.8% | 0.5 | -- | 0.0% |
| Baillie Gifford | 14.5% | 16.3% | 0.8 | 0.9 | 5.5% |
| MSCI ACWI ex US | 9.4% | 15.4% | 0.5 | -- | 0.0% |
| Mondrian | 6.2% | 16.1% | 0.3 | 0.0 | 4.0% |
| MSCI ACWI ex USA Value Gross | 6.3% | 17.3% | 0.3 | -- | 0.0% |



| | Return (Rank) | | | | | | | |
|--------------------------------------|---------------|------------|-----------|-----------|----------|----------|----------|----------|
| | Quarter | Fiscal YTD | 1 Year | 2 Years | 3 Years | 5 Years | 7 Years | 10 Years |
| 5th Percentile | 22.1 | 32.0 | 23.7 | 24.7 | 10.6 | 12.8 | 8.3 | 8.0 |
| 25th Percentile | 19.1 | 28.4 | 16.4 | 20.1 | 7.0 | 10.3 | 6.1 | 6.4 |
| Median | 17.4 | 25.9 | 12.6 | 17.5 | 5.3 | 9.3 | 5.3 | 5.7 |
| 75th Percentile | 16.2 | 24.4 | 10.4 | 15.9 | 4.4 | 8.4 | 4.8 | 5.1 |
| 95th Percentile | 13.7 | 20.9 | 5.2 | 12.5 | 1.5 | 6.6 | 3.2 | 3.7 |
| # of Portfolios | 353 | 353 | 353 | 352 | 346 | 331 | 314 | 245 |
| ● International Equity | 16.2 (77) | 24.0 (81) | 13.0 (47) | 18.0 (44) | 6.3 (32) | 9.5 (43) | 5.8 (30) | 5.7 (50) |
| ▲ Blended International Equity Index | 15.1 (87) | 21.4 (95) | 9.5 (79) | 15.5 (79) | 4.4 (75) | 8.9 (63) | 5.1 (59) | 5.3 (67) |



See appendix for the market capitalization breakpoints.

Characteristics

| | Portfolio | MSCI ACWI ex USA IMI Gross |
|---------------------------------|-----------|----------------------------|
| Number of Holdings | 6,525 | 6,605 |
| Weighted Avg. Market Cap. (\$B) | 85.3 | 87.1 |
| Median Market Cap. (\$B) | 2.1 | 1.8 |
| Price To Earnings | 23.5 | 20.6 |
| Price To Book | 3.0 | 2.7 |
| Price To Sales | 1.3 | 1.2 |
| Return on Equity (%) | 9.2 | 9.7 |
| Yield (%) | 2.0 | 2.3 |

Top Holdings

| | |
|---|------|
| TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD | 1.5% |
| SHOPIFY INC | 1.4% |
| TAIWAN SEMICONDUCTOR MANUFACTURING CO LTD | 1.3% |
| ALIBABA GROUP HOLDING LTD | 1.3% |
| ASML HOLDING NV | 1.1% |
| UNITED OVERSEAS BANK LTD | 1.1% |
| ZALANDO SE | 1.0% |
| SAMSUNG ELECTRONICS CO LTD | 1.0% |
| CONTINENTAL | 0.9% |
| HOUSING DEVELOPMENT FINANCE CORP LTD | 0.9% |

Best Performers

| | Return % |
|--|----------|
| MMX MINERACAO E METALICOS SA | 933.2% |
| GCL-POLY ENERGY HOLDINGS LTD | 278.3% |
| RENOVA INC | 261.0% |
| PILBARA MINERALS LTD | 232.0% |
| DELTA ELECTRONICS (THAILAND) PUBLIC CO LTD | 226.7% |
| YANG MING MARINE TRANSPORT CORP | 210.8% |
| PT WASKITA KARYA (PERSERO) | 208.7% |
| AC ENERGY CORPORATION | 193.2% |
| PT ANEKA TAMBANG (PERSERO) TBK | 193.0% |
| HYUNDAI BIOSCIENCE CO LTD | 182.7% |

Worst Performers

| | Return % |
|--|----------|
| POSEIDON CONCEPTS CORP (POOSF) | -99.0% |
| HONG KONG FINANCE INVESTMENT HOLDING GROUP LTD | -83.2% |
| HEBEI CONSTRUCTION GROUP CORPORATION LIMITED | -71.5% |
| PACIFIC CENTURY PREMIUM DEVELOPMENTS LTD | -59.6% |
| RELIEFT THERAPEUTICS HOLDING AG | -52.6% |
| MESOBLAST (A:MSBX) | -52.3% |
| GNI GROUP (J:GNIL) | -50.6% |
| IMMUNOVIA AB | -50.2% |
| SAS AB, STOCKHOLM | -47.9% |
| S2 RESOURCES LTD | -44.0% |

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

| | Attribution Effects | | | | Returns | | Sector Weights | | | | |
|------------------------|---------------------|------------------|-------------------|---------------------|--------------|-----------|----------------|--------------|--------------|---------------|---------------|
| | Total Effects | Selection Effect | Allocation Effect | Interaction Effects | Portfolio | Benchmark | Portfolio | Benchmark | | | |
| Energy | 0.0% | 0.1% | 0.0% | -0.1% | 24.6% | 23.3% | 3.4% | 3.9% | | | |
| Materials | -0.1% | 0.2% | -0.1% | -0.3% | 21.9% | 19.6% | 4.9% | 8.3% | | | |
| Industrials | -0.5% | -0.5% | 0.0% | 0.0% | 13.4% | 17.3% | 14.1% | 12.8% | | | |
| Consumer Discretionary | 0.2% | 0.1% | 0.0% | 0.2% | 16.7% | 16.0% | 17.2% | 13.7% | | | |
| Consumer Staples | 0.2% | 0.3% | 0.0% | -0.1% | 11.3% | 8.7% | 8.8% | 9.0% | | | |
| Health Care | 0.1% | 0.1% | 0.1% | -0.1% | 6.5% | 6.3% | 9.6% | 10.3% | | | |
| Financials | -0.1% | 0.5% | -0.2% | -0.4% | 26.9% | 24.3% | 12.8% | 16.1% | | | |
| Information Technology | 0.3% | 0.1% | 0.2% | 0.0% | 23.8% | 23.8% | 15.0% | 11.9% | | | |
| Communication Services | 0.5% | 0.3% | 0.0% | 0.2% | 18.8% | 13.7% | 9.1% | 7.0% | | | |
| Utilities | 0.1% | 0.1% | 0.0% | 0.0% | 20.1% | 15.0% | 2.7% | 3.4% | | | |
| Real Estate | 0.0% | 0.1% | 0.1% | -0.2% | 16.7% | 12.9% | 1.4% | 3.8% | | | |
| Cash | -0.1% | 0.0% | -0.1% | 0.0% | 0.0% | -- | 1.0% | 0.0% | | | |
| Unclassified | 0.0% | -- | -- | -- | -- | -- | 0.0% | 0.0% | | | |
| Portfolio | 0.7% | = | 1.5% | + | -0.1% | + | -0.7% | 17.8% | 17.1% | 100.0% | 100.0% |

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 | |
| Europe | | | | | | | | | |
| Austria | 33.2% | 38.9% | 0.1% | 0.2% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Belgium | 16.6% | 16.6% | 0.2% | 0.7% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Czech Republic* | 33.7% | 32.4% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Denmark | 19.6% | 14.3% | 0.8% | 1.6% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% |
| Finland | -1.5% | 11.8% | 0.9% | 0.8% | -0.1% | 0.0% | 0.0% | 0.0% | -0.1% |
| France | 13.5% | 20.2% | 6.0% | 6.2% | -0.4% | 0.0% | 0.0% | 0.0% | -0.4% |
| Germany | 12.8% | 10.5% | 5.1% | 5.8% | 0.1% | 0.0% | 0.0% | 0.0% | 0.1% |
| Greece* | 30.4% | 33.1% | 0.0% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Hungary* | 37.5% | 37.5% | 0.0% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Ireland | -13.8% | 15.7% | 1.0% | 0.4% | -0.1% | 0.0% | 0.0% | -0.2% | -0.3% |
| Italy | 21.7% | 21.1% | 1.5% | 1.5% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Luxembourg | 30.4% | 17.1% | 0.6% | 0.0% | 0.0% | 0.0% | 0.0% | 0.1% | 0.1% |
| Netherlands | 24.1% | 21.2% | 2.5% | 2.3% | 0.1% | 0.0% | 0.0% | 0.0% | 0.1% |
| Norway | 24.2% | 24.2% | 0.2% | 0.5% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Poland* | 20.1% | 19.9% | 0.1% | 0.2% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Portugal | 7.5% | 21.0% | 0.4% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Russia* | 26.4% | 25.9% | 0.5% | 0.7% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Spain | 33.8% | 27.0% | 1.7% | 1.4% | 0.1% | 0.0% | 0.0% | 0.0% | 0.2% |
| Sweden | 14.1% | 15.1% | 3.6% | 2.6% | 0.0% | -0.1% | 0.1% | 0.0% | 0.0% |
| Switzerland | 12.5% | 8.5% | 4.0% | 6.4% | 0.2% | 0.2% | -0.1% | -0.1% | 0.3% |
| United Kingdom | 17.1% | 18.5% | 11.6% | 9.0% | -0.1% | 0.0% | 0.1% | 0.0% | 0.0% |

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

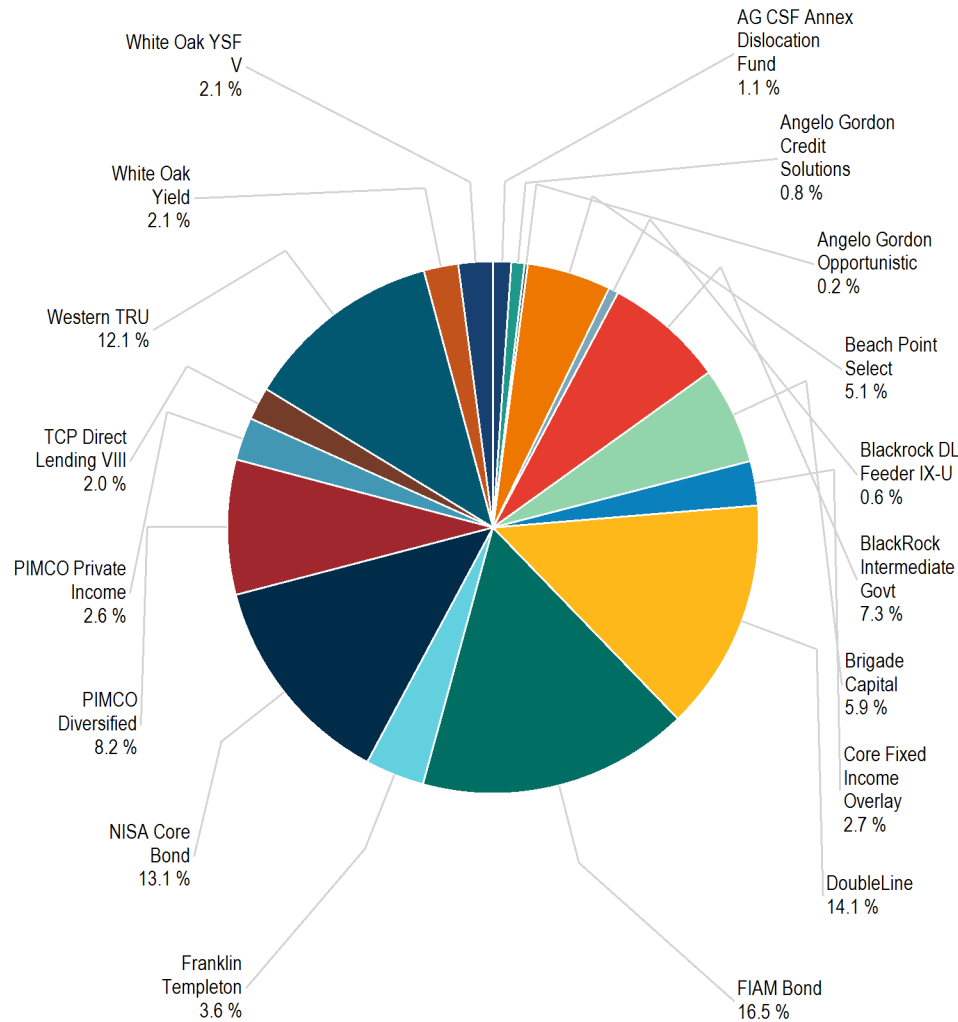
| | Returns and Weights | | | | Attribution Effects | | | | Total Effects | |
|--------------------|---------------------|--------------|----------------|--------------|---------------------|-------------------|-----------------|--------------------|---------------|--|
| | Manager Return | Index Return | Manager Weight | Index Weight | Selection Effect | Allocation Effect | Currency Effect | Interaction Effect | | |
| AsiaPacific | | | | | | | | | | |
| Australia | 19.2% | 22.8% | 2.8% | 4.5% | -0.1% | 0.0% | -0.2% | 0.1% | -0.3% | |
| China* | 16.1% | 10.9% | 10.1% | 11.1% | 0.6% | 0.0% | 0.0% | -0.1% | 0.5% | |
| Hong Kong | 13.6% | 15.1% | 3.2% | 2.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | |
| India* | 27.5% | 21.3% | 3.5% | 2.5% | 0.2% | 0.1% | 0.0% | 0.1% | 0.3% | |
| Indonesia* | 41.3% | 36.5% | 0.3% | 0.4% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | |
| Japan | 14.9% | 14.0% | 19.8% | 17.4% | 0.1% | 0.0% | 0.1% | 0.0% | 0.2% | |
| Korea* | 35.0% | 36.1% | 2.7% | 3.7% | 0.0% | -0.1% | -0.1% | 0.0% | -0.3% | |
| Malaysia* | 12.6% | 11.7% | 0.2% | 0.5% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | |
| New Zealand | 50.5% | 19.2% | 0.6% | 0.3% | 0.1% | 0.0% | 0.0% | 0.1% | 0.2% | |
| Pakistan* | 9.6% | 9.5% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | |
| Philippines* | 23.5% | 23.5% | 0.1% | 0.2% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | |
| Singapore | 20.3% | 16.8% | 1.5% | 0.7% | 0.0% | 0.0% | 0.0% | 0.0% | 0.1% | |
| Taiwan* | 28.2% | 22.3% | 4.2% | 4.0% | 0.3% | 0.0% | 0.0% | 0.0% | 0.3% | |
| Thailand* | 23.6% | 22.5% | 0.3% | 0.6% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | |
| Americas | | | | | | | | | | |
| Argentina* | 54.4% | 25.4% | 0.5% | 0.1% | 0.0% | 0.1% | 0.0% | 0.1% | 0.2% | |
| Brazil* | 29.5% | 36.4% | 1.2% | 1.4% | -0.1% | 0.0% | 0.0% | 0.0% | -0.1% | |
| Canada | 13.7% | 14.6% | 4.3% | 6.5% | 0.1% | 0.1% | -0.2% | 0.0% | -0.1% | |
| Chile* | 27.1% | 27.2% | 0.1% | 0.2% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | |
| Colombia* | 47.6% | 47.5% | 0.0% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | |
| Mexico* | 33.5% | 31.6% | 0.4% | 0.5% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | |
| Peru* | -0.2% | 29.9% | 0.0% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | |
| United States | 18.3% | 13.0% | 0.7% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | |

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 | |
| Other | | | | | | | | | |
| Egypt* | -2.8% | -2.3% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Israel | 21.6% | 22.0% | 0.2% | 0.5% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Qatar* | 2.3% | 2.3% | 0.1% | 0.2% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Romania** | 0.0% | 13.7% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Saudi Arabia* | 6.7% | 6.7% | 0.3% | 0.8% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| South Africa* | 18.6% | 22.5% | 0.9% | 1.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Turkey* | 34.0% | 34.0% | 0.0% | 0.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| United Arab Emirates* | 10.9% | 10.9% | 0.1% | 0.2% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Totals | | | | | | | | | |
| Americas | 20.8% | 19.5% | 7.2% | 8.7% | 0.3% | 0.0% | -0.3% | -0.1% | 0.0% |
| Europe | 15.8% | 16.4% | 40.9% | 40.5% | -0.2% | 0.0% | 0.1% | 0.0% | -0.2% |
| Asia/Pacific | 19.2% | 17.3% | 49.2% | 48.0% | 1.1% | 0.0% | -0.2% | 0.0% | 1.0% |
| Other | 15.9% | 15.7% | 1.6% | 2.9% | -0.1% | 0.0% | 0.0% | 0.0% | 0.0% |
| Cash | 0.0% | -- | 1.1% | 0.0% | 0.0% | -0.1% | 0.0% | 0.0% | -0.1% |
| Total | 17.7% | 17.1% | 100.0% | 100.0% | 1.1% | -0.1% | -0.4% | 0.0% | 0.6% |
| Totals | | | | | | | | | |
| Developed | 15.8% | 15.9% | 73.3% | 71.5% | 0.1% | 0.0% | -0.2% | 0.0% | 0.0% |
| Emerging* | 23.8% | 19.9% | 25.6% | 28.5% | 1.3% | -0.1% | -0.3% | -0.1% | 0.8% |
| Frontier** | 0.0% | -- | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% |
| Cash | 0.0% | -- | 1.1% | 0.0% | 0.0% | -0.1% | 0.0% | 0.0% | -0.1% |

Fixed Income Manager Allocation Analysis

Period Ending: December 31, 2020



| | Actual \$ | Actual % | Manager Contribution to Excess Return % |
|-------------------------------------|------------------------|---------------|---|
| AG CSF Annex Dislocation Fund | \$17,541,450 | 1.1% | 0.0% |
| Angelo Gordon Credit Solutions | \$13,124,580 | 0.8% | 0.0% |
| Angelo Gordon Opportunistic | \$2,598,807 | 0.2% | 0.0% |
| Angelo Gordon STAR | \$31,800 | 0.0% | 0.0% |
| Beach Point Select | \$84,463,914 | 5.1% | 0.2% |
| Blackrock DL Feeder IX-U | \$9,275,073 | 0.6% | 0.0% |
| BlackRock Intermediate Govt | \$120,278,426 | 7.3% | 0.0% |
| Brigade Capital | \$97,013,974 | 5.9% | 0.2% |
| DoubleLine | \$231,202,223 | 14.1% | -0.1% |
| FIAM Bond | \$271,676,815 | 16.5% | 0.1% |
| Franklin Templeton | \$58,718,812 | 3.6% | -0.1% |
| NISA Core Bond | \$215,702,605 | 13.1% | 0.0% |
| PIMCO Diversified | \$134,338,857 | 8.2% | 0.0% |
| PIMCO Private Income | \$42,506,912 | 2.6% | 0.0% |
| TCP Direct Lending VIII | \$32,471,367 | 2.0% | 0.0% |
| Western TRU | \$199,438,034 | 12.1% | 0.5% |
| White Oak Yield | \$34,191,325 | 2.1% | -0.1% |
| White Oak YSF V | \$33,713,789 | 2.1% | 0.0% |
| Core Fixed Income Overlay | \$43,985,867 | 2.7% | 0.0% |
| Actual vs. Policy Weight Difference | | | -0.3% |
| Total | \$1,642,274,631 | 100.0% | 0.4% |

Fixed Income
Risk vs. Return (3 Years)

Period Ending: December 31, 2020

Statistics Summary

3 Years

| | Anlzd Return | Anlzd Standard Deviation | Sharpe Ratio | Information Ratio | Tracking Error |
|---------------------------------|--------------|--------------------------|--------------|-------------------|----------------|
| Fixed Income | 5.2% | 3.5% | 1.0 | -0.2 | 1.9% |
| Blended Fixed Income Index | 5.6% | 4.1% | 1.0 | -- | 0.0% |
| Core Fixed | 5.1% | 2.9% | 1.3 | -0.2 | 1.5% |
| BBgBarc US Aggregate TR | 5.3% | 3.4% | 1.1 | -- | 0.0% |
| BlackRock Intermediate Govt | 4.3% | 2.5% | 1.1 | 3.1 | 0.1% |
| BBgBarc US Govt Int TR | 4.1% | 2.5% | 1.0 | -- | 0.0% |
| FIAM Bond | 6.3% | 3.9% | 1.3 | 0.6 | 1.6% |
| BBgBarc US Aggregate TR | 5.3% | 3.4% | 1.1 | -- | 0.0% |
| Western TRU | 4.0% | 6.8% | 0.4 | 0.3 | 6.8% |
| 3-Month Libor Total Return USD | 1.8% | 0.3% | 1.1 | -- | 0.0% |
| Opportunistic Credit | 5.4% | 6.8% | 0.6 | -0.3 | 4.4% |
| BBgBarc BA Intermediate HY | 6.6% | 8.0% | 0.6 | -- | 0.0% |
| Angelo Gordon Opportunistic | 9.7% | 18.4% | 0.4 | 0.2 | 18.5% |
| BBgBarc US Aggregate TR | 5.3% | 3.4% | 1.1 | -- | 0.0% |
| Angelo Gordon STAR | 12.5% | 12.4% | 0.9 | 0.6 | 12.3% |
| BBgBarc US Aggregate TR | 5.3% | 3.4% | 1.1 | -- | 0.0% |
| Beach Point Select | 7.7% | 8.8% | 0.7 | 0.2 | 4.7% |
| BBgBarc BA Intermediate HY | 6.6% | 8.0% | 0.6 | -- | 0.0% |
| Brigade Capital | 3.9% | 12.1% | 0.2 | -0.4 | 6.8% |
| BBgBarc BA Intermediate HY | 6.6% | 8.0% | 0.6 | -- | 0.0% |
| PIMCO Diversified | 6.0% | 6.8% | 0.7 | 0.1 | 1.4% |
| Blended PIMCO Diversified Index | 5.8% | 7.7% | 0.6 | -- | 0.0% |

Statistics Summary

3 Years

| | Anlzd Return | Anlzd Standard Deviation | Sharpe Ratio | Information Ratio | Tracking Error |
|---------------------------------|--------------|--------------------------|--------------|-------------------|----------------|
| Franklin Templeton | -1.5% | 6.9% | -0.4 | -0.8 | 7.7% |
| BBgBarc Multiverse TR | 4.8% | 4.3% | 0.8 | -- | 0.0% |
| Private Credit | 7.3% | 4.1% | 1.4 | 0.0 | 2.2% |
| Cliffwater Direct Lending Index | 7.4% | 5.3% | 1.1 | -- | 0.0% |
| TCP Direct Lending VIII | 6.8% | 3.1% | 1.7 | -0.1 | 4.2% |
| Cliffwater Direct Lending Index | 7.4% | 5.3% | 1.1 | -- | 0.0% |
| White Oak Yield | 6.6% | 3.5% | 1.5 | -0.2 | 3.5% |
| Cliffwater Direct Lending Index | 7.4% | 5.3% | 1.1 | -- | 0.0% |

Fixed Income
Risk vs. Return (5 Years)

