Pension Trust

1000 Mill Street
San Luis Obispo, CA 93408
(805) 781-5465 Phone
(805) 781-5697 Fax
www.SLOPensionTrust.org

San Luis Obispo County
Pension Trust
SLOCPT

AGENDA

Monday, February 22, 2021 9:30 AM
***** Online only

PENSION TRUST
BOARD OF TRUSTEES

MEETING MATERIALS
Materials for the meeting may be found at
http://www.slocounty.ca.gov/Departments/Pension-Trust/Board-of-Trustees
Any supporting documentation that relates to an agenda item for open session of any regular meeting that is distributed after the agenda is posted and prior to the meeting will also be available at this location.

AMERICANS WITH DISABILITIES ACT (Government Code §54953.2)
Disabled individuals who need special assistance to listen to and/or participate in any meeting of the Board of Trustees may request assistance by calling 805/781-5465, or sending an email to SLOCPT@co.slo.ca.us. Every effort will be made to reasonably accommodate individuals with disabilities by making meeting materials and access available in alternative formats. Requests for assistance should be made at least two days in advance of a meeting whenever possible.

*** TELE-CONFERENCE / VIDEO-CONFERENCE**
Due to the current pandemic Board of Trustees meetings are closed to the public attending in person until further notice.

This meeting of the Board of Trustees will be held via teleconference and/or videoconference pursuant to Executive Order N-25-20, issued by Governor Newsom on March 12, 2020, Executive Order N-29-20, issued by Governor Newsom on March 17, 2020, and Executive Order N-35-20, issued by Governor Newsom on March 21, 2020. Items of business will be limited to the matters shown on the agenda.

If you wish to view the videoconference of the meeting please access
https://zoom.us/j/92485707573?pwd=V3gxZWVyYmxmYVoyK2g5VGhPOXN3dz09
If you wish to listen to the teleconference meeting, please dial 669/900-6833 (Meeting ID 924-8570-7573). If you have any questions or require additional service, please contact SLOCPT at 805/781-5465.

A) PUBLIC COMMENT

1. Public Comment: Members of the public wishing to address the Board on matters other than scheduled items may do so when recognized by the Chair. Presentations are limited to three minutes per individual.

B) ORGANIZATIONAL

None

C) CONSENT

2. Minutes of the Regular Meeting of January 25, 2021 (Approve Without Correction).

3. Reports of Deposits and Contributions for the month of January 2021 (Receive and File).

4. Reports of Service Retirements, Disability Retirements and DROP Participants for the month of January 2021 (Receive, Approve and File).

5. Recommend Plan Amendment – Court – Added Bargaining Unit (Recommend Approval).

E) APPLICATIONS FOR DISABILITY RETIREMENT

None

E) OLD BUSINESS

None

F) NEW BUSINESS

6. Approval of the Annual Cost-Of-Living Adjustments provided by the San Luis Obispo County Employees Retirement Plan (Recommend Approval).

7. FPPC – Form 700 Disclosures (Presentation by General Counsel)

G) INVESTMENTS

8. Quarterly Investment Report for the 4th Quarter of 2020 – Verus (Receive and File).

9. Monthly Investment Report for January 2021 (Receive and File).

10. Capital Market Assumptions – 2021 – Verus (Review, Discuss, Receive and File).

11. Risk Diversifying Portfolio Strategy Review and Investment Manager Selection – Treasuries and TIPS Portfolios (Recommend Approval).

12. Asset Allocation - (Review, Discuss, and Direct Staff as necessary).

H) OPERATIONS

13. Staff Reports

14. General Counsel Reports

15. Committee Reports:

    i. Audit Committee No Report
    ii. Personnel Committee No Report
    iii. Private Markets Investments No Report

16. Upcoming Board Topics (subject to change)

    i. March 22, 2021
        a. Disability Case(s)
        b. Annual Actuarial Valuation planning
        c. Employer prefunding agreement and discount rate
        d. FY 21-22 SLOCPT administrative budget – preliminary
        e. Disability Hearings Referee Panel Update
        f. Private Markets Discretionary Advisor Search Consultant Selection

    ii. April 26, 2021 – planned as a non-meeting month

    iii. May 24, 2021
        a. Annual Actuarial Valuation Assumptions Approval
        b. FY 21-22 SLOCPT administrative budget – approval
        c. Quarterly Investment Report
        d. Private Markets Discretionary Advisor Strategy and Finalists

    iv. June 28, 2021
        a. 2020 Financial Audit Report / CAFR Approval
        b. 2020 Actuarial Valuation / Contribution Rate changes
        c. Employer prefunding amount
        d. Private Markets Discretionary Advisor Selection

17. Trustee Comments

I) CLOSED SESSION

None

J) ADJOURNMENT

PENSION TRUST
BOARD OF TRUSTEES

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MINUTES

PENSION TRUST
BOARD OF TRUSTEES

Monday, January 25, 2021 *
Regular Meeting of the Pension Trust
Board of Trustees

** Note – all attendees participated via videoconference as noticed on the agenda for the meeting. Public access was available via videoconference or an audio-only phone-in line.*

Board Members Present:	Guy Savage	
	Gere Sibbach	
	Taylor Dacus	
	Jim Hamilton	
	Jeff Hamm	
	Lisa Howe	
	Michelle Shoresman	
Board Members Absent:	-	
Pension Trust Staff:	Carl Nelson	Executive Director
	Amy Burke	Deputy Director
	Jennifer Alderete	Accountant
General Counsel:	Chris Waddell	Olson | Remcho
	Kristen Rogers	Olson | Remcho
Others:	Michael Hobbs	SLO County Human Resources
	Larry Batchelder	SLOCREA
	Zack Cziryak	Reporter – FinDaily.com
	Shawn Parris	JP Morgan
	Jackie DeSanctis	

Call to Order: 9:33 AM by President Savage

A) PUBLIC COMMENT

1. None

B) ORGANIZATIONAL

2. Election of Officers (Pursuant to Section 3.05 and Section 3.06 of the By-Laws of the San Luis Obispo County Pension Trust).

   Trustee Savage, 2020 Board of Trustees President, commented on his opinion that it is healthy for Boards to rotate their officers annually.

   President: Trustee Savage nominated Trustee Sibbach to serve as Board of Trustees President for 2021. There were no other nominations.

   Vote: Trustee Sibbach elected President - Unanimous (roll call vote)

   Vice President: Trustee Sibbach nominated Trustee Hamm to serve as Board of Trustees Vice President for 2021. There were no other nominations.

   Vote: Trustee Hamm elected Vice President - Unanimous (roll call vote)

Trustee Sibbach took over presiding at the meeting as newly elected President

3. **Committees** – appointment of members by President:

   Newly elected President Sibbach appointed the following Trustees to the two standing committees and one ad hoc Committee as follows:

   Audit Committee (standing):
   Trustees Dacus, Hamilton, and Howe

   Personnel Committee (standing):
   Trustees Hamm, Shoresman and Savage

   Private Markets Investments Committee (ad hoc):
   Trustees Hamilton, Dacus, and Savage

C) CONSENT

4. Minutes of the Regular Meeting of November 23, 2020 (Approve Without Correction).

5. Reports of Deposits and Contributions for the months of November and December 2020 (Receive and File).

6. Reports of Service Retirements, Disability Retirements and DROP Participants for the months of November and December 2020 (Receive, Approve and File).

7. Monthly Investment Report for October 2020 (Receive and File).

8. Monthly Investment Report for November 2020 (Receive and File).

9. Resolution 2021-01 – Post Employment Health Plan and Indemnification – Authorization pursuant to Section 16.02(j) of the Retirement Plan – PEHP (Recommend Approval)

10. *Reserved (not used)*

Motion: Approve the Consent items.

Public Comment: none

Discussion: Trustee Sibbach asked about fees and the operation of the PEHP in Item 9 and Staff's answer was discussed.

Motion Made: Mr. Savage Motion Seconded: Mr. Hamm

Carried: Unanimous (roll call vote)

D) APPLICATIONS FOR DISABILITY RETIREMENT

None

E) OLD BUSINESS

None

F) NEW BUSINESS

11. Review of Pension Trust Policies – (Review and Discuss).

Discussion: General Counsel Waddell led a discussion of the Pension Trusts Governance, Ethical & Fiduciary Conduct, and Trustee Core Competencies and Educational policies. In the discussion Trustees noted several minor modifications to consider as a future policy re-adoption Board item.

Public Comment: None

No Action Necessary

10:33 AM – Board President Sibbach called for a break

10:45 AM – back in session

12. Disability Hearing Process – Plan Amendments Recommendation - (Recommend Approval)

Discussion: Staff summarized the action which is a reaffirmation of a February 2017 recommendation by the Board of Trustees to amend the Retirement Plan, Appendix E covering the conduct of Disability Retirement hearings. The ensuing collective bargaining Meet & Confer obligations of San Luis Obispo County as the Plan Sponsor were concluded in November 2020 with no changes to the proposed Plan amendment. The Board discussed with Staff and General Counsel the disability hearing process amendments recommended. General Counsel noted that the prior policy of having the Board of Trustees serve in Disability hearings as both the "Finder of Fact" as well as the "Decision Making" body was not advisable or typical of other retirement systems. The proposed amendments incorporate the use of a Referee to conduct Disability hearings and present a recommendation to the Board of Trustees.

Motion: Reaffirm the previously adopted Board of Trustees action of February 27, 2017 (Board Item 9) recommending amendments to Appendix E of the Retirement Plan.

Public Comment: None

Motion Made: Mr. Savage Motion Seconded: Mr. Hamilton

Carried: Unanimous (roll call vote)

G) INVESTMENTS

13. Annual Cashflow Analysis (Receive and File).

Discussion: Staff summarized the annual analysis of Plan cashflows as required by the Investment Policy Statement.

Motion: Receive and File

Public Comment: None

Motion Made: Mr. Hamm Motion Seconded: Mr. Savage

Carried: Unanimous (roll call vote)

14. Monthly Investment Report for December 2020 (Receive and File)

    Discussion: Staff summarized the December 2020 monthly investment report. The preliminary estimate for the Total Fund gross rate of return for 2020 is +8.9%.

    Motion: Receive and File

    Public Comment: None

    Motion Made: Mr. Savage Motion Seconded: Mr. Dacus

    Carried: Unanimous (roll call vote)

15. Private Markets Discretionary Advisor Search Consultant and RFI (Review, Discuss, and Recommend Approval).

    Discussion: Mr. Nelson discussed the prior approval of the Board of Trustees to use a Search Consultant to assist with the hiring of a Private Markets Discretionary Advisor. The process to conduct such a search were discussed. The draft Request for Information for a search consultant was also discussed and approved to be issued.

    Motion: Approve Staff recommendation

    Public Comment: None

    Motion Made: Mr. Hamm Motion Seconded: Mr. Hamilton

    Carried: Unanimous (roll call vote)

16. Asset Allocation

    Discussion: none

    Public Comment: None

    No Action Necessary

H) OPERATIONS

17. Staff Reports

    i. Retirements – Ms. Burke reported on the total number of retirements processed during 2020 – 136. This is above the 2019 total of 120 retirements. Ms. Burke also reported

that at year-end 2020, Tier 1 Members made up 36% of the total active employee population.

ii. Mortality – Mr. Nelson commented briefly on the expected impact of the Covid-19 pandemic on long-term mortality assumptions. While it is too early to predict, it is likely that the pandemic constitutes a temporary acceleration of mortality with minimal impact on longer term actuarial mortality assumptions.

18. General Counsel Reports

None

19. Committee Reports:

i. Audit Committee No Report

ii. Personnel Committee No Report

20. Upcoming Board Topics – published on meeting agenda

21. Trustee Comments

i. Trustee Savage commented on the State's pandemic limitations and urged everyone to follow safety procedures including mask wearing.

I) CLOSED SESSION

None

J) ADJOURNMENT

There being no further business, the meeting was adjourned at 11:46 AM. The next Regular Meeting was set for February 22, 2021, at 9:30 AM, to be a virtual online meeting.

Respectfully submitted,

Carl Nelson
Executive Director

REPORT OF DEPOSITS AND CONTRIBUTIONS FOR THE MONTH OF
JANUARY 2021

PP 1	**1/15/2021**	Pensionable	Employer	Employer	Employee	Employer for Employee	Employee	Combined	Additional	Buy	**TOTAL**
	By Employer and Tier:	Salary	Contributions	Rate	Contributions	Contributions	Rate	Rate	Contributions	Backs	**Contributions**
	County Tier 1	3,041,298.53	825,909.99	27.16%	398,558.17	259,129.82	21.63%	48.78%	1,212.50	790.83	**1,485,601.31**
	County Tier 2	989,460.66	280,685.42	28.37%	60,440.24	83,453.21	14.54%	42.91%	-	332.54	**424,911.41**
	County Tier 3	3,580,184.58	950,735.24	26.56%	485,274.89	-	13.55%	40.11%	-	2,176.50	**1,438,186.63**
	Superior Court Tier 1	224,982.69	62,553.74	27.80%	41,756.17	-	18.56%	46.36%	-	-	**104,309.91**
	Superior Court Tier 3	118,273.68	31,662.79	26.77%	15,501.45	-	13.11%	39.88%	-	-	**47,164.24**
	APCD Tier 1	47,918.79	12,830.38	26.78%	7,615.88	3,733.33	23.68%	50.46%	-	-	**24,179.59**
	APCD Tier 3	29,913.61	7,688.30	25.70%	4,523.35	-	15.12%	40.82%	-	-	**12,211.65**
	SLOCPT Tier 1	7,715.87	1,969.86	25.53%	1,135.78	716.80	24.01%	49.54%	-	-	**3,822.44**
	SLOCPT Tier 2	9,171.20	2,341.40	25.53%	475.98	852.01	14.48%	40.01%	-	-	**3,669.39**
	SLOCPT Tier 3	12,101.71	3,030.26	25.04%	1,742.48	-	14.40%	39.44%	250.00	-	**5,022.74**
	LAFCO Tier 3	2,248.00	654.17	29.10%	241.21	-	10.73%	39.83%	-	-	**895.38**
	RTA Tier 2	25,866.65	6,590.81	25.48%	541.62	3,362.66	15.09%	40.57%	-	-	**10,495.09**
	RTA Tier 3	15,551.60	4,287.50	27.57%	1,793.55	-	11.53%	39.10%	-	-	**6,081.05**
		8,104,687.57	2,190,939.86	27.03%	1,019,600.77	351,247.83	16.91%	43.95%	1,462.50	3,299.87	**$ 3,566,550.83**

PP 2	**1/29/2021**	Pensionable	Employer	Employer	Employee	Employer for Employee	Employee	Combined	Additional	Buy	**TOTAL**
	By Employer and Tier:	Salary	Contributions	Rate	Contributions	Contributions	Rate	Rate	Contributions	Backs	**Contributions**
	County Tier 1	3,039,398.35	825,417.52	27.16%	398,344.26	259,031.29	21.63%	48.79%	1,137.50	790.83	**1,484,721.40**
	County Tier 2	985,092.60	279,399.69	28.36%	60,032.82	83,089.70	14.53%	42.89%	-	332.54	**422,854.75**
	County Tier 3	3,612,765.61	958,776.36	26.54%	488,684.55	-	13.53%	40.07%	-	2,176.50	**1,449,637.41**
	Superior Court Tier 1	222,008.59	61,657.22	27.77%	41,157.56	-	18.54%	46.31%	-	-	**102,814.78**
	Superior Court Tier 3	104,871.43	27,590.92	26.31%	13,691.66	-	13.06%	39.36%	-	-	**41,282.58**
	APCD Tier 1	47,918.75	12,830.37	26.78%	7,615.88	3,733.32	23.68%	50.46%	-	-	**24,179.57**
	APCD Tier 3	29,913.61	7,688.30	25.70%	4,523.35	-	15.12%	40.82%	-	-	**12,211.65**
	SLOCPT Tier 1	7,715.87	1,969.86	25.53%	1,135.78	716.80	24.01%	49.54%	-	-	**3,822.44**
	SLOCPT Tier 2	9,171.20	2,341.40	25.53%	475.98	852.01	14.48%	40.01%	-	-	**3,669.39**
	SLOCPT Tier 3	11,956.36	2,993.87	25.04%	1,719.63	-	14.38%	39.42%	250.00	-	**4,963.50**
	LAFCO Tier 3	2,248.00	654.17	29.10%	241.21	-	10.73%	39.83%	-	-	**895.38**
	RTA Tier 2	26,464.25	6,743.10	25.48%	551.16	3,440.36	15.08%	40.56%	-	-	**10,734.62**
	RTA Tier 3	15,182.40	4,162.11	27.41%	1,786.02	-	11.76%	39.18%	-	-	**5,948.13**
		8,114,707.02	2,192,224.89	27.02%	1,019,959.86	350,863.48	16.89%	43.91%	1,387.50	3,299.87	**$ 3,567,735.60**
	TOTAL FOR THE MONTH	**16,219,394.59**	**4,383,164.75**	**27.02%**	**2,039,560.63**	**702,111.31**	**16.90%**	**43.93%**	**2,850.00**	**6,599.74**	**$ 7,134,286.43**
	TOTAL YEAR TO DATE	**16,219,394.59**	**4,383,164.75**	**27.02%**	**2,039,560.63**	**702,111.31**	**16.90%**	**43.93%**	**2,850.00**	**6,599.74**	**$ 7,134,286.43**

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REPORT OF RETIREMENTS	January 2021

RETIREE NAME	DEPARTMENT	BENEFIT TYPE *	EFFECTIVE DATE	MONTHLY BENEFIT	SS TEMP ANNUITY**
Alm, Christopher C	Sheriff-Coroner	DROP	01/01/2021	5,884.15	False
Berg, Steve	Drinking Driver Programs	Service Retirement	12/19/2020	5,229.03	False
Brown, Leslie A	Human Resources	Service Retirement	12/31/2020	7,010.06	False
Brown, Leslie A	Human Resources	Additional Annuity	12/31/2020	254.96	False
Brunick, Jennie	Sheriff-Coroner	DROP	01/01/2021	4,764.05	False
Carpenter, Deborah L	Library	Service Retirement	12/31/2020	2,714.66	False
Chang, Helen Patric	District Attorney	Service Retirement	12/31/2020	3,000.56	False
Chang, Helen Patric	District Attorney	Additional Annuity	12/31/2020	28.22	False
Cramer, Peter J	Sheriff-Coroner	DROP	01/01/2021	5,241.72	False
Curtis-Ames, Kathleen T	Sheriff-Coroner	DROP	01/01/2021	1,979.82	False
Dauer, David Paul	Assessor	Service Retirement	01/01/2021	5,421.92	False
De La Torre, Noelia G	Superior Court	Service Retirement	01/01/2021	6,448.20	False
Donovan, Jay A	Sheriff-Coroner	DROP	12/01/2020	11,872.56	False
FOXHOVEN, KATHLEEN A	Superior Court	Service Retirement	12/26/2020	3,230.37	False
Gaiger, Christine M	Public Health Department	DROP	01/01/2021	7,952.84	False
Land, Michael Scott	Facilities Management	Service Retirement	01/09/2021	641.18	False
Lane, Kelly	Public Health Department	Service Retirement	01/01/2021	2,176.66	False
Leslie, Mark S	Public Works ISF	DROP	01/01/2021	4,405.89	False
Leslie, Mark S	Public Works ISF	Additional Annuity	01/01/2021	259.72	False
May, Julie Kathryn	Behavioral Health	Non Duty Disability Ret	12/31/2020	575.47	False
McClure, Linda G	Public Health Department	Service Retirement	12/19/2020	4,740.16	False
Moore, Mark A	Public Works ISF	Service Retirement	01/01/2021	5,456.45	False
Nadal, Jason M	Sheriff-Coroner	DROP	01/01/2021	6,600.53	False
Nelson, Cynthia Kae	Behavioral Health	Service Retirement	01/01/2021	1,389.35	False
Nix, Aaron J	Sheriff-Coroner	DROP	01/01/2021	10,310.08	False
O'Connor, Ann Marie	Library	Service Retirement	12/31/2020	2,396.15	False
Ochoa Gaxiola, Teresa M	Department of Social Services	Service Retirement	01/01/2021	722.70	False
Ochoa Gaxiola, Teresa M	Department of Social Services	Additional Annuity	01/01/2021	0.30	False
Quiroz, Louise A	Superior Court	Service Retirement	12/31/2020	3,029.96	False
Raubinger, Linda	ITD	Service Retirement	01/01/2021	424.60	False
Raubinger, Linda	ITD	Additional Annuity	01/01/2021	206.46	False
Raubinger, Robert W	General Services	Service Retirement	01/01/2021	1,027.96	False
Raubinger, Robert W	General Services	Additional Annuity	01/01/2021	34.40	False
Rempe, James F	ITD	Service Retirement	12/26/2020	3,404.86	False
Rempe, James F	ITD	Additional Annuity	12/26/2020	32.48	False
Robles, Rachel Ann	Department of Social Services	DROP	01/01/2021	1,991.17	False

REPORT OF RETIREMENTS	January 2021

RETIREE NAME	DEPARTMENT	BENEFIT TYPE *	EFFECTIVE DATE	MONTHLY BENEFIT	SS TEMP ANNUITY**
Santana, August	District Attorney	Service Retirement	11/01/2020	1,725.23	False
Severn, Carl F	ITD	DROP	01/01/2021	5,824.48	False
Smith, Patricia E	SLO County Child Support Servi	Service Retirement	12/26/2020	3,822.31	False
Smolik, Lance L	District Attorney	Service Retirement	12/29/2020	7,854.81	False
Spagnolo, Donald	Public Works ISF	Service Retirement	12/01/2020	1,598.39	False
Wilkes, Wendell E	Public Works ISF	DROP	01/01/2021	6,591.40	False
Wolter, Julia E	Airports	Service Retirement	01/01/2021	3,868.29	False
Wolter, Julia E	Airports	Additional Annuity	01/01/2021	13.24	False

** Additional Annuity Benefits are calculated based on the Additional Contribution and associated Interest balance of the Retiree at the point of retirement (per Sections 5.07, 27.12, 28.12, 29.12, 30.12, and 31.12 of the Plan)*

*** If "True" Retiree has elected an optional Social Security Coordinated Temporary Annuity (per Section 13.06 of the Plan), actual monthly allowance will be increased until age 62 and then actuarially reduced going forward*

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San Luis Obispo County
Pension Trust
SLOCPT

Date: February 22, 2021

To: Board of Trustees

From: Carl Nelson – Executive Director
Amy Burke – Deputy Director

Agenda Item 5: Recommended Plan Amendment – Court Added Bargaining Unit

Recommendation:

To approve a recommendation from the Board of Trustees to the County and the Board of Supervisors to amend the Retirement Plan to -

1. **Add an additional Bargaining Unit – San Luis Obispo Superior Court Bargaining Unit 28 – Attorneys, to be identical to the existing Court Bargaining Unit 24 - Management (Miscellaneous).**

Discussion:

The San Luis Obispo Superior Court participates in the Retirement Plan as a Contracting Agency pursuant to Article 25 of the Plan. The Court has requested the addition of a new Bargaining Unit 28 – Attorney to the Plan. The Court already has included in the Plan the identified Bargaining Unit 24 – Management. The addition of BU28 – Attorney is a reclassification of some BU24 members for internal Court purposes. The Tier 1 and Tier 3 (the Court has no Tier 2) benefits of the proposed BU28 are identical to those of BU24 and are in the Miscellaneous Class.