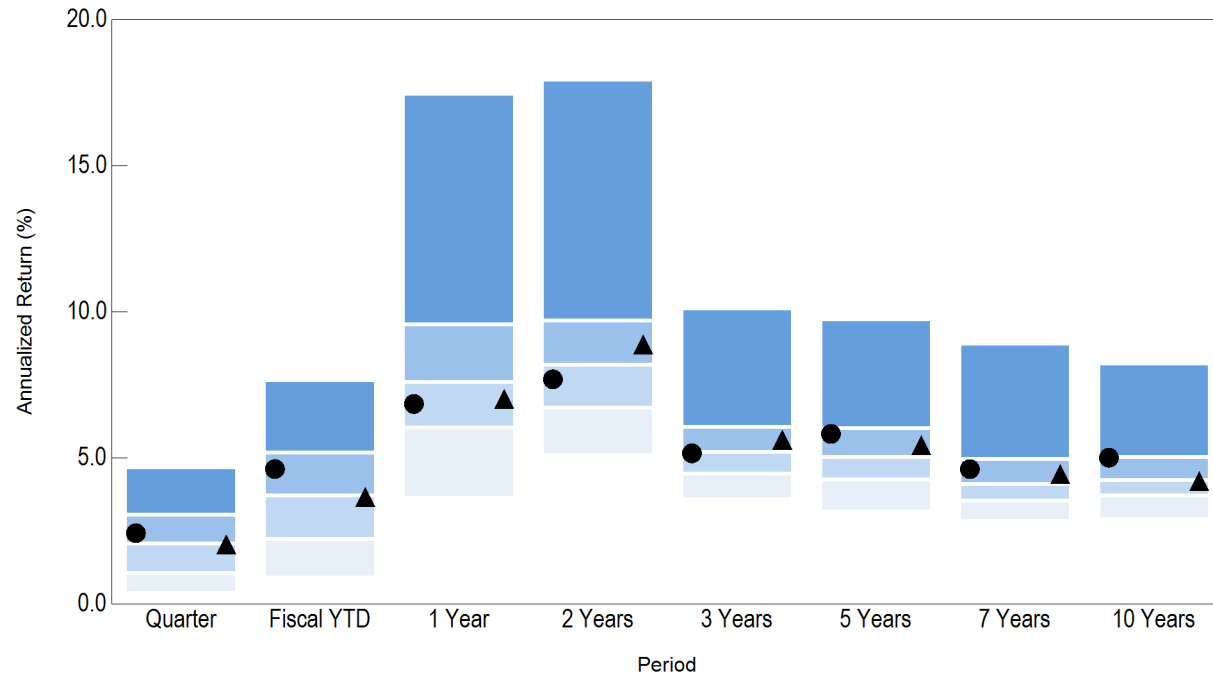
Period Ending: December 31, 2020

Statistics Summary

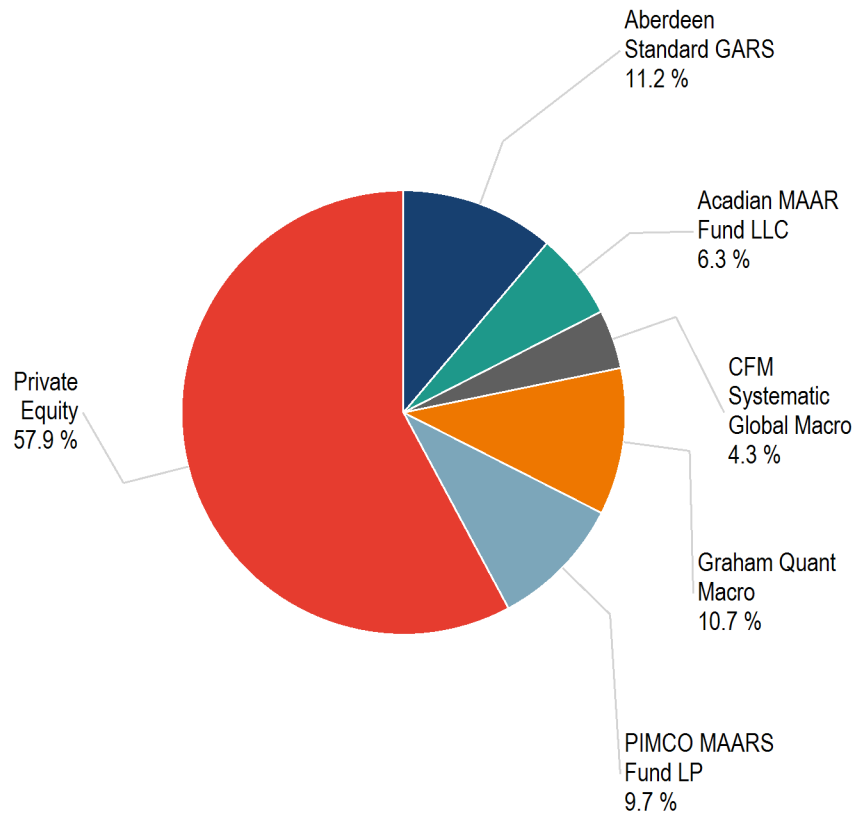
5 Years

| | Anlzd Return | Anlzd Standard Deviation | Sharpe Ratio | Information Ratio | Tracking Error |
|--------------------------------|--------------|--------------------------|--------------|-------------------|----------------|
| Fixed Income | 5.8% | 3.2% | 1.5 | 0.2 | 2.0% |
| Blended Fixed Income Index | 5.4% | 3.6% | 1.2 | -- | 0.0% |
| Core Fixed | 4.9% | 2.8% | 1.3 | 0.3 | 1.7% |
| BBgBarc US Aggregate TR | 4.4% | 3.2% | 1.0 | -- | 0.0% |
| FIAM Bond | 5.5% | 3.5% | 1.3 | 0.8 | 1.3% |
| BBgBarc US Aggregate TR | 4.4% | 3.2% | 1.0 | -- | 0.0% |
| Western TRU | 5.2% | 5.8% | 0.7 | 0.6 | 5.9% |
| 3-Month Libor Total Return USD | 1.5% | 0.2% | 1.4 | -- | 0.0% |
| Opportunistic Credit | 7.9% | 5.7% | 1.2 | 0.1 | 3.7% |
| BBgBarc BA Intermediate HY | 7.6% | 6.5% | 1.0 | -- | 0.0% |
| Angelo Gordon Opportunistic | 10.7% | 15.0% | 0.6 | 0.4 | 15.2% |
| BBgBarc US Aggregate TR | 4.4% | 3.2% | 1.0 | -- | 0.0% |
| Angelo Gordon STAR | 12.4% | 10.4% | 1.1 | 0.7 | 10.6% |
| BBgBarc US Aggregate TR | 4.4% | 3.2% | 1.0 | -- | 0.0% |
| Beach Point Select | 9.5% | 7.2% | 1.2 | 0.5 | 3.9% |
| BBgBarc BA Intermediate HY | 7.6% | 6.5% | 1.0 | -- | 0.0% |
| Brigade Capital | 8.2% | 10.2% | 0.7 | 0.1 | 5.9% |
| BBgBarc BA Intermediate HY | 7.6% | 6.5% | 1.0 | -- | 0.0% |
| Franklin Templeton | 1.4% | 6.5% | 0.0 | -0.4 | 8.0% |
| BBgBarc Multiverse TR | 5.0% | 4.7% | 0.8 | -- | 0.0% |

InvMetrics All DB Total Fix Inc Net Return Comparison



| | Return (Rank) | | | | | | | |
|------------------------------|---------------|------------|----------|----------|----------|----------|----------|----------|
| | Quarter | Fiscal YTD | 1 Year | 2 Years | 3 Years | 5 Years | 7 Years | 10 Years |
| 5th Percentile | 4.7 | 7.7 | 17.4 | 17.9 | 10.1 | 9.7 | 8.9 | 8.2 |
| 25th Percentile | 3.1 | 5.2 | 9.6 | 9.7 | 6.1 | 6.0 | 5.0 | 5.0 |
| Median | 2.1 | 3.7 | 7.6 | 8.2 | 5.2 | 5.0 | 4.1 | 4.3 |
| 75th Percentile | 1.1 | 2.2 | 6.0 | 6.7 | 4.5 | 4.3 | 3.5 | 3.7 |
| 95th Percentile | 0.4 | 0.9 | 3.6 | 5.1 | 3.6 | 3.2 | 2.8 | 2.9 |
| # of Portfolios | 299 | 299 | 299 | 298 | 296 | 278 | 258 | 219 |
| ● Fixed Income | 2.4 (44) | 4.6 (36) | 6.8 (61) | 7.7 (61) | 5.2 (54) | 5.8 (30) | 4.6 (32) | 5.0 (26) |
| ▲ Blended Fixed Income Index | 2.0 (52) | 3.7 (53) | 7.0 (56) | 8.9 (36) | 5.6 (37) | 5.4 (40) | 4.4 (39) | 4.2 (55) |



| | Actual \$ | Actual % | Manager Contribution to Excess Return % |
|-------------------------------------|----------------------|---------------|---|
| Aberdeen Standard GARS | \$81,329,035 | 11.2% | 0.4% |
| Acadian MAAR Fund LLC | \$45,822,221 | 6.3% | 0.0% |
| CFM Systematic Global Macro | \$31,559,539 | 4.3% | 0.0% |
| Graham Quant Macro | \$77,719,575 | 10.7% | 0.5% |
| PIMCO MAARS Fund LP | \$70,527,099 | 9.7% | -0.1% |
| Private Equity | \$422,412,520 | 57.9% | 11.6% |
| Actual vs. Policy Weight Difference | | | 0.7% |
| Total | \$729,369,990 | 100.0% | 13.0% |

Statistics Summary

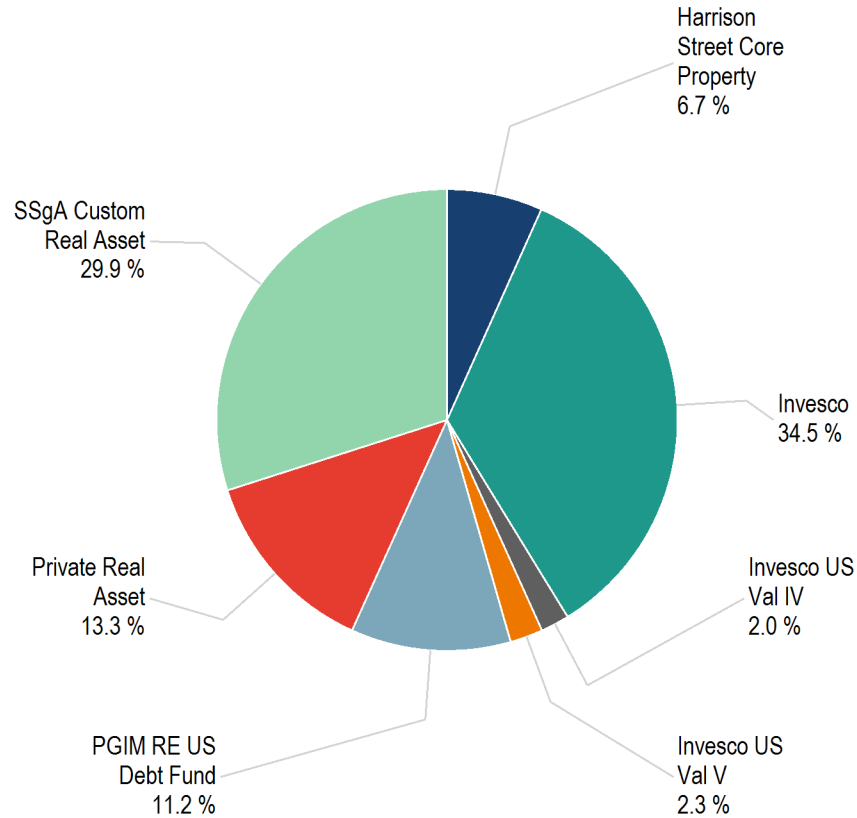
3 Years

| | Anlzd Return | Anlzd Standard Deviation | Sharpe Ratio | Information Ratio | Tracking Error |
|------------------------------|--------------|--------------------------|--------------|-------------------|----------------|
| Alternatives | 13.3% | 14.7% | 0.8 | 0.3 | 13.7% |
| Blended Alternatives Index | 9.3% | 9.2% | 0.8 | -- | 0.0% |
| Private Equity | 32.7% | 24.3% | 1.3 | 0.9 | 22.9% |
| Blended Private Equity Index | 12.2% | 18.2% | 0.6 | -- | 0.0% |
| Hedge Fund/Absolute Return | -7.2% | 7.0% | -1.2 | -1.8 | 7.0% |
| Libor 1 month +4% | 5.6% | 0.3% | 16.3 | -- | 0.0% |
| Aberdeen Standard GARS | 3.5% | 5.1% | 0.4 | -0.4 | 5.1% |
| Libor 1 month +4% | 5.6% | 0.3% | 16.3 | -- | 0.0% |

Statistics Summary

5 Years

| | Anlzd Return | Anlzd Standard Deviation | Sharpe Ratio | Information Ratio | Tracking Error |
|------------------------------|--------------|--------------------------|--------------|-------------------|----------------|
| Alternatives | 11.7% | 11.8% | 0.9 | 0.1 | 11.3% |
| Blended Alternatives Index | 10.7% | 7.6% | 1.3 | -- | 0.0% |
| Private Equity | 25.0% | 19.8% | 1.2 | 0.5 | 19.4% |
| Blended Private Equity Index | 15.2% | 14.9% | 0.9 | -- | 0.0% |
| Hedge Fund/Absolute Return | -3.3% | 5.9% | -0.7 | -1.4 | 5.9% |
| Libor 1 month +4% | 5.3% | 0.2% | 17.2 | -- | 0.0% |
| Aberdeen Standard GARS | 2.4% | 4.4% | 0.3 | -0.7 | 4.4% |
| Libor 1 month +4% | 5.3% | 0.2% | 17.2 | -- | 0.0% |



| | Actual \$ | Actual % | Manager Contribution to Excess Return % |
|-------------------------------------|----------------------|---------------|---|
| Harrison Street Core Property | \$51,180,898 | 6.7% | 0.0% |
| Invesco | \$262,524,177 | 34.5% | 0.1% |
| Invesco US Val IV | \$14,947,299 | 2.0% | 0.1% |
| Invesco US Val V | \$17,562,148 | 2.3% | 0.1% |
| PGIM RE US Debt Fund | \$85,126,127 | 11.2% | 0.0% |
| Private Real Asset | \$101,239,090 | 13.3% | -1.0% |
| SSgA Custom Real Asset | \$227,469,523 | 29.9% | 0.0% |
| Actual vs. Policy Weight Difference | | | 0.1% |
| Total | \$760,049,262 | 100.0% | -0.7% |

Statistics Summary

3 Years

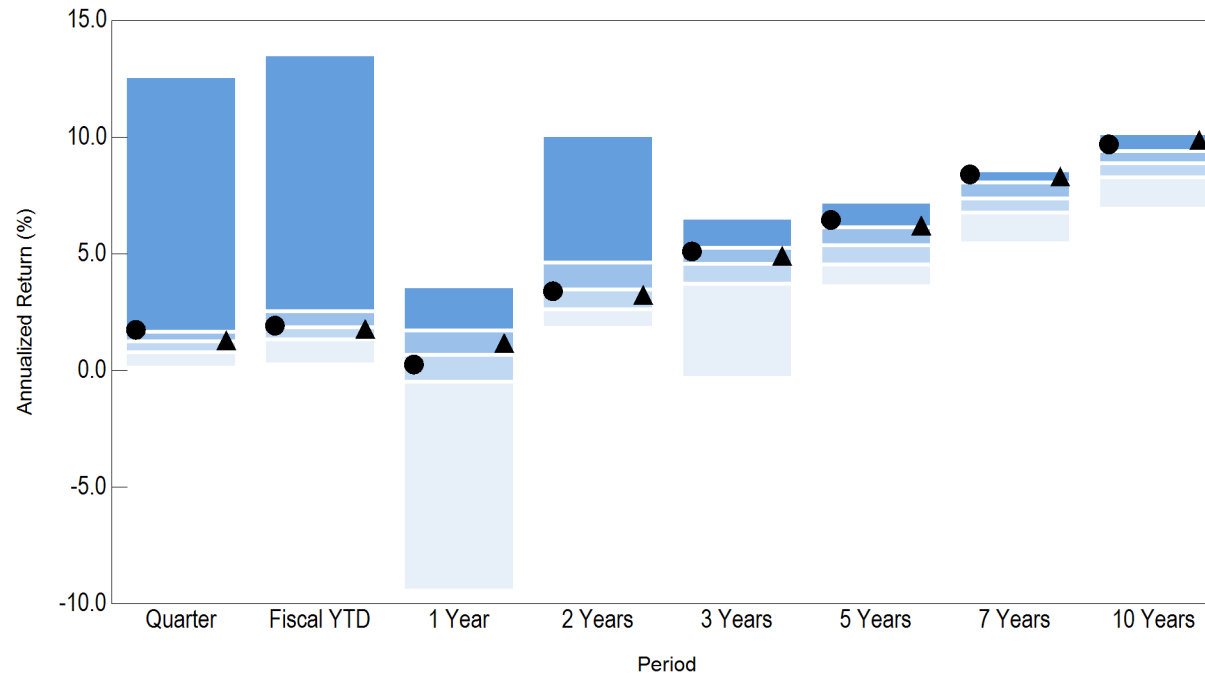
| | Anlzd Return | Anlzd Standard Deviation | Sharpe Ratio | Information Ratio | Tracking Error |
|----------------------------------|--------------|-----------------------------|--------------|-------------------|----------------|
| Inflation Hedge | -0.3% | 7.0% | -0.2 | -1.1 | 2.6% |
| Blended Inflation Hedge Index | 2.6% | 6.1% | 0.2 | -- | 0.0% |
| Real Estate | 5.1% | 3.5% | 1.0 | 0.2 | 1.1% |
| NCREIF ODCE | 4.9% | 2.8% | 1.2 | -- | 0.0% |
| Invesco | 4.3% | 4.1% | 0.7 | -0.3 | 1.9% |
| NCREIF ODCE | 4.9% | 2.8% | 1.2 | -- | 0.0% |
| Invesco US Val IV | 9.1% | 6.3% | 1.2 | 1.0 | 4.2% |
| NCREIF ODCE | 4.9% | 2.8% | 1.2 | -- | 0.0% |
| PGIM RE US Debt Fund | 5.5% | 2.3% | 1.7 | 0.3 | 1.8% |
| NCREIF ODCE | 4.9% | 2.8% | 1.2 | -- | 0.0% |
| Private Real Asset | -2.5% | 9.7% | -0.4 | -0.1 | 18.3% |
| Blended Private Real Asset Index | -1.4% | 19.3% | -0.1 | -- | 0.0% |
| Public Real Assets | -5.1% | 19.9% | -0.3 | -1.1 | 4.4% |
| Blended Public Real Asset Index | -0.3% | 16.8% | -0.1 | -- | 0.0% |
| SSgA Custom Real Asset | -0.3% | 16.5% | -0.1 | 0.0 | 0.8% |
| SSgA Custom Real Asset Index | -0.3% | 16.8% | -0.1 | -- | 0.0% |

Statistics Summary

5 Years

| | Anlzd Return | Anlzd Standard Deviation | Sharpe Ratio | Information Ratio | Tracking Error Rank |
|----------------------------------|--------------|-----------------------------|--------------|-------------------|---------------------|
| Real Estate | 6.4% | 3.6% | 1.5 | 0.2 | 38 |
| NCREIF ODCE | 6.2% | 3.0% | 1.7 | -- | 1 |
| Invesco | 6.0% | 4.0% | 1.2 | -0.1 | -- |
| NCREIF ODCE | 6.2% | 3.0% | 1.7 | -- | -- |
| Invesco US Val IV | 9.1% | 5.8% | 1.4 | 0.7 | -- |
| NCREIF ODCE | 6.2% | 3.0% | 1.7 | -- | -- |
| Private Real Asset | 5.4% | 22.0% | 0.2 | 0.1 | -- |
| Blended Private Real Asset Index | 2.8% | 15.1% | 0.1 | -- | -- |

InvMetrics All DB Real Estate Pub Net Return Comparison



| | Quarter | Fiscal YTD | 1 Year | 2 Years | 3 Years | 5 Years | 7 Years | 10 Years |
|----------------------|----------|------------|----------|----------|----------|----------|----------|----------|
| Return (Rank) | | | | | | | | |
| 5th Percentile | 12.6 | 13.5 | 3.6 | 10.1 | 6.5 | 7.2 | 8.6 | 10.2 |
| 25th Percentile | 1.7 | 2.6 | 1.7 | 4.6 | 5.3 | 6.2 | 8.1 | 9.4 |
| Median | 1.3 | 1.9 | 0.7 | 3.5 | 4.6 | 5.4 | 7.4 | 8.9 |
| 75th Percentile | 0.8 | 1.3 | -0.5 | 2.6 | 3.7 | 4.6 | 6.8 | 8.3 |
| 95th Percentile | 0.1 | 0.3 | -9.4 | 1.8 | -0.3 | 3.6 | 5.5 | 6.9 |
| # of Portfolios | 84 | 84 | 84 | 82 | 82 | 78 | 73 | 58 |
| ● Real Estate | 1.7 (24) | 1.9 (49) | 0.3 (70) | 3.4 (53) | 5.1 (30) | 6.4 (19) | 8.4 (11) | 9.7 (11) |
| ▲ NCREIF ODCE | 1.3 (48) | 1.8 (52) | 1.2 (33) | 3.2 (55) | 4.9 (36) | 6.2 (24) | 8.3 (15) | 9.9 (8) |

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.

Acadian Asset Management – MAAR Fund

This is a multi-factor strategy that aims to exploit behavioral inefficiencies within and across global markets and is designed to be diversifying, dynamic and defensive. It is market neutral, implemented using long and short positions across five primary asset classes (equity, fixed income, currency, commodities, and volatility) and over 100 underlying assets with a focus on liquid instruments.

Angelo, Gordon & Co. – AG STAR Fund

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

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

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

Angelo, Gordon & Co. – Credit Solutions

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

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

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

Baillie Gifford – ACWI ex US Focus Equities

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

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

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

BlackRock – Intermediate Government Index

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

BlackRock – MSCI ACWI ex US IMI Index

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

BlackRock – Russell 1000 Index

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

BlackRock – Direct Lending Fund

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

Brigade – Opportunistic Credit

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

CFM Systematic Global Macro

Capital Fund Management (CFM) Systematic Global Macro (SGM) is a directional strategy that takes long and short positions in liquid futures and forwards across 130+ markets and across equities, bonds, currencies, and commodities.

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.

White Oak - White Oak Yield Spectrum Fund V

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: December 31, 2020

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

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

Policy Index and Benchmark History

Period Ending: December 31, 2020

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

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

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

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

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

Policy Index and Benchmark History

Period Ending: December 31, 2020

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

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

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

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

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

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

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

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

Policy Index and Benchmark History

Period Ending: December 31, 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% |
| | 100.0% | 100.0% |

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

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

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

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

Acadian Asset Management

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

Baillie Gifford

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

BlackRock-Russell 1000 Index Fund

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

BlackRock-Intermediate Govt Bond Index Fund

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

BlackRock-MSCI ACWI ex US IMI Index Fund

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

DoubleLine

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

Franklin Templeton Investment

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

FIAM Bond

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

PanAgora Asset Management

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

Parametric Overlay

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

Parametric Currency Overlay

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

PIMCO Diversified

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

QMA

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

Western Asset Management

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

Mondrian Investment Partners

Assets Below \$190 million

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

Assets Above \$190 million

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

NISA

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

Manager Compliance (Net)

Period Ending: December 31, 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 | -- | -- | -- |
| White Oak YSF V | Cliffwater Direct Lending Index | -- | -- | -- |
| Aberdeen Standard GARS | Libor 1 month +4% | ✗ | ✗ | ✗ |
| Acadian MAAR Fund LLC | Libor 1 month +4% | -- | -- | -- |
| CFM Systematic Global Macro | 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: December 31, 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 | -- | -- | -- |
| White Oak YSF V | Cliffwater Direct Lending Index | -- | -- | -- |
| Aberdeen Standard GARS | Libor 1 month +4% | ✗ | ✗ | ✗ |
| Acadian MAAR Fund LLC | Libor 1 month +4% | -- | -- | -- |
| CFM Systematic Global Macro | Libor 1 month +4% | -- | -- | -- |
| Graham Quant Macro | Libor 1 month +4% | -- | -- | -- |
| PIMCO MAARS Fund LP | Libor 1 month +4% | -- | -- | -- |

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

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

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



**PERSPECTIVES
THAT DRIVE
ENTERPRISE
SUCCESS**

1ST QUARTER 2021
Investment Landscape

Recent Verus research

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Topics of interest

IS PAINLESS DIVERSIFICATION DEAD?

Interest rates have collapsed in developed economies in past years, and more recently at home in the United States, which has greatly dampened investors' performance outlook for diversified portfolios. These events have led many investors to question the traditional role of fixed income. In this Topic of Interest white paper, we outline some issues that investors must come to terms with, and we begin to unpick ways of thinking about diversification and preservation of capital in the new market environment.

INTEGRATING ESG INTO ACTIVE PORTFOLIOS

In this paper, we address how environmental, social, and governance (ESG) considerations are integrated into our manager research process. We address Verus' approach to ESG issues when advising clients and link that to what ESG due diligence looks like in researching investment managers. Next, we consider the spectrum of ESG integration as defined by the primary objective of the product. Finally, we address the challenges that ESG considerations pose for hedge fund managers and private equity general partners.

QUANTIFYING ESG IN PORTFOLIO CONSTRUCTION

Environmental, social, and governance (ESG) investing is a wide-ranging field that encompasses many different approaches. Investors are integrating ESG into the creation of their policies, investment beliefs, strategic asset allocations, manager selection decisions, and much more. ESG ratings and scores allow investors to understand and compare the ESG profile of companies and managers. ESG screens can serve as an effective tool for investors to identify exposures that may conflict with their institutional values.

AGREEING ON ESG

This paper sheds light on the difficulty institutional investors face as they embark on their journey toward implementing a thoughtful ESG policy that fits their specific organization and is designed to help them cut through the clutter by providing a detailed, practical "soup-to-nuts" methodology to determine the best policy for their organization.

Annual research

2021 CAPITAL MARKET ASSUMPTIONS

Learn about the 2020 market movements and how these shifts have affected our long-term outlook.

Sound thinking

FINDING COMFORT IN AN UNCOMFORTABLE WORLD

An outline of various topics that an investor might want to add to their agenda for the coming year.

Up and coming event

EMERGING & DIVERSE MANAGERS DILIGENCE DAYS

For the third consecutive year, Verus is inviting qualified managers to participate in one-on-one meetings with its senior staff during its 3rd Emerging and Diverse Manager Diligence Days.

- March 16-18
- March 22
- March 24
- March 26

Table of contents



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Economic environment 6

Fixed income rates & credit 21

Equity 26

Other assets 36

Appendix 38

4th quarter summary

THE ECONOMIC CLIMATE

- Real GDP grew at a -2.8% rate year-over-year in the third quarter (+33.4% quarterly annualized rate) as the U.S. economy recovered much of the economic activity lost in the second quarter. **p. 11**
- Joe Biden was elected President of the United States. The market seemed to interpret a Biden win as a mild positive for risk assets, on the expectation of larger economic stimulus. Democrats also took both seats in the Georgia run-off election, completing the party's "Blue Wave". **p. 7**
- Several new, more-infectious strains of COVID-19 emerged and spread around the world, though experts remain confident in the efficacy of the currently-approved arsenal of vaccines. **p. 7**

PORTFOLIO IMPACTS

- Emerging market equities (+19.7%) outperformed U.S. (+12.1%) and international developed equities (+16.0%) once again in Q4. Latin American equities showed significant outperformance (+34.8%), after years of lagging behind other emerging markets. **p. 32**
- The U.S. 10-year TIPS breakeven inflation rate headed notably higher over the quarter, from 1.6% in September to 2.0% in December. Although U.S. inflation is lower than pre-pandemic levels, market pricing for inflation is the highest since 2018. **p. 12**

THE INVESTMENT CLIMATE

- Congress passed an omnibus spending bill, including \$900 billion earmarked for COVID-19 relief. Key features of the package included a re-up of the Paycheck Protection Program, \$600 stimulus checks for most individuals, and \$300 per week in additional unemployment benefits over a 10-week period. **p. 11**
- According to FactSet, S&P 500 Q4 earnings are expected to be down -8.8%. This estimate improved from the -12.7% drop expected on September 30th. For full year 2020, analysts are expecting a -13.3% earnings decline. **p. 26**

ASSET ALLOCATION ISSUES

- U.S. equities delivered +12.1% during the quarter, ending the year at an all-time-high. The S&P 500 was one of the strongest equity markets in 2020, up +18.4% despite an earnings recession and considerable uncertainty. **p. 28**
- Weakness in the U.S. dollar remained a theme in Q4, and the Bloomberg Dollar Spot Index fell to a two and a half year low. Analysts attributed some of the weakness in the US dollar to lower relative real yields in the U.S. **p. 37**
- Within the U.S. market, a sizable rotation occurred in Q4 as certain sectors that had been beaten-down during the pandemic performed strongly. Rising energy prices boosted the Energy sector, while higher interest rates improved the outlook for Financials. **p. 28**

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

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

What drove the market in Q4?