Amending the Retirement Plan requires the Board of Trustees to recommend such a change pursuant to Section 8.01 of the Plan excerpted below. The actual approval of Retirement Plan amendments is done by the Board of Supervisors.

> Section 8.01: Amendment of the By-Laws. These By-Laws and the Retirement Plan may be amended, subject to the approval of the Board of Supervisors, by the Board of Trustees at any regular or special meeting of the Board of Trustees. No amendment shall

become effective until approved by the Board of Supervisors of the County of San Luis Obispo.

The addition of BU28 – Attorney will have no impact on retirement benefits or liabilities. It is only a reclassification of BU24 members into the new BU28 unit with identical SLOCPT benefits.

The Plan amendments are shown on Attachment A to this memo which are redline pages excerpted from the Retirement Plan. They constitute a handful of specific references in the body of the Plan and added columns to the contribution rate schedules in Appendix A to add Bargaining Unit 28 - Attorney. The redlined edits include updating the names of Superior Court Bargaining Units 19 (Supervisory Employees), 24 (Management), and 25 (Subordinate Judicial Officers) for consistency within the document and per clarification from an authorized officer of the Court.

Upon Board of Trustees approval of these recommended Plan amendments they will be scheduled for action by the Board of Supervisor on some future consent agenda with a request to apply the change retroactively to January 10, 2021 as specified by the Superior Court's authorized officer.

It is likely that the previously approved Plan amendment of Appendix E – Disability Hearings – will be a separate Board of Supervisors action for the sake of clarity but, presented at the same meeting.

Respectfully Submitted

(b) Notwithstanding Section 1.16 (a), Final Compensation, for the purpose of determining any allowance and/or benefit with respect to a Member shall mean the average monthly Compensation Earnable by that Member**:**

(1) during the consecutive 12 month period of employment immediately preceding the effective date of his or her retirement or the date of his or her last separation from service with the Employer or any consecutive 12 month period of Membership elected by a Member at or before the time the Member files an application for retirement, or if the Member fails to elect,
(2) during the 12 consecutive months of the Member's highest Compensation Earnable while a Member of this Pension Trust.
(3) This Section 1.16 (b) shall apply to Members as follows:

(i) a Member who is employed in County Bargaining Unit 4, 7, 8, 9, 10, 11, 12, 15, 16 or 17 or by the Pension Trust, the Local Agency Formation Commission or the Air Pollution Control District and who retires or dies on or after December 22, 2002;
(ii) or a Member who is employed in Superior Court Bargaining Unit 24, 25, 26, ~~or~~ 27 or 28 and who retires or dies on or after October 5, 2004;
(iii) or a Member who is employed in Superior Court Bargaining Unit 19 and who retires or dies on or after December 20, 2004;
(iv) or a Member who is employed in County Bargaining Unit 1, 5 or 13 and who retires on or after July 1, 2005;
(v) or a Member who is employed in County Bargaining Unit 3,14,21, 22, 27 or 28 and who retires or dies on or after July 3, 2005;
(vi) or a Member who is employed in County Bargaining Unit 6 and who retires or dies on or after September 11, 2005;
(vii) or a Member who is employed in County Bargaining Unit 2 and who retires or dies on or after October 18, 2005;
(viii) or a Member who is employed in County Bargaining Unit 31 or 32 and who retires or dies on or after September 24, 2006
(ix) or a Member who is employed in Superior Court Bargaining Unit 17, 18 or 20 and who retires or dies on or after June 1, 2007.

(c) Notwithstanding section 1.16(a) Final Compensation for a Reserve Participant with respect to an allowance and /or benefits based on service with the Employer, shall mean the average monthly Compensation Earnable while a Member:

(1) during any consecutive 12 month period of employment immediately preceding his or her last date of separation from service with the Employer or any consecutive 12 month period of Membership elected by the Reserve Participant at or before the time the Reserve Participant files an application for retirement, or if the Reserve Participant fails to elect,
(2) during the 12 consecutive months of the Reserve Participant's highest Compensation Earnable while a Member of this Pension Trust.
(3) This Section 1.16 (c) shall apply to Reserve Participants as follows:

(i) a Reserve Participant who was last employed in County Bargaining Unit 4,7,8,9,10,11,12, 15, 16 or 17 or by the Pension Trust, the Local Agency

Formation Commission or the Air Pollution Control District and who retires or dies on or after December 22, 2002;

(ii) or a Reserve Participant who was last employed in Superior Court Bargaining Unit 24, 25, 26, ~~or~~ 27 and 28 and who retires or dies on or after October 5, 2004;

(iii) or a Reserve Participant who was last employed in Superior Court Bargaining Unit 19 and who retires or dies on or after December 20, 2004;

(iv) or a Reserve Participant who was last employed in County Bargaining Unit 1, 5 or 13 and who retires on or after July 1, 2005;

(v) or a Reserve Participant who was last employed in County Bargaining Unit 3,14,21, 22, 27 or 28 and who retires or dies on or after July 3, 2005;

(vi) or a Reserve Participant who was last employed in County Bargaining Unit 6 and who retires or dies on or after September 11, 2005;

(vii) or a Reserve Participant who was last employed in County Bargaining Unit 2 and who retires or dies on or after October 18, 2005;

(viii) or a Reserve Participant who was last employed in County Bargaining Unit 31 or 32 and who retires or dies on or after September 24, 2006

(ix) or a Reserve Participant who was last employed in Superior Court Bargaining Unit 17, 18 or 20 and who retires or dies on or after June 1, 2007.

(d) Notwithstanding any other provision of the Retirement Plan, for Retired Participants who Reinstate from Retirement on or after the date the provisions of Section 1.16 (b) or (c) became applicable to the Bargaining Unit in which said retired Participant was last employed, the provisions of Section 1.16 (b) or Section 1.16 (c) shall apply only to service or benefits accrued after said Reinstatement from Retirement. (12-22-2002)(10-05-2004)(12-14-2004)(05-10-2005)(06-28-2005)(09-11-2005)(10-18-2005)(09-24-2006) (12-5-2006) (05-15-2007)

Section 1.17: "Normal Hours" for a full-time County Employee shall be 40 hours per seven day work week of County Employment, or, for County Employees who are Safety Members, the optional equivalent of the 40 hours per seven day work week allowed by the Federal Fair Labor Standards Act and adopted by the County Employer. "Normal Hours" shall not include overtime worked by a County Employee for the County Employer. "Overtime" is the aggregate hours worked by a County Employee for the County Employer in excess of the hours of work considered normal for a County Employee on a full time basis and as defined in the Federal Fair Labor Standards Act. For a County Employee whose County Employment is less than full-time, "Normal Hours" shall be the same as the ratio of actual County Employment to full-time County Employment. For example, Normal Hours for "half-time" County Employment shall be 20 hours per week of work for the County Employer. "Normal Hours" shall have no meaning or application for elected officers of the County.

If a Member is concurrently employed in two or more positions covered by the Pension Trust, one or more of which is fulltime, employment in the part-time position shall constitute overtime. If two or more positions are permanent and full time, the position with the highest compensation shall be designated as the Pension Trust covered employment to be reported to the Pension Trust. (03-07-06)

1) An Appointed Official (Unit 09),
2) A County Officer or employee in General Management (Unit 08),
3) An employee whose civil service classification is assigned to Operations and Staff Management (Unit 07),
4) A Confidential Employee as defined in Section 2(c) of Article I of the San Luis Obispo Employee Relations Policy (Unit 11),
5) An employee in a civil service classification represented by a Recognized Employee Organization under the San Luis Obispo County Employee Relations Policy, as follows:

a) Deputy County Counsel (Unit 12),
b) Deputy District Attorney (Unit 04),
c) Clerical (Unit 13),
d) Supervisory (Unit 05),
e) Trades, Crafts and Services (Unit 02),
f) Public Services (Unit 01),
(04-20-2004)(10/18/2011)

b) An employee of the Superior Court of the State of California in and for the County of San Luis Obispo who is a Member pursuant to Article 3 of this Retirement Plan, as follows:

i) Superior Court ~~General~~ Management (Unit 24),
ii) Superior Court Subordinate Judicial Officers(Unit 25),
iii) Superior Court Technical (Unit 18),
iv) Superior Court Supervisory Employees (Unit 19),
v) Superior Court Interpreter (Unit 17),
vi) Superior Court Employees (Unit 20),
vii) Superior Court ~~Staff Management and~~ Confidential (Unit 26),
viii) Superior Court Professional (Unit 27),
ix) Superior Court Attorney (Unit 28).
(04-20-2004)(10/18/2011)(01/10/2021)

(2) Safety Members Classes:

a) Safety Members employed in Bargaining Unit 10,15 or 16.
b) Safety Members employed in Bargaining Unit 03,06,07,14, 27 or 28.(04-20-2004)(10-18-2011)

(3) Probation Officer Members Classes:

a) Probation Officer Members employed in Bargaining Units 08,09, 29, 31 or 32.(10-18-2011)

(4) Pension Trust Employee Classes:

a) An officer or employee of the Pension Trust who is a Member pursuant to Section 3.04of this Retirement Plan.(04-20-2004)

(5) Contracting Local Agency Classes:

a) Officers and Employees of any local agency within the County of San Luis Obispo, which agency has entered into a contract with the County of San Luis Obispo pursuant to Article 25 of this Retirement Plan. (04-20-2004)

(b) When a Member has earned service credit in more than one Class of Membership, the Member's Service Retirement Allowance shall be the aggregate of the Service Retirement Allowances attributable to the Member's service credit earned in each Class of Membership, unless, for a specific Class of membership, this Article 6 specifically provides otherwise. (04-20-2004) (10-18-2011)

Section 6.08: Miscellaneous Members Service Retirement Allowance on and after January 7, 2001 for: County Elected Officers; County Appointed Officials (Unit 09); County General Management (Unit 08), Operations and Staff Management (Unit 07); County Confidential Employees (Unit 11); Deputy County Counsel Association (Unit 12); and San Luis Obispo Government Attorneys' Union (Unit 04); Superior Court ~~General~~ Management (Unit 24); Superior Court Subordinate Judicial Officers (Unit 25); Superior Court ~~Staff Management~~Confidential (Unit 26), ~~and~~ Superior Court Professional (Unit 27), and Superior Court Attorney (Unit 28); and Employees of the Pension Trust, Local Agency Formation Commission, and Air Pollution Control District Management (Unit 99).

(a) Upon retirement for service on or after January 7, 2001, a Miscellaneous Member who is assigned to one of the categories set forth in subsection (b) of this Section 6.08 is entitled to receive a service retirement allowance equal to the Member's Final Compensation multiplied by the Member's Attained Age Percentage Factor, as shown in subsection (c) of this Section 6.08, multiplied by the Member's Pension Trust Service Credit earned by the Member while a Miscellaneous Member; provided that, in no event shall a Member's service retirement allowance under this Section 6.08 exceed the Member's Final Compensation.

(b) This Section 6.08 shall apply to:

(1) A Miscellaneous Member employed by the County of San Luis Obispo who is:

a) An elected officer of the County of San Luis Obispo, including a Member of the Board of Supervisors who has voluntarily become a Member of the Retirement Plan pursuant to Article 3.

b) An officer or employee of the County of San Luis Obispo who is:

i) An Appointed Official (Unit 09).

ii) A County Officer in General Management (Unit 08).

iii) An employee whose civil service classification is assigned to Operations and Staff Management (Unit 07).

iv) A Confidential Employee as defined in Section 2(c) of Article I of the San Luis Obispo County Employee Relations Policy (Unit 11).

v) An employee in a civil service classification represented by a Recognized Employee Organization under the San Luis Obispo County Employee Relations Policy, as follows:

(a) Deputy County Counsel (Unit 12).
(b) Deputy District Attorney (Union 04).

(2) Pension Trust Officers and Employees who are Miscellaneous Members pursuant to Section 3.04 of this Retirement Plan.
(3) A Miscellaneous Member who is an employee of the Superior Court of the State of California in and for the County of San Luis Obispo, as follows:

a) Superior Court ~~General~~ Management (Unit 24).
b) Superior Court Subordinate Judicial Officers (Unit 25).
c) Superior Court ~~Management and~~ Confidential (Unit 26).
d) Superior Court Professional (Unit 27).
e) Superior Court Attorney (Unit 28).

(4) A Miscellaneous Member who is an employee of the San Luis Obispo County Local Agency Formation Commission.
(5) A Miscellaneous Member who is a Management employee of the San Luis Obispo County Air Pollution Control District (Unit 99).

(c) The Attained Age Percentage Factor to be used for Members identified in this Section 6.08 shall be based on the Member's last attained quarter-year of age as of the effective date of retirement, as set forth in the following table:

Miscellaneous Bargaining Units

Employer: County

BU #	Employee Association	BU Description
01	SLOCEA Big Unit	Public Services Unit
02	SLOCEA Trades Unit	Trades, Crafts, Services Unit
04	SLOGAU	Deputy District Attorneys
05	SLOCEA Big Unit	Supervisory Unit
07	UEC	Operations/Staff Management
08	UEC	General Management
09	Other Unrepresented	Appointed Department Heads
09 auto	Other Unrepresented	Appointed Department Heads with pensionable Auto Allowance
10	Other Unrepresented	Elected Department Heads
10 auto	Other Unrepresented	Elected Department Heads with pensionable Auto Allowance
11	UEC	Confidential
12	DCCA	Deputy County Counsel Attorneys
13	SLOCEA Big Unit	Clerical Unit
14	DSA	Supervisory Law Enforcement
17	Other Unrepresented	Board of Supervisors
17 auto	Other Unrepresented	Board of Supervisors with pensionable Auto Allowance
21	DSA	Non-Safety Law Enforcement Unit
22	DSA	Dispatcher Unit

Employer: Court

BU #	Employee Association	BU Description
17	CFI	Interpreter
18	SEIU	Technical
19	SLOCEA	Supervisory Employees
20	SEIU	Court Employees
24	Unrepresented	~~General~~ Management ~~& Attorneys~~
25	Unrepresented	~~Commissioners~~ Subordinate Judicial Officers
26	Unrepresented	Confidential
27	Unrepresented	Professional
28	Unrepresented	Attorney

Employer: APCD

BU #	Employee Association	BU Description
98	Unrepresented	Public Services
99	Unrepresented	Operations & Staff Management
99 auto	Unrepresented	Operations & Staff Management with pensionable Auto Allowance

Employer: LAFCO

BU #	Employee Association	BU Description
07a	Unrepresented	Analyst
07c	Unrepresented	Clerk
07 auto	Unrepresented	Executive Officer with pensionable Auto Allowance

Employer: RTA

BU #	Employee Association	BU Description
71	Unrepresented	Employees hired before January 12, 2020
72	Unrepresented	Employees hired on or after January 12, 2020

Miscellenous Member Contribution Rates - Tier 1

Employer: Court

Effective Date: January 10, 2021

		Bargaining Unit								
		17	18	19	20	24	25	26	27	28
Employer Appropriation		27.10%	27.10%	25.68%	25.62%	30.45%	31.44%	30.45%	30.45%	30.45%
Employee Rates:	**Entry Age**									
	18	19.19%	19.19%	16.11%	16.67%	17.96%	16.97%	17.96%	17.96%	17.96%
	19	19.26%	19.26%	16.18%	16.74%	18.03%	17.04%	18.03%	18.03%	18.03%
	20	19.33%	19.33%	16.25%	16.81%	18.10%	17.11%	18.10%	18.10%	18.10%
	21	19.39%	19.39%	16.31%	16.87%	18.16%	17.17%	18.16%	18.16%	18.16%
	22	19.41%	19.41%	16.33%	16.89%	18.18%	17.19%	18.18%	18.18%	18.18%
	23	19.43%	19.43%	16.35%	16.91%	18.20%	17.21%	18.20%	18.20%	18.20%
	24	19.46%	19.46%	16.38%	16.94%	18.23%	17.24%	18.23%	18.23%	18.23%
	25	19.50%	19.50%	16.42%	16.98%	18.27%	17.28%	18.27%	18.27%	18.27%
	26	19.55%	19.55%	16.47%	17.03%	18.32%	17.33%	18.32%	18.32%	18.32%
	27	19.60%	19.60%	16.52%	17.08%	18.37%	17.38%	18.37%	18.37%	18.37%
	28	19.66%	19.66%	16.58%	17.14%	18.43%	17.44%	18.43%	18.43%	18.43%
	29	19.73%	19.73%	16.65%	17.21%	18.50%	17.51%	18.50%	18.50%	18.50%
	30	19.80%	19.80%	16.72%	17.28%	18.57%	17.58%	18.57%	18.57%	18.57%
	31	19.88%	19.88%	16.80%	17.36%	18.65%	17.66%	18.65%	18.65%	18.65%
	32	19.97%	19.97%	16.89%	17.45%	18.74%	17.75%	18.74%	18.74%	18.74%
	33	20.06%	20.06%	16.98%	17.54%	18.83%	17.84%	18.83%	18.83%	18.83%
	34	20.16%	20.16%	17.08%	17.64%	18.93%	17.94%	18.93%	18.93%	18.93%
	35	20.26%	20.26%	17.18%	17.74%	19.03%	18.04%	19.03%	19.03%	19.03%
	36	20.36%	20.36%	17.28%	17.84%	19.13%	18.14%	19.13%	19.13%	19.13%
	37	20.47%	20.47%	17.39%	17.95%	19.24%	18.25%	19.24%	19.24%	19.24%
	38	20.58%	20.58%	17.50%	18.06%	19.35%	18.36%	19.35%	19.35%	19.35%
	39	20.70%	20.70%	17.62%	18.18%	19.47%	18.48%	19.47%	19.47%	19.47%
	40	20.82%	20.82%	17.74%	18.30%	19.59%	18.60%	19.59%	19.59%	19.59%
	41	20.95%	20.95%	17.87%	18.43%	19.72%	18.73%	19.72%	19.72%	19.72%
	42	21.08%	21.08%	18.00%	18.56%	19.85%	18.86%	19.85%	19.85%	19.85%
	43	21.22%	21.22%	18.14%	18.70%	19.99%	19.00%	19.99%	19.99%	19.99%
	44	21.36%	21.36%	18.28%	18.84%	20.13%	19.14%	20.13%	20.13%	20.13%
	45	21.50%	21.50%	18.42%	18.98%	20.27%	19.28%	20.27%	20.27%	20.27%
	46	21.65%	21.65%	18.57%	19.13%	20.42%	19.43%	20.42%	20.42%	20.42%
	47	21.81%	21.81%	18.73%	19.29%	20.58%	19.59%	20.58%	20.58%	20.58%
	48	21.97%	21.97%	18.89%	19.45%	20.74%	19.75%	20.74%	20.74%	20.74%
	49	22.13%	22.13%	19.05%	19.61%	20.90%	19.91%	20.90%	20.90%	20.90%
	50	22.30%	22.30%	19.22%	19.78%	21.07%	20.08%	21.07%	21.07%	21.07%
	51	22.47%	22.47%	19.39%	19.95%	21.24%	20.25%	21.24%	21.24%	21.24%
	52	22.64%	22.64%	19.56%	20.12%	21.41%	20.42%	21.41%	21.41%	21.41%
	53	22.82%	22.82%	19.74%	20.30%	21.59%	20.60%	21.59%	21.59%	21.59%
	54	23.00%	23.00%	19.92%	20.48%	21.77%	20.78%	21.77%	21.77%	21.77%
	55	23.19%	23.19%	20.11%	20.67%	21.96%	20.97%	21.96%	21.96%	21.96%
	56	23.38%	23.38%	20.30%	20.86%	22.15%	21.16%	22.15%	22.15%	22.15%
	57	23.57%	23.57%	20.49%	21.05%	22.34%	21.35%	22.34%	22.34%	22.34%
	58	23.77%	23.77%	20.69%	21.25%	22.54%	21.55%	22.54%	22.54%	22.54%
	59+	23.97%	23.97%	20.89%	21.45%	22.74%	21.75%	22.74%	22.74%	22.74%
Employer Pick-up		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Pick-up pensionable?		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Miscellenous Member Contribution Rates - Tier 3

Employer: Court

Effective Date: January 10, 2021

		Bargaining Unit								
		17	18	19	20	24	25	26	27	28
Employer Appropriation		26.45%	26.45%	25.03%	24.97%	29.80%	30.79%	29.80%	29.80%	29.80%
Employee Rates:	**Entry Age**									
	18	10.21%	10.21%	10.21%	10.21%	10.21%	9.22%	10.21%	10.21%	10.21%
	19	10.46%	10.46%	10.46%	10.46%	10.46%	9.47%	10.46%	10.46%	10.46%
	20	10.46%	10.46%	10.46%	10.46%	10.46%	9.47%	10.46%	10.46%	10.46%
	21	10.71%	10.71%	10.71%	10.71%	10.71%	9.72%	10.71%	10.71%	10.71%
	22	10.71%	10.71%	10.71%	10.71%	10.71%	9.72%	10.71%	10.71%	10.71%
	23	10.96%	10.96%	10.96%	10.96%	10.96%	9.97%	10.96%	10.96%	10.96%
	24	10.96%	10.96%	10.96%	10.96%	10.96%	9.97%	10.96%	10.96%	10.96%
	25	11.21%	11.21%	11.21%	11.21%	11.21%	10.22%	11.21%	11.21%	11.21%
	26	11.46%	11.46%	11.46%	11.46%	11.46%	10.47%	11.46%	11.46%	11.46%
	27	11.46%	11.46%	11.46%	11.46%	11.46%	10.47%	11.46%	11.46%	11.46%
	28	11.71%	11.71%	11.71%	11.71%	11.71%	10.72%	11.71%	11.71%	11.71%
	29	11.96%	11.96%	11.96%	11.96%	11.96%	10.97%	11.96%	11.96%	11.96%
	30	11.96%	11.96%	11.96%	11.96%	11.96%	10.97%	11.96%	11.96%	11.96%
	31	12.21%	12.21%	12.21%	12.21%	12.21%	11.22%	12.21%	12.21%	12.21%
	32	12.46%	12.46%	12.46%	12.46%	12.46%	11.47%	12.46%	12.46%	12.46%
	33	12.71%	12.71%	12.71%	12.71%	12.71%	11.72%	12.71%	12.71%	12.71%
	34	12.96%	12.96%	12.96%	12.96%	12.96%	11.97%	12.96%	12.96%	12.96%
	35	12.96%	12.96%	12.96%	12.96%	12.96%	11.97%	12.96%	12.96%	12.96%
	36	13.21%	13.21%	13.21%	13.21%	13.21%	12.22%	13.21%	13.21%	13.21%
	37	13.46%	13.46%	13.46%	13.46%	13.46%	12.47%	13.46%	13.46%	13.46%
	38	13.71%	13.71%	13.71%	13.71%	13.71%	12.72%	13.71%	13.71%	13.71%
	39	13.96%	13.96%	13.96%	13.96%	13.96%	12.97%	13.96%	13.96%	13.96%
	40	14.21%	14.21%	14.21%	14.21%	14.21%	13.22%	14.21%	14.21%	14.21%
	41	14.46%	14.46%	14.46%	14.46%	14.46%	13.47%	14.46%	14.46%	14.46%
	42	14.46%	14.46%	14.46%	14.46%	14.46%	13.47%	14.46%	14.46%	14.46%
	43	14.71%	14.71%	14.71%	14.71%	14.71%	13.72%	14.71%	14.71%	14.71%
	44	14.96%	14.96%	14.96%	14.96%	14.96%	13.97%	14.96%	14.96%	14.96%
	45	15.21%	15.21%	15.21%	15.21%	15.21%	14.22%	15.21%	15.21%	15.21%
	46	15.46%	15.46%	15.46%	15.46%	15.46%	14.47%	15.46%	15.46%	15.46%
	47	15.71%	15.71%	15.71%	15.71%	15.71%	14.72%	15.71%	15.71%	15.71%
	48	15.96%	15.96%	15.96%	15.96%	15.96%	14.97%	15.96%	15.96%	15.96%
	49	16.21%	16.21%	16.21%	16.21%	16.21%	15.22%	16.21%	16.21%	16.21%
	50	16.46%	16.46%	16.46%	16.46%	16.46%	15.47%	16.46%	16.46%	16.46%
	51	16.71%	16.71%	16.71%	16.71%	16.71%	15.72%	16.71%	16.71%	16.71%
	52	16.96%	16.96%	16.96%	16.96%	16.96%	15.97%	16.96%	16.96%	16.96%
	53	17.21%	17.21%	17.21%	17.21%	17.21%	16.22%	17.21%	17.21%	17.21%
	54	17.46%	17.46%	17.46%	17.46%	17.46%	16.47%	17.46%	17.46%	17.46%
	55	17.71%	17.71%	17.71%	17.71%	17.71%	16.72%	17.71%	17.71%	17.71%
	56	17.96%	17.96%	17.96%	17.96%	17.96%	16.97%	17.96%	17.96%	17.96%
	57+	17.96%	17.96%	17.96%	17.96%	17.96%	16.97%	17.96%	17.96%	17.96%
Employer Pick-up		0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Pick-up pensionable?		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Board of Trustees
1000 Mill Street
San Luis Obispo, CA 93408
Phone: (805) 781-5465
Fax: (805) 781-5697
www.SLOPensionTrust.org

San Luis Obispo County
Pension Trust
SLOCPT

Date: February 22, 2021

To: Board of Trustees

From: Carl Nelson – Executive Director
Amy Burke – Deputy Director

Agenda Item 6: Annual Cost-Of-Living Adjustments provided by the San Luis Obispo County Employees Retirement Plan

Recommendation:

It is recommended that the Board approve Cost-Of-Living Adjustments (COLAs) as recommended by SLOCPT's Actuary (Cheiron), and in accordance with the Retirement Plan.

1. **Tier 1 benefit recipients, 2021 COLA of 2.4%.**

2. **Tier 2 and Tier 3 recipients, 2021 COLA of 2.00% (the maximum)**.

Discussion:

COLA Adjustments - The Retirement Plan provides for annual cost-of-living adjustments for retirees in: Section 19.01 and Section 19.02 of Article 19: Cost-Of-Living; Section 27.25 of Article 27: Tier Two –Miscellaneous; Section 28.25 of Article 28: Tier Two – Safety; Section 29.25 of Article 29: Tier Three – AB 340: Miscellaneous; Section 30.25 of Article 30: Tier Three – AB 340: Safety; and Section 31.24 of Article 31: Tier Three – AB 340: Probation.

CPI-U Benchmarks - The COLA percentage, as specified by the Plan, is determined by the average of the All Urban Consumers Consumer Price Index – all items (CPI-U) for the Los Angeles and the San Francisco metropolitan areas.

The SLOCPT's actuary calculates the recommended COLA as a smoothed value using the two most recent annual averages published by the Bureau of Labor Statistics for each specified metropolitan area. While COLAs have historically been calculated as increases to benefits with positive inflation, the Plan also allows for decreases should there be deflation in the CPI-U data.

Financial:

This year's recommended COLA is expected to cumulatively increase the current monthly retiree payroll distribution by approximately $280k.

The 2020 Actuarial Valuation used a long-term COLA assumption of 2.50% for Tier 1 COLA adjustments. Most Tier 1 recipients currently have a COLA bank of at least 0.5% that will be added to the base COLA rate (up to a maximum of 3.0%) this year. As a result, the above assumed COLA for 2021 will contribute to an actuarial loss in future actuarial valuations.

Conclusion:

COLA Recommendation - The recommended COLA based on average of the years 2020 and 2019 has been calculated as **2.4%.** As dictated by the Plan, COLAs may not exceed 3% for Tier 1 retirees or 2% for Tier 2 and Tier 3 retirees. Furthermore, for Tier 1 retirees, if the calculated average percentage increase is less than 3%, recipients who have a Cumulative Carryover COLA balance from prior years (where the calculated COLA was greater than the 3.0% maximum) will have this balance applied to their COLA % up to the maximum 3.0%. Tier 2 and Tier 3 retirees are not eligible for the Cumulative Carryover as stipulated by the Plan.

Upon Board approval, all eligible retirees will receive a COLA on April 1, 2021 as shown in the following table. The Cumulative Carryover (COLA Bank) for each vintage year of retirees will change as shown on the attached letter from SLOCPT's Actuary.

Tier:	Retirement Date:	COLA:
1	On or Before January 1, 2019	3.0%
1	January 2, 2019 through January 1, 2020	2.9%
1	January 2, 2020 through January 1, 2021	2.4%
2 & 3	On or Before January 1, 2021	2.0%

Respectfully Submitted

Via Electronic Mail

February 10, 2021

Mr. Carl Nelson
Executive Director
San Luis Obispo County Pension Trust
1000 Mill Street
San Luis Obispo, California 93408

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

Dear Carl:

Per your request, we are providing you with the April 1, 2021 Cost-of-Living Adjustment computations for San Luis Obispo County Pension Trust (SLOCPT) members, prepared in accordance with Sections 19.01 and 19.02 of the SLOCPT by-laws.

Background

The Cost-of-Living Adjustment (COLA) is determined annually based on the percentage increase or decrease in the cost of living, using the annual average of the Los Angeles-Long Beach-Anaheim and San Francisco-Oakland-Hayward Consumer Price Indices (CPI) for All Urban Consumers, for all items, using a base period of 1982-1984.

At the direction of SLOCPT and following long-standing practice, we are using a two-year average of the percentage changes of the indices described above to determine the COLAs as of April 1, 2021. We understand this is permissible based on legal counsel's interpretation of "found by the Board of Trustees to approximate" in Section 19.01 of the SLOCPT by-laws.

COLA Calculations

The Consumer Price Indices and calculations described above are as follows:

		Annual Average CPI-U	Average Annual Increase
Los Angeles metropolitan area:	2018:	265.962	
	2019:	274.114	3.065%
	2020:	278.567	1.625%
San Francisco metropolitan area:	2018:	285.550	
	2019:	295.004	3.311%
	2020:	300.084	1.722%

Based on the averaging method, this represents an increase of 2.431%, which when rounded to the nearest one-tenth percent results in a COLA increase of 2.4%.

Section 19.01 and 19.02

Tier 1 members are subject to the COLA provisions of Sections 19.01 and 19.02, which limits the COLA increases to 3.0% annually. Any excess of the COLA increase calculated without regard to the maximum above 3.0% is to be accumulated and carried over each year, rounded to the nearest one-tenth percent.

Members who retired on or before January 1, 2019 will receive a COLA increase of 3.0% to their monthly benefit, and members who retired after January 1, 2019 and on or before January 1, 2020 will receive a benefit increase of 2.9%; based on their accumulated carry-over balances ("COLA bank") as of April 1, 2020. Finally, members who retired after January 1, 2020 and on or before January 1, 2021 will receive a 2.4% increase in their benefits. There is no COLA bank remaining for members who retired after January 1, 2019.

The attached exhibit summarizes the COLAs and carry-over balances for Tier 1 members subject to Sections 19.01 and 19.02.

Sections 27.25, 28.25, 29.25, 30.25, 31.25

Tier 2 and Tier 3 (AB 340) members are subject to the COLA provisions of Sections 27.25, 28.25, 29.25, 30.25, and 31.25, and are also governed by Sections 19.01 and 19.02. The annual COLA for members in these Tiers is limited to 2.0% and they do not carry forward any accumulation of COLAs above the annual 2% maximum. Thus, Tier 2 and Tier 3 members will receive a COLA of 2%.

This letter was prepared exclusively for SLOCPT for the purpose described herein. Other users of this letter are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any other user.

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

Sincerely,
Cheiron

Anne D. Harper, FSA, MAAA, EA
Principal Consulting Actuary

Attachment

cc: Amy Burke
Alice Alsberghe, ASA, MAAA, EA
Graham Schmidt, ASA, FCA, MAAA, EA

San Luis Obispo County Pension Trust
Cost of Living Adjustments (COLA) - Section 19.01 and 19.02
Tier 1 Members

Maximum Annual COLA: 3.0%

	April 1, 2020			April 1, 2021		
Initial Retirement Date	CPI Change (A)	COLA Granted (B)	Accumulated Carry-Over[1] (C)	CPI Change[2] (D)	COLA Granted (E)	Accumulated Carry-Over (F)
On or Before 1/1/1979	3.5%	3.0%	17.4%	2.4%	3.0%	16.8%
1/2/1979 to 1/1/1980	3.5%	3.0%	13.1%	2.4%	3.0%	12.5%
1/2/1980 to 1/1/1981	3.5%	3.0%	6.4%	2.4%	3.0%	5.8%
1/2/1981 to 1/1/2019	3.5%	3.0%	0.9%	2.4%	3.0%	0.3%
1/2/2019 to 1/1/2020	3.5%	3.0%	0.5%	2.4%	2.9%	0.0%
1/2/2020 to 1/1/2021	-	-	-	2.4%	2.4%	0.0%

[1] *Based on GRS' letter dated January 31, 2020.*

[2] *Two-year average of annual average increases of the Los Angeles-Long Beach-Anaheim and San Francisco-Hayward-Oakland All Urban Consumer Price Indices, for all items, 1982-1984 base (Section 19.01 and 19.02).*

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Board of Trustees
1000 Mill Street
San Luis Obispo, CA 93408
Phone: (805) 781-5465
Fax: (805) 781-5697
www.SLOPensionTrust.org

San Luis Obispo County
Pension Trust
SLOCPT

Date: February 22, 2021

To: Board of Trustees

From: Carl Nelson – Executive Director
Amy Burke – Deputy Director
Chris Waddell – General Counsel

Agenda Item 7: FPPC – Form 700 Disclosures

General Counsel will be providing a presentation on the Fair Political Practices Commission (FPPC) rules relative to completing the annual Form 700 disclosures required of Trustees and senior staff.

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Board of Trustees

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San Luis Obispo County Pension Trust
SLOCPT

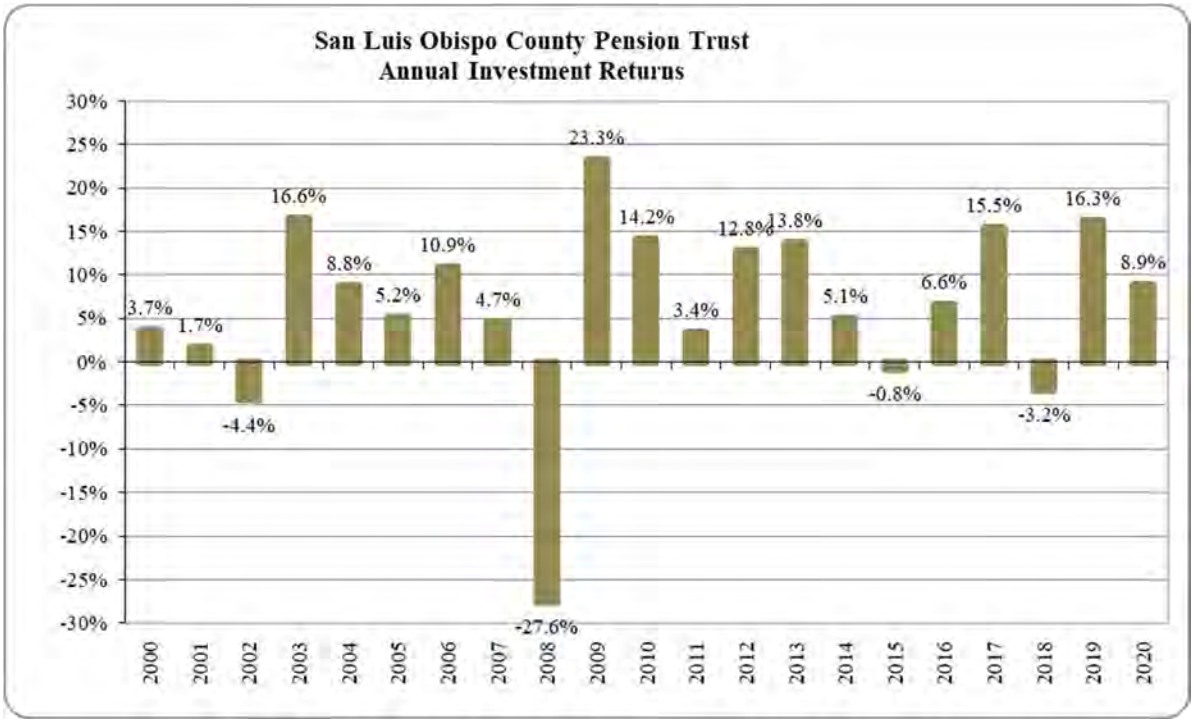
Date: February 22, 2021

To: Board of Trustees

From: Carl Nelson – Executive Director
Amy Burke – Deputy Director

Agenda Item 8: Quarterly Investment Report for the 4th Quarter of 2020

Attached to this memo is the 4Q20 quarterly investment report prepared by the Trust's investment consultant Verus. Scott Whalen of Verus will make a detailed presentation and discuss the quarterly report. The 20 year history of the rates of return gross of fees of the Pension Trust are shown below as an extension of the data in the Verus report.



Respectfully submitted,

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Verus

PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS

PERIOD ENDING: DECEMBER 31, 2020

Investment Performance Review for

San Luis Obispo County Pension Trust

Agenda Item 8

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Verus

VERUSINVESTMENTS.COM

SEATTLE 206-622-3700
LOS ANGELES 300-297-1777
SAN FRANCISCO 415-362-3484
PITTSBURGH 412-784-6678

Investment Landscape TAB I

Investment Performance Review TAB II

Agenda Item 8

Recent Verus research

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

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.

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.

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.

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

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Verus

VERUSINVESTMENTS.COM

SEATTLE 206.622.3700
PITTSBURGH 412.784.6678
LOS ANGELES 310.297.1777
SAN FRANCISCO 415.362.3484

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

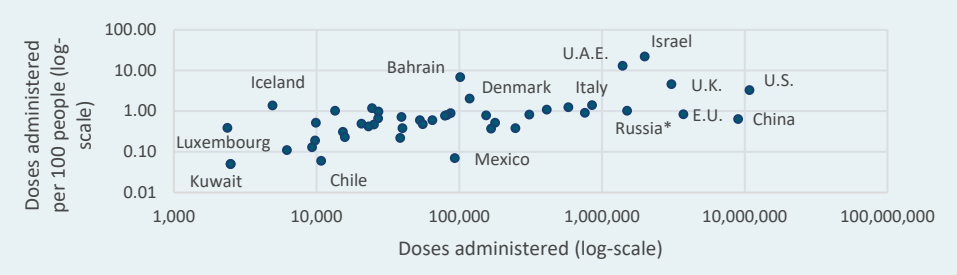
"Dollar's Slump Propels Global Peers Toward Multi-Year Peaks"

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.

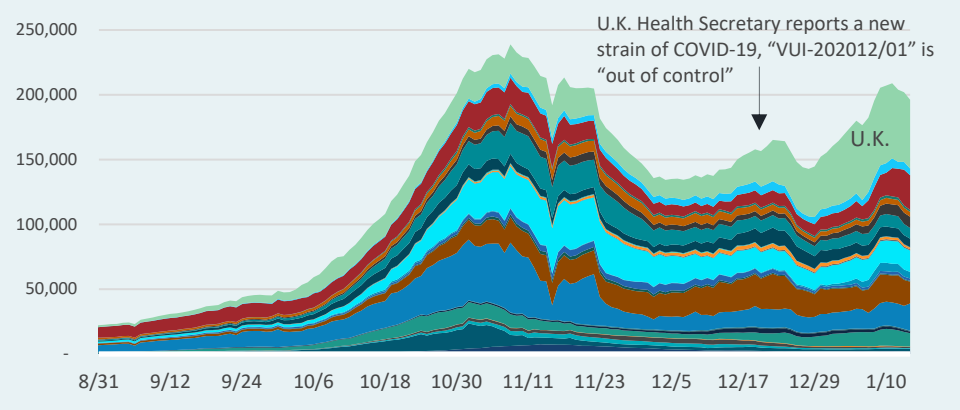
— Home sales activity continued to grow at an extremely fast pace in the fourth quarter, as record-low interest rates and the work-from-home environment fueled demand. Existing home sales were 25.8% higher than one-year prior.