“The Mass Distribution of Covid-19 Vaccines Is Under Way. ‘Everything Has to Come Together.’”

COVID-19 U.S. HOSPITALIZATION RATE

| 7/25 | 8/29 | 9/26 | 10/31 | 11/28 | 12/26 |
|------|------|------|-------|-------|-------|
| 7.6% | 4.4% | 4.1% | 8.7% | 16.6% | 10.4% |

Article Source: Wall Street Journal, December 13th, 2020

“Congress agrees to \$900 billion Covid stimulus deal after months of failed negotiations”

U.S. TOTAL PUBLIC DEBT OUTSTANDING (TRILLIONS)

| Jul | Aug | Sep | Oct | Nov | Dec |
|--------|--------|--------|--------|--------|--------|
| \$26.5 | \$26.7 | \$26.9 | \$27.1 | \$27.4 | \$27.7 |

Article Source: CNBC, December 20th, 2020

“Powell says stock prices are not necessarily high considering the low level of interest rates”

TEN-YEAR U.S. REAL YIELD (NOMINAL YIELD MINUS BREAKEVEN INFLATION)

| Jul | Aug | Sep | Oct | Nov | Dec |
|--------|--------|--------|--------|--------|--------|
| -1.03% | -1.10% | -0.95% | -0.83% | -0.95% | -1.07% |

Article Source: CNBC, December 16th, 2020

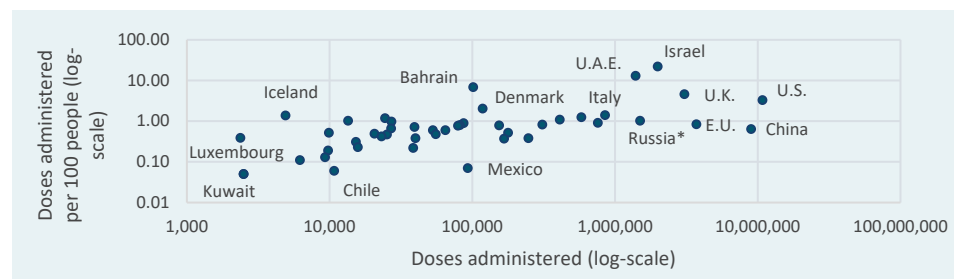
“Dollar’s Slump Propels Global Peers Toward Multi-Year Peaks”

BLOOMBERG DOLLAR SPOT INDEX

| Jul | Aug | Sep | Oct | Nov | Dec |
|------|------|------|------|------|------|
| 1179 | 1161 | 1177 | 1172 | 1145 | 1120 |

Article Source: Bloomberg, November 29th, 2020

GLOBAL VACCINATION CAMPAIGN



Source: Bloomberg, as of 1/13/21, or most recent release

MOST RECENT FISCAL STIMULUS PACKAGE ALLOCATIONS (BILLIONS)



Source: U.S. House of Representatives, as of 12/21/20

S&P 500 INDEX



Source: Standard & Poor's, Bloomberg, as of 12/31/20

Economic environment

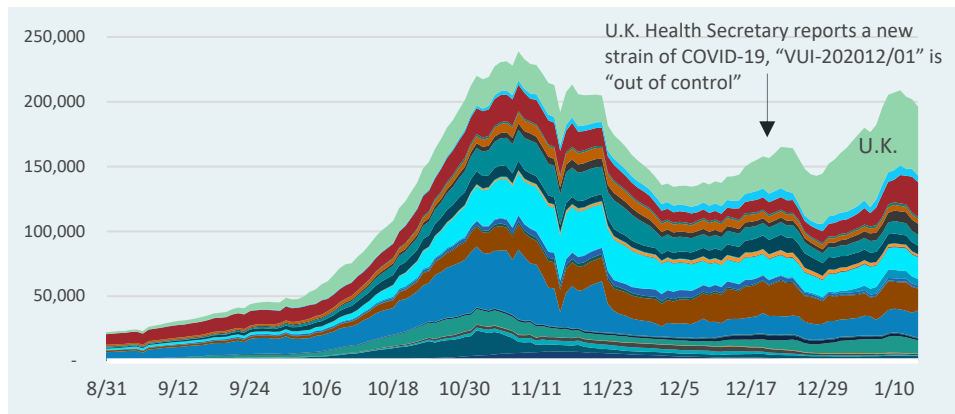
U.S. economics summary

- Real GDP grew at a -2.8% rate year-over-year in the third quarter (+33.4% quarterly annualized rate) as the U.S. economy recovered much of the economic activity lost in the second quarter.
- The Atlanta Fed’s forecast for fourth quarter growth was 7.4% quarter-over-quarter, as of January 15th, suggesting further economy expansion.
- Joe Biden was elected President of the United States in November. Jon Ossoff and Raphael Warnock both won in the Georgia Senate runoff elections in January, which ensured democratic control of both the White House and the Senate with V.P.-elect Kamala Harris as the swing vote. The wins completed the democratic “Blue Wave” many have associated with extensive fiscal support. Slim democratic majorities in both chambers of Congress, however, may constrain Biden’s policy scope.
- After impressive employment gains in Q3, the recovery appeared to be stalling in recent months. Unemployment fell from 7.8% in September to 6.7% in December.
- Consumer sentiment remained stubbornly low, despite broad recoveries in consumer spending, auto sales, and the housing market.
- Home sales activity continued to grow at an extremely fast pace in the fourth quarter, as record-low interest rates and the work-from-home environment fueled demand. Existing home sales were 25.8% higher than one-year prior.
- Several new, more-infectious strains of COVID-19 emerged and spread around the world, though experts remain confident in the efficacy of the currently-approved arsenal of vaccines. The global vaccination campaign began in December, and 44 million doses have been distributed so far.

| | Most Recent | 12 Months Prior |
|---|------------------------|---------------------------|
| GDP (YoY) | (2.8%) 9/30/20 | 2.1% 9/30/19 |
| Inflation (CPI YoY, Core) | 1.6% 12/31/20 | 2.3% 12/31/19 |
| Expected Inflation (5yr-5yr forward) | 2.0% 12/31/20 | 1.8% 12/31/19 |
| Fed Funds Target Range | 0% – 0.25% 12/31/20 | 1.50% – 1.75% 12/31/19 |
| 10-Year Rate | 0.9% 12/31/20 | 1.9% 12/31/19 |
| U-3 Unemployment | 6.7% 12/31/20 | 3.5% 12/31/19 |
| U-6 Unemployment | 11.7% 12/31/20 | 6.7% 12/31/19 |

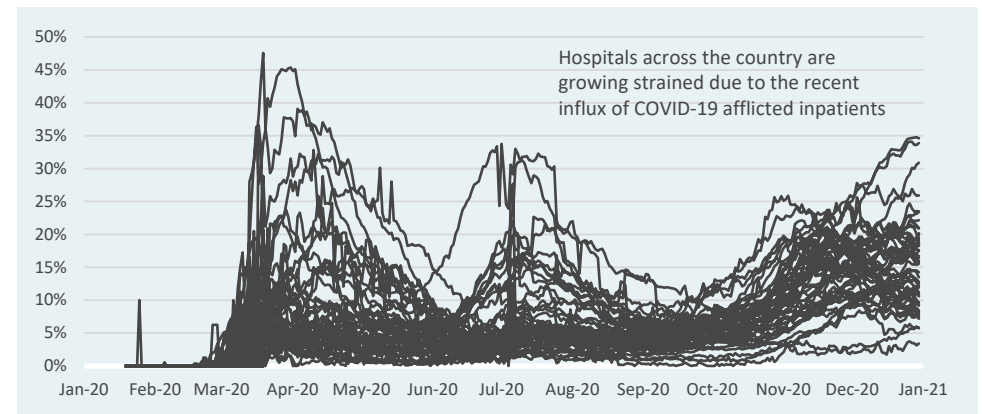
COVID-19 update

SEVEN-DAY AVERAGE DAILY CASE GROWTH – EUROPE AND THE U.K.



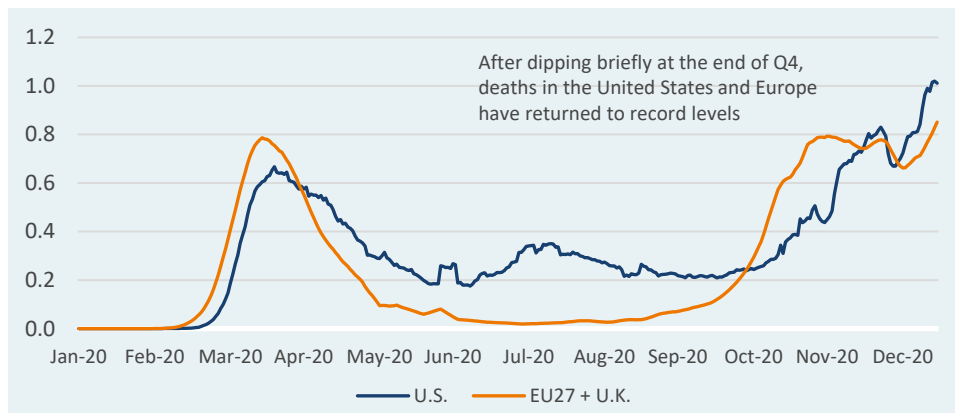
Source: Bloomberg, as of 1/14/21

COVID-19 INPATIENTS BY U.S. STATE (%)



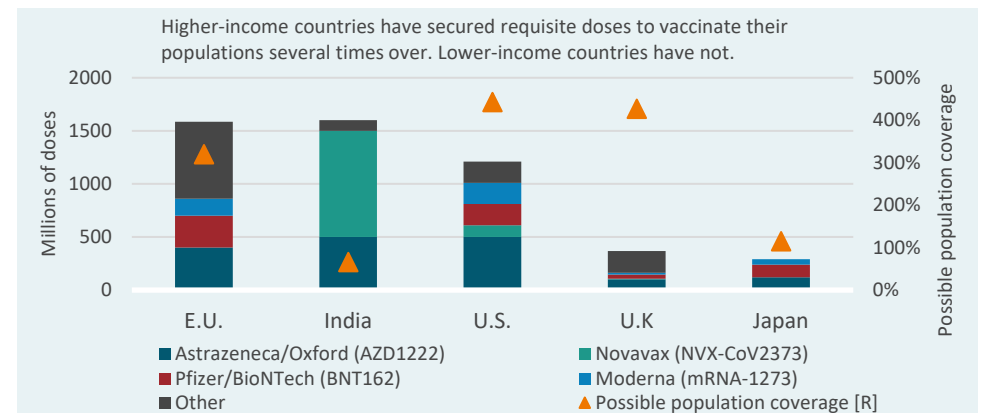
Source: Bloomberg, as of 1/9/21

SEVEN-DAY AVERAGE DAILY DEATHS PER 100,000 IN POPULATION



Source: Bloomberg, as of 1/14/21

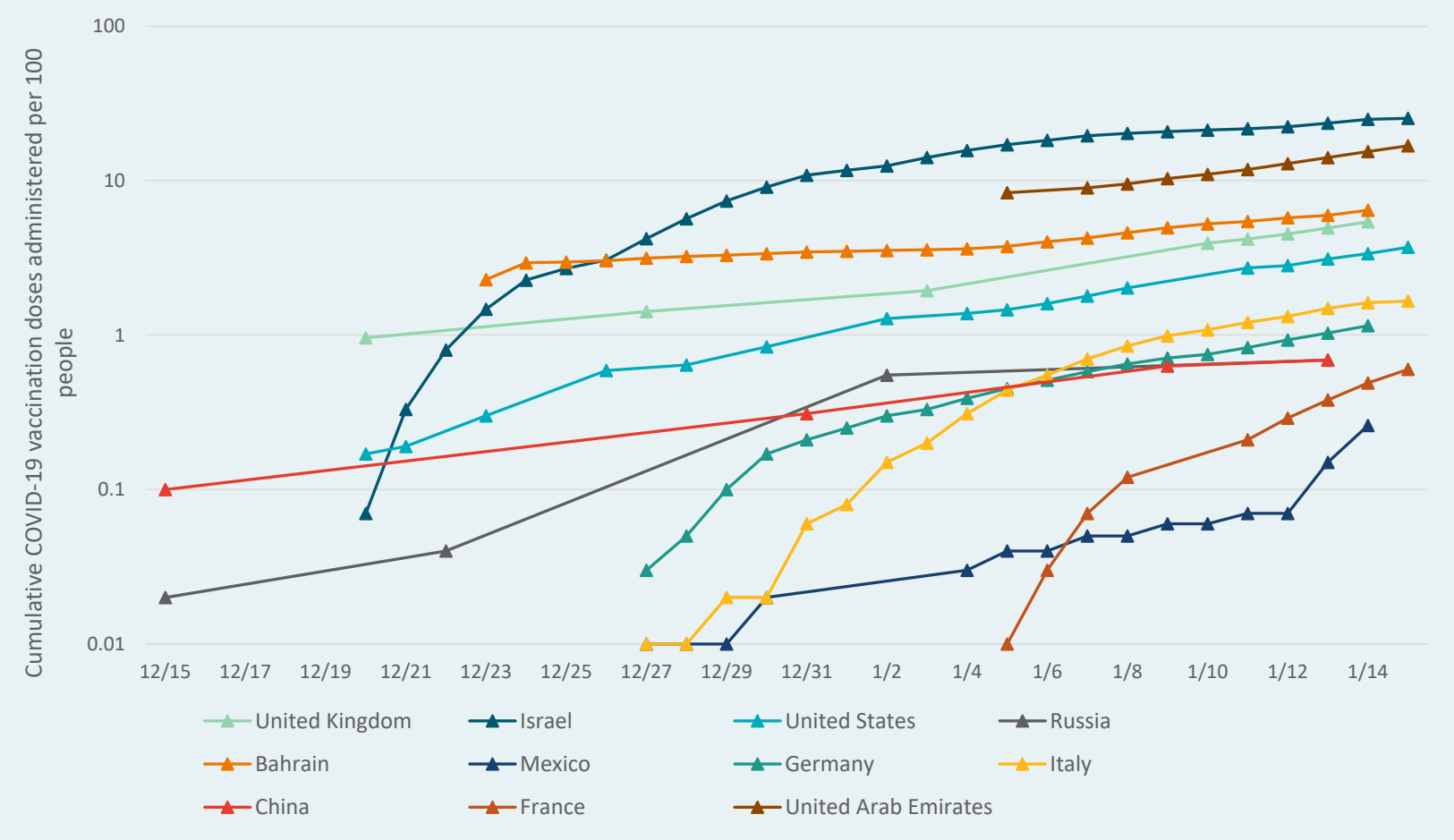
VACCINE COVERAGE BY COUNTRY



Source: Duke Global Health Innovation Center, as of 1/8/21; possible population coverage includes confirmed and potential doses committed to – it is possible not all vaccines will be approved.

Global vaccination campaign

CUMULATIVE COVID-19 VACCINE DOSES ADMINISTERED PER 100 PEOPLE

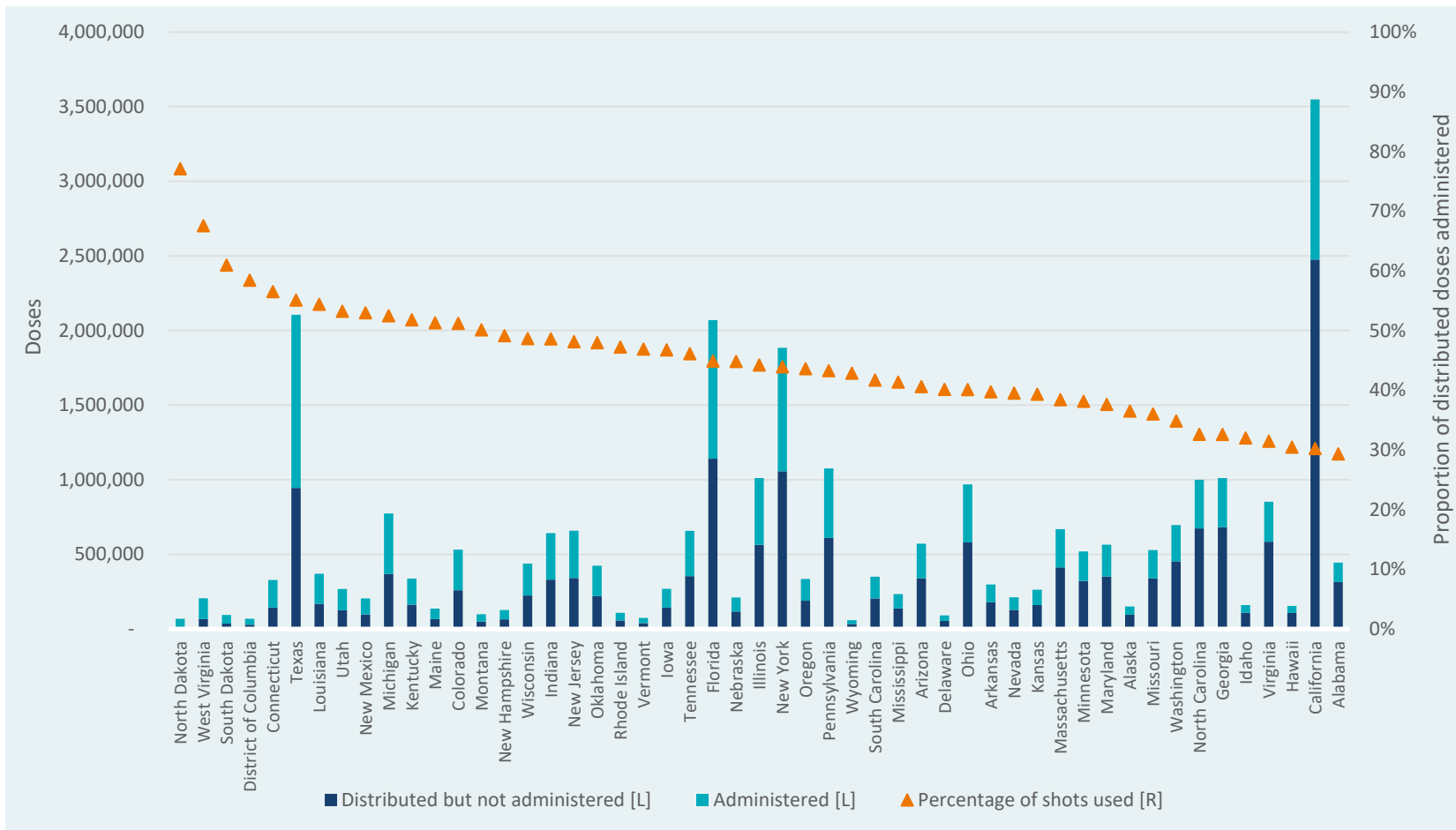


Israel has led the way so far, but it is a country with a size and population comparable to New Jersey

Source: Our World in Data, as of 1/15/21

Administration issues in the U.S.

THE GAP BETWEEN DISTRIBUTED AND ADMINISTERED VACCINE DOSES



As of January 15th, roughly 13 million doses had been administered nationwide, accounting for roughly 42% of all doses distributed

President Biden is aiming to achieve 100 million vaccine dose administrations in his first 100 days in office

Source: Bloomberg, as of 1/15/21

GDP growth

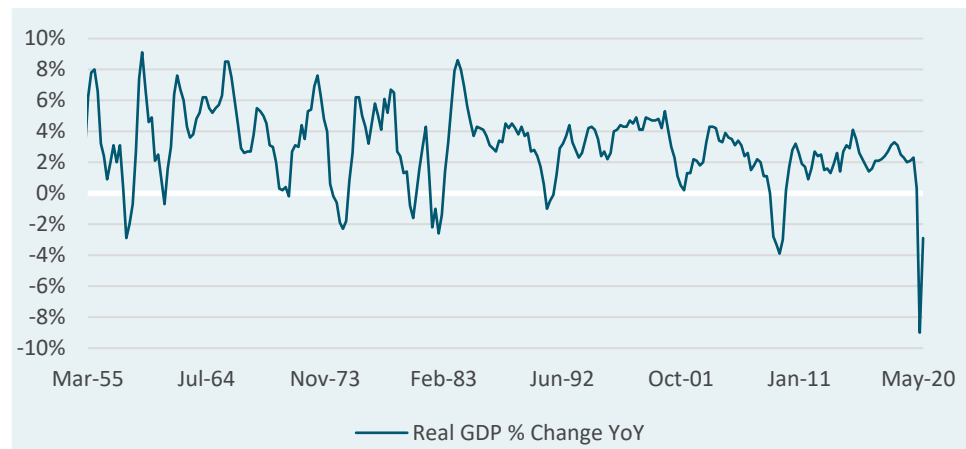
Real GDP grew at a -2.8% rate year-over-year in the third quarter (+33.4% quarterly annualized rate) as the U.S. economy recovered much of the economic activity lost during the depths of the pandemic. Personal consumption expenditures expanded at a quarterly annualized pace of -25.4%. Growth was broad-based, and included strong private investment, exports, and inventory builds.

Not only was this bounce-back a product of pent-up demand released by the economic reopening, it was also the result of a coordinated and historic stimulus effort by the U.S.

government. After the Federal Reserve took interest rates to zero and flooded the markets with liquidity, Congress passed an omnibus spending bill, including \$900 billion earmarked for COVID-19 relief. Key features of the package included a re-up of the Paycheck Protection Program, \$600 stimulus checks for most individuals, and \$300 per week in additional unemployment benefits over a 10-week period.

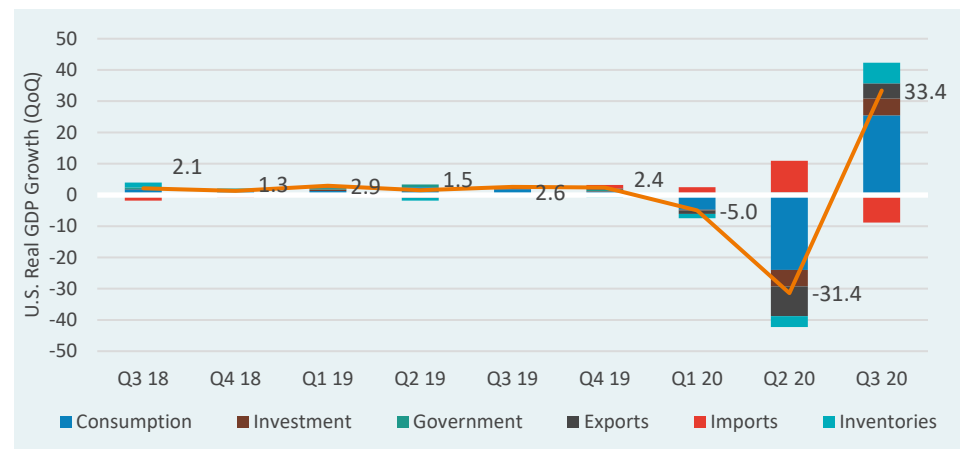
The Atlanta Fed's forecast for Q4 growth was 7.4% on a quarter-over-quarter annualized basis (-1.7% year-over-year) as of January 15th, suggesting further economic recovery.

U.S. REAL GDP GROWTH (YOY)



Source: Bloomberg, as of 9/30/20

U.S. GDP GROWTH ATTRIBUTION



Source: BEA, annualized quarterly rate, as of 9/30/20

Inflation

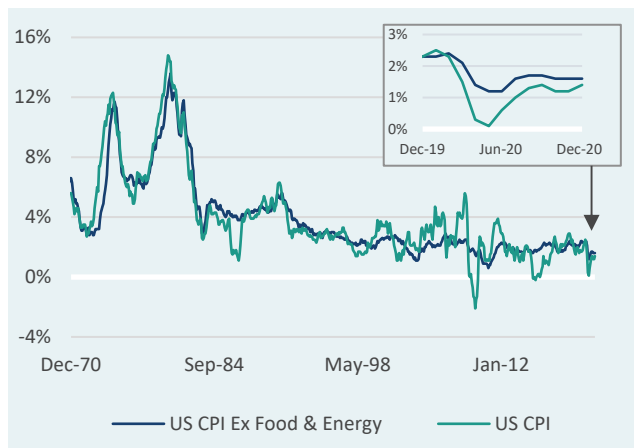
Headline inflation stayed relatively stable during Q4, at 1.4% year-over-year in December. Energy prices have acted as a drag on inflation, with gasoline (-15.2%) and fuel oil (-20.0%) showing the largest moves. Food (+3.9%), as well as used cars & trucks (+10.0%), had a lifting effect on inflation during the year. Inflation excluding volatile food and energy prices increased 1.6%.

The U.S. 10-year TIPS breakeven inflation rate headed notably higher over the quarter, from 1.6% in September to

2.0% in December. Although U.S. inflation is lower than pre-pandemic levels, market pricing for inflation is the highest since 2018.

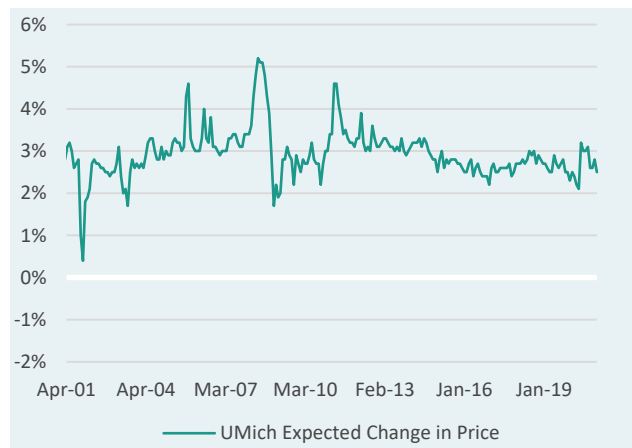
Consumer inflation expectations, as indicated by the University of Michigan survey, proved volatile throughout the year. After starting 2020 at an expected 2.3% rate of inflation, expectations fell to 2.1% in April before spiking to 3.2% in May. Expectations fell in the fourth quarter and settled at 2.5% in December.