— 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*

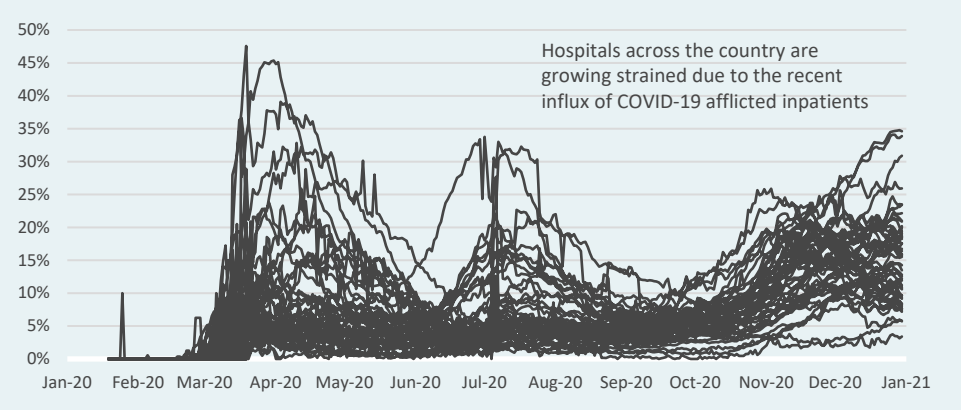
COVID-19 update

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



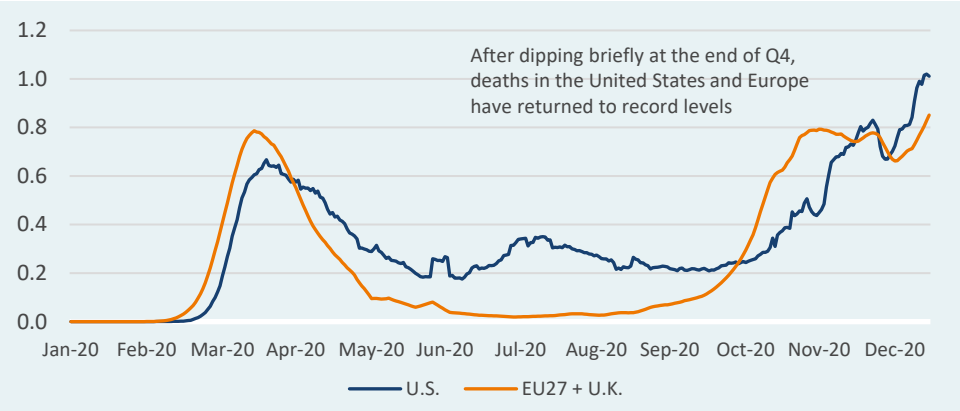
Source: Bloomberg, as of 1/14/21

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



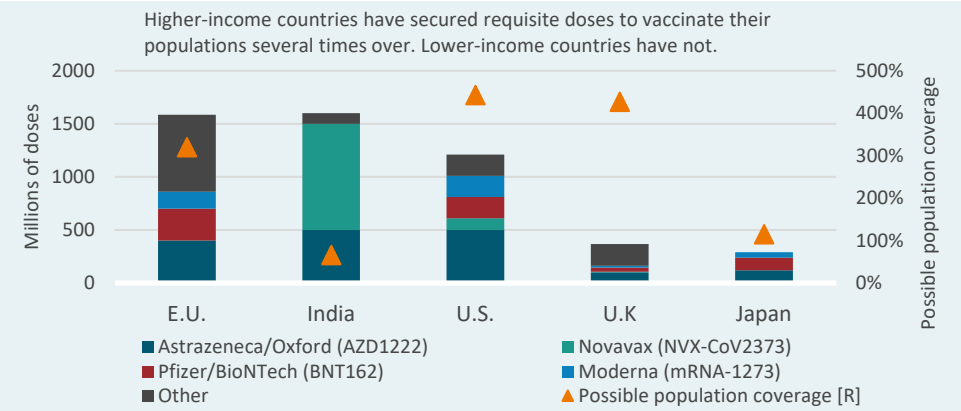
Source: Bloomberg, as of 1/9/21

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



Source: Bloomberg, as of 1/14/21

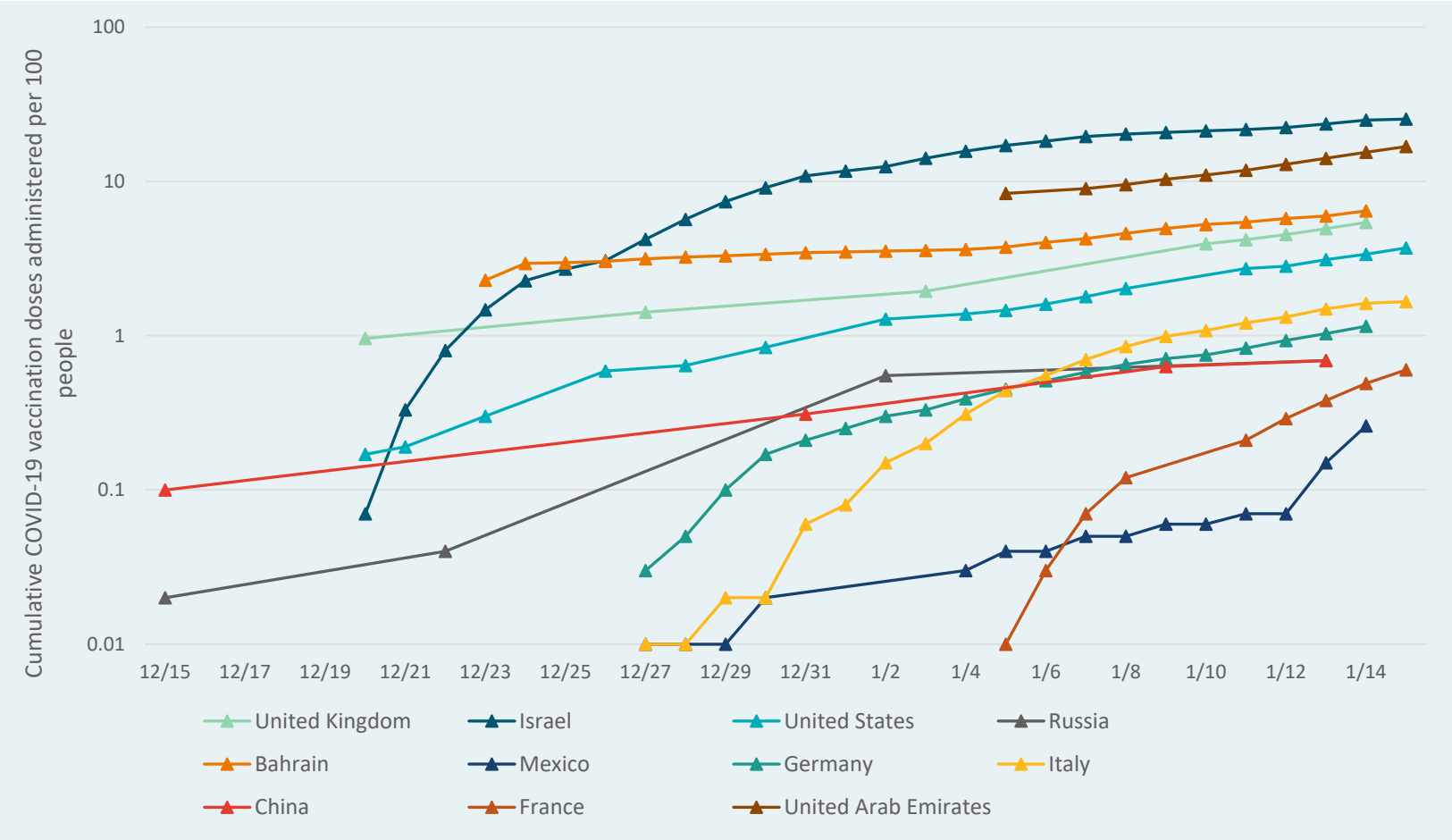
VACCINE COVERAGE BY COUNTRY



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

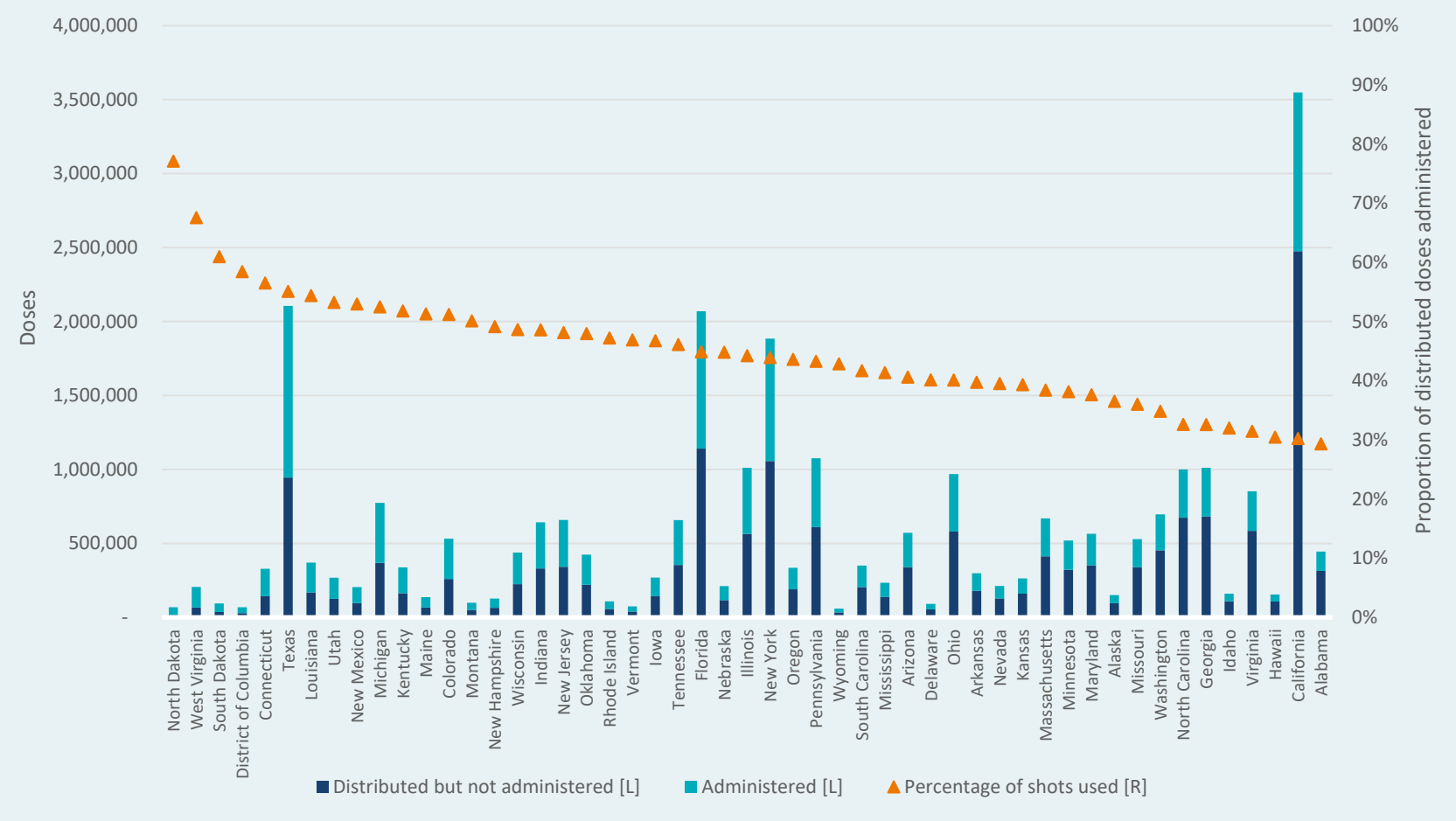


Israel has led the way so far, but it is a country with a size and population comparable to New Jersey

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

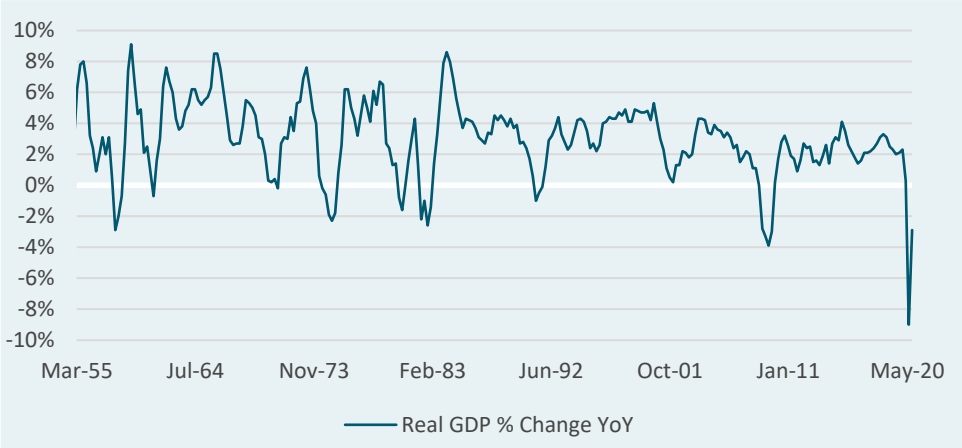
GDP growth

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.

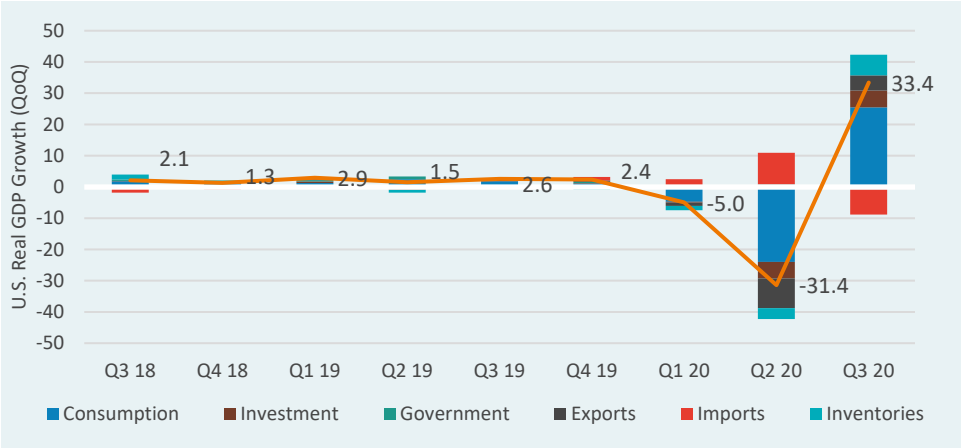
The Atlanta Fed's forecast for Q4 growth was 7.4% on a quarter-over-quarter annualized basis (-1.7% year-over-year) as of January 15th, suggesting further economic recovery.

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

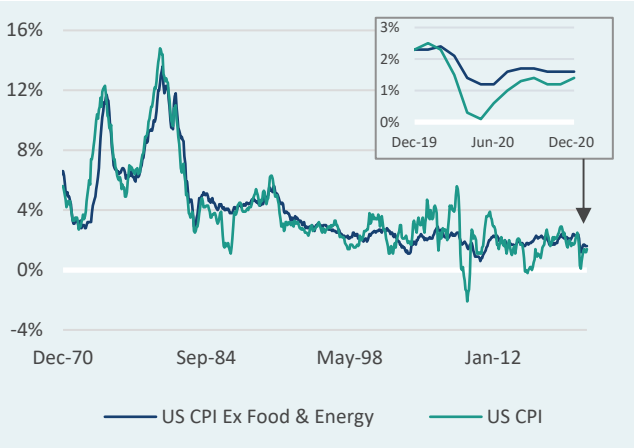
Inflation

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.

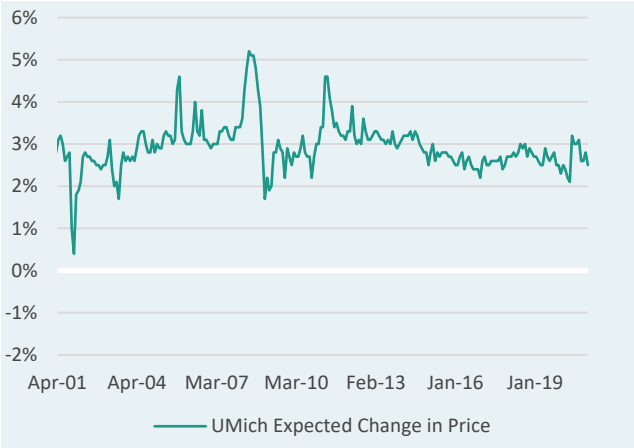
Consumer inflation expectations, as indicated by the University of Michigan survey, proved volatile throughout the year. After starting 2020 at an expected 2.3% rate of inflation, expectations fell to 2.1% in April before spiking to 3.2% in May. Expectations fell in the fourth quarter and settled at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

U.S. CPI (YOY)



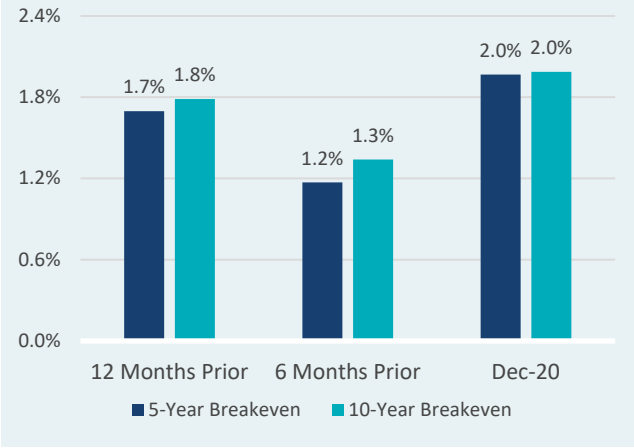
Source: Bloomberg, as of 12/31/20

CONSUMER INFLATION EXPECTATIONS



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

BREAKEVEN INFLATION RATES



Source: Bloomberg, as of 12/31/20

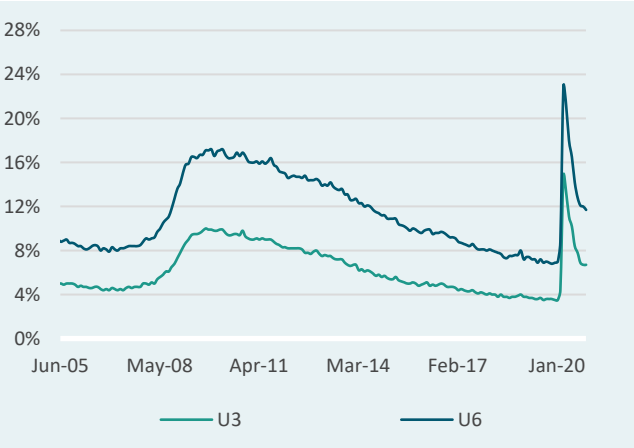
Labor market

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.

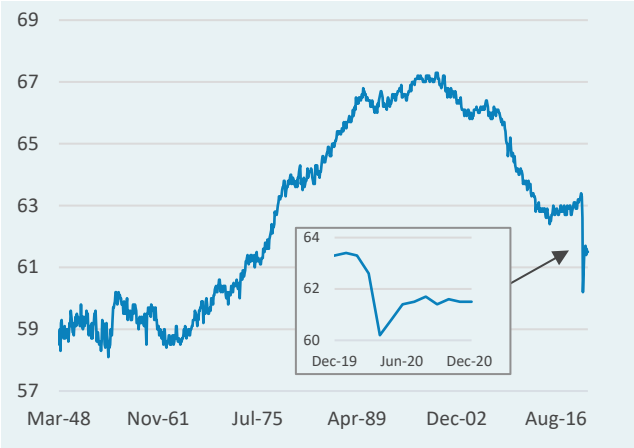
The U.S. employment recovery appears to be stalling

U.S. UNEMPLOYMENT



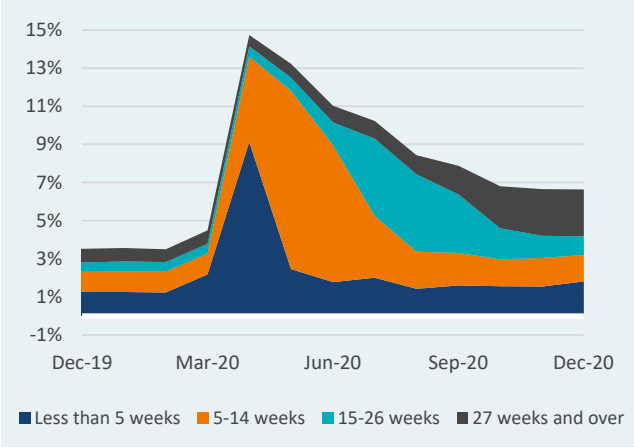
Source: FRED, as of 12/31/20

LABOR PARTICIPATION RATE



Source: FRED, as of 12/31/20

UNEMPLOYMENT DECOMPOSITION BY DURATION



Source: BLS, as of 12/31/20

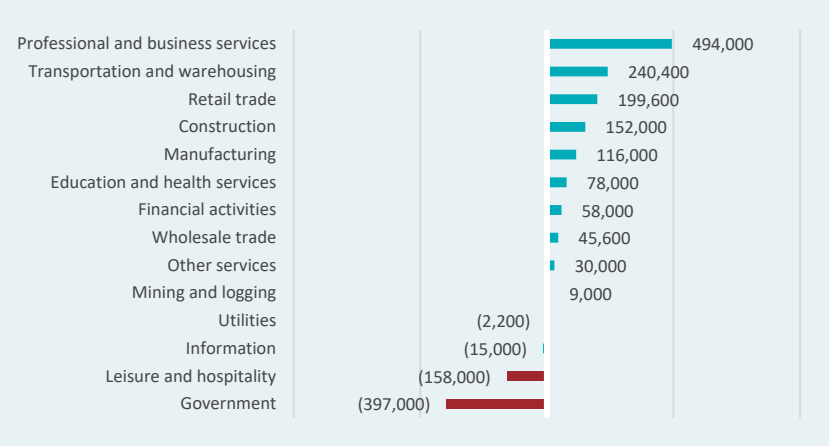
U-3 unemployment rates relative to peaks

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

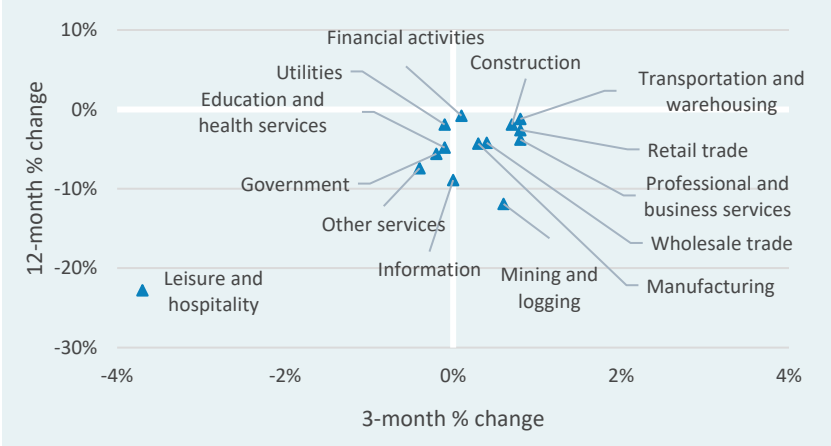
Source: Bloomberg, BLS, as of 12/31/20

Employment conditions

Q4 2020 NONFARM PAYROLLS CHANGES

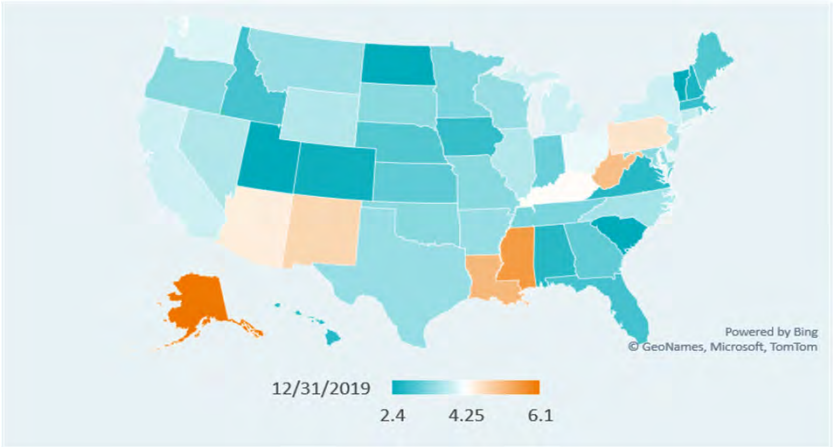


NONFARM PAYROLL GROWTH BY SECTOR

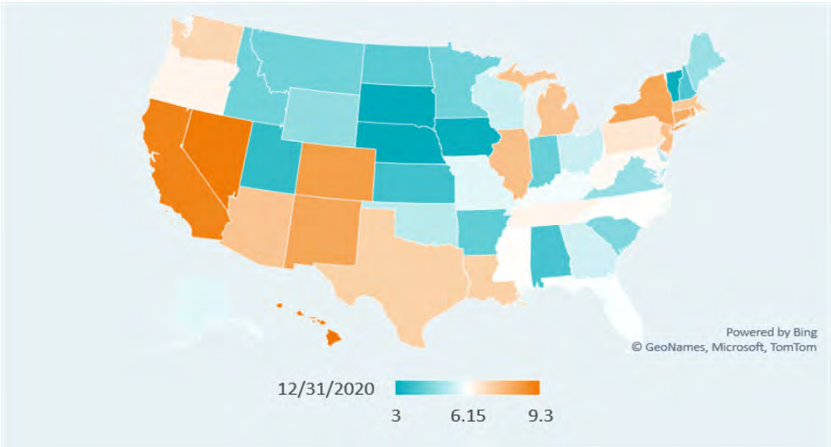


While employment in many sectors bounced back in Q4, jobs in the leisure and hospitality sector dipped as the impact of state lockdowns began to show up in the payrolls data

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

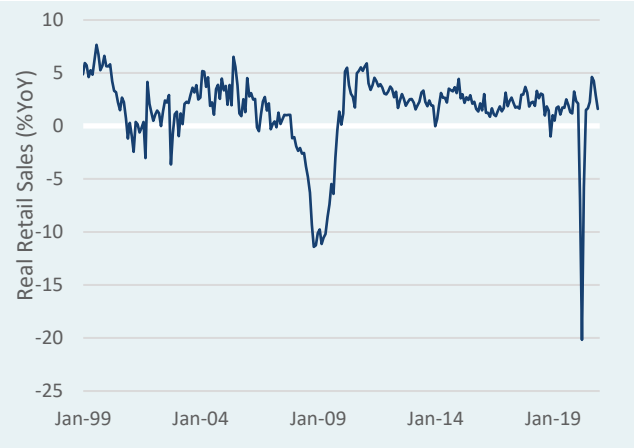
The consumer

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.