U.S. CPI (YOY)



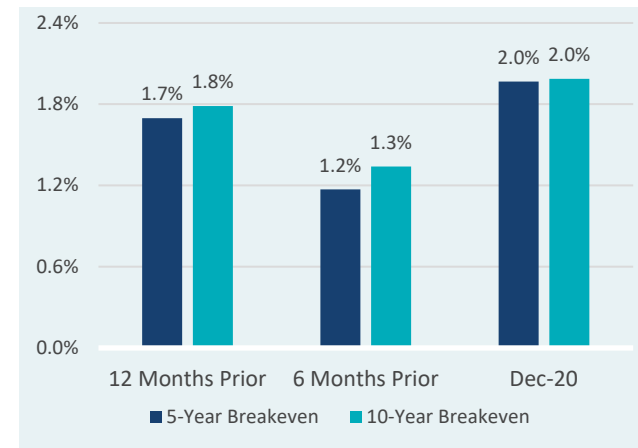
Source: Bloomberg, as of 12/31/20

CONSUMER INFLATION EXPECTATIONS



Source: University of Michigan, as of 12/31/20

BREAKEVEN INFLATION RATES



Source: Bloomberg, as of 12/31/20

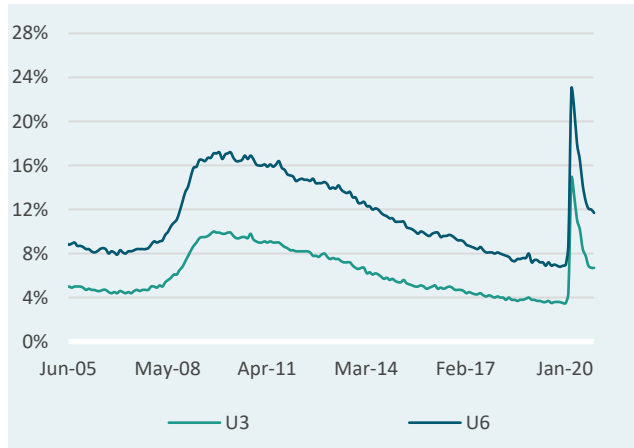
Labor market

After impressive employment gains in Q3, the recovery appeared to be stalling in recent months. Unemployment fell from 7.8% in September to 6.7% in December—a small improvement compared to previous months. Additionally, while the current unemployment rate does not seem exceptionally weak from a historical perspective, this metric masks the fact that the U.S. labor force participation rate also fell during COVID-19. In simpler terms, since the pandemic, roughly 3% of workers are now unemployed and seeking work, and an additional 2% of workers are now unemployed and *not* seeking work.

During an economic recession, it is important to understand the portion of newly unemployed workers who seek to quickly rejoin the workforce (cyclical unemployment), relative to the portion of workers who lose their jobs and end up more permanently out of work due to lack of opportunities or discouragement (structural unemployment). As shown in the chart below, a growing share of unemployed workers have remained out of work since the onset of the economic recession.

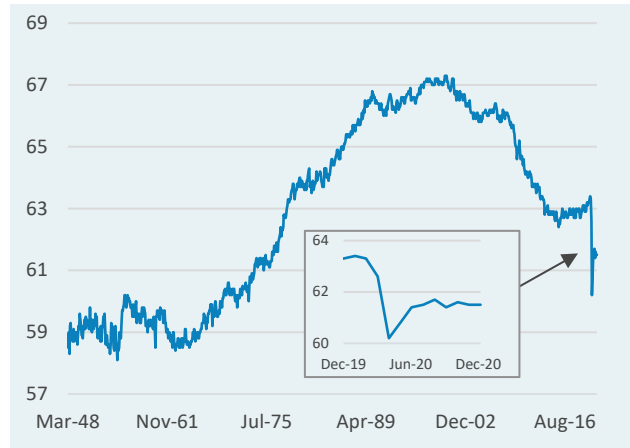
The U.S. employment recovery appears to be stalling

U.S. UNEMPLOYMENT



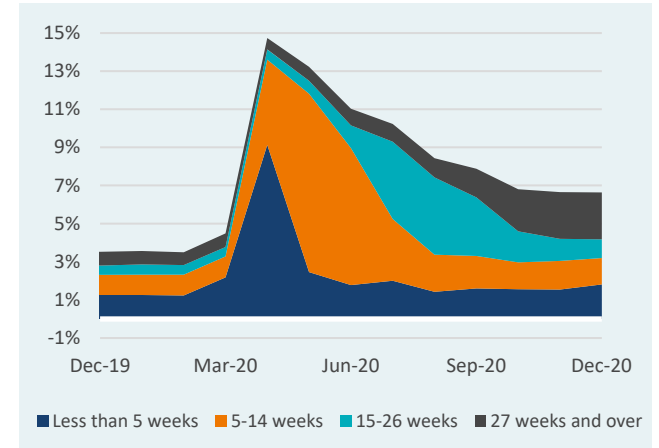
Source: FRED, as of 12/31/20

LABOR PARTICIPATION RATE



Source: FRED, as of 12/31/20

UNEMPLOYMENT DECOMPOSITION BY DURATION



Source: BLS, as of 12/31/20

U-3 unemployment rates relative to peaks

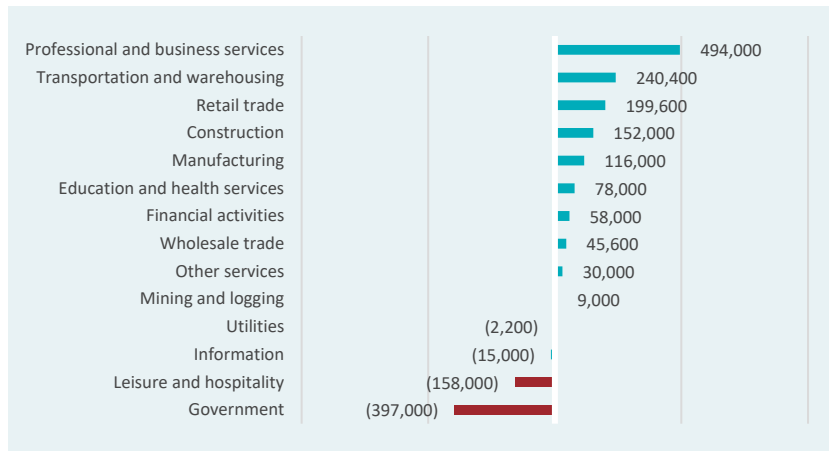


The Covid-19 recession features a historically-abrupt loss and subsequent rebound in broad unemployment

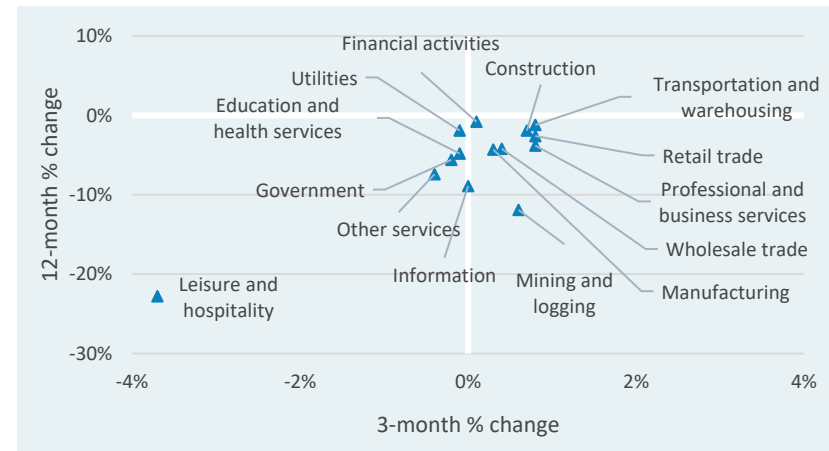
Source: Bloomberg, BLS, as of 12/31/20

Employment conditions

Q4 2020 NONFARM PAYROLLS CHANGES

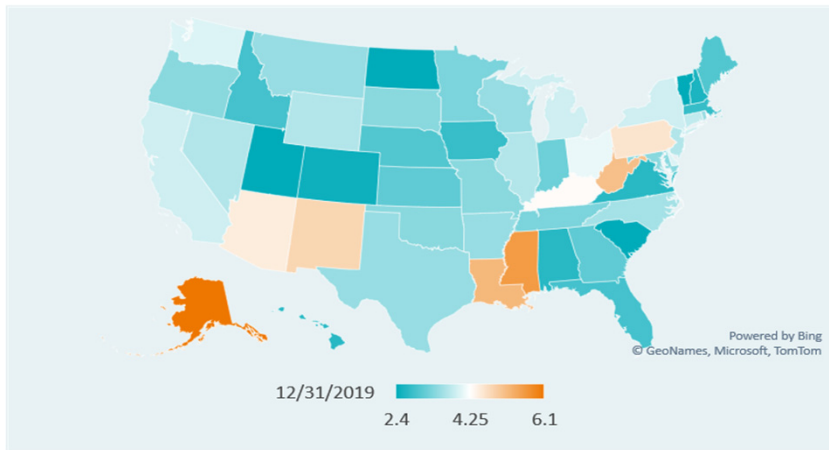


NONFARM PAYROLL GROWTH BY SECTOR

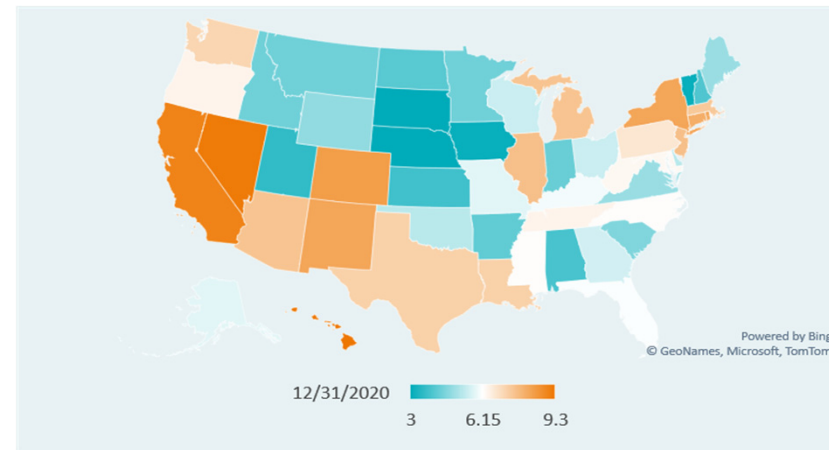


While employment in many sectors bounced back in Q4, jobs in the leisure and hospitality sector dipped as the impact of state lockdowns began to show up in the payrolls data

U-3 UNEMPLOYMENT (12/31/2019)



U-3 UNEMPLOYMENT (12/31/2020)



Despite the broad gains in the 4th quarter, nonfarm payrolls shrunk in every sector over the full calendar year

Source: BLS, as of 12/31/20 – or most recent release

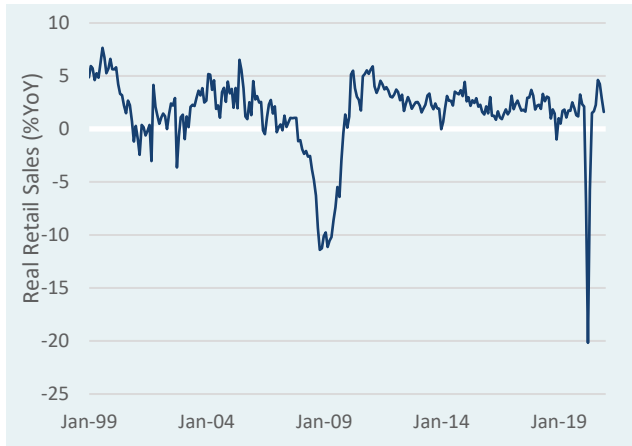
The consumer

U.S. retail sales have shown a surprising recovery after falling -20% year-over-year in April. Retail sales, after adjusting for inflation, increased 1.6% in December. Spending patterns have shown resiliency despite the economic slowdown. Automobile and home sale activity, for example, has recovered to previous levels.

However, recent spending patterns have been vastly affected by unprecedented government stimulus. Because this expansion was far from a “natural” recovery, it will be worth watching how consumption trends change as the various economic stimulus programs end. This effect may already be apparent as retail sales growth slowed from 4.6% in September to 1.6% in December.

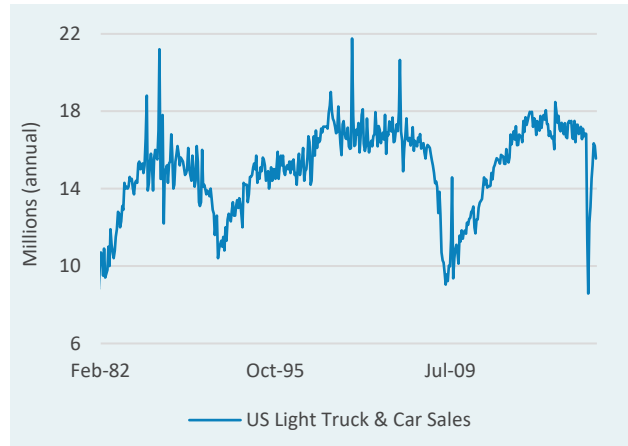
According to anonymized cellular phone data collected by Google for COVID-19 public health research, Americans began returning to their daily routines through late spring and summer, as activity began moving back to normalcy. However, these improvements plateaued across certain types of activities such as workplace travel, retail & recreation, and transit station usage, and this activity has slowed down once again. Continued weak activity, or even a further slowdown due to renewed government restrictions, could cast doubt on the U.S. economic recovery.

REAL RETAIL SALES GROWTH (YOY)



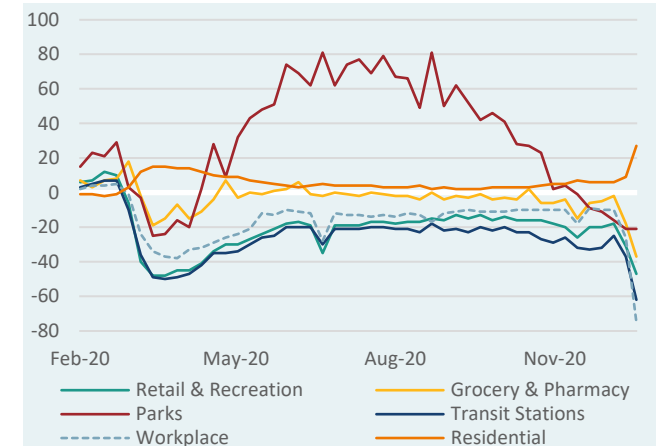
Source: FRED, as of 12/31/20

AUTO SALES



Source: Federal Reserve, as of 11/30/20

GOOGLE U.S. ACTIVITY TRACKER



Source: Google anonymized U.S. citizen mobility, as of 12/31/20

Sentiment

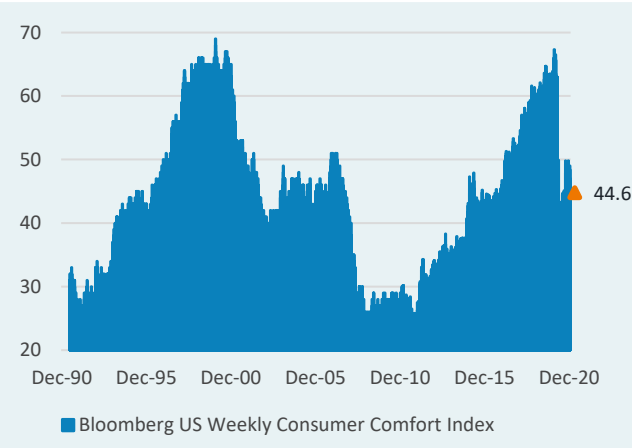
Consumer sentiment remained stubbornly low during the fourth quarter, despite broad recoveries in consumer spending, auto sales, and the housing market.

The Bloomberg Consumer Comfort Index attempts to gauge Americans’ views on the economy, their personal financial situation, and buying conditions. The index fell from 49.3 to 44.6 during the quarter. The University of Michigan Consumer Sentiment Survey attempts to gauge attitudes about the business climate, personal finances, and spending conditions. The index was flat at 80.7 in Q4—down from a

cycle high of 101.0 in February.

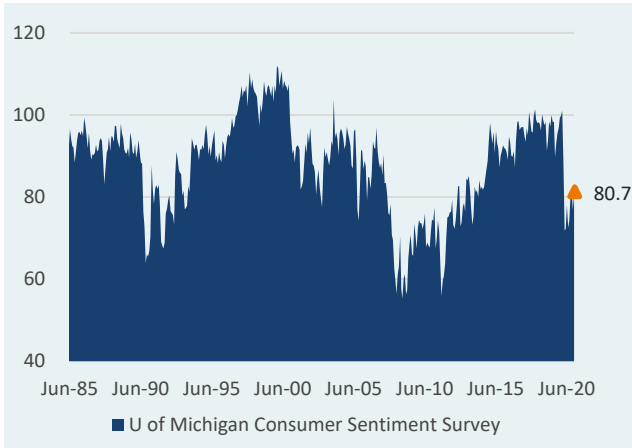
The NFIB Small Business Optimism Index exhibited a sharp decline to 95.9 in Q4, bringing the index back towards pandemic lows. The survey suggested that most business owners expect deteriorating conditions over the next six months. The survey also showed that concerns exist regarding government-mandated business closures due to COVID-19, and that the new U.S. administration may be less friendly toward the business community.

CONSUMER COMFORT



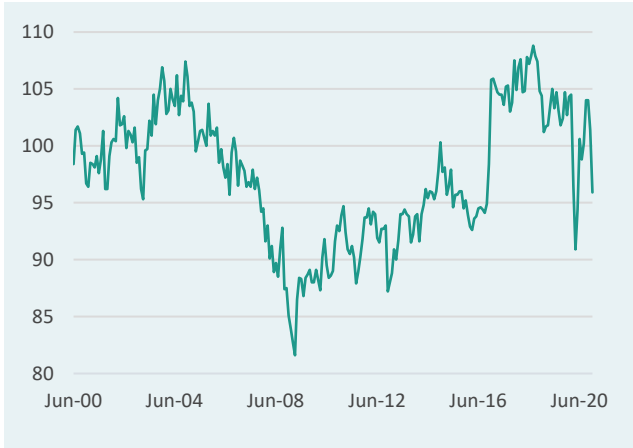
Source: Bloomberg, as of 12/31/20

CONSUMER SENTIMENT



Source: University of Michigan, as of 12/31/20

SMALL BUSINESS OPTIMISM



Source: NFIB, as of 12/31/20

Housing

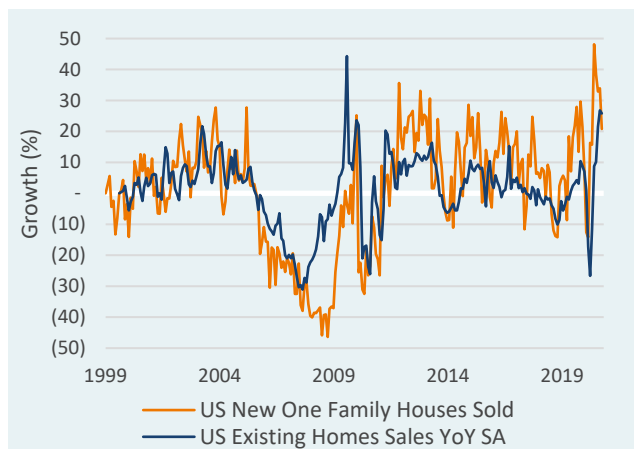
Home sales activity continued to grow at an extremely fast pace in the fourth quarter, as record-low interest rates and the work-from-home environment fueled demand. It remains to be seen the degree to which business work-from-home policies become permanent, post-pandemic. The direction of these trends may have a far-reaching impact on home sales as workers seek more space for home offices, and perhaps also feel greater freedom to move outside of major urban areas. Existing home sales were 25.8% higher than one-year prior, an overall rate of growth not experienced in over a decade.

Despite a gradual bounce-back of U.S. Treasury interest rates,

the 30-year U.S. Fixed Mortgage Rate has continued to move lower. The direction of mortgage rates from here will likely have a material impact on home prices.

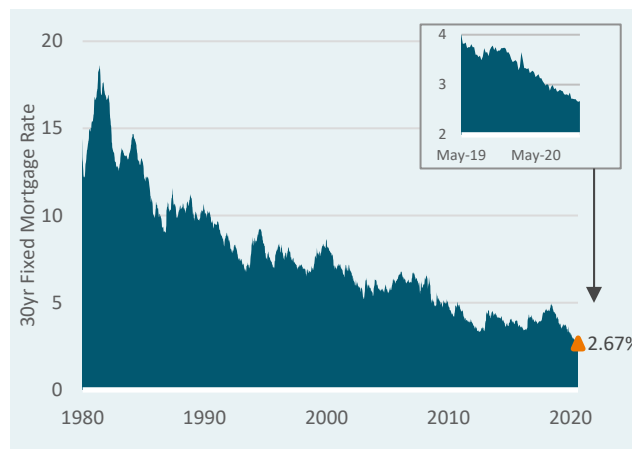
It is important to note that the overall cost of owning a home is a combination of home prices and borrowing rates (among many other variables, of course). While the price of a new home in the U.S. is, on average, higher than ever before, record-low interest rates have compensated for higher prices. As suggested by the Housing Affordability Index, the overall cost of owning a home today is below-average, historically speaking.

U.S. HOME SALES (YOY)



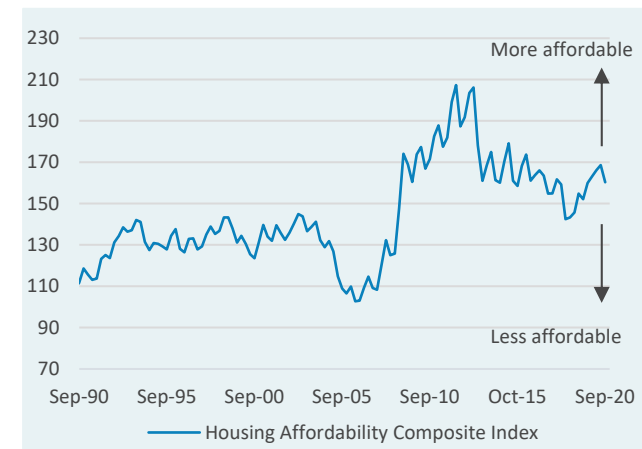
Source: FRED, as of 11/30/20

30-YEAR FIXED MORTGAGE RATE (AVERAGE)



Source: FRED, as of 12/31/20

HOUSING AFFORDABILITY INDEX



Source: National Association of Realtors, as of 9/30/20

International economics summary

- Economic growth in Q3, although negative on a year-over-year basis, painted an optimistic picture of the recovery. Consumers and businesses around the world have attempted to continue on, despite recent lockdowns, restrictions, and safety concerns. GDP growth figures have improved markedly from the depths of Q2. Most economies have recovered more than half of lost activity experienced during the prior quarter.
- European Union leaders agreed on a historic €1.8 trillion budget-and-recovery plan for 2021-2027, paving the way for a €750-billion pandemic relief package which will be financed by joint debt issuance.
- U.K. and E.U. officials reached an official trade deal at the 11th hour before the December 31st, 2020 conclusion of the transition period following Britain's official cutting of ties with the E.U. last January. The

agreement marked the beginning of a new chapter in the history of British relations with Europe.

- Governments have taken different approaches to supporting workers, and while many approaches have had similar economic effects, they have often had drastically different impacts on official unemployment figures. We believe official unemployment figures are of limited value in this environment—more in-depth analysis is likely required.
- The pandemic placed downward pressure on inflation. Since then, inflation levels have generally remained muted in developed markets while recovering moderately in emerging economies. China appears to be an outlier, as inflation has recently dipped below zero. This move was fueled by falling pork prices, which had been moving higher in recent years and pushing up inflation.

| Area | GDP (Real, YoY) | Inflation (CPI, YoY) | Unemployment |
|------------------|--------------------|-------------------------|-------------------|
| United States | (2.8%) 9/30/20 | 1.4% 12/31/20 | 6.7% 12/31/20 |
| Eurozone | (4.3%) 9/30/20 | (0.3%) 12/31/20 | 8.3% 11/30/20 |
| Japan | (5.7%) 9/30/20 | (1.3%) 12/31/20 | 2.8% 11/30/20 |
| BRICS Nations | 1.9% 9/30/20 | 1.5% 12/31/20 | 5.1% 12/31/20 |
| Brazil | (3.9%) 9/30/20 | 4.5% 12/31/20 | 14.3% 10/31/20 |
| Russia | (3.4%) 9/30/20 | 4.9% 12/31/20 | 6.1% 11/30/20 |
| India | (7.5%) 9/30/20 | 4.6% 12/31/20 | 9.1% 12/31/20 |
| China | 2.3% 12/31/20 | 0.2% 12/31/20 | 4.2% 12/31/20 |

NOTE: India lacks reliable government unemployment data. Unemployment rate shown above is estimated from the Centre for Monitoring Indian Economy

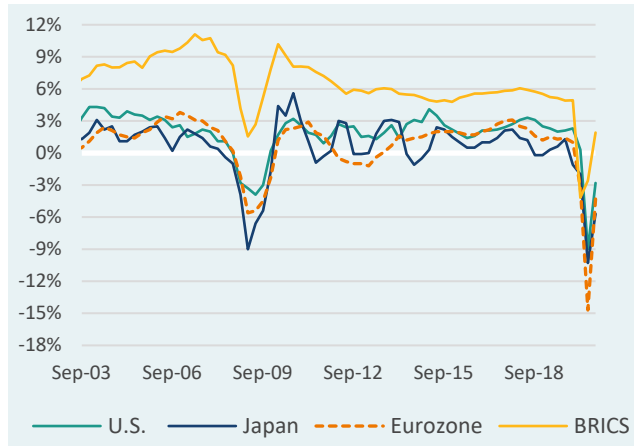
International economics

Economic growth in Q3, although negative on a year-over-year basis, painted an optimistic picture of the recovery. Consumers and businesses around the world have attempted to continue on, despite recent lockdowns, restrictions, and safety concerns. GDP growth figures have improved markedly from the depths of Q2. Most economies have recovered more than half of lost activity seen during the prior quarter. The direction of recovery was similar across the emerging markets, and these economies have maintained their growth “premium” over developed markets throughout the crisis.

Unemployment in the Eurozone has fallen slightly to 8.3%

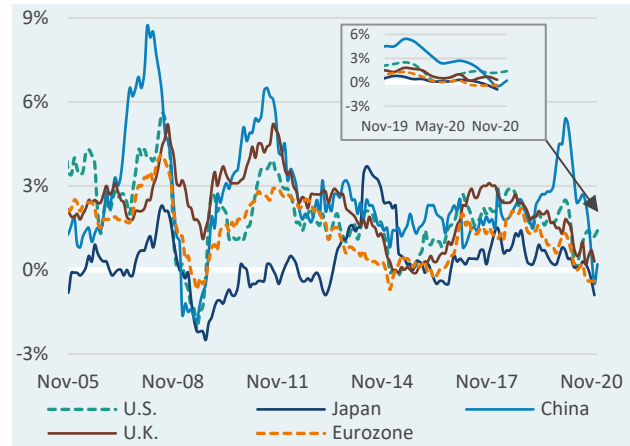
from a high of 8.7% in July. Governments around the world have taken different approaches to supporting workers. One approach, as taken by the U.S., was to provide greater financial support to workers who had lost their jobs. Another approach, such as that taken by the UK, was for government to effectively pay workers’ wages to keep them on payroll. These approaches, which may be very similar in overall economic effect, can appear drastically different in the official rate of unemployment statistics (shown below). In short, official unemployment figures may be of limited value in this environment—more in-depth analysis is required.

REAL GDP GROWTH (YOY)



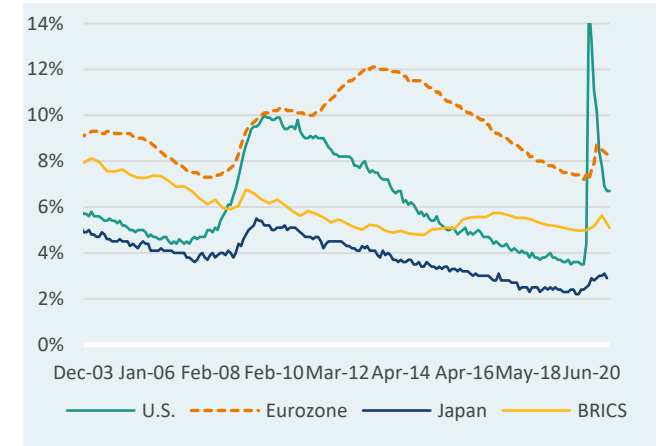
Source: Bloomberg, as of 9/30/20

INFLATION (CPI YOY)



Source: Bloomberg, as of 12/31/20 – or most recent release

UNEMPLOYMENT



Source: Bloomberg, as of 12/31/20 – or most recent release

Fixed income rates & credit

Interest rate environment

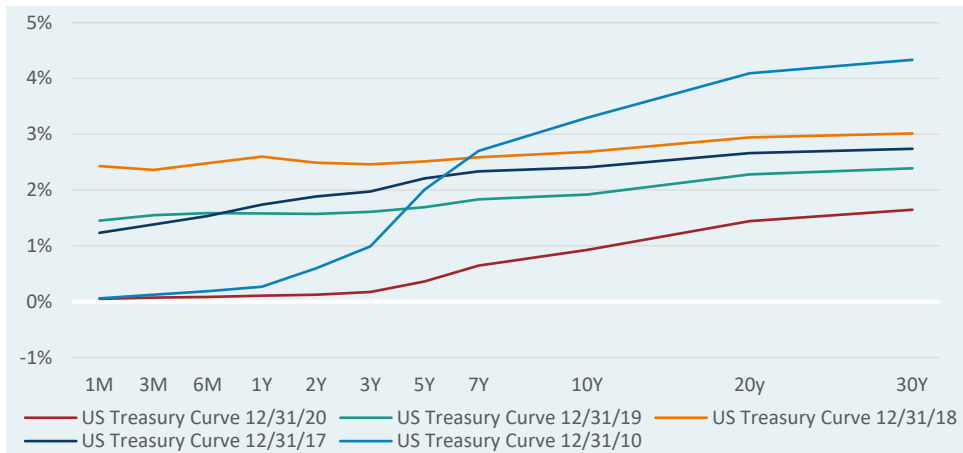
- Longer-dated U.S. Treasury yields moved upward in the fourth quarter, with the U.S. 10-year rising above 1.0% to begin 2021. Higher interest rates may place pressure on equity valuations if this trend continues. The yield of shorter-dated bonds and cash has not moved and is expected to stay near zero.
- Ten-year breakeven inflation rates rallied from 1.6% to 2.0% in Q4, likely propelled higher by expectations that Biden’s fiscal approach paired with vaccine rollouts will result in higher longer-term growth and inflation. The rise in priced inflation outpaced the rise in nominal Treasury yields, leading the 10-year U.S. real yield to decline from -0.95% to -1.07%, near record lows.
- Officials at the Federal Reserve remained committed to a \$120 billion monthly pace of bond purchases until there is “substantial progress” toward employment and inflation objectives. Fed Chair Powell left the door open to adjusting the pace of those purchases as necessary, and stated that the Fed would “let the world know...well in advance of active consideration of beginning a gradual taper of asset purchases.”
- The European Central Bank expanded the size of its Pandemic Emergency Purchase Program (PEPP) by €500 billion, bringing the new total to €1.85 trillion. The ECB also extended the horizon for purchases under PEPP to March 2022, and the timeline for reinvestment of maturing PEPP assets to the end of 2023.
- Joe Biden nominated Janet Yellen, Jerome Powell’s predecessor, as U.S. Treasury Secretary. Throughout the pandemic, central bankers have been calling for further coordination of fiscal and monetary action, and Yellen’s nomination could represent the next step down that path.

| Area | Short Term (3M) | 10-Year |
|---------------|-----------------|---------|
| United States | 0.06% | 0.91% |
| Germany | (0.83%) | (0.57%) |
| France | (0.77%) | (0.34%) |
| Spain | (0.83%) | 0.04% |
| Italy | (0.65%) | 0.54% |
| Greece | (0.38%) | 0.62% |
| U.K. | (0.06%) | 0.20% |
| Japan | (0.12%) | 0.02% |
| Australia | 0.02% | 0.97% |
| China | 2.28% | 3.14% |
| Brazil | 2.00% | 6.91% |
| Russia | 3.54% | 6.01% |

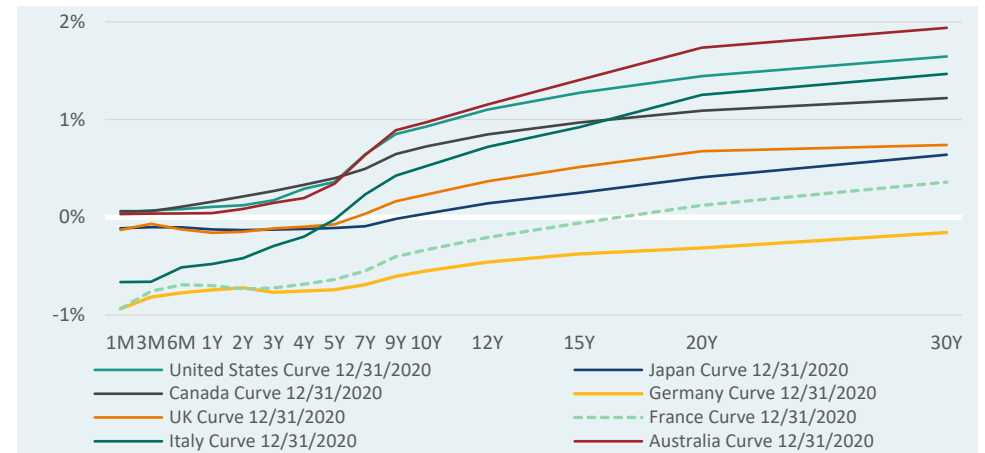
Source: Bloomberg, as of 12/31/20

Yield environment

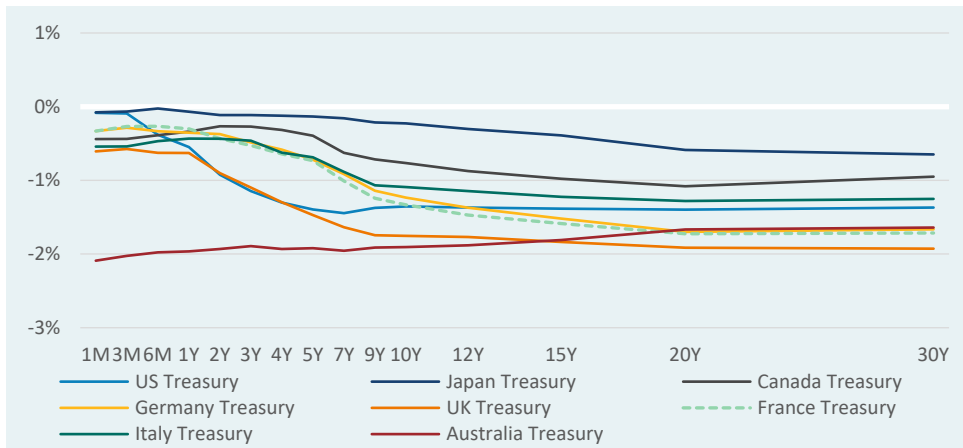
U.S. YIELD CURVE



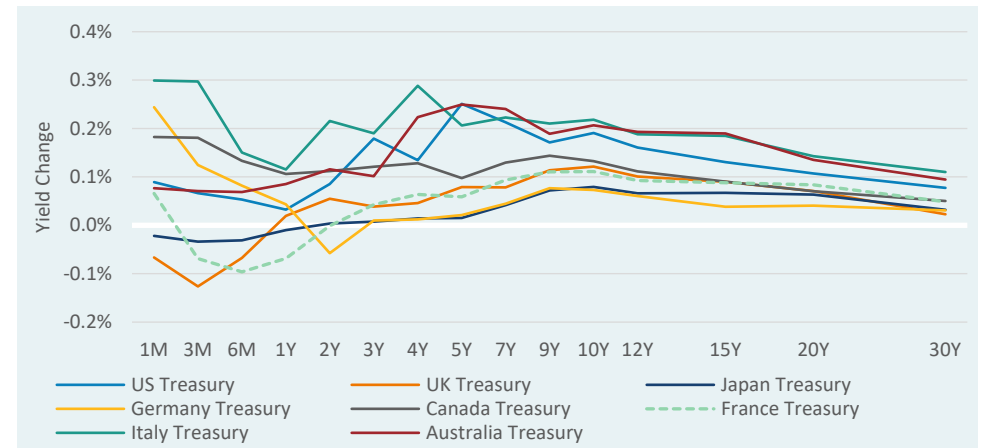
GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



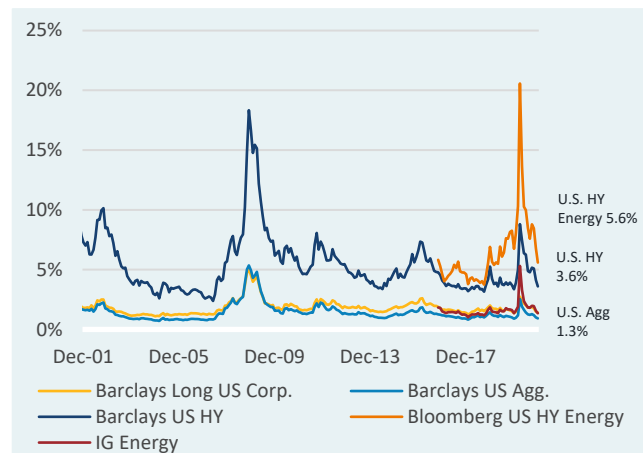
Source: Bloomberg, as of 12/31/20

Credit environment

After four quarters of exceptional volatility, credit market spreads ended 2020 roughly in line with where they started. Both investment grade and below investment grade assets experienced positive performance, driven in part by increased investor demand for yield but mainly by the unprecedented Fed action in March which led rates to all-time lows. For the calendar year, investment grade credit returned 9.4%, outperforming high yield (+7.1%), and banks loans (+2.8%). The effects of COVID market disruptions created wide dispersion among sectors as metals/mining, freight, and food/drug retail outperformed while energy and domestic telecom underperformed.

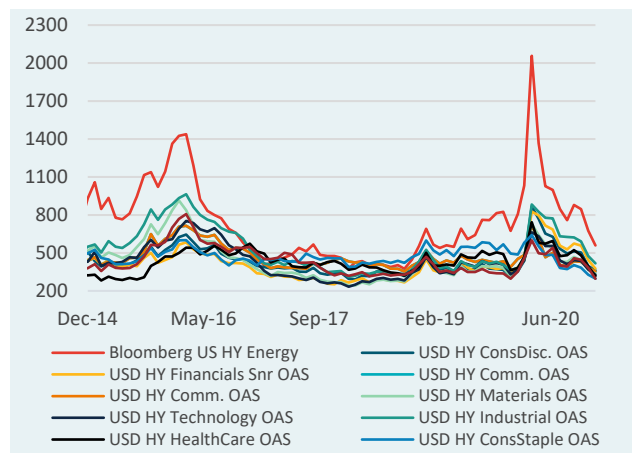
In the fourth quarter, high yield bonds returned 6.5%, outperforming bank loans (+3.6%) and investment grade credit (+2.8%). Positive vaccine news and conclusion of the presidential election led to strong risk-on sentiment during the quarter, driving longer duration and lower quality bonds to outperform within U.S. credit. In addition, credit spreads continued to tighten, with high yield spreads tightening 157 bps to 360 bps and investment grade spreads falling 40 bps to finish the year at 92 bps.

SPREADS



Source: Barclays, Bloomberg, as of 12/31/20

HIGH YIELD SECTOR SPREADS (BPS)



Source: Bloomberg, as of 12/31/20

| Market | Credit Spread (OAS) | |
|---------------------|---------------------|----------|
| | 12/31/20 | 12/31/19 |
| Long U.S. Corp | 1.4% | 1.4% |
| U.S. Inv Grade Corp | 1.0% | 0.9% |
| U.S. High Yield | 3.6% | 3.7% |
| U.S. Bank Loans* | 4.6% | 4.4% |

Source: Barclays, Credit Suisse, Bloomberg, as of 12/31/20

*Discount margin (4-year life)

Default & issuance

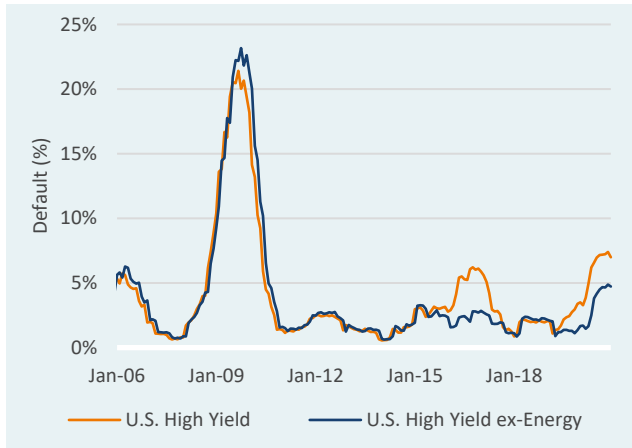
A total of 88 companies defaulted in 2020, representing \$130 billion. This activity was led by the energy, telecom, and retail sectors. The \$130 billion in defaults in 2020 ranked second only to the \$185 billion experienced in 2009.

The par weighted U.S. high yield default rate increased 0.4% during the quarter to 6.2%—well above the long-term average of 3.0-3.5%. If the energy sector is excluded (which showed an annual default rate of 20.5%), the high yield default rate came in at a more modest 4.5%. During the fourth quarter, the leveraged loan default rate came in at 4.0%—moderately above the long-term average of 3.0%.

High yield bond issuance fell from the record levels posted in Q2 and Q3 but remained elevated in Q4. Total issuance for 2020 was the highest on record at \$511 billion, outpacing 2013's historical peak of \$378 billion.

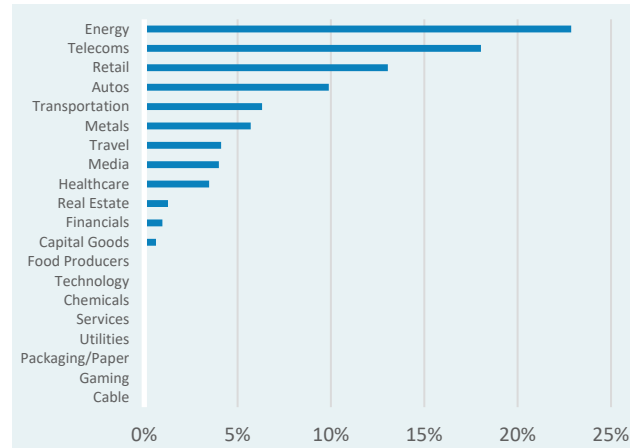
Investment grade issuance for 2020 totaled \$1.8 trillion, which was 40% higher than the prior record achieved in 2017. The fourth quarter was the slowest of the year with \$215 billion in new issues—a level that was in line with the four-year average

HY DEFAULT RATE (ROLLING 1-YEAR)



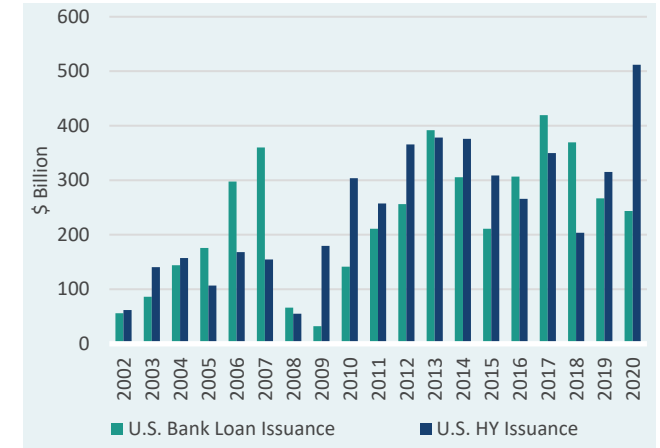
Source: BofA Merrill Lynch, as of 12/31/20

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



Source: BofA Merrill Lynch, as of 12/31/20 – par weighted

U.S. ISSUANCE (\$ BILLIONS)



Source: BofA Merrill Lynch, as of 12/31/20

Equity

Equity environment

- U.S. equities delivered +12.1% during the quarter, ending the year at an all-time-high. The S&P 500 was one of the strongest equity markets in 2020, up +18.4% despite an earnings recession and considerable economic uncertainty.
- Emerging market equities (MSCI EM +19.7%) once again outperformed U.S. (S&P 500 +12.1%) and international developed equities (MSCI EAFE +16.0%) in Q4. Latin American equities showed significant outperformance during the quarter (MSCI Latin America +34.8%), after years of lagging behind other emerging markets.
- According to FactSet, S&P 500 Q4 earnings are expected to be down -8.8%. This estimate improved materially from the -12.7% drop expected on September 30th. Analysts are expecting a -13.3% earnings decline for full-year 2020.
- The Cboe VIX Index remained rangebound in the fourth quarter, ending the year at 22.8. Priced volatility is moderately elevated relative to the longer-term average of 19.
- Weakness in the U.S. dollar relative to both emerging market and developed market currencies remained a theme during the fourth quarter, as the Bloomberg Dollar Spot Index fell to a two and a half year low. Analysts attributed some of the weakness in the greenback to lower relative real yields in the United States, as nominal Treasury yields picked up.
- Within the index, a sizable rotation occurred in Q4 as certain sectors that had been beaten-down during the pandemic performed strongly. Rising energy prices boosted the Energy sector, while higher interest rates on the longer end of the yield curve improved the outlook for Financials.

| | QTD TOTAL RETURN | | 1 YEAR TOTAL RETURN | |
|--|------------------|----------|---------------------|----------|
| | (unhedged) | (hedged) | (unhedged) | (hedged) |
| US Large Cap (S&P 500) | 12.1% | | 18.4% | |
| US Small Cap (Russell 2000) | 31.4% | | 20.0% | |
| US Large Value (Russell 1000 Value) | 16.3% | | 2.8% | |
| US Large Growth (Russell 1000 Growth) | 11.4% | | 38.5% | |
| International Large (MSCI EAFE) | 16.0% | 11.9% | 7.8% | 2.5% |
| Eurozone (Euro Stoxx 50) | 16.2% | 12.2% | 5.5% | (1.2%) |
| U.K. (FTSE 100) | 17.2% | 11.4% | (8.9%) | (10.2%) |
| Japan (NIKKEI 225) | 21.1% | 18.8% | 24.2% | 19.4% |
| Emerging Markets (MSCI Emerging Markets) | 19.7% | 16.0% | 18.3% | 19.6% |

Source: Russell Investments, MSCI, STOXX, FTSE, Nikkei, as of 12/31/20

Domestic equity

U.S. equities delivered +12.1% during the quarter, ending the year at an all-time-high. The S&P 500 was one of the strongest equity markets in 2020, up +18.4% despite an earnings recession and considerable economic uncertainty.

Within the index, a sizable rotation occurred in Q4 as certain sectors that had been beaten-down during the pandemic performed strongly. Rising energy prices boosted the Energy sector, while higher interest rates improved the outlook for Financials. It remains to be seen whether certain consumer habits displayed during the pandemic (online shopping and heightened social media usage, for example) begin reverting to previous levels as the world moves back to normalcy or if

instead, these new habits become more permanent in nature. The answer to this question has important implications for future intra-sector performance.

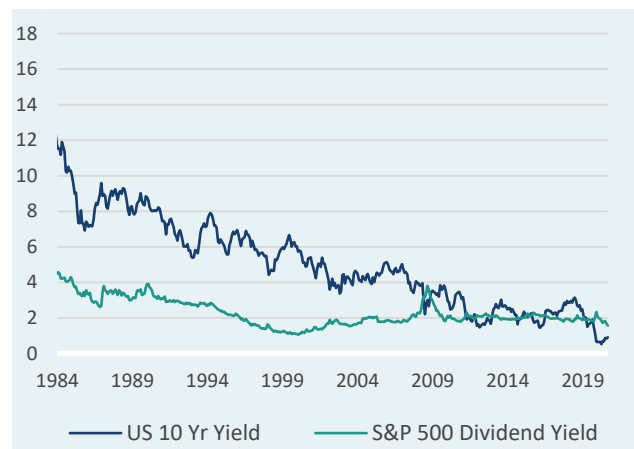
As equities move higher, it is difficult not to notice a disconnect between the US. market and the economy. We believe this rally is the result of a confluence of forces. Ultra-low interest rates, extremely accommodative monetary and fiscal policy, plus the implicit guarantee that further economic weakness will be met with more support and stimulus, seems to be creating a new type of “Goldilocks market” that harkens back to the post-Global Financial Crisis market expansion.

S&P 500 INDEX



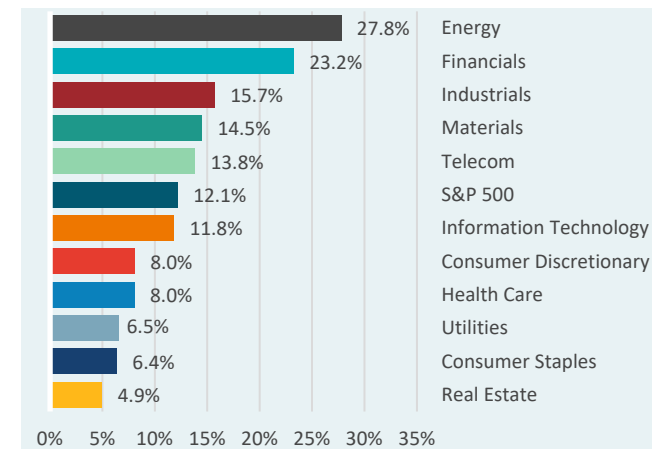
Source: Standard & Poor's, as of 12/31/20

DIVIDEND YIELD VS BOND YIELD



Source: Standard & Poor's, as of 12/31/20

Q4 SECTOR PERFORMANCE



Source: Standard & Poor's, as of 12/31/20

Domestic equity size & style

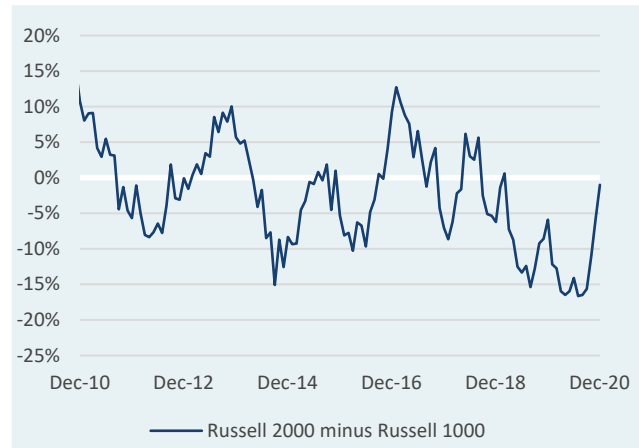
U.S. value stocks beat growth stocks during the fourth quarter (Russell 1000 Value +16.3%, Russell 1000 Growth +11.4%), reversing an extended run of value underperformance. The moderate bounce in value stock performance appeared to be partly driven by sector movements. Energy, Financials, and Materials sectors tend to contain an outsized number of value stocks. These sectors were among the top performers in Q4. Small cap stocks delivered sizable outperformance over large cap stocks (Russell 2000 +31.4%, Russell 1000 +13.7%).