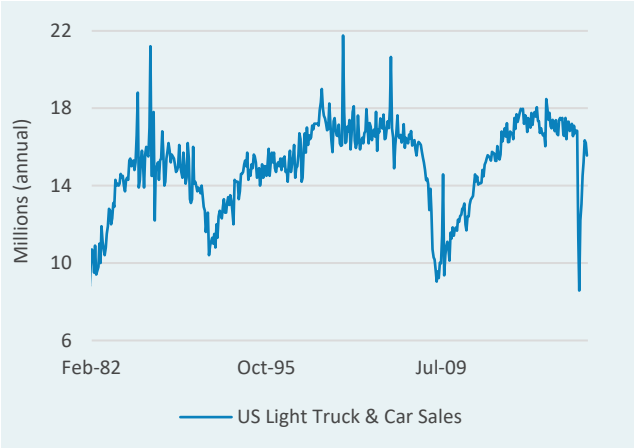
According to anonymized cellular phone data collected by Google for COVID-19 public health research, Americans began returning to their daily routines through late spring and summer, as activity began moving back to normalcy. However, these improvements plateaued across certain types of activities such 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)



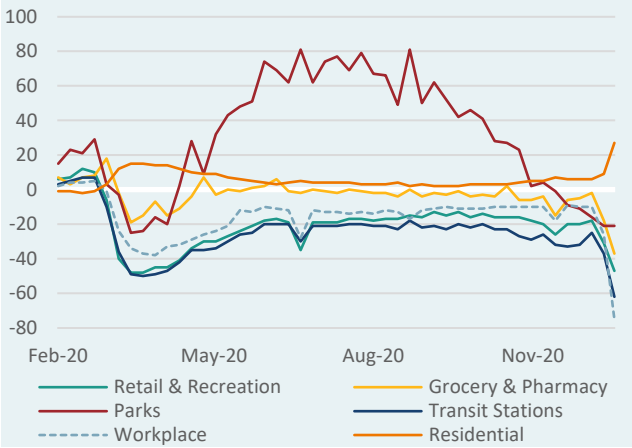
Source: FRED, as of 12/31/20

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

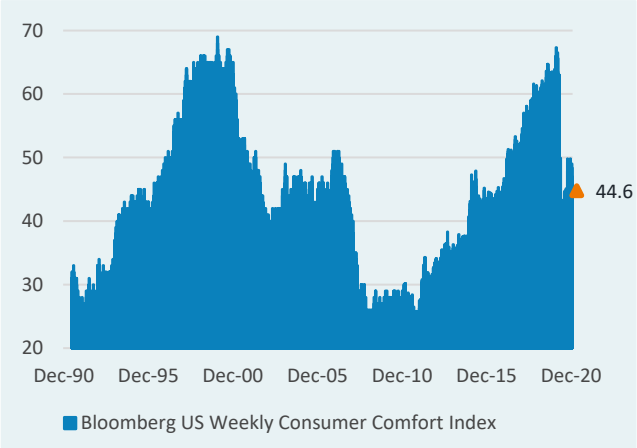
Sentiment

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.

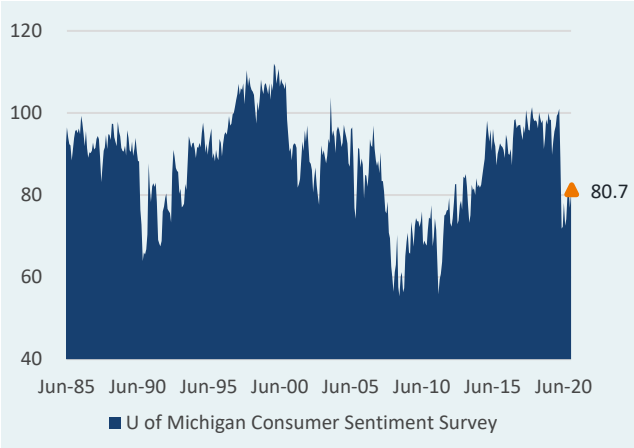
The NFIB Small Business Optimism Index exhibited a sharp decline to 95.9 in Q4, bringing the index back towards pandemic lows. The survey suggested that most business owners expect deteriorating conditions over the next six months. The survey also showed that concerns exist regarding government-mandated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

CONSUMER COMFORT



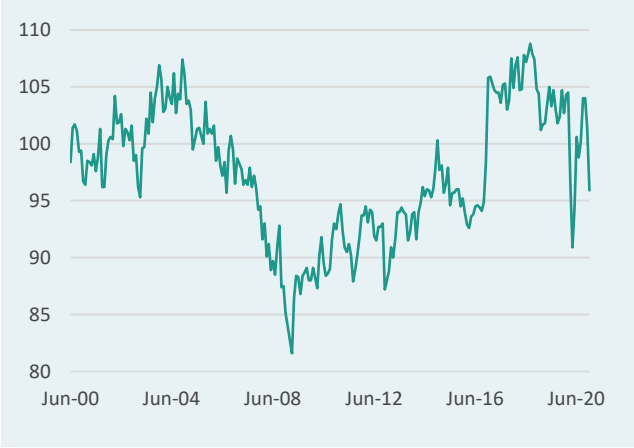
Source: Bloomberg, as of 12/31/20

CONSUMER SENTIMENT



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

SMALL BUSINESS OPTIMISM



Source: NFIB, as of 12/31/20

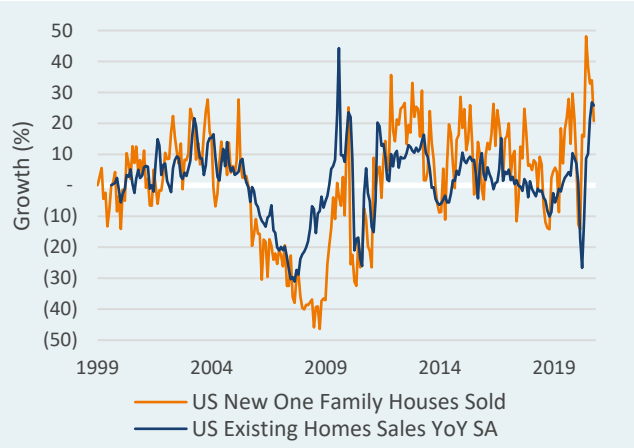
Housing

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.

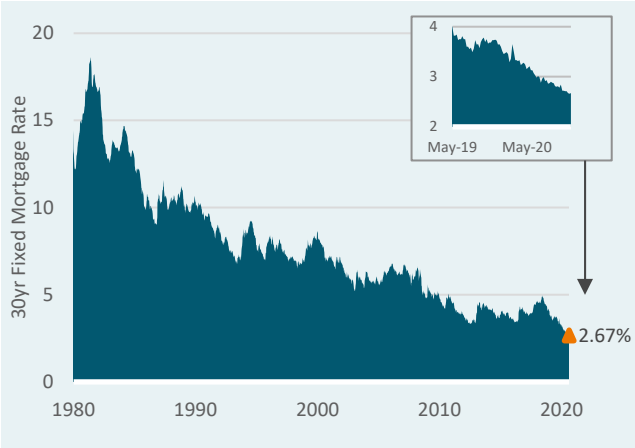
It is important to note that the overall cost of owning a home is a combination of home prices and borrowing rates (among many other variables, of course). While the price of a new home in the U.S. is, on average, higher than ever before, record-low interest rates have compensated for higher prices.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



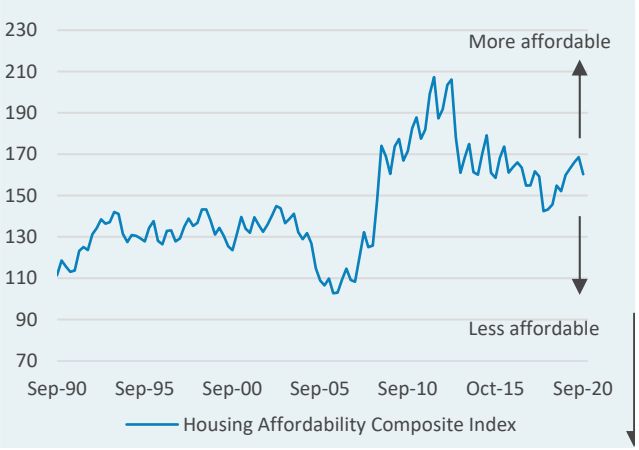
Source: FRED, as of 11/30/20

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*

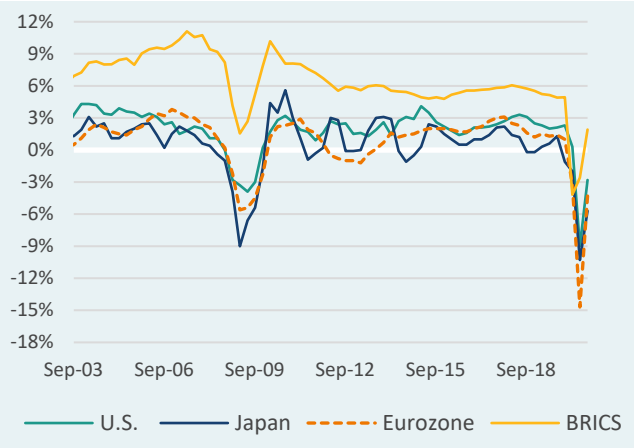
NOTE: India lacks reliable government unemployment data. Unemployment rate shown above is estimated from the Centre for Monitoring Indian Economy

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.

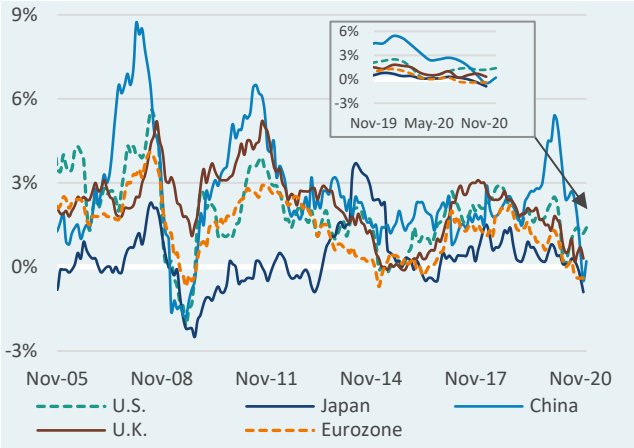
Unemployment in the Eurozone has fallen slightly to 8.3% from a high of 8.7% in July. Governments around the world have taken different approaches to supporting workers. One approach, as taken by the U.S., was to provide greater financial support to workers who had lost their jobs. Another approach, 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)



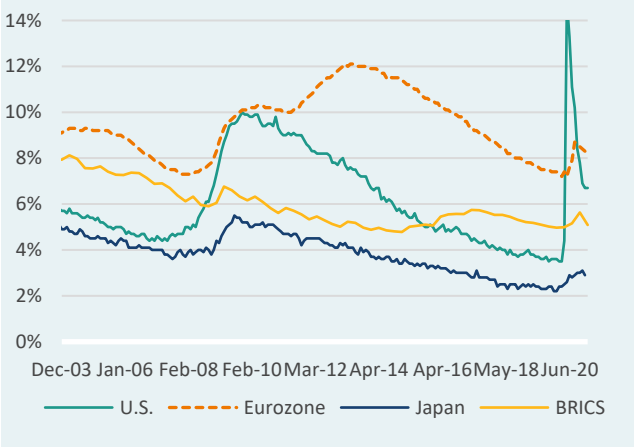
Source: Bloomberg, as of 9/30/20

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.

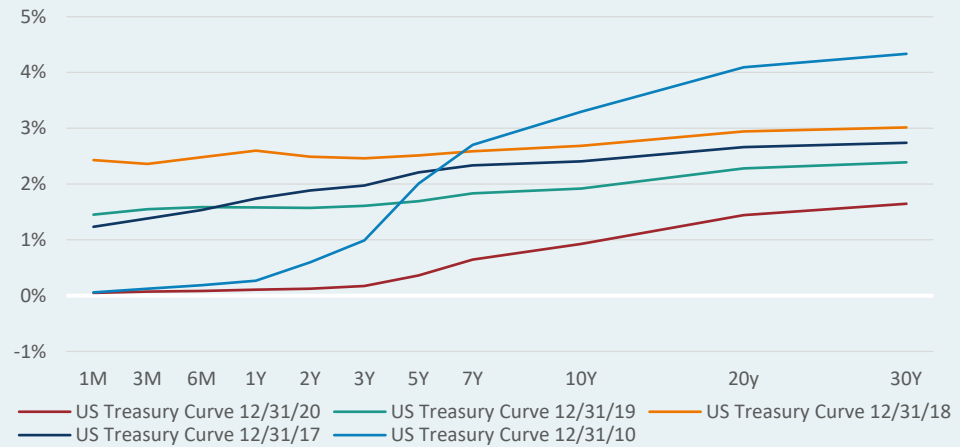
— Joe Biden nominated Janet Yellen, Jerome Powell's predecessor, as U.S. Treasury Secretary. Throughout the pandemic, central bankers have been calling for further coordination of fiscal and monetary action, and Yellen's nomination could represent the next step down that path.

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%

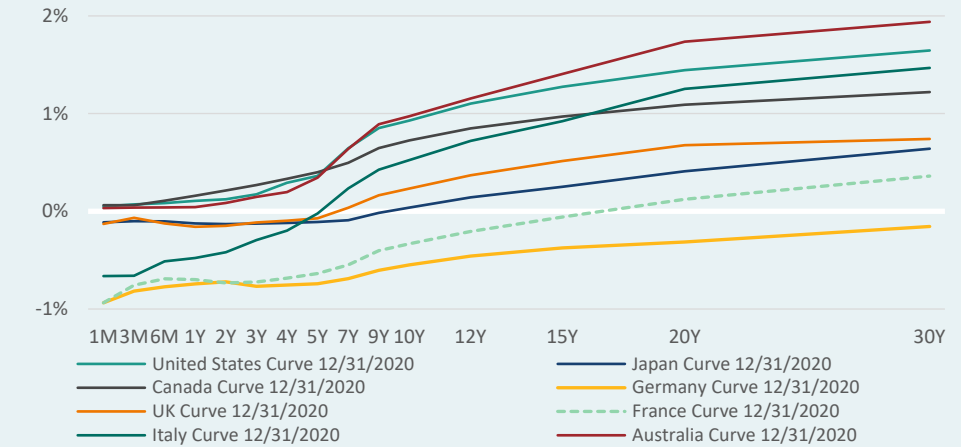
Source: Bloomberg, as of 12/31/20

Yield environment

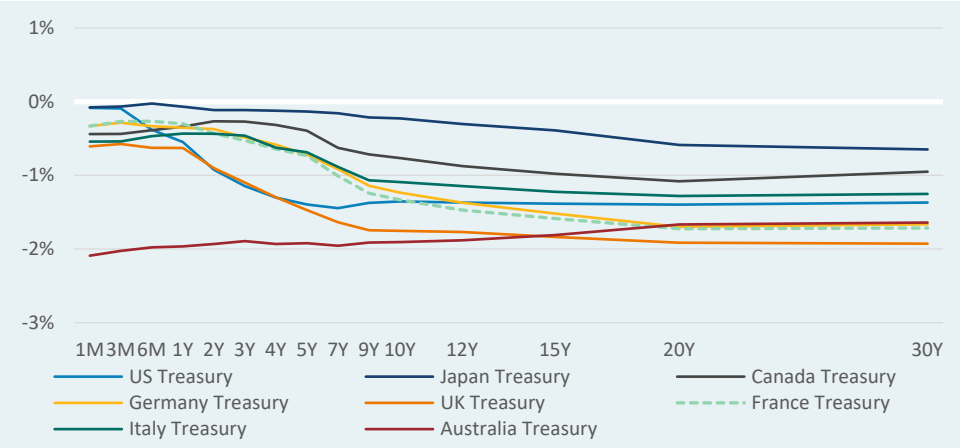
U.S. YIELD CURVE



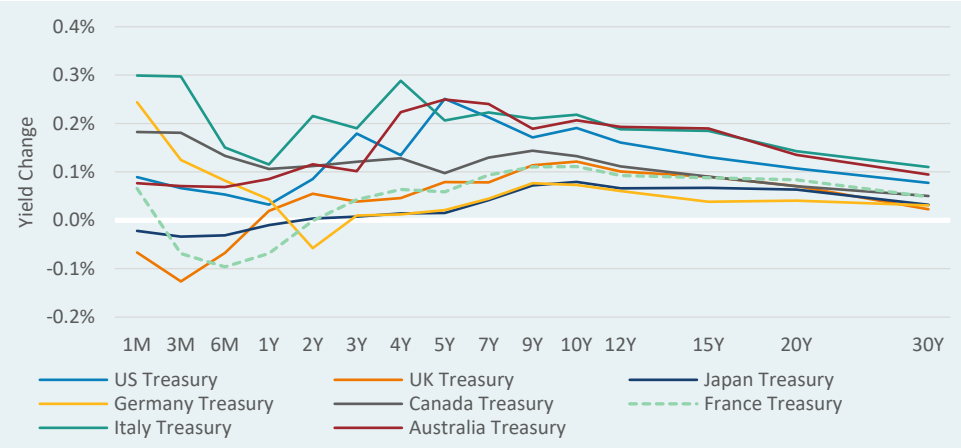
GLOBAL GOVERNMENT YIELD CURVES



YIELD CURVE CHANGES OVER LAST FIVE YEARS



IMPLIED CHANGES OVER NEXT YEAR



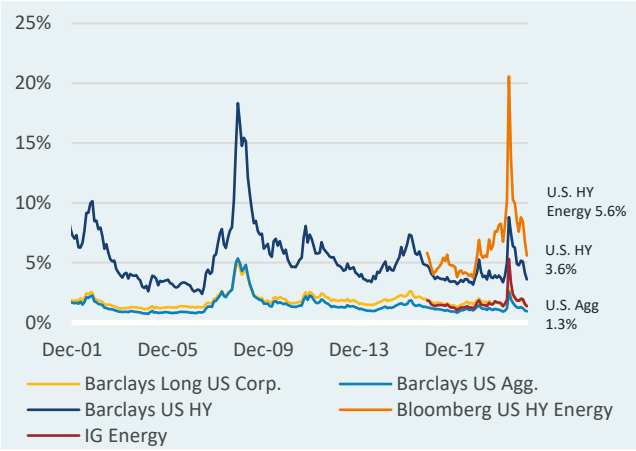
Source: Bloomberg, as of 12/31/20

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.

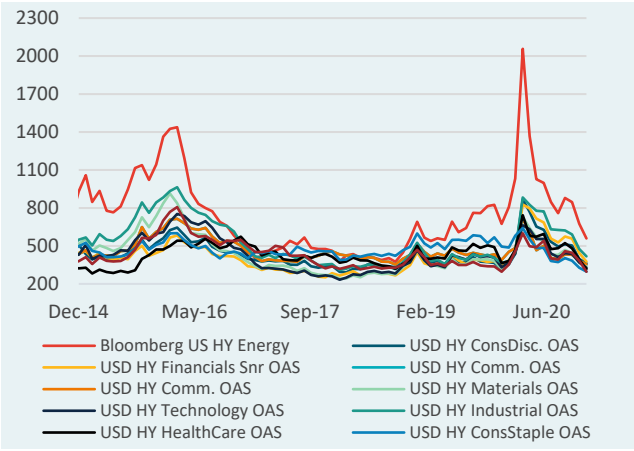
In the fourth quarter, high yield bonds returned 6.5%, outperforming bank loans (+3.6%) and investment grade credit (+2.8%). Positive vaccine news and conclusion of the presidential election led to strong risk-on sentiment during the quarter, driving longer duration and lower quality bonds to outperform 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

	Credit Spread (OAS)	
Market	**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

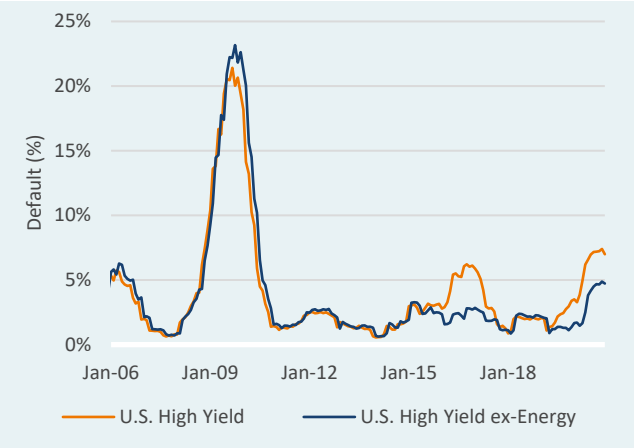
A total of 88 companies defaulted in 2020, representing $130 billion. This activity was led by the energy, telecom, and retail sectors. The $130 billion in defaults in 2020 ranked second only to the $185 billion experienced in 2009.

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.

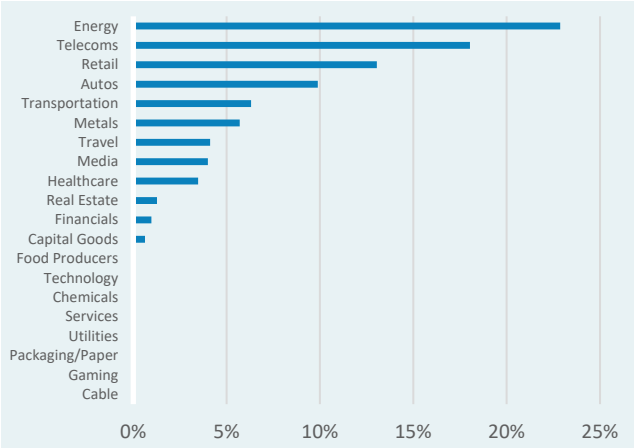
Investment grade issuance for 2020 totaled $1.8 trillion, which was 40% higher than the prior record achieved in 2017. The fourth quarter was the slowest of the year with $215 billion in new issues—a level that was in line with the four-year average

HY DEFAULT RATE (ROLLING 1-YEAR)



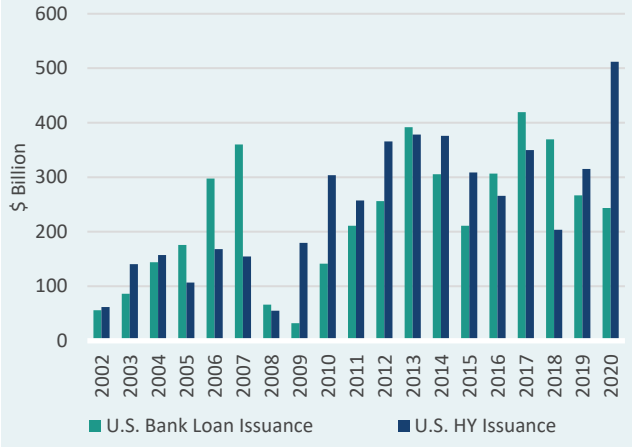
Source: BofA Merrill Lynch, as of 12/31/20

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.

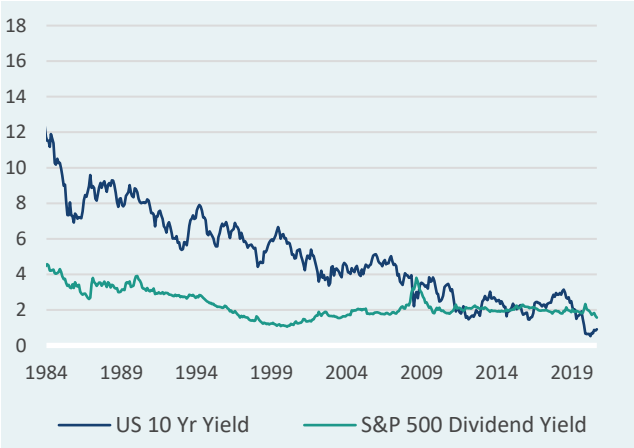
Within the index, a sizable rotation occurred in Q4 as certain sectors that had been beaten-down during the pandemic performed strongly. Rising energy prices boosted the Energy sector, while higher interest rates improved the outlook for Financials. It remains to be seen whether certain consumer habits 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

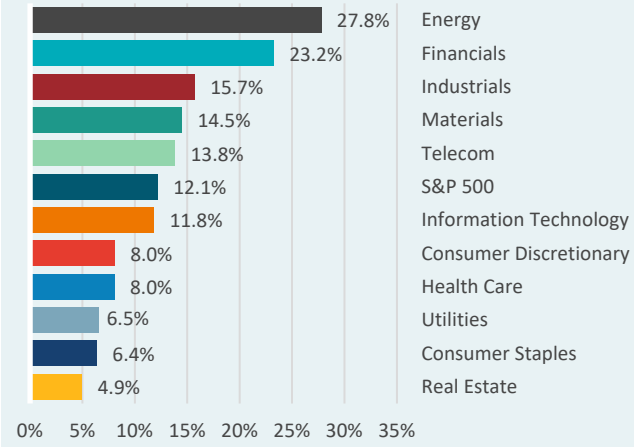
Source: Standard & Poor's, as of 12/31/20

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

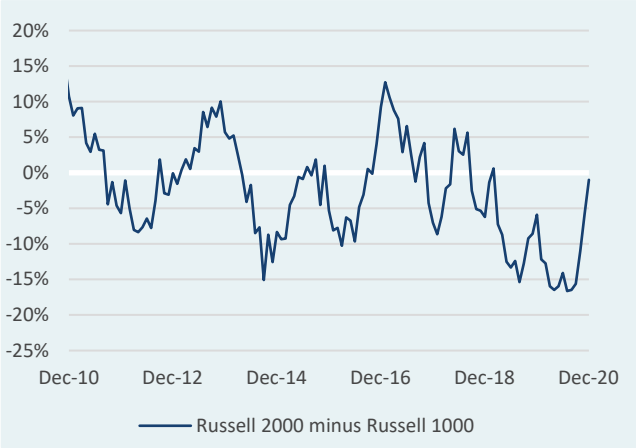
Domestic equity size & style

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.

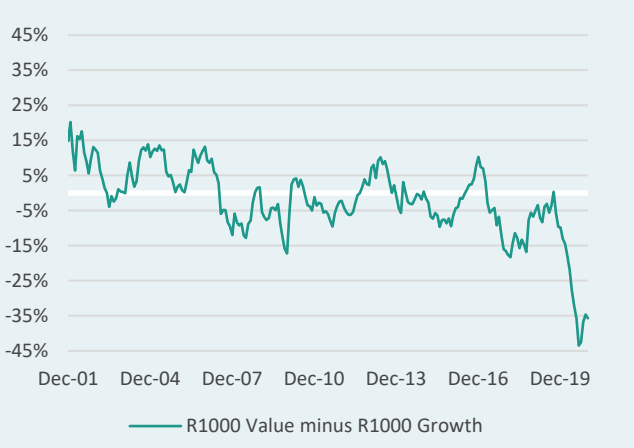
Sector performance has fueled dramatic negative performance of the value premium

SMALL CAP VS LARGE CAP (YOY)



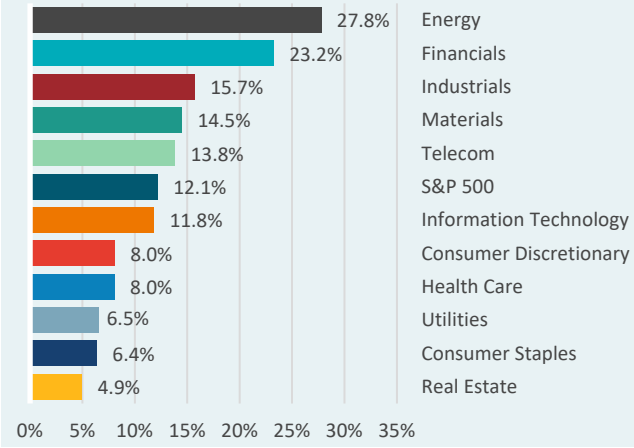
Source: FTSE, as of 12/31/20

VALUE VS GROWTH (YOY)



Source: FTSE, as of 12/31/20

Q4 SECTOR PERFORMANCE



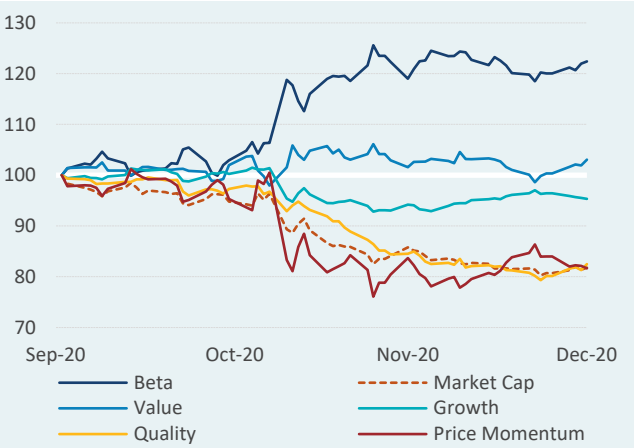
Source: Standard & Poor's, as of 12/31/20

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.

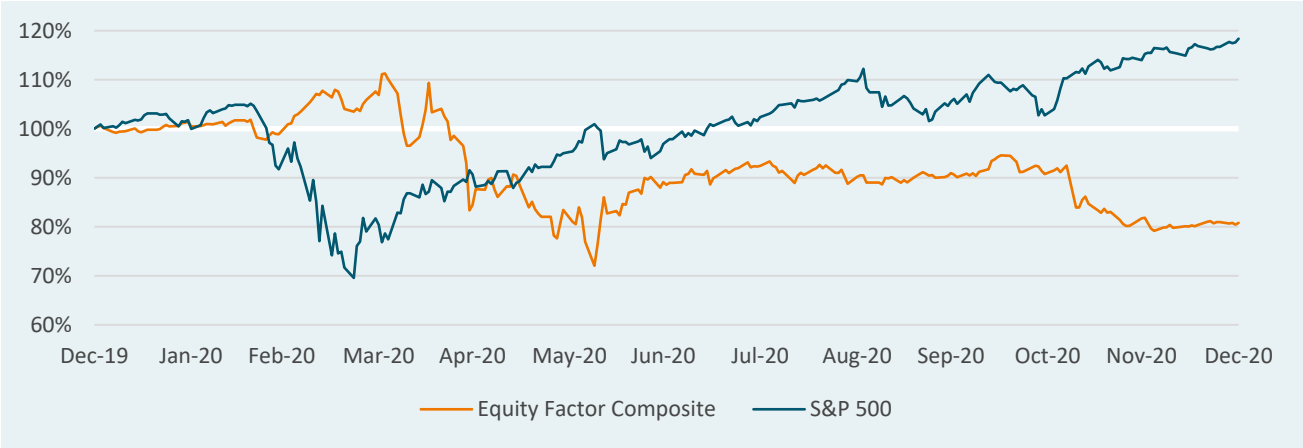
Equity factors had a very difficult year in 2020 and subsequently trailed the equity market by a very wide margin. Quality factors provided some protection during the periods of market turmoil. However other market neutral risk premia strategies did not enjoy consistent recoveries, particularly as market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

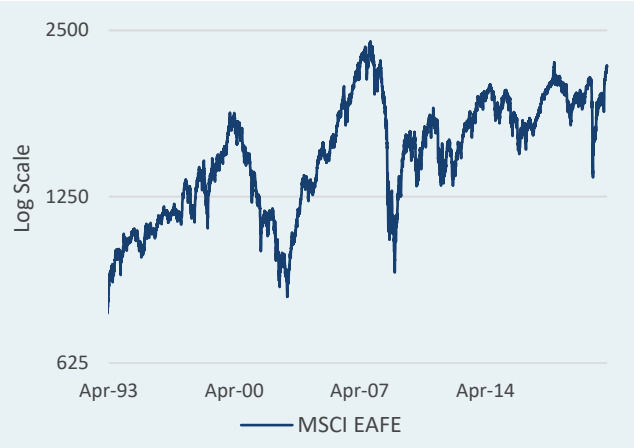
International developed equity

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.

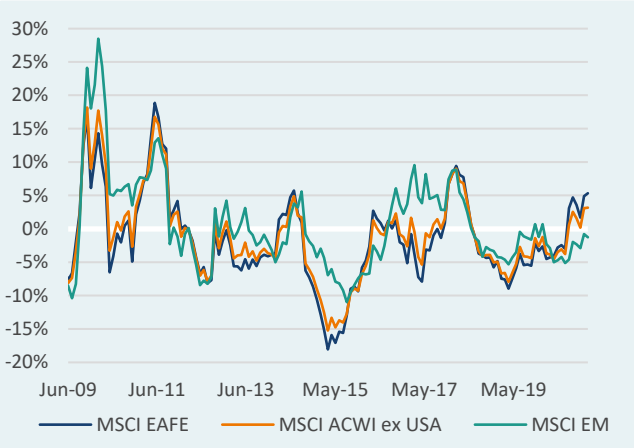
European equities (+17.2%) outperformed Hong Kong (+15.5%) and Japanese (+15.3%) equities in Q4, supported by strong performance in Austria (+47.3%) and Spain (+27.7%). In Oceania, Australia posted solid returns (+22.9%), which were bolstered by a firmer Australian dollar.

INTERNATIONAL DEVELOPED EQUITIES



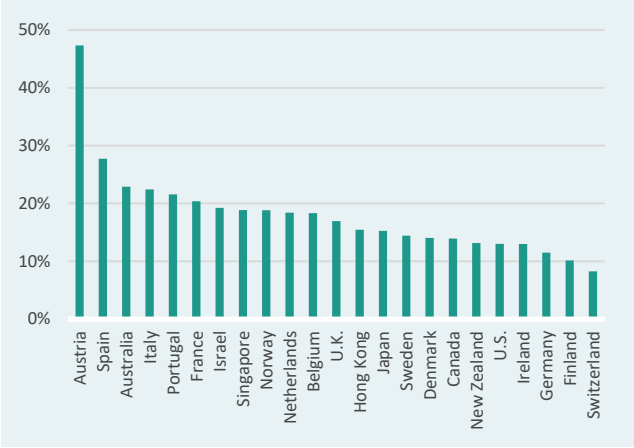
Source: MSCI, as of 12/31/20

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.

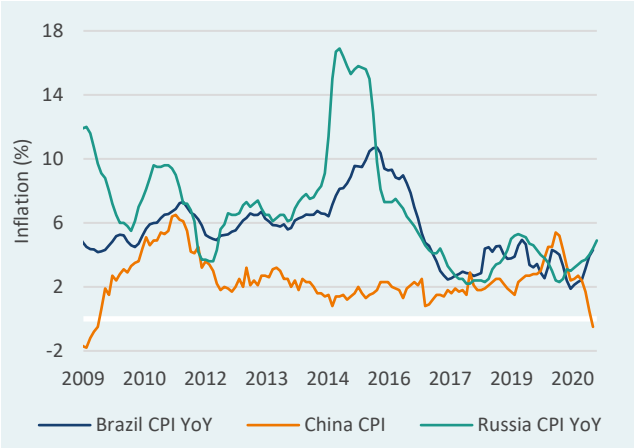
The pandemic placed downward pressure on inflation earlier in 2020. Since then, the rate of price movement has recovered in many markets. China appears to be an outlier, as inflation recently dipped below zero. This move was fueled by falling pork prices, which had been moving higher in recent years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

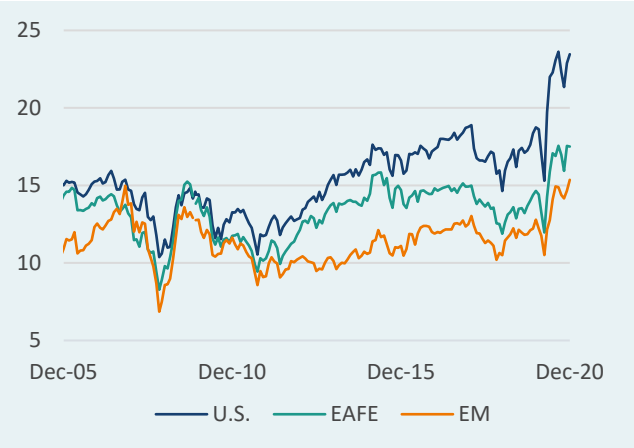
Equity valuations

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.

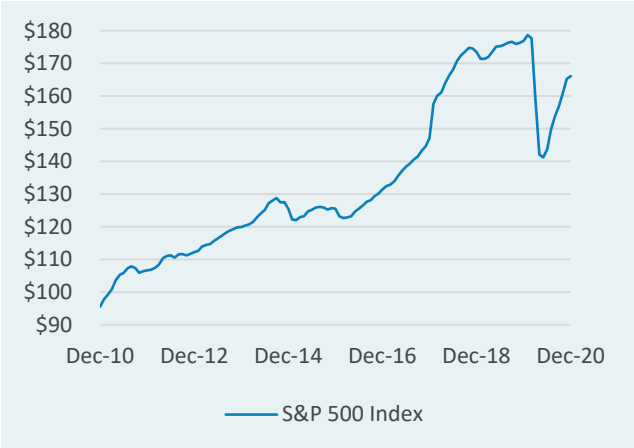
On a trailing-earnings basis, international developed equities appear most expensive as the second series of lockdowns which swept over the continent toward the end of the year have severely impacted earnings. The question in Europe, however, is largely the same one we are grappling with in the U.S.: 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



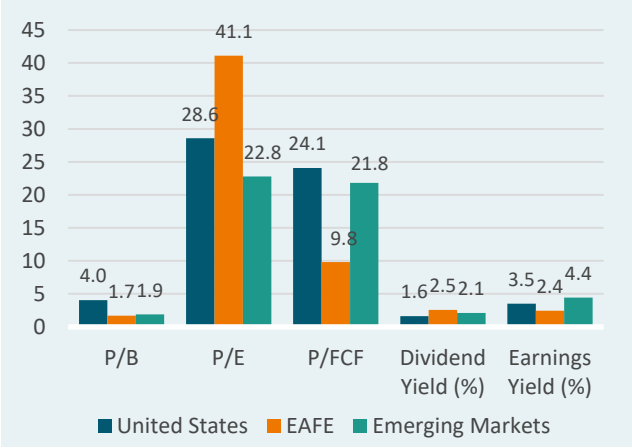
Source: MSCI, 12m forward P/E, as of 12/31/20

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

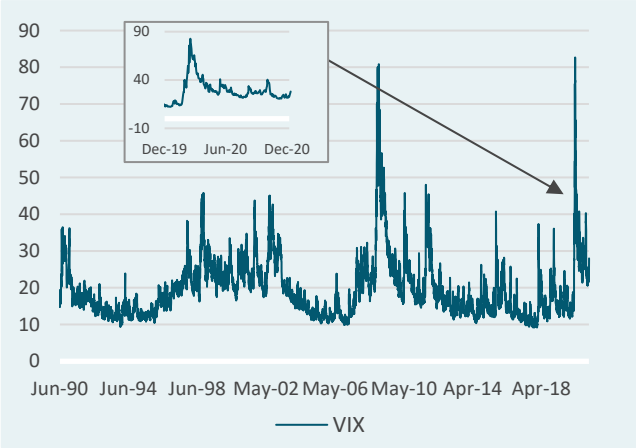
Equity volatility

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.