A variety of risks seem to be boiling up around large U.S. technology companies. Given the significant market role that

these businesses play, along with their *growth* rather than *value* characteristics, this regulatory risk could have implications for 2021. First, it is easy to argue that firms such as Google, Amazon, and Facebook have exercised some degree of monopoly power (the FTC recently sued Facebook for alleged illegal monopolistic conduct, and numerous other investigations abound). Further anti-trust actions are likely to come. Second, in recent years there has been a degree of bipartisan consensus that social media companies are doing a poor job of moderating content (though each political party has very different ideas as to the appropriate solution). These risks, which rest perhaps solely on the shoulders of “growth stocks”, will be worth watching in 2021.

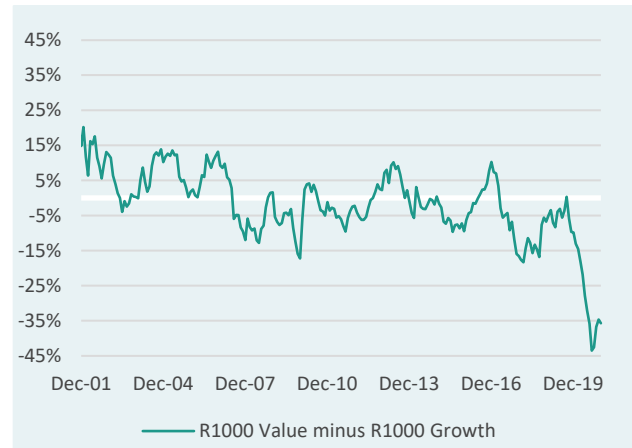
Sector performance has fueled dramatic negative performance of the value premium

SMALL CAP VS LARGE CAP (YOY)



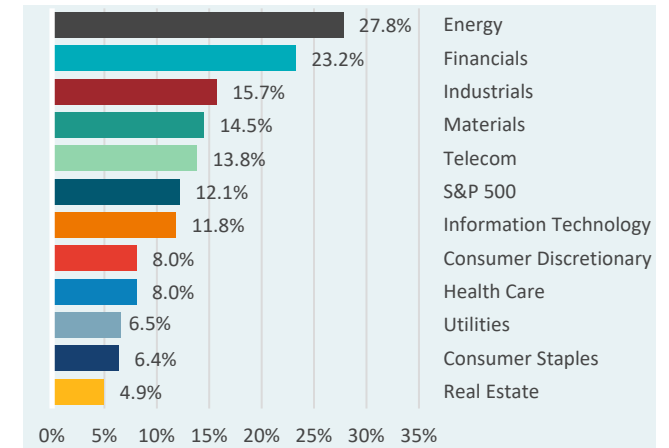
Source: FTSE, as of 12/31/20

VALUE VS GROWTH (YOY)



Source: FTSE, as of 12/31/20

Q4 SECTOR PERFORMANCE



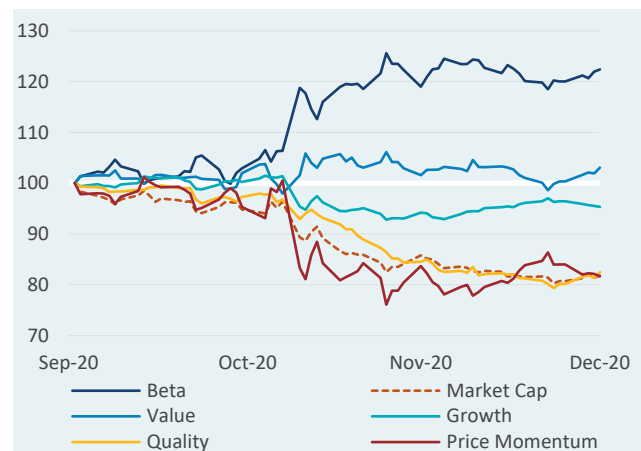
Source: Standard & Poor's, as of 12/31/20

Factor portfolios in 2020

After a quiet October, factor results significantly diverged in November as investors strongly reacted to positive COVID-19 vaccine news. Anticipating a path toward post-pandemic normalcy, investors rotated into stocks with higher betas and higher volatility (long/short, sector-neutral, S&P 500 Index quintiles). Small-cap stocks also performed well while the value factor modestly gained ground, mostly due to strong results from stocks with attractive price-to-book ratios. Investors funded this rotation by selling large-cap and high-quality positions. Poor price momentum results were further evidence of the strength of the move.

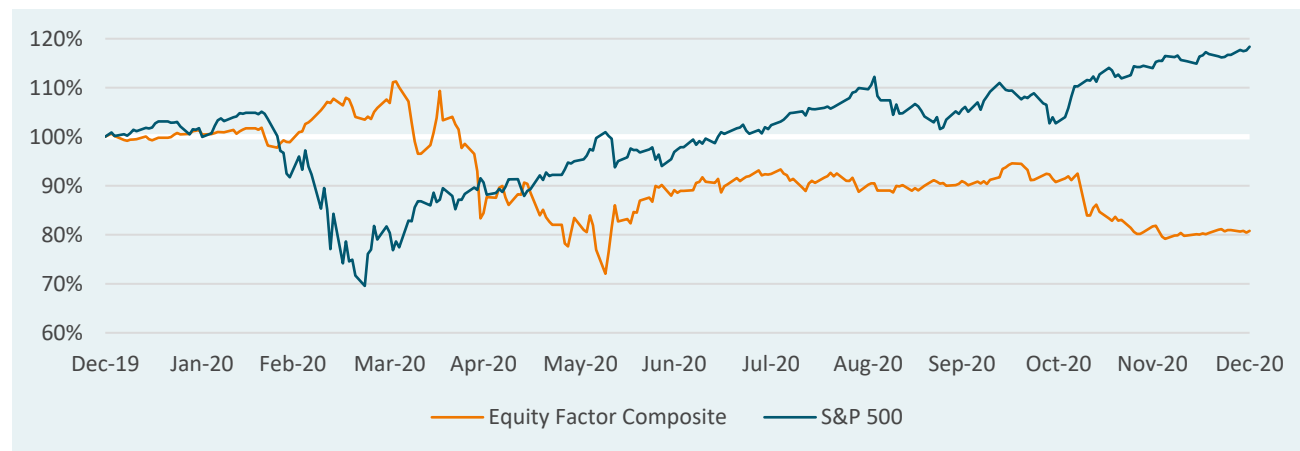
Equity factors had a very difficult year in 2020 and subsequently trailed the equity market by a very wide margin. Quality factors provided some protection during the periods of market turmoil. However other market neutral risk premia strategies did not enjoy consistent recoveries, particularly as market preferences quickly reversed back and forth during the pandemic.

Q4 2020 PERFORMANCE



Source: J.P. Morgan, as of 12/31/20

CUMULATIVE RETURN (INDEXED 12/31/19=100%)



Source: J.P. Morgan, as of 12/31/20; Equity Factor Composite represents the performance of a 10-factor model designed as a simple proxy for quant performance. The factors are combined so that the long and short portfolios contain the most- and least-attractive quant stocks.

International developed equity

International equities delivered exceptional performance in the fourth quarter, as most global markets have now fully recovered from the March drawdown. The MSCI EAFE Index (+16.0%) outperformed the S&P 500 Index (+12.1%) while lagging the MSCI Emerging Markets Index (+19.7). Continuing U.S. dollar weakness was a notable theme, boosting international equity performance by 5% over the past year.

The recent depreciation of the U.S. dollar has acted as a tailwind to many unhedged international investments. The MSCI EAFE Index unhedged returned 16.0% in Q4, compared

to 11.9% if currency had been hedged. The three largest currency exposures embedded in the MSCI EAFE Index—the euro (32%), the yen (26%), and the pound sterling (13%)—appreciated +4.3%, +2.2%, and +5.7% relative to the U.S. dollar during the quarter, respectively.

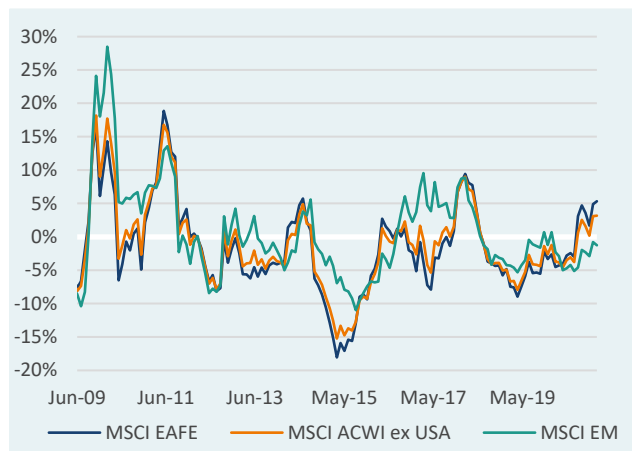
European equities (+17.2%) outperformed Hong Kong (+15.5%) and Japanese (+15.3%) equities in Q4, supported by strong performance in Austria (+47.3%) and Spain (+27.7%). In Oceania, Australia posted solid returns (+22.9%), which were bolstered by a firmer Australian dollar.

INTERNATIONAL DEVELOPED EQUITIES



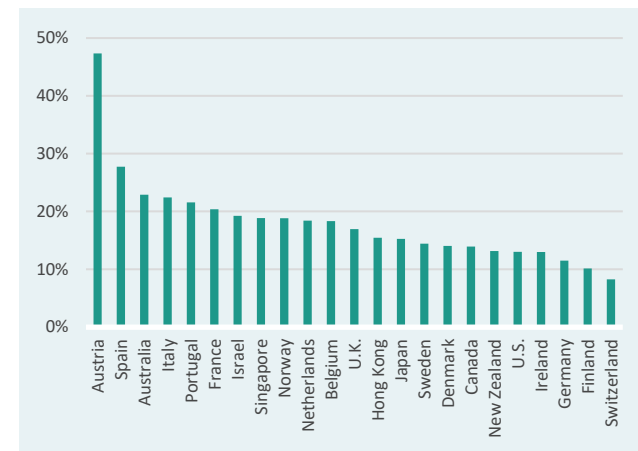
Source: MSCI, as of 12/31/20

EFFECT OF CURRENCY (1-YEAR ROLLING)



Source: MSCI, as of 12/31/20

Q4 2020 PERFORMANCE (ALL IN USD)



Source: MSCI, Bloomberg, as of 12/31/20

Emerging market equity

Emerging market equities (MSCI EM +19.7%) outperformed U.S. (S&P 500 +12.1%) and international developed equities (MSCI EAFE +16.0%) once again in Q4. Latin American equities showed significant outperformance during the quarter (MSCI Latin America +34.8%), after years of lagging behind other emerging markets.

The pandemic placed downward pressure on inflation earlier in 2020. Since then, the rate of price movement has recovered in many markets. China appears to be an outlier, as inflation recently dipped below zero. This move was fueled by falling pork prices, which had been moving higher

in recent years and causing above-average levels of inflation.

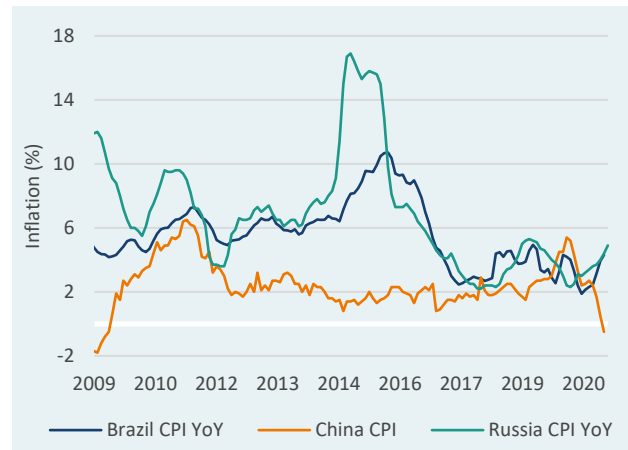
Emerging market currencies sold off significantly during the beginning of the year as investors bid up safe-haven currencies, including the U.S. dollar, amid unprecedented economic and market uncertainty. Since March, however, the embedded currency portfolio of the MSCI Emerging Markets Index began to recover significantly and ended the year nearly on par with where it had started. Continued appreciation of emerging market currencies could provide tailwinds for unhedged U.S. investors in the asset class.

EMERGING MARKET EQUITY



Source: MSCI, as of 12/31/20

INFLATION (YOY)



Source: Bloomberg, as of 12/31/20 or most recent data

MSCI EM INDEX EMBEDDED CURRENCY



Source: Bloomberg, as of 12/31/20

Equity valuations

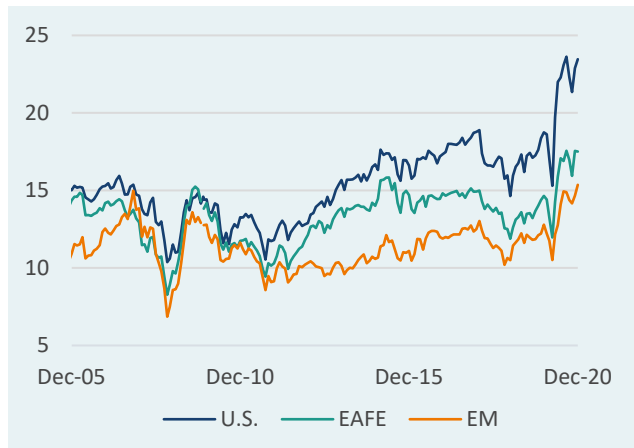
Particularly during the last two months of the year, valuations shot higher alongside equity prices as markets digested news that several COVID-19 vaccine candidates proved more effective than anticipated. Today, price-to-earnings multiples appear stretched relative to long-term averages.

Markets have shown a remarkable ability to look past the pandemic-related disruptions and focus on the light at the end of the tunnel. Some in the industry have viewed the exceptional performance of U.S. equities in 2020 as the “check” that fundamentals will need to “cash” next year, and that if sales and earnings do not recover at the strong pace

they are expected (+8.2%/+22.6%), there could be room for a correction.

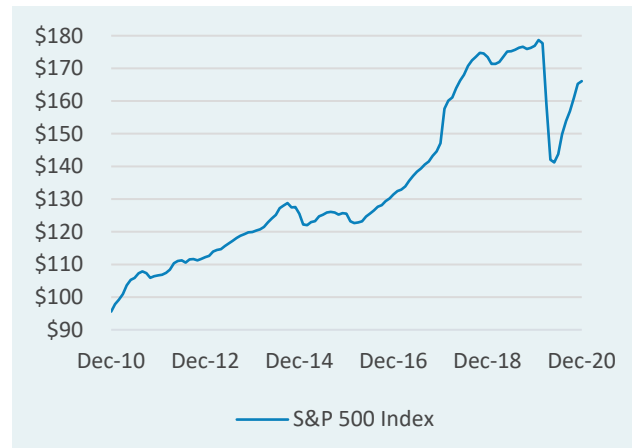
On a trailing-earnings basis, international developed equities appear most expensive as the second series of lockdowns which swept over the continent toward the end of the year have severely impacted earnings. The question in Europe, however, is largely the same one we are grappling with in the U.S.: are earnings temporarily depressed and ripe for a quick rebound next year, or are the earnings streams impaired and equity prices less justified?

FORWARD P/E RATIOS



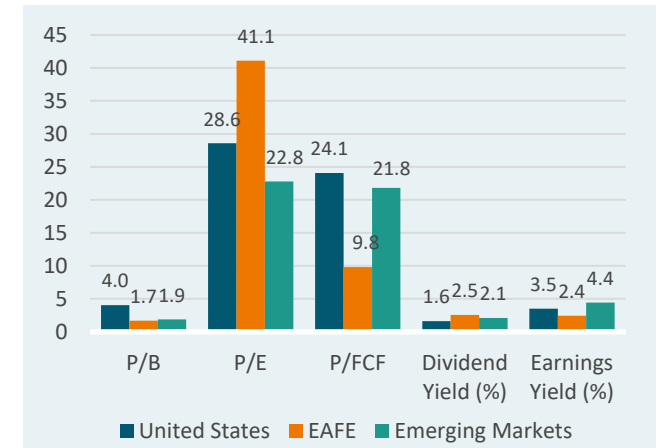
Source: MSCI, 12m forward P/E, as of 12/31/20

BLENDED 12-MONTH EARNINGS EXPECTATIONS



Source: Bloomberg, as of 12/31/20

VALUATION METRICS (3-MONTH AVERAGE)



Source: Bloomberg, MSCI as of 12/31/20 - trailing P/E

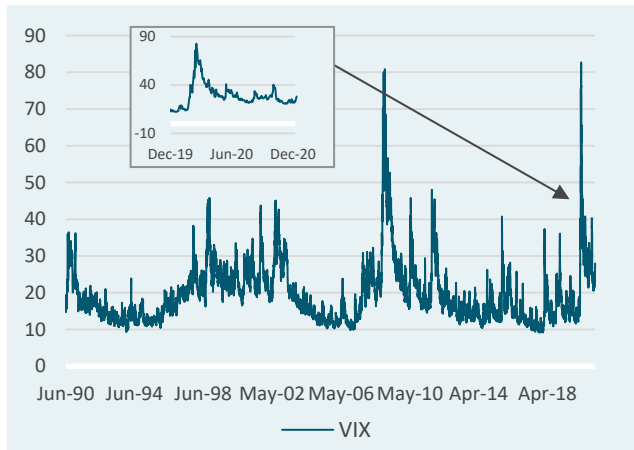
Equity volatility

The Cboe VIX Index remained rangebound in the fourth quarter, ending the year at 22.8. Priced volatility is moderately elevated relative to the longer-term average of 19.

The U.S. equity market exhibited surprisingly high volatility in 2020 relative to other global markets. The domestic market has typically been a lowest risk market. In recent years, this relationship has flipped, with U.S. stocks showing higher volatility than developed market stocks, and nearly on par with emerging market equities.

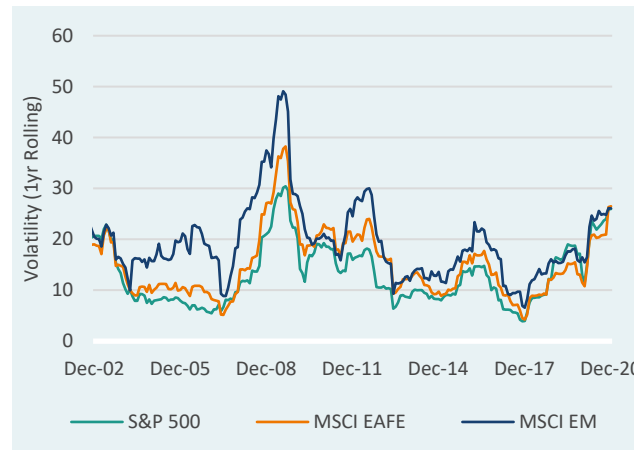
Since implied and realized volatility spiked in the first quarter, options-implied volatility has receded significantly, back toward more normal levels. As equity markets climbed to new highs in the final few months of the year, the U.S. implied volatility curve began to steepen. During the fourth quarter, the implied volatility of deeply out-of-the-money puts was little changed, while the implied volatility of deeply out-of-the-money call options declined to more-average levels. The steepening of the implied volatility curve likely demonstrates the market's marginal preference for downside protection over upside participation at current price levels.

U.S. IMPLIED VOLATILITY (VIX)



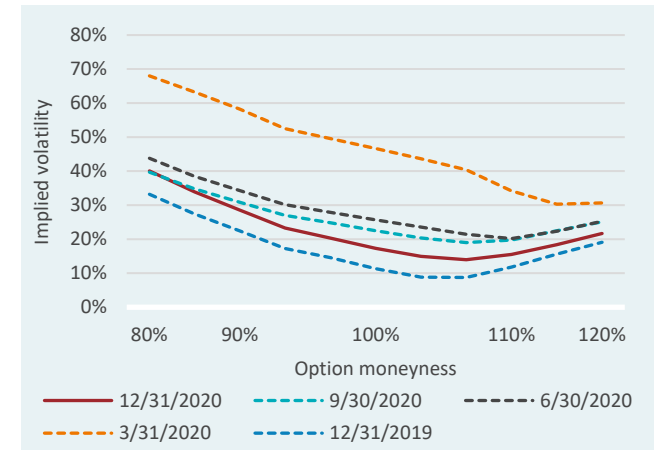
Source: Cboe, as of 12/31/20

REALIZED VOLATILITY



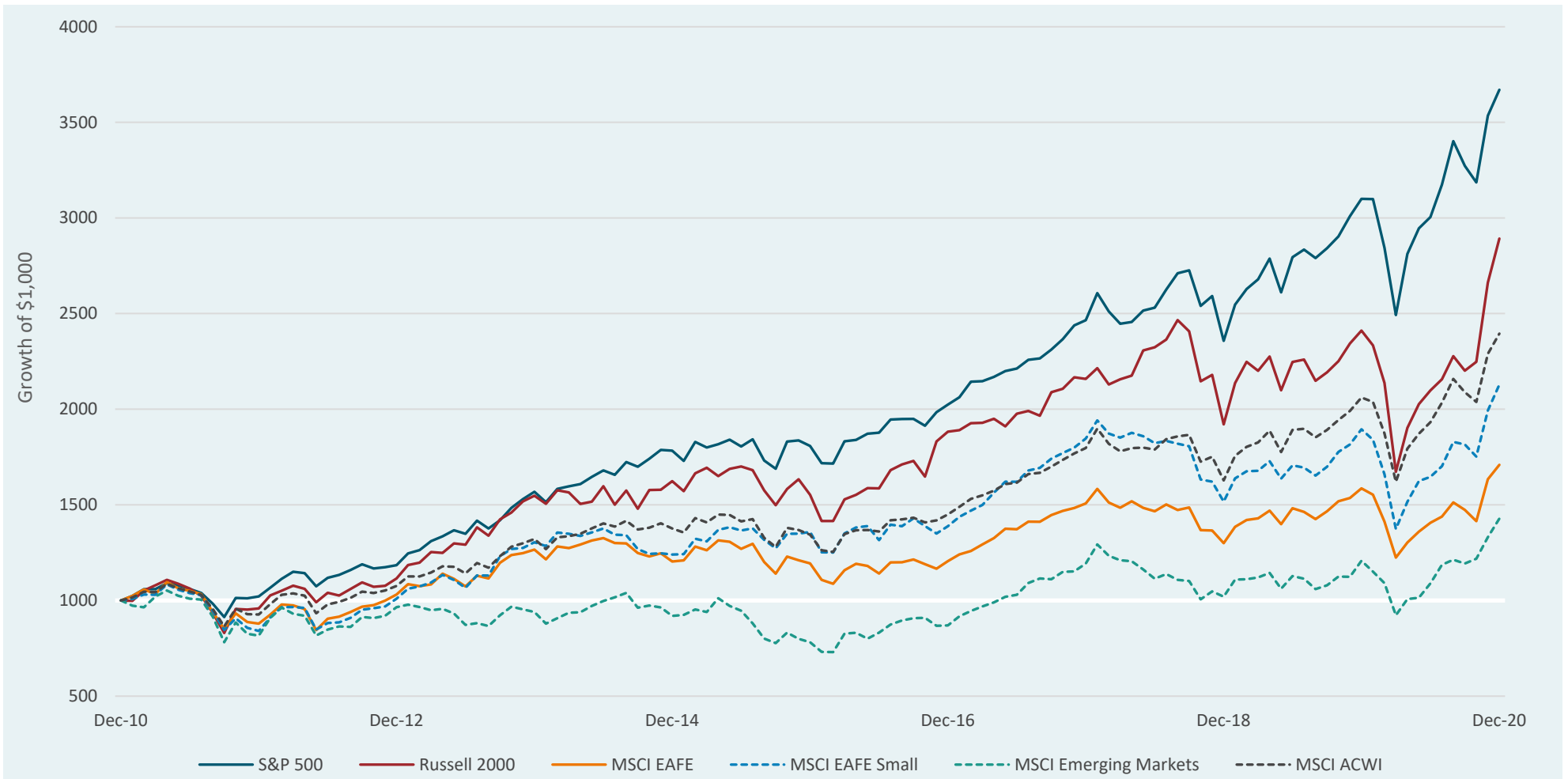
Source: Standard & Poor's, MSCI, as of 12/31/20

1-MONTH U.S. IMPLIED VOLATILITY CURVE



Source: Bloomberg, as of 12/31/20

Long-term equity performance



Source: Morningstar, as of 12/31/20

Other assets

Currency

Weakness in the U.S. dollar relative to both emerging market and developed market currencies remained a theme in the fourth quarter, as the Bloomberg Dollar Spot Index fell to a two and a half year low. Analysts attributed some of the weakness of the greenback to lower relative real yields in the United States, as nominal Treasury yields rose less than inflation expectations. Many in the industry have made calls for a continuation of dollar weakness into 2021. If that weakness were to materialize, it would supply significant tailwinds for unhedged U.S. investors in non-U.S. equities. We continue to believe that unhedged currency exposure results in uncompensated risk, which is a suboptimal approach for many investors.

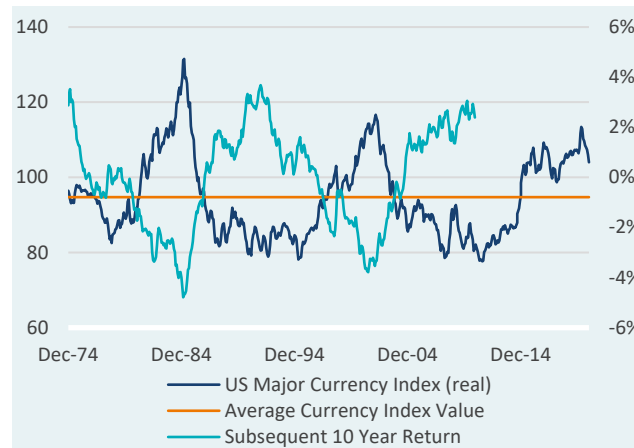
The onshore Chinese renminbi rallied significantly over the fourth quarter. The strength has been primarily credited to the apparently-blistering pace of China's recovery from pandemic-related disruptions, which has fueled capital inflows from offshore investors. Looking ahead, the election of Joe Biden has been viewed largely as constructive for the yuan, as the expectation remains that Biden's stance on China will be less confrontational than his predecessor's, reducing trade tensions. On the other hand, the rising value of the yuan may make China's exports less-affordable for Europeans still recovering from the pandemic. This dynamic has stoked speculation that the People's Bank of China might soon step in to cool the rally.