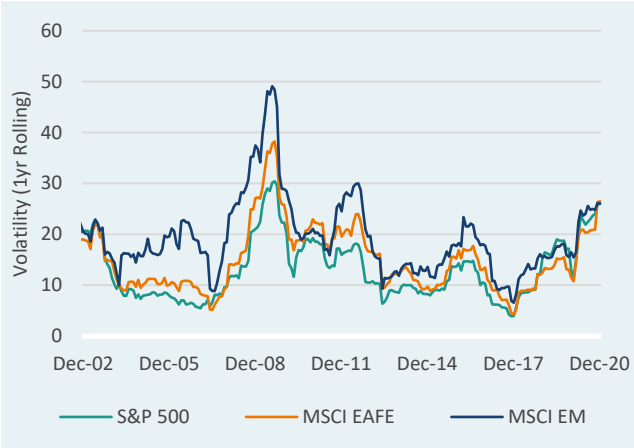
Since implied and realized volatility spiked in the first quarter, options-implied volatility has receded significantly, back toward more normal levels. As equity markets climbed to new highs in the final few months of the year, the U.S. implied volatility curve began to steepen. During the fourth quarter, 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)



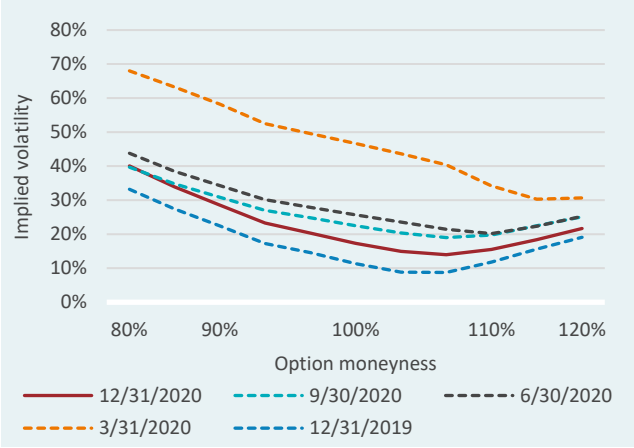
Source: Cboe, as of 12/31/20

REALIZED VOLATILITY



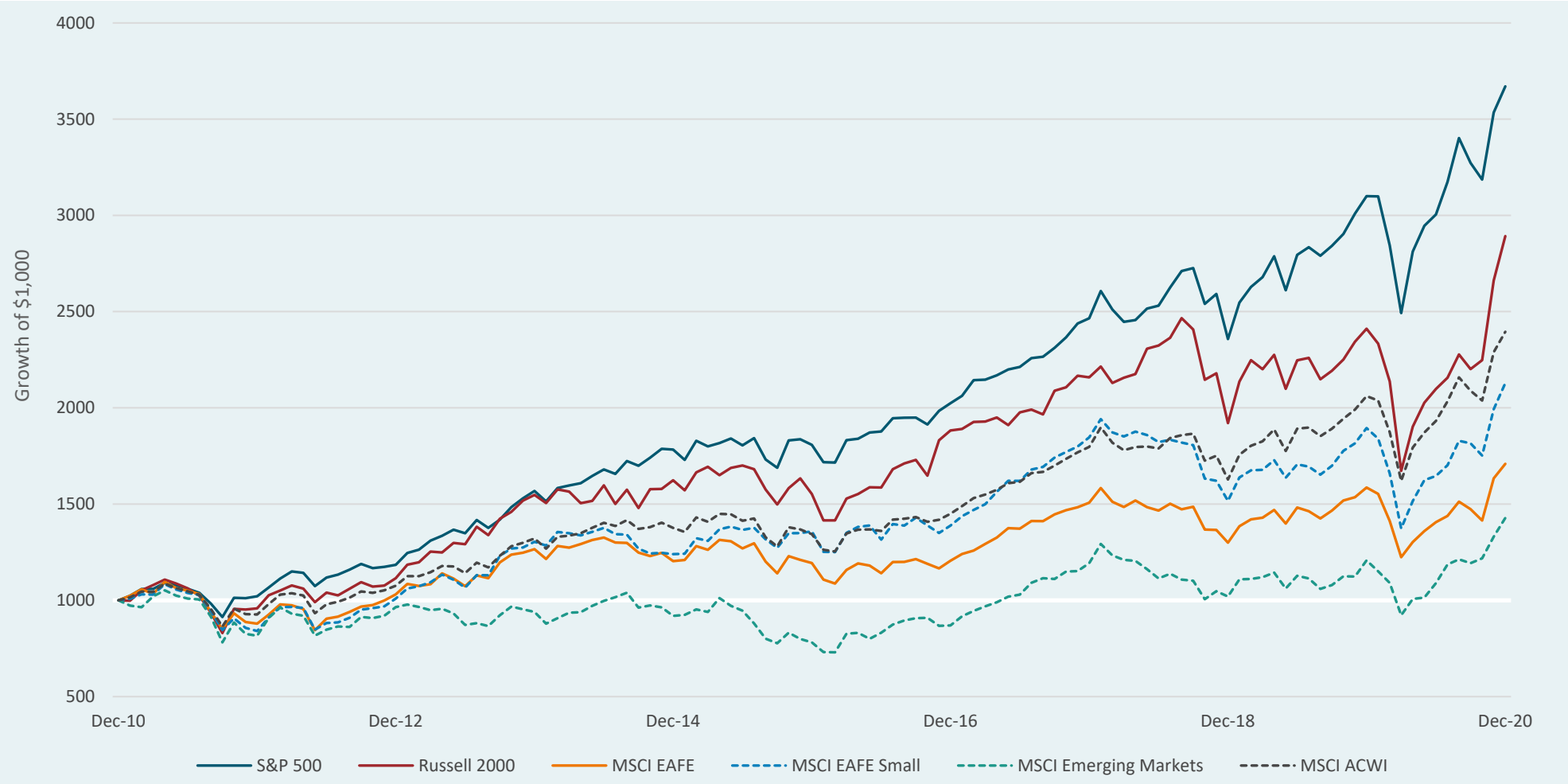
Source: Standard & Poor's, MSCI, as of 12/31/20

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

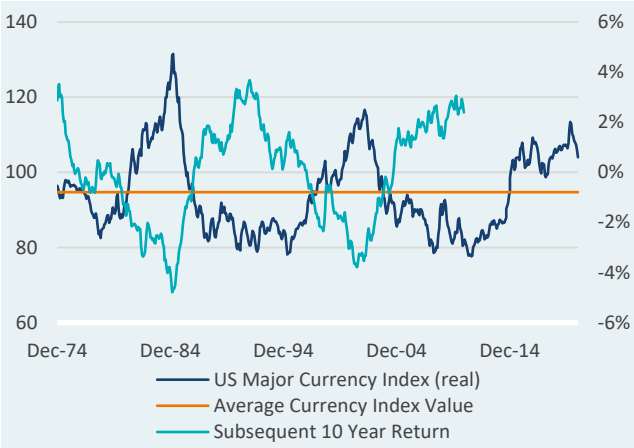
Weakness in the U.S. dollar relative to both emerging market and developed market currencies remained a theme in the fourth quarter, as the Bloomberg Dollar Spot Index fell to a two and a half year low. Analysts attributed some of the weakness of the greenback to lower relative real yields in the United 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

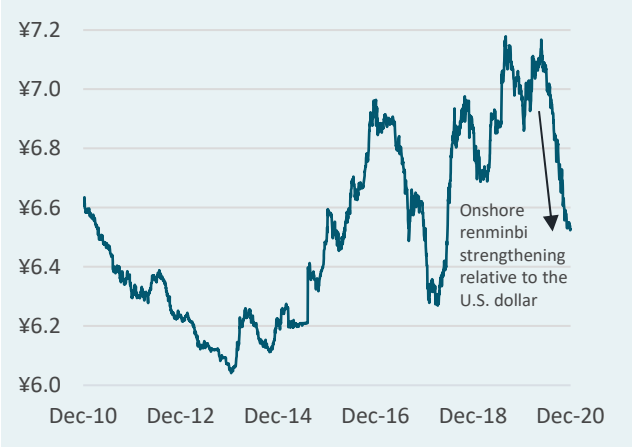
Source: Bloomberg, as of 12/31/20

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

BEST

WORST

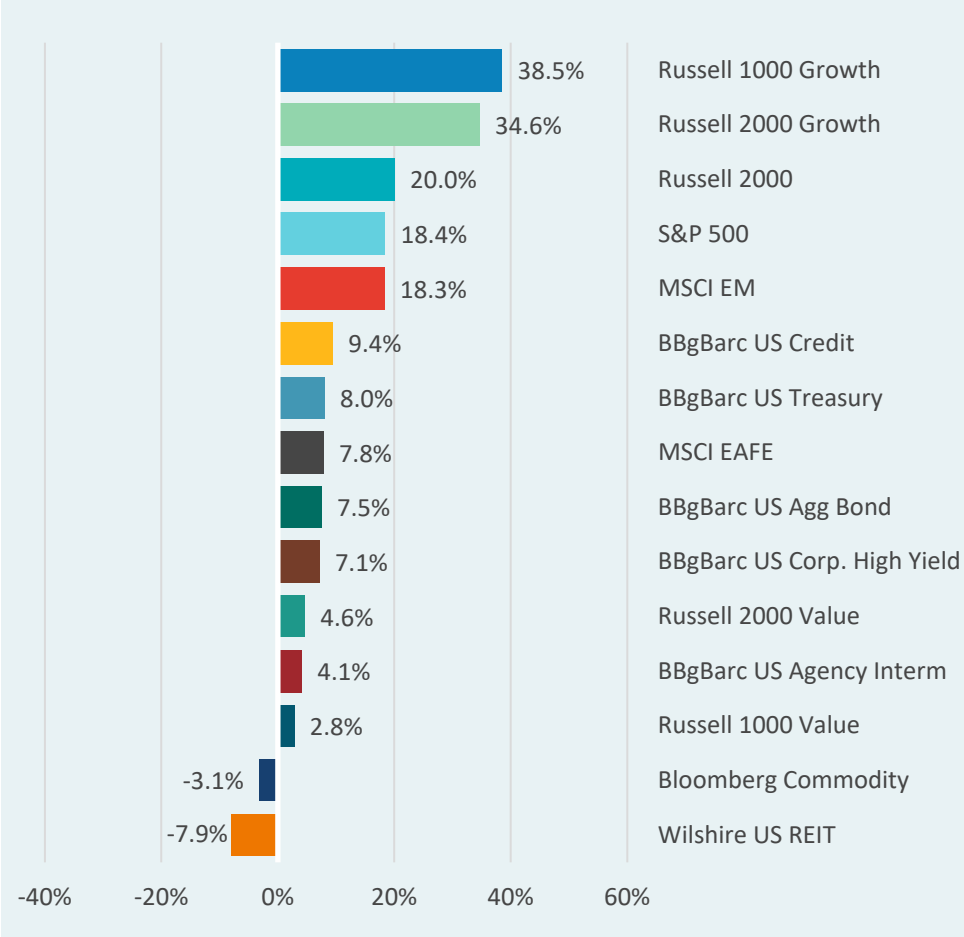
	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	5-Year	10-Year
Large Cap Growth	38.7	66.4	31.8	14.0	25.9	56.3	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	13.3	31.7	37.3	6.7	36.4	38.5	21.0	17.2
Small Cap Growth	27.0	43.1	22.8	8.4	10.3	48.5	22.2	21.4	26.9	16.2	1.4	37.2	26.9	7.8	18.1	38.8	13.2	5.7	21.3	30.2	1.9	31.4	34.6	16.4	14.0
Large Cap Equity	20.3	33.2	12.2	7.3	6.7	47.3	20.7	20.1	23.5	15.8	-6.5	34.5	24.5	2.6	17.9	34.5	13.0	0.9	17.3	25.0	0.0	28.5	21.0	15.6	13.5
Small Cap Equity	19.3	27.3	11.6	3.3	1.6	46.0	18.3	14.0	22.2	11.8	-21.4	32.5	19.2	1.5	17.5	33.5	11.8	0.6	12.1	22.2	-1.5	26.5	20.0	13.3	11.2
Emerging Markets Equity	16.2	26.5	7.0	2.8	1.0	39.2	16.5	7.5	18.4	11.6	-25.9	28.4	16.8	0.4	16.4	33.1	6.0	0.0	11.8	21.7	-3.5	25.5	18.3	12.8	10.5
60/40 Global Portfolio	8.7	21.3	4.1	-2.4	-6.0	29.9	14.3	6.3	15.5	10.3	-33.8	23.3	16.1	-2.1	15.3	23.3	4.9	-0.8	11.2	14.6	-6.0	22.4	14.0	9.7	8.9
Hedge Funds of Funds	15.6	24.3	6.0	2.5	-5.9	30.0	14.5	7.1	16.6	10.9	-28.9	27.2	16.7	0.1	16.3	32.5	5.6	-0.4	11.3	17.1	-4.8	22.0	10.3	9.7	8.7
International Equity	4.9	20.9	-3.0	-5.6	-11.4	29.7	12.9	5.3	15.1	7.0	-35.6	20.6	15.5	-2.9	14.6	12.1	4.2	-1.4	8.0	13.7	-8.3	18.6	7.8	9.5	6.8
US Bonds	1.2	13.2	-7.3	-9.1	-15.5	25.2	11.4	4.7	13.3	7.0	-36.8	19.7	13.1	-4.2	11.5	11.0	3.4	-2.5	7.1	7.8	-9.3	18.4	7.5	7.4	5.5
Small Cap Value	-2.5	11.4	-7.8	-9.2	-15.7	23.9	9.1	4.6	10.4	5.8	-37.6	18.9	10.2	-5.5	10.5	9.0	2.8	-3.8	5.7	7.7	-11.0	8.7	4.6	5.7	3.8
Large Cap Value	-5.1	7.3	-14.0	-12.4	-20.5	11.6	6.9	4.6	9.1	4.4	-38.4	11.5	8.2	-5.7	4.8	0.1	0.0	-4.4	2.6	7.0	-11.2	7.8	2.8	4.4	3.6
Real Estate	-6.5	4.8	-22.4	-19.5	-21.7	9.0	6.3	4.2	4.8	-0.2	-38.5	5.9	6.5	-11.7	4.2	-2.0	-1.8	-7.5	1.0	3.5	-12.9	7.7	0.5	4.4	3.3
Cash	-25.3	-0.8	-22.4	-20.4	-27.9	4.1	4.3	3.2	4.3	-1.6	-43.1	0.2	5.7	-13.3	0.1	-2.3	-4.5	-14.9	0.5	1.7	-13.8	6.4	0.5	1.1	0.6
Commodities	-27.0	-1.5	-30.6	-21.2	-30.3	1.0	1.4	2.4	2.1	-9.8	-53.2	-16.9	0.1	-18.2	-1.1	-9.5	-17.0	-24.7	0.3	0.9	-14.6	2.1	-3.1	1.0	-6.5

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

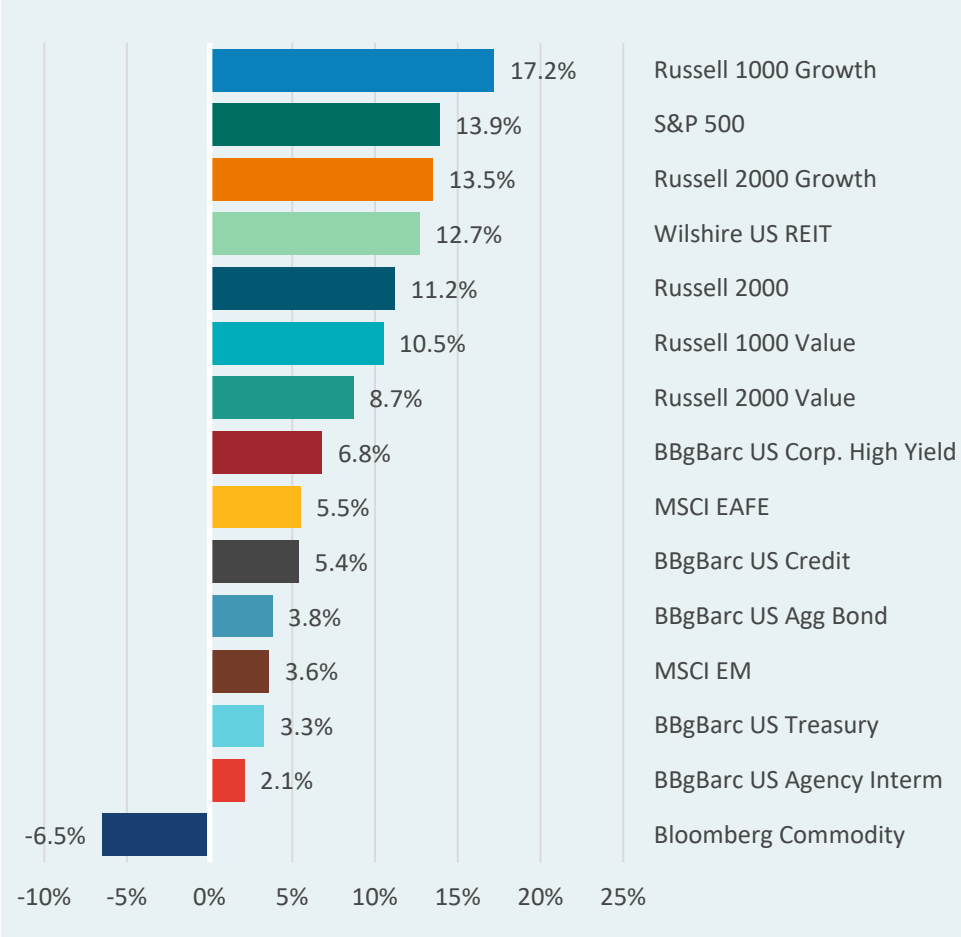
Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BBgBarc US Aggregate, T-Bill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

Major asset class returns

ONE YEAR ENDING DECEMBER



TEN YEARS ENDING DECEMBER



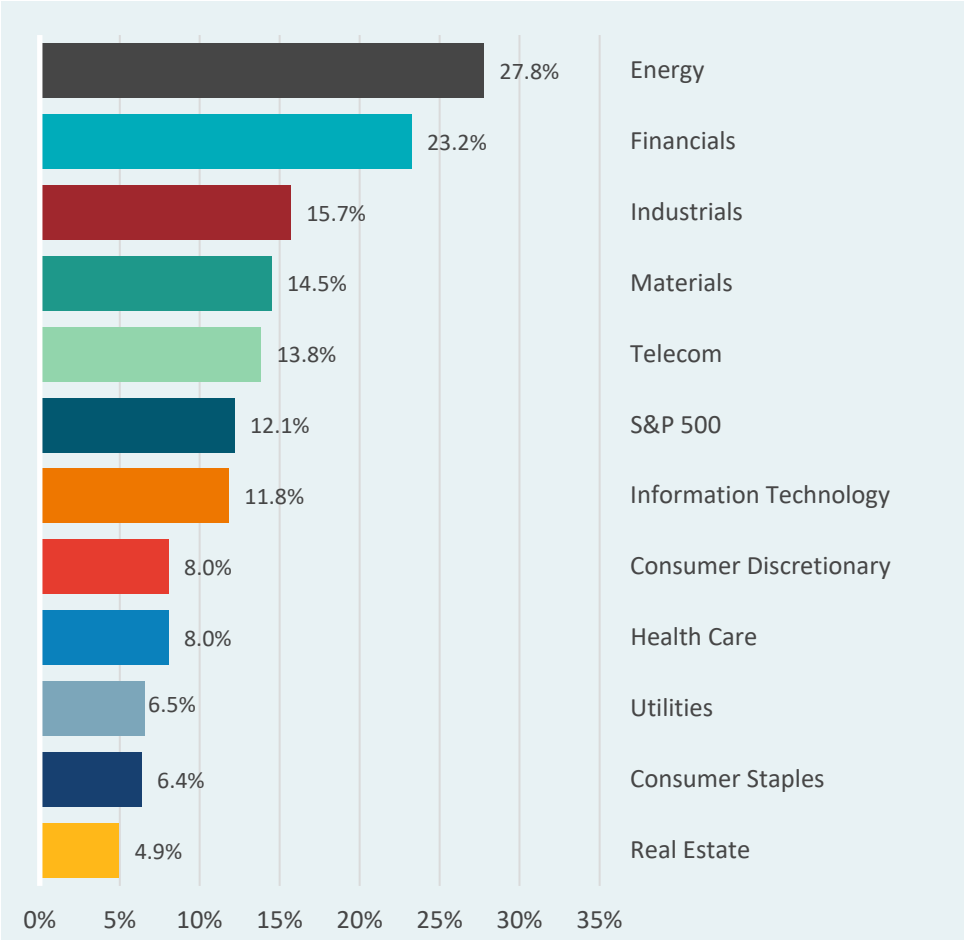
**Only publicly traded asset performance is shown here. Performance of private assets is typically released with a 3- to 6-month delay.*