BLOOMBERG DOLLAR SPOT INDEX



Source: Bloomberg, as of 12/31/20

USD CURRENCY LEVEL & SUBSEQUENT RETURN



Source: Federal Reserve, as of 12/31/20

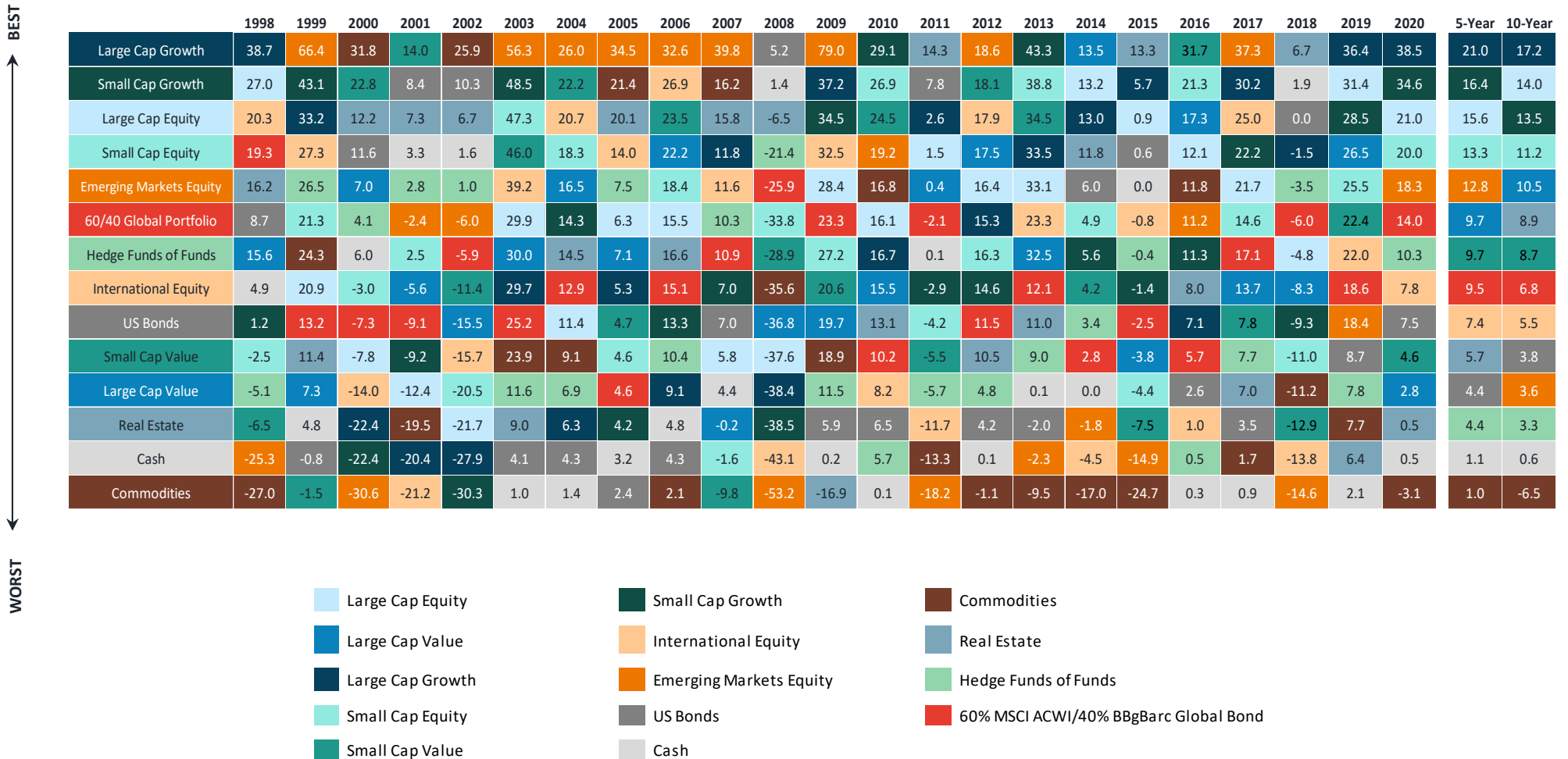
USD/CNY CROSS RATE



Source: Bloomberg, as of 12/31/20

Appendix

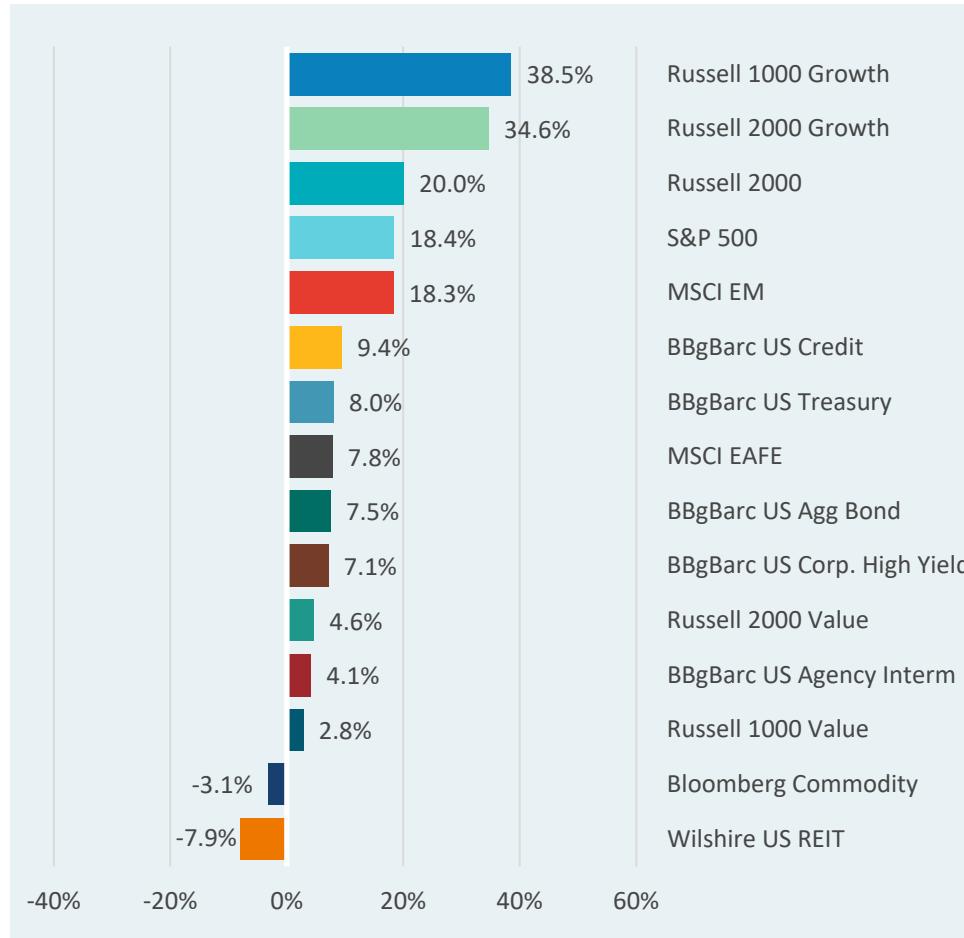
Periodic table of returns



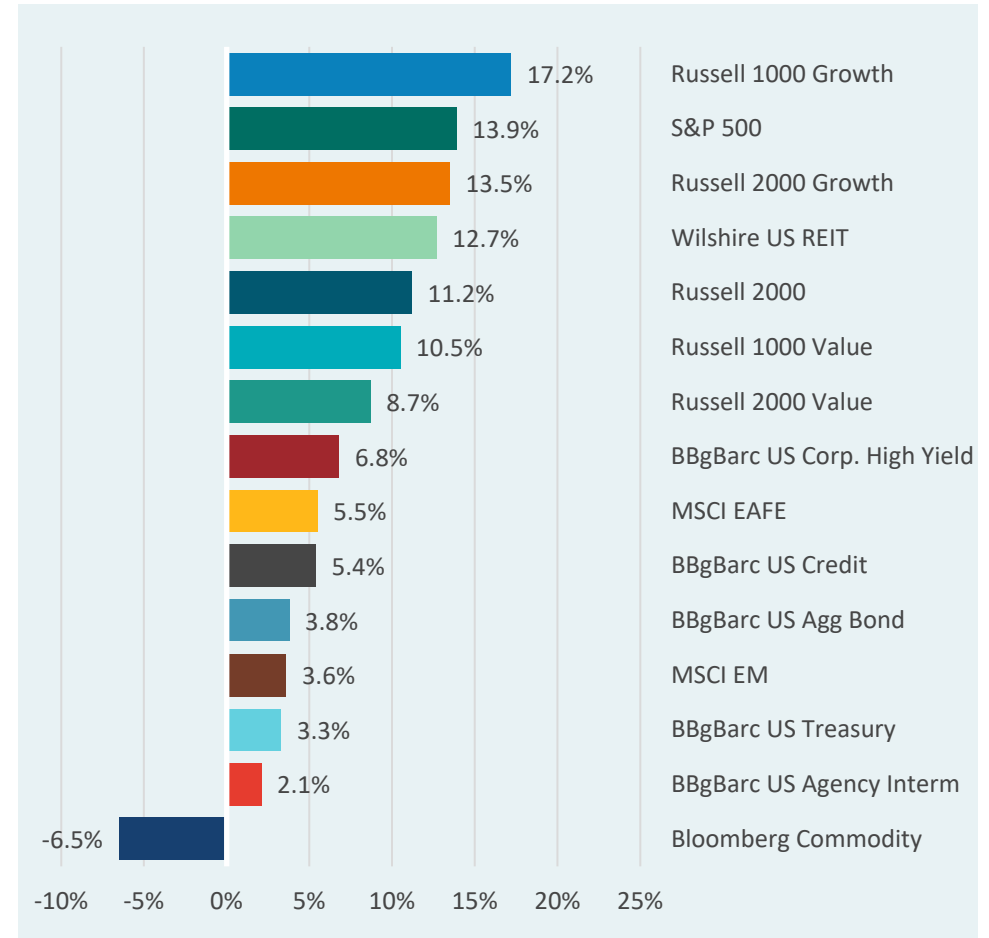
Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BBgBarc US Aggregate, T-Bill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

Major asset class returns

ONE YEAR ENDING DECEMBER



TEN YEARS ENDING DECEMBER



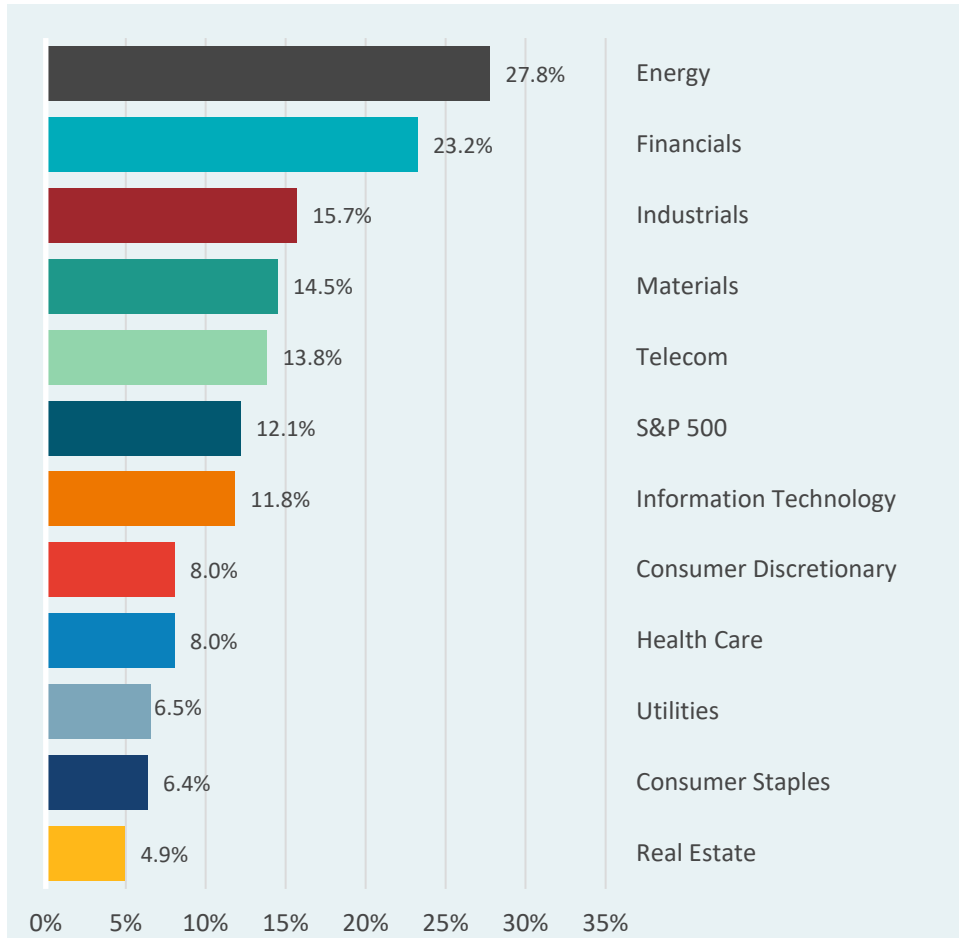
*Only publicly traded asset performance is shown here. Performance of private assets is typically released with a 3- to 6-month delay.

Source: Morningstar, as of 12/31/20

Source: Morningstar, as of 12/31/20

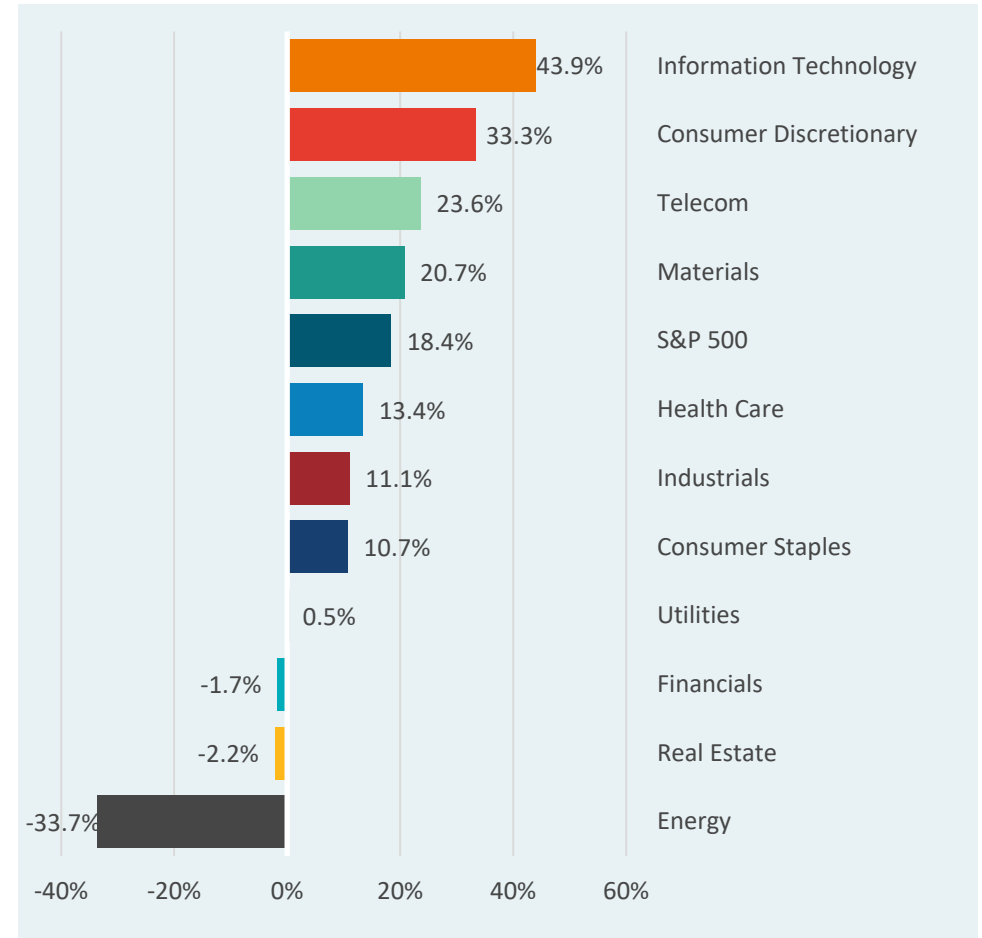
S&P 500 sector returns

Q4 2020



Source: Morningstar, as of 12/31/20

ONE YEAR ENDING DECEMBER

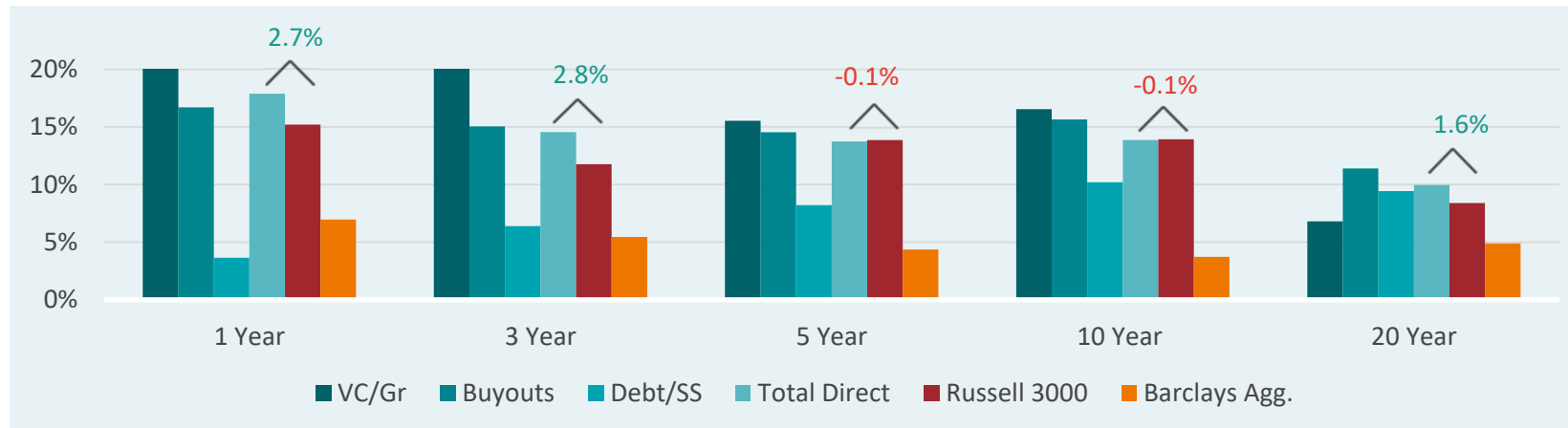


Source: Morningstar, as of 12/31/20

Private equity vs. public performance

As of 9/30/2020

DIRECT PRIVATE EQUITY FUND INVESTMENTS



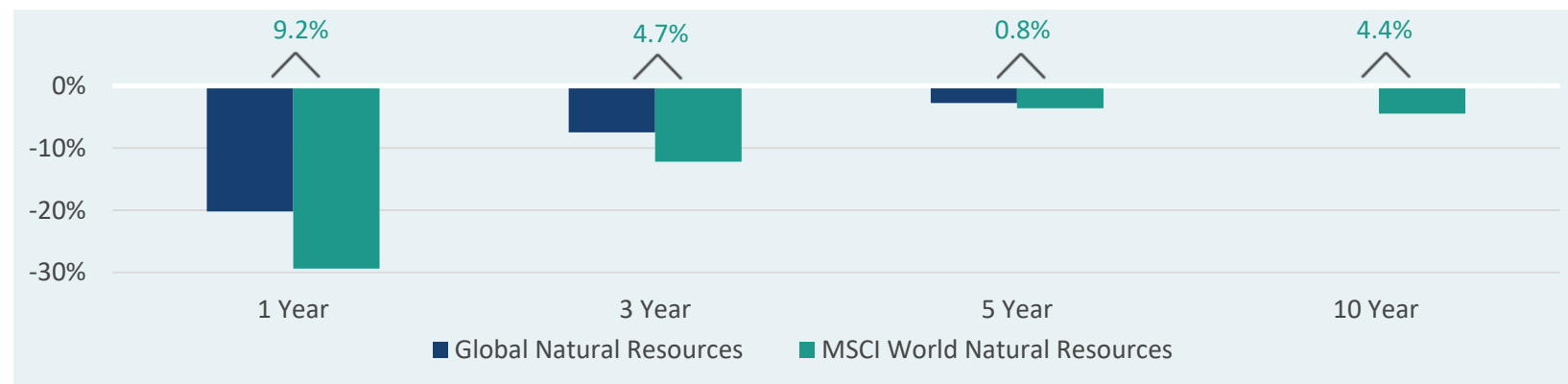
Direct private equity fund investments outperformed comparable public equities across most time periods

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

Private equity vs. liquid real assets performance

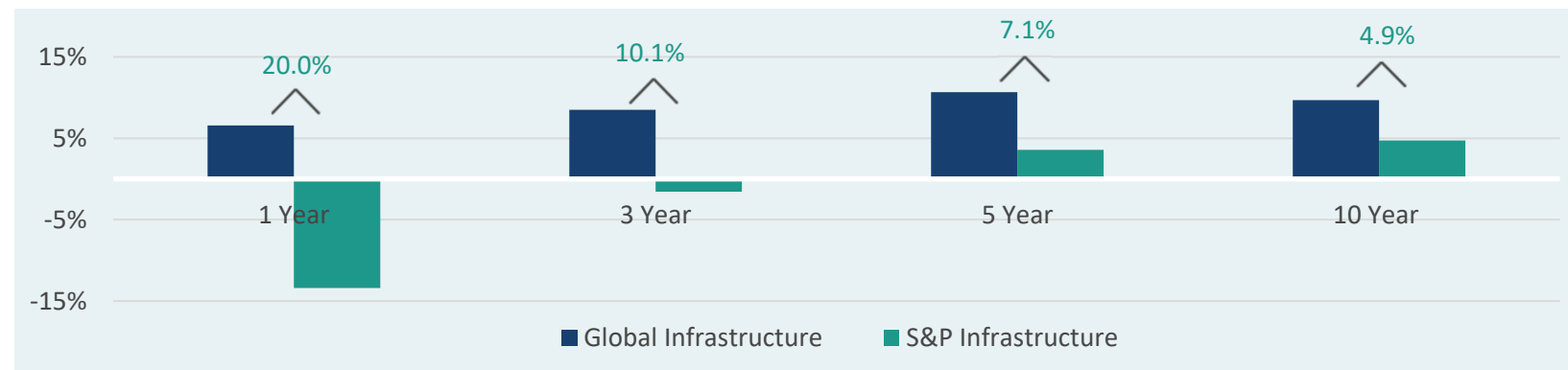
As of 9/30/2020

GLOBAL NATURAL RESOURCES FUNDS



Natural resource funds outperformed the MSCI World Natural Resources benchmark across all time periods

GLOBAL INFRASTRUCTURE FUNDS



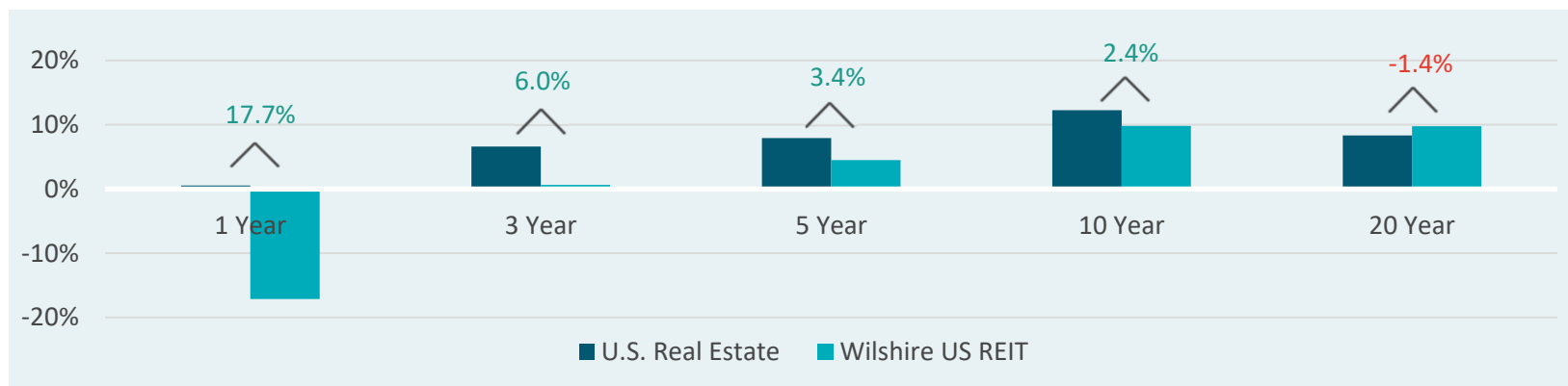
Infrastructure funds outperformed the S&P Infra. Index across all periods

Sources: Thomson Reuters C|A PME: Global Natural Resources (vintage 1999 and later, inception of MSCI World Natural Resources benchmark) and Global Infrastructure (vintage 2002 and later, inception of S&P Infrastructure benchmark) universes as of September 30, 2020. 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

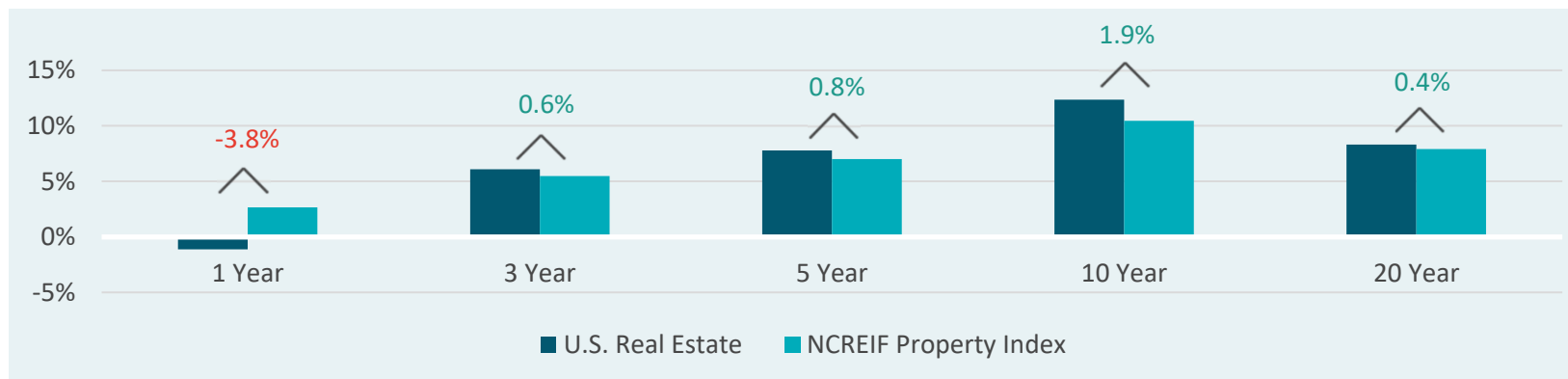
As of 9/30/2020

U.S. PRIVATE REAL ESTATE FUNDS VS. LIQUID UNIVERSE



U.S. private real estate funds outperformed the Wilshire U.S. REIT Index across most time periods

U.S. PRIVATE REAL ESTATE FUNDS VS. CORE FUNDS



U.S. private real estate funds outperformed the NCREIF Property Index over all time periods, aside from the past year

Sources: Thomson Reuters C|A PME: U.S. Real Estate universes as of September 30, 2020. Public Market Equivalent returns resulted from identical cash flows invested into and distributed from respective liquid real estate universes.

Detailed index returns

DOMESTIC EQUITY

| | Month | QTD | YTD | 1 Year | 3 Year | 5 Year | 10 Year |
|------------------------|-------|------|------|--------|--------|--------|---------|
| Core Index | | | | | | | |
| S&P 500 | 3.8 | 12.1 | 18.4 | 18.4 | 14.2 | 15.2 | 13.9 |
| S&P 500 Equal Weighted | 4.3 | 18.5 | 12.8 | 12.8 | 10.4 | 13.0 | 12.7 |
| DJ Industrial Average | 3.4 | 10.7 | 9.7 | 9.7 | 9.9 | 14.7 | 13.0 |
| Russell Top 200 | 4.1 | 11.6 | 22.4 | 22.4 | 16.0 | 16.4 | 14.6 |
| Russell 1000 | 4.2 | 13.7 | 21.0 | 21.0 | 14.8 | 15.6 | 14.0 |
| Russell 2000 | 8.7 | 31.4 | 20.0 | 20.0 | 10.2 | 13.3 | 11.2 |
| Russell 3000 | 4.5 | 14.7 | 20.9 | 20.9 | 14.5 | 15.4 | 13.8 |
| Russell Mid Cap | 4.7 | 19.9 | 17.1 | 17.1 | 11.6 | 13.4 | 12.4 |
| Style Index | | | | | | | |
| Russell 1000 Growth | 4.6 | 11.4 | 38.5 | 38.5 | 23.0 | 21.0 | 17.2 |
| Russell 1000 Value | 3.8 | 16.3 | 2.8 | 2.8 | 6.1 | 9.7 | 10.5 |
| Russell 2000 Growth | 9.3 | 29.6 | 34.6 | 34.6 | 16.2 | 16.4 | 13.5 |
| Russell 2000 Value | 7.9 | 33.4 | 4.6 | 4.6 | 3.7 | 9.7 | 8.7 |

INTERNATIONAL EQUITY

| Broad Index | | | | | | | |
|------------------------|------|------|--------|--------|-------|------|-------|
| MSCI ACWI | 4.6 | 14.7 | 16.3 | 16.3 | 10.1 | 12.3 | 9.1 |
| MSCI ACWI ex US | 5.4 | 17.0 | 10.7 | 10.7 | 4.9 | 8.9 | 4.9 |
| MSCI EAFE | 4.6 | 16.0 | 7.8 | 7.8 | 4.3 | 7.4 | 5.5 |
| MSCI EM | 7.4 | 19.7 | 18.3 | 18.3 | 6.2 | 12.8 | 3.6 |
| MSCI EAFE Small Cap | 6.8 | 17.3 | 12.3 | 12.3 | 4.9 | 9.4 | 7.8 |
| Style Index | | | | | | | |
| MSCI EAFE Growth | 4.9 | 13.1 | 18.3 | 18.3 | 9.7 | 10.5 | 7.5 |
| MSCI EAFE Value | 4.4 | 19.2 | (2.6) | (2.6) | (1.2) | 4.2 | 3.4 |
| Regional Index | | | | | | | |
| MSCI UK | 5.5 | 16.9 | (10.5) | (10.5) | (2.4) | 2.6 | 3.0 |
| MSCI Japan | 4.1 | 15.3 | 14.5 | 14.5 | 6.1 | 8.7 | 6.5 |
| MSCI Euro | 4.0 | 17.2 | 6.6 | 6.6 | 3.1 | 7.0 | 5.0 |
| MSCI EM Asia | 7.1 | 18.9 | 28.4 | 28.4 | 9.0 | 14.4 | 6.6 |
| MSCI EM Latin American | 11.9 | 34.8 | (13.8) | (13.8) | (1.8) | 8.9 | (3.4) |

FIXED INCOME

| | Month | QTD | YTD | 1 Year | 3 Year | 5 Year | 10 Year |
|-----------------------------|-------|-------|------|--------|--------|--------|---------|
| Broad Index | | | | | | | |
| BBgBarc US TIPS | 1.1 | 1.6 | 11.0 | 11.0 | 5.9 | 5.1 | 3.8 |
| BBgBarc US Treasury Bills | 0.0 | 0.0 | 0.7 | 0.7 | 1.6 | 1.2 | 0.7 |
| BBgBarc US Agg Bond | 0.1 | 0.7 | 7.5 | 7.5 | 5.3 | 4.4 | 3.8 |
| Duration | | | | | | | |
| BBgBarc US Treasury 1-3 Yr | 0.1 | 0.0 | 3.2 | 3.2 | 2.8 | 1.9 | 1.3 |
| BBgBarc US Treasury Long | (1.2) | (3.0) | 17.7 | 17.7 | 9.9 | 7.8 | 7.8 |
| BBgBarc US Treasury | (0.2) | (0.8) | 8.0 | 8.0 | 5.2 | 3.8 | 3.3 |
| Issuer | | | | | | | |
| BBgBarc US MBS | 0.2 | 0.2 | 3.9 | 3.9 | 3.7 | 3.1 | 3.0 |
| BBgBarc US Corp. High Yield | 1.9 | 6.5 | 7.1 | 7.1 | 6.2 | 8.6 | 6.8 |
| BBgBarc US Agency Interm | 0.1 | 0.1 | 4.1 | 4.1 | 3.4 | 2.5 | 2.1 |
| BBgBarc US Credit | 0.5 | 2.8 | 9.4 | 9.4 | 6.8 | 6.4 | 5.4 |

OTHER

| Index | | | | | | | |
|------------------------|-----|------|--------|--------|--------|-------|-------|
| Bloomberg Commodity | 5.0 | 10.2 | (3.1) | (3.1) | (2.5) | 1.0 | (6.5) |
| Wilshire US REIT | 2.8 | 10.6 | (7.9) | (7.9) | 3.3 | 4.3 | 8.3 |
| CS Leveraged Loans | 1.3 | 3.6 | 2.8 | 2.8 | 4.0 | 5.2 | 4.5 |
| Alerian MLP | 2.5 | 32.4 | (31.6) | (31.6) | (13.7) | (7.0) | (2.1) |
| Regional Index | | | | | | | |
| JPM EMBI Global Div | 1.9 | 5.8 | 5.3 | 5.3 | 5.0 | 7.1 | 6.2 |
| JPM GBI-EM Global Div | 3.5 | 9.6 | 2.7 | 2.7 | 3.0 | 6.7 | 1.5 |
| Hedge Funds | | | | | | | |
| HFRI Composite | 4.5 | 10.7 | 11.6 | 11.6 | 5.5 | 6.1 | 4.2 |
| HFRI FOF Composite | 3.1 | 7.5 | 10.3 | 10.3 | 4.7 | 4.4 | 3.3 |
| Currency (Spot) | | | | | | | |
| Euro | 2.3 | 4.3 | 9.0 | 9.0 | 0.6 | 2.4 | (0.9) |
| Pound Sterling | 2.4 | 5.7 | 3.2 | 3.2 | 0.3 | (1.5) | (1.3) |
| Yen | 1.0 | 2.2 | 5.3 | 5.3 | 2.9 | 3.1 | (2.4) |

Source: Morningstar, HFRI, as of 12/31/20

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)

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

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

NAHB Housing Market Index - the housing market index is a weighted average of separate diffusion 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

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

February 23, 2021

Agenda Item 7.1

TO: Board of Retirement
FROM: Scott Hood, Chief Executive Officer 
SUBJECT: March 2020 Board-Staff Retreat Topics

Recommendation

This item is informational only.

Background

This item is to give the Board a final opportunity to discuss the topics for the upcoming virtual retreat in March. The Board assists with setting the topics to be addressed and provides input regarding the proposed presenters. Following this meeting, staff will finalize scheduling the presenters.

Discussion

Attached is a proposed schedule which reflects input from the Board over the last few meetings. This version condenses the retreat to one day and starts with a shortened regular Board meeting. Our kick-off speaker, Luiz Oliviera, from the San Francisco Federal Reserve Bank will provide an economic outlook and the Federal Reserve's monetary policy. Nick Collier, from Milliman, will provide a presentation on funding methodologies and options in a declining return market. Ian Toner, from Verus, will provide a presentation on the impact of COVID-19 on the world economies and markets. Jeff MacLean, also from Verus will provide a presentation on moving towards a mature plan, part 3. Mike Coultrip will wrap up the retreat by leading the Board through a deep dive of the portfolio.

The 2021 SamCERA Board-Staff Retreat is scheduled along the same lines as prior years:

Days: One day
Timing: Leaves time between the presentations for discussion
Location: Virtual Meeting via Zoom
Speakers: SamCERA's consultants and staff
Regular Business: The Board's regular monthly business will be the first scheduled event in the morning
Date: **Tuesday, March 23**
Start Time: **8:30 a.m.**

Attachment

Draft 2021 Board-Staff Retreat Agenda



Board/Staff Retreat

March 23, 2021

BOARD/ STAFF RETREAT AGENDA

- 8:30 a.m. BEGINNING OF REGULAR BOARD MEETING AGENDA**
- 9:00 a.m. ECONOMIC OUTLOOK AND FEDERAL RESERVE MONTARY POLICY**
PRESENTER: Luiz Oliveira, San Francisco Federal Reserve Bank
- 9:45 a.m. FUNDING METHODOLOGIES AND OPTIONS IN A DECLINING RETURN MARKET**
PRESENTER: Nick Collier, Milliman
- 11:00 a.m. THE IMPACT OF COVID-19 ON PORTFOLIO/ASSET CLASS/RELATIVE VALUE**
PRESENTER: Ian Toner, Verus
- 12:00 p.m. LUNCH**
- 12:30 p.m. FUTHER DISCUSSION ON PLAN MATURITY**
PRESENTER: Jeff MacLean, Chief Executive Officer, VERUS
- 1:30 p.m. DEEP DIVE INTO THE SAMCERA PORTFOLIO PERFORMANCE**
PRESENTER: Michael Coultrip, SamCERA Chief Investment Officer &
- 3:00 p.m. END OF RETREAT**

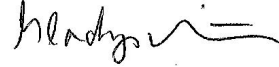
SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

February 23, 2021

Agenda Item 7.2

TO: Board of Retirement

FROM: Gladys Smith, Assistant Executive Officer



SUBJECT: Suspension of Nomination Signature Requirement for June 14, 2021 election

Recommendation

Approve a resolution temporarily suspending the requirement of nomination signatures contained In Regulation Section 4.5 and suspending the disqualification of candidates for failure to submit the required qualified nomination signatures set forth in Regulation 4.7 of Article IV Election of Trustees for the June 14, 2021 election for the Second, Seventh and Seventh Member Alternate seats due to the continued State of Emergency as a result of the threat of COVID-19.

Background

On March 4, 2020, Governor Newsom proclaimed a State of Emergency to exist in California because of the threat of COVID-19 and that proclamation is still in effect. There are social distancing recommendations and orders still in effect in the County of San Mateo. One of the COVID-19 precautions taken by our participating employers is decompressed staffing at the various workplace sites.

On June 14, 2021, there will be an election for the Second (General), Seventh (Safety) and Seventh Alternate Board seats. Board Regulation 4.7 requires that each candidate "shall be nominated by a petition signed by not less than ten SamCERA Members eligible to sign the candidate's petition." In addition, Regulation 4.7 provides that if the Elections Officer "finds that less than the number of qualified signatures specified in Section 4.5 have been submitted, the Elections Officer shall disqualify the candidate."

Discussion

On April 19, 2021, the requirement for gathering nomination signatures commences and it is unknown how many active SamCERA members would be available at the workplace to sign the nomination petitions. Staff recommends that for this June 14, 2021 election to not require candidates to obtain signatures from other active SamCERA members to run for the Board as set forth in the regulations.

Suspending compliance with Regulations 4.5 and 4.7 for the June 14, 2021 election would be consistent with our efforts to protect our members and to stop the spread of COVID-19.

Attachment

Resolution temporarily suspending the requirement of nomination signatures contained In Regulation Section 4.5 and suspending the disqualification of candidates for failure to submit the required qualified nomination signatures set forth in Regulation 4.7 of Article IV Election of Trustees for the June 14, 2021 election for the Second, Seventh and Seventh Member Alternate seats due to the continued State of Emergency as a result of the threat of Covid-19.

BOARD OF RETIREMENT

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION

RESOLUTION TEMPORARILY SUSPENDING THE REQUIREMENT OF NOMINATION SIGNATURES CONTAINED IN REGULATION SECTION 4.5 AND SUSPENDING THE DISQUALIFICATION OF CANDIDATES FOR FAILURE TO SUBMIT THE REQUIRED QUALIFIED NOMINATION SIGNATURES SET FORTH IN REGULATION 4.7 OF ARTICLE IV ELECTION OF TRUSTEES FOR THE JUNE 14, 2021 ELECTION FOR THE SECOND, SEVENTH AND SEVENTH MEMBER ALTERNATE SEATS DUE TO THE CONTINUED STATE OF EMERGENCY AS A RESULT OF THE THREAT OF COVID-19

WHEREAS, on March 4, 2020, Governor Newsom proclaimed a State of Emergency to exist in California as a result of the threat of COVID-19 and that proclamation is still in effect; and

WHEREAS, despite sustained efforts, the virus continues to spread and is impacting all sectors in California and there are social distancing recommendations and orders in effect in the County of San Mateo; and

WHEREAS, on January 19, 2021, Dr. Scott Morrow, Health Officer for San Mateo County stated that "We are in the middle of a great COVID surge. Case rates are 10+ times higher than they were in September and October. Deaths are about 10 times higher as well. The virus is everywhere. Hospitals are bursting at the seams, and they are perilously close to breaking.... The ability to control this pandemic lies primarily in your hands. Please take every precaution"; and

WHEREAS, one of the precautions taken by our participating employers is decompressed staffing at the various workplace sites; and

WHEREAS on June 14, 2021, there will be an election for the Second, Seventh and Seventh Member Alternate seats and for that election, Regulation 4.7 requires that each candidate "shall be nominated by a petition signed by not less than ten SamCERA Members eligible to sign the candidate's petition"; and

WHEREAS Regulation 4.7 provides that the Elections Officer shall compare the names on Nominating Petitions and Declarations of Candidacy with the 'List of Eligible Candidates and Nominators.' If the Elections Officer finds that less than the number of qualified signatures specified in Section 4.5 have been submitted, the Elections Officer shall disqualify the candidate"; and

WHEREAS, while this Board is hopeful that the case rates will decline by April 19, 2021, when the requirement for gathering nomination signatures commences, whether it will do so is unknown and it is further unknown how many active SamCERA members will be back in the workplace to gather signatures from; and

WHEREAS, this Board desires to be cautious and for this June 14, 2021 election to not require candidates to obtain signatures from other active SamCERA members in order to run for the Board as set forth in Regulation 4.5 and to suspend compliance with Regulations 4.5 and 4.7 in an effort to protect our members and to stop the spread of COVID-19; and

NOW THEREFORE, IT IS HEREBY DETERMINED AND ORDERED that the requirement contained in Regulation 4.5 of Article IV Election of Trustees that candidates for Second and Seventh Trustee "shall be nominated by a petition signed by not less than ten SamCERA Members eligible to sign the candidate's petition," is hereby suspended for the election to be held on June 14, 2021.

NOW THEREFORE, IT IS HEREBY FURTHER DETERMINED AND ORDERED that the requirement contained in Regulation 4.7 of Article IV Election of Trustees that the Elections Officer shall compare the names on Nominating Petitions and Declarations of Candidacy with the "List of Eligible Candidates and Nominators" and that if the Elections Officer finds that less than the number of qualified signatures specified in Section 4.5 have been submitted, the Elections Officer shall disqualify the candidate," is hereby suspended for the election for the Second, Seventh and Seventh Member Alternate seats to be held on June 14, 2021.

* * * * *

Regularly passed and adopted, by the San Mateo County Employees' Retirement Association, Board of Retirement, on February 23, 2021.

Ayes, Trustees:

Noes, Trustees:

Absent, Trustees:

Abstain, Trustees:

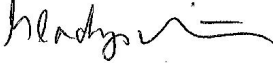
*Katherine O'Malley, Board Secretary
SamCERA*

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

February 23, 2021

Agenda Item 7.3

TO: Board of Retirement

FROM: Gladys Smith, Assistant Executive Officer 

SUBJECT: Report on Upcoming Trustee Elections and Appointments

Recommendation

This is an information only report.

Background

The Board has nine members and two alternates. Board membership includes the County Treasurer, appointees of the Board of Supervisors, and elected members chosen by the differing active and retiree SamCERA membership groups. The terms of the Board members, except the Treasurer, are for three years and are staggered.

Discussion

The terms of the elected Second Member (General), Ms. Katherine O'Malley, the Seventh Member (Safety), Mr. Robert Raw and the Seventh Member Alternate, Ms. Susan Lee, will expire on June 30, 2021. The terms of the appointed Fourth Member and Sixth Member, currently held by Mr. Eric Tashman and Mr. Mark Battey will also expire on June 30, 2021.

Election Process

The election nominating and voting processes are set forth in the Board regulations which state that the County Elections Division runs the election. As for timing, Regulation 4.1 provides that: "Regular Elections shall be held on the second Monday in June of the years in which the terms of elected Trustees expire." Accordingly, elections for the elected seats will be on June 14, 2021. At today's meeting, staff will present an election schedule developed with the County Elections Division.

Appointment Process

Staff has notified the member of the Board of Supervisors who is the liaison to our Board, and his staff, of the two expiring appointed seats.

Attachment

Election Calendar

MARK CHURCH
CHIEF ELECTIONS OFFICER & ASSESSOR-COUNTY CLERK-RECORDER
SamCERA ELECTION - General and Retired Members

Monday, June 14, 2021

| <u>DATE (in 2021)</u> | <u>ACTION or DEADLINE</u> |
|---|---|
| Monday, April 5 | By this day, the Retirement Board's Chief Executive Officer shall distribute a Notice of Election to all County work sites. The notice shall include, but not be limited to: The Qualifications of Candidates The process for obtaining copies of the Nominating Petition and Election Regulations The Date of the Election The name and address of the Elections Officer §4.3 |
| Friday, April 16 | No later than this date, the Retirement Board's Chief Executive Officer shall provide to the Chief Elections Officer the List of Eligible Candidates & Nominators , which shall include those names of members who are eligible to sign Nomination papers and/or run for office. §4.2 |
| Monday, April 19 Monday, May 3 | Between these dates is the candidate filing period. Nomination Petitions, Declarations of Candidacy are available during this time. A copy of the Code of Fair Campaign Practices as it appears in the California Elections Code, and a copy of the SamCERA Election Regulations will be also be issued to candidates at the time of filing. Signed Nominating Petitions and Declarations of Candidacy must be filed with the Elections Officer no later than 5 p.m., May 3, 2021. A 300-word Candidate Statement is also due by this deadline. No candidate, for any reason, may withdraw or change his or her Candidate's Statement after this deadline. §§4.5 - 4.7, §4.22 |
| Monday, May 3 | Candidate filing period closes at 5 p.m. today. The Elections Officer shall compare names/signatures/addresses on the Declaration of Candidacy and Nomination Papers against the List of Eligible Candidates & Nominators provided by the Retirement Board's Chief Executive Officer. Candidates who do not meet the qualifications set forth in §§ 4.4 - 4.5, shall be disqualified. §§4.4 - 4.7, 4.9 |

| | |
|--|---|
| <p>Monday, May 3</p> | <p>Last day a candidate may withdraw from the election by filing a written statement with the Elections Officer. §4.6</p> |
| <p>Tuesday, May 11</p> | <p>Elections Officer will certify to the Retirement Board's Chief Executive Officer all qualified candidates. (R&E deadline outside of SamCERA Regs) §4.11</p> |
| <p>Tuesday, May 11</p> | <p>Chief Elections Officer will determine the order of names on the ballot by lot (Randomized Alphabet Drawing). §4.11</p> |
| <p>Thursday, May 6</p> | <p>No later than 5 p.m. today, a candidate may challenge by writ of mandate or injunction filed with the Superior Court of San Mateo County, which requests that the decision of the Elections Officer to accept or reject a candidate's statement be reversed and/or that the statement in question is false, misleading, or inconsistent with the requirements of §4.9. §4.10</p> |
| <p>Thursday, May 20</p> | <p>No later than this date, the Retirement Board's Chief Executive Officer shall provide the List of Eligible Voters. §4.2</p> |
| <p>Friday, May 21 Friday, May 28</p> | <p>Between these dates, ballots will be mailed to all eligible voters. Complete addressing/mailing of all envelopes/ballots. All should be mailed no later than midnight, <u>May 28, 2021</u>. §4.11</p> |
| <p>Friday, May 21 Monday, June 14</p> | <p>Make available upon request, replacement ballots to any eligible voter who lost or did not receive his or her ballot. Requests may be made in person, in writing, by e-mail, fax or by telephone. Replacement ballots are not to be given to anyone other than the person requesting. §4.11</p> |
| <p>Friday, May 21 Monday, June 14</p> | <p>Check names on all incoming voted ballots against the list of eligible voters provided by the Retirement Board's Chief Executive Officer. Keep secure all qualified and unqualified voted ballots that are received. §§4.2, 4.13, 4.15</p> |
| <p>Monday, June 14</p> | <p>Election Day. Last day to receive voted ballots in person or by Pony Mail. Any voted ballot that is U.S. Postmarked on or before Election Day and received by the Elections Officer on or before 5 p.m. on the Friday following the Election Day (June 18, 2021) shall also be counted. §4.11</p> |

| | |
|--------------------------------|--|
| <p>Tuesday, June 15</p> | <p>No earlier than this day, ballots will be counted. Certification of the Election Results will be prepared on the form provided by the Retirement Administrator, no later than the Friday following the election (June 18, 2021). The results will be made available to the Chief Executive Officer and the Board of Retirement. §§4.14, 4.17</p> |
| <p>Friday, June 18</p> | <p>Voted ballots that are U.S. postmarked no later than Election Day and received by 5 p.m. today will be counted. §4.11, A</p> |
| <p>Friday, June 18</p> | <p>No later than this date, the Elections Officer shall canvass and certify the results of the election. §4.17</p> |
| <p>Wednesday, June 23</p> | <p>Last day (within 5 calendar days of certification) for a candidate to file written application with the Elections Officer to request a recount of votes cast. Candidate must agree to pay for the actual cost, unless recount shows a change in results. §4.19</p> |
| <p>Saturday, July 3</p> | <p>Last day (within 15 calendar days of issuance of certified results) a candidate may file a petition with the Superior Court to contest the election. Court's decision shall be based on clear and convincing proof. §4.20</p> |
| <p>Saturday, December 11</p> | <p>The Elections Officer shall accept and provide for the safekeeping of all ballots cast. Ballots must be retained for 180 days after Election Day, and in the absence of litigation, may be discarded after this day. §4.18</p> |



All references to Election Procedures are from the Regulations of the Board of Retirement, Article 4 - Election of Trustees

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
Board of Retirement

February 23, 2021

Agenda Item 7.4

TO: Board of Retirement

FROM: Tariq Ali, Chief Technology Officer 
Scott Hood, Chief Executive Officer 

SUBJECT: Demonstration of Redesigned MySamCERA Mobile Application

Recommendation

This item is informational only.

Background

SamCERA currently has a "MySamCERA" mobile application that enables members to perform retirement estimates, download forms, check beneficiary information and many other activities from their phones. The app needed updating and other improvements and at its October meeting, the Board authorized the execution of an agreement with Digital Deployment to perform a redesign of the app.

Discussion

Digital Deployment's redesign of the mobile app is scheduled to be launched in March. This redesign was achieved with on-going input from staff and coordination with Vitech Inc., our pension administration software provider, for the use of its Application Program Interface (API) to access member's data for use in the app.

Digital Deployments' updated app is modern, has enhanced features, an improved user interface, and more flexible options.

At the meeting, Digital Deployment will walk through a demo of the app for the Board and to highlight its functions.