Source: Morningstar, as of 12/31/20

Source: Morningstar, as of 12/31/20

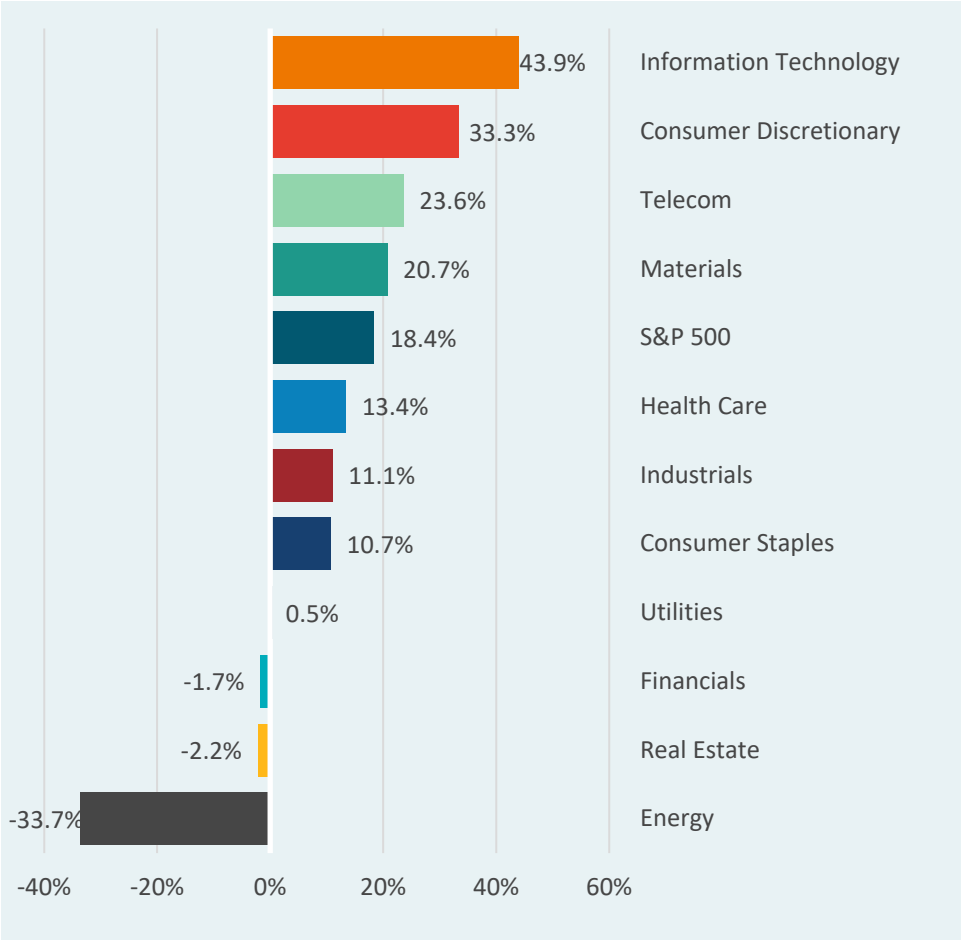
S&P 500 sector returns

Q4 2020



Source: Morningstar, as of 12/31/20

ONE YEAR ENDING DECEMBER

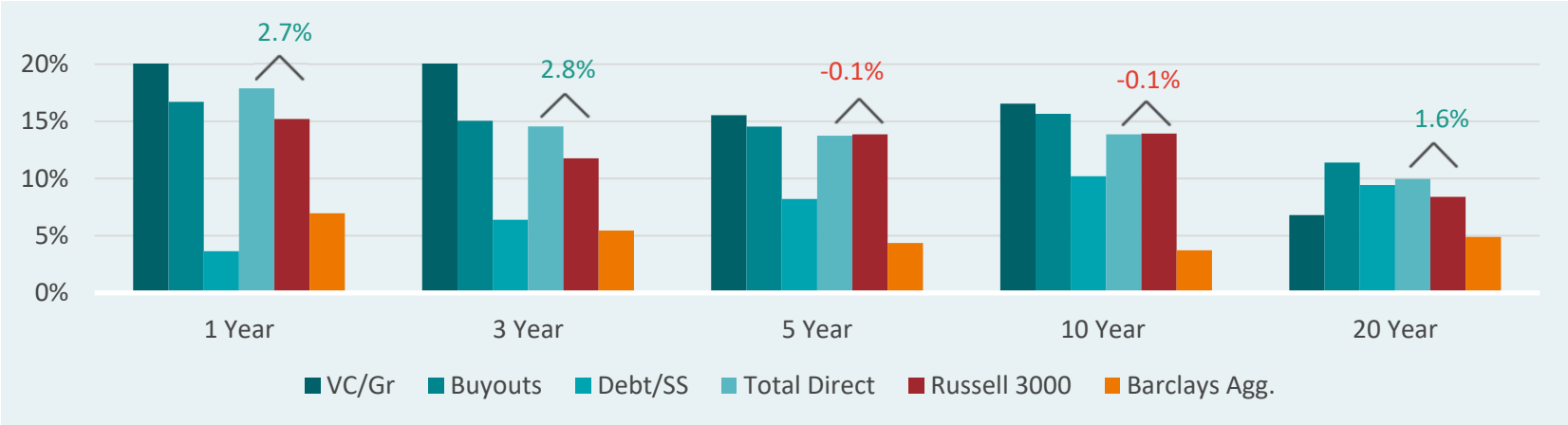


Source: Morningstar, as of 12/31/20

Private equity vs. public performance

As of 9/30/2020

DIRECT PRIVATE EQUITY FUND INVESTMENTS



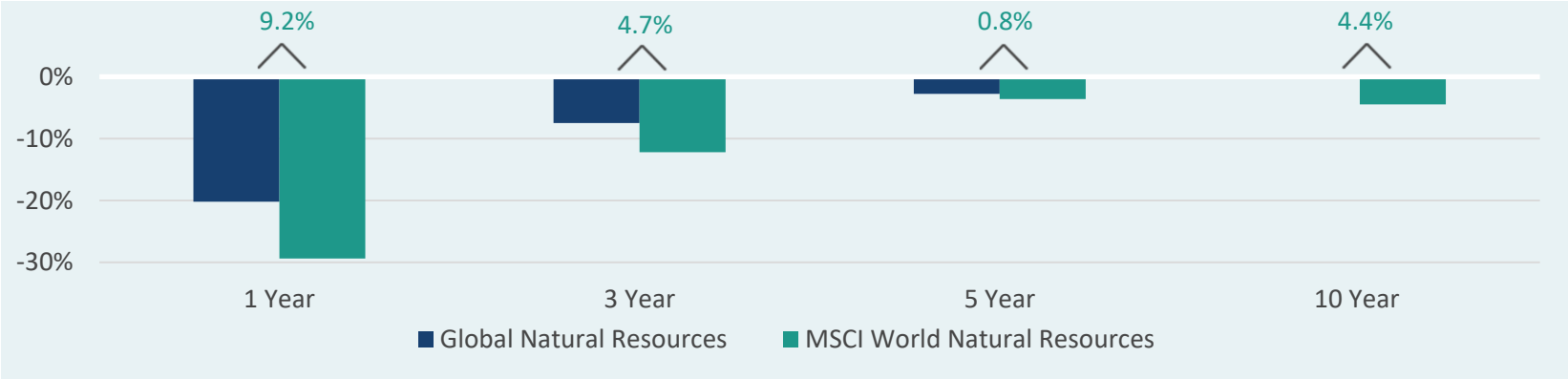
Direct private equity fund investments outperformed comparable public equites across most time periods

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

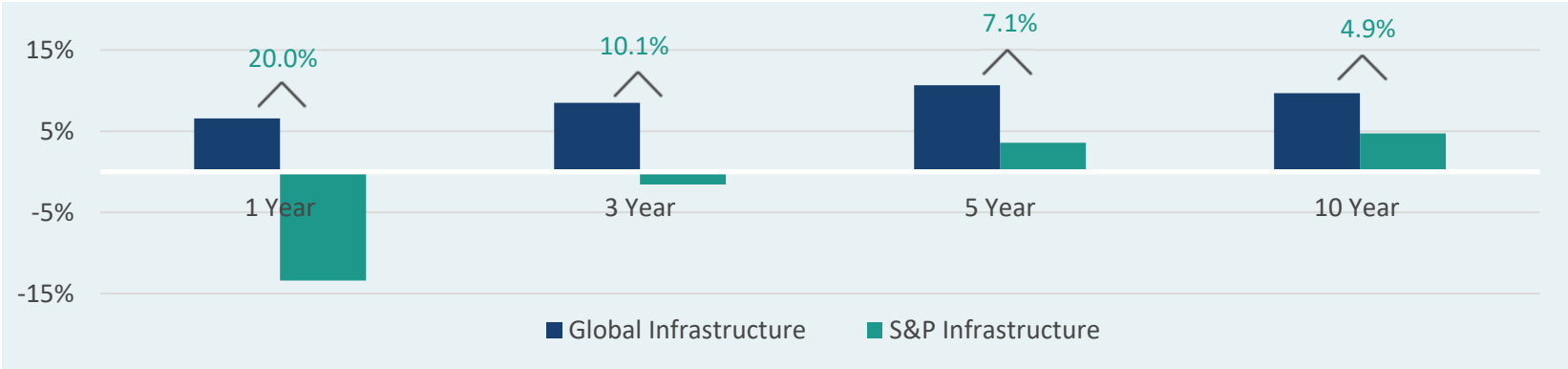
As of 9/30/2020

GLOBAL NATURAL RESOURCES FUNDS



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

GLOBAL INFRASTRUCTURE FUNDS



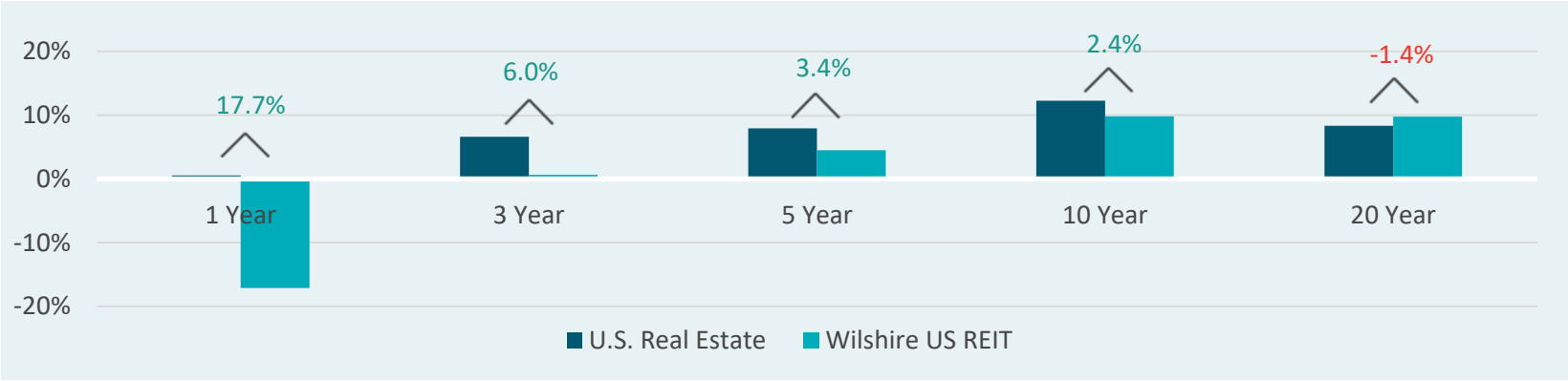
Infrastructure funds outperformed the S&P Infra. Index across all periods

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

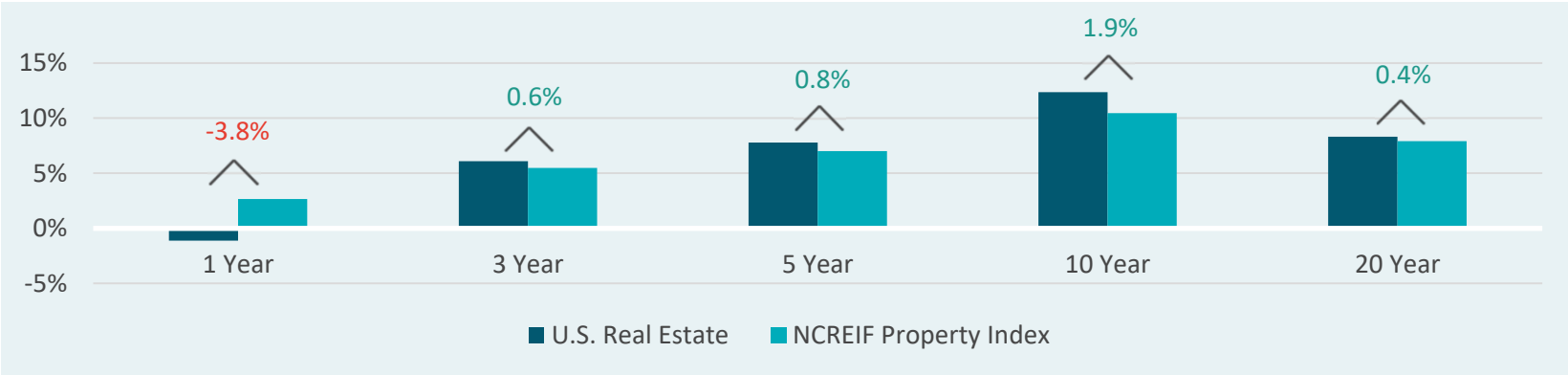
As of 9/30/2020

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

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
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

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
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.langerresearch.com)*

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

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

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

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San Luis Obispo County Pension Trust

Investment Performance Review

Period Ending: December 31, 2020

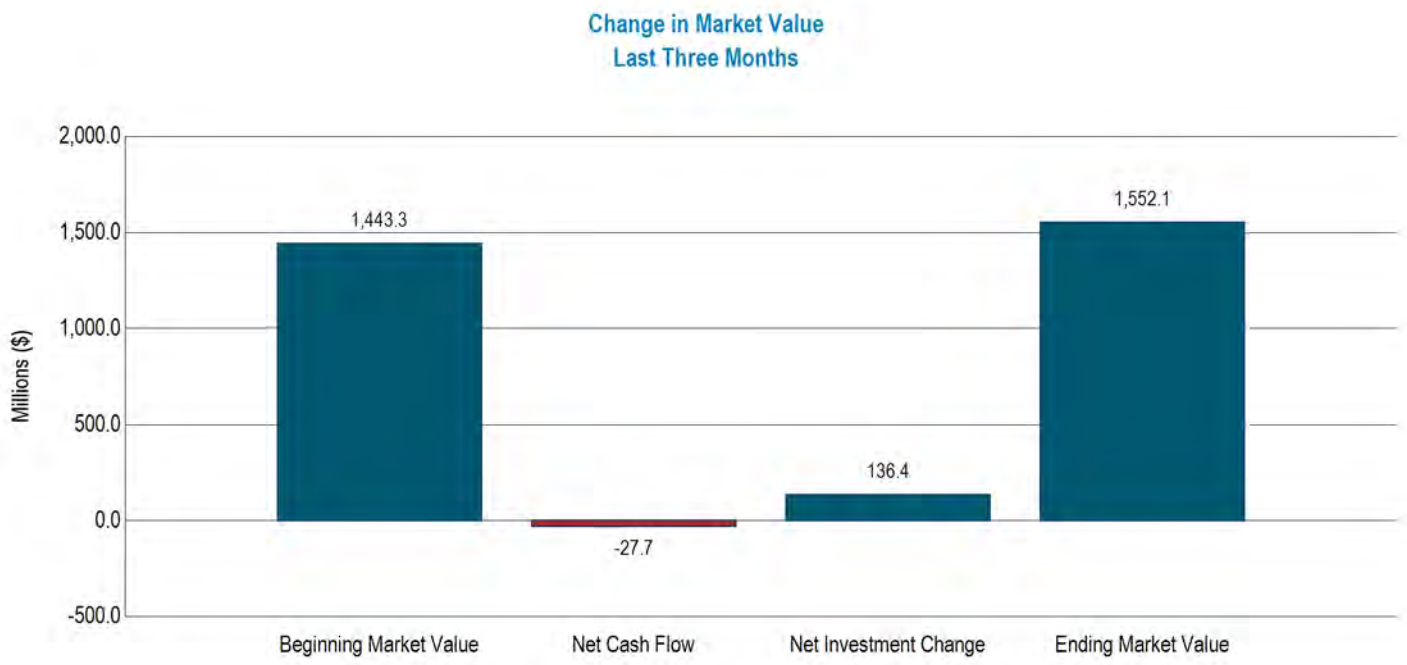
Verus

VERUSINVESTMENTS.COM

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

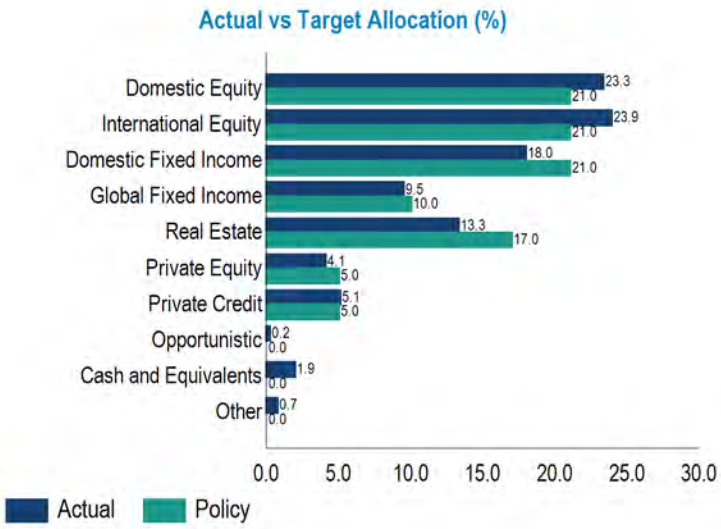
Portfolio Reconciliation

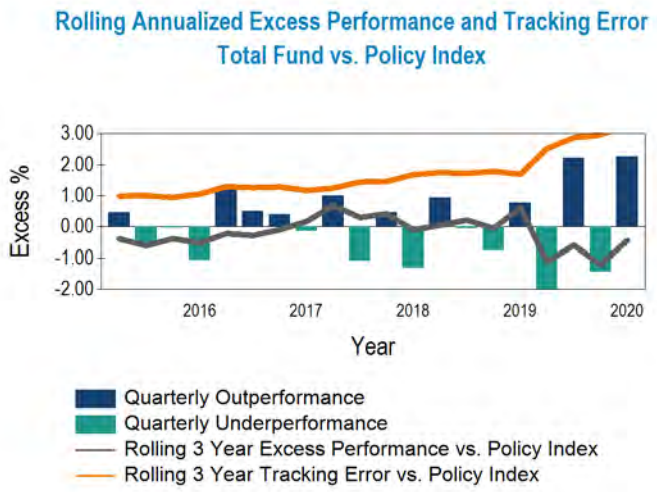
	Last Three Months	One Year
Beginning Market Value	$1,443,322,061	$1,446,514,955
Net Cash Flow	-$27,653,502	-$18,254,760
Net Investment Change	$136,417,158	$123,825,521
Ending Market Value	$1,552,085,716	$1,552,085,716



Contributions and withdrawals may include intra-account transfers between managers/funds.

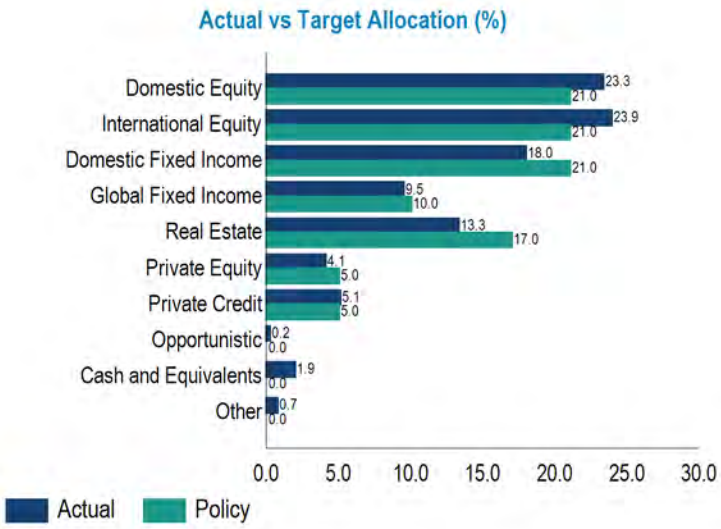
	QTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank
Total Fund	**9.6**	**66**	**8.9**	**92**	**7.1**	**89**	**8.6**	**89**
Policy Index	*7.4*	*95*	*10.0*	*85*	*7.5*	*81*	*8.7*	*87*
Total Domestic Equity	**15.6**	**47**	**13.7**	**91**	**11.7**	**86**	**14.5**	**47**
Russell 3000	*14.7*	*81*	*20.9*	*20*	*14.5*	*19*	*15.4*	*19*
Total International Equity	**20.8**	**7**	**19.4**	**12**	**10.9**	**5**	**12.1**	**12**
MSCI ACWI ex USA Gross	*17.1*	*56*	*11.1*	*69*	*5.4*	*58*	*9.4*	*65*
Total Domestic Fixed Income	**2.2**	**22**	**8.1**	**46**	**6.0**	**26**	**5.4**	**33**
BBgBarc US Aggregate TR	*0.7*	*68*	*7.5*	*57*	*5.3*	*52*	*4.4*	*57*
Total Global Fixed	**9.6**	**--**	**6.7**	**--**	**3.1**	**--**	**5.5**	**--**
FTSE World Govt Bond Index	*2.8*	*--*	*10.1*	*--*	*5.0*	*--*	*4.8*	*--*
Total Real Estate	**1.5**	**--**	**1.1**	**--**	**4.3**	**--**	**5.7**	**--**
NCREIF Property Index	*1.2*	*--*	*1.6*	*--*	*4.9*	*--*	*5.9*	*--*
Total Private Equity	**4.1**	**--**	**6.6**	**--**	**10.7**	**--**	**13.4**	**--**
Private Equity Benchmark	*4.1*	*--*	*--*	*--*	*--*	*--*	*--*	*--*
Total Private Credit	**0.3**	**--**	**-1.7**	**--**	**5.6**	**--**	**--**	**--**
Private Credit Benchmark	*0.3*	*--*	*--*	*--*	*--*	*--*	*--*	*--*
Total Cash	**0.5**	**--**	**1.9**	**--**	**1.9**	**--**	**1.4**	**--**
91 Day T-Bills	*0.0*	*--*	*0.5*	*--*	*1.5*	*--*	*1.1*	*--*
Total Opportunistic	**-0.9**	**--**	**-27.4**	**--**	**-4.1**	**--**	**1.1**	**--**
Russell 3000 + 3%	*15.5*	*--*	*24.5*	*--*	*17.9*	*--*	*18.9*	*--*

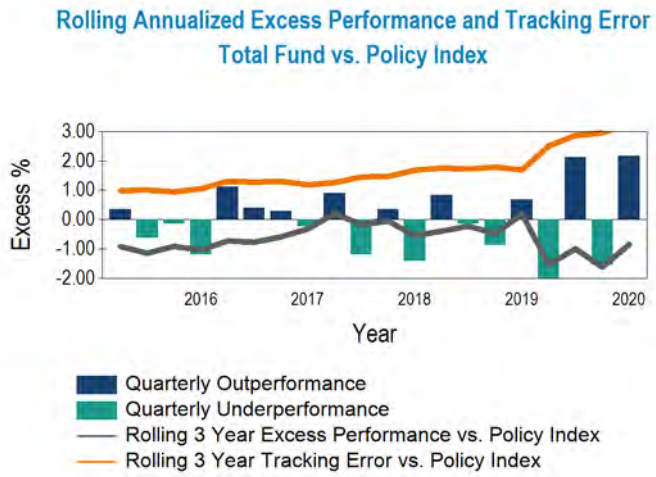




New Policy Index as of 10/1/2020: 21% Russell 3000, 21% MSCI ACWI ex-US (Gross), 31% BBgBarc U.S. Aggregate, 17% NCREIF Property Index, 1% Russell 3000,4 Private Equity Benchmark, 5% Private Credit Benchmark. Private Equity, Private Credit and Opportunistic composite returns are lagged by one quarter. All returns are (G) Gross of fees. Effective 1/1/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation.
(e) To avoid unnecessary and possibly misleading Tracking Error, the Total Fund Policy Benchmark uses actual time-weighted private markets returns applied to actual private market asset class weights rounded to the nearest whole percentage point. The difference in actual weight versus target is allocated to the private market investment's public market "equivalent" (e.g., private equity to public equity; private credit to public fixed income).

	QTD	Rank	1 Yr	Rank	3 Yrs	Rank	5 Yrs	Rank
Total Fund	**9.5**	**69**	**8.5**	**93**	**6.6**	**93**	**8.2**	**94**
Policy Index	*7.4*	*95*	*10.0*	*85*	*7.5*	*81*	*8.7*	*87*
Total Domestic Equity	**15.5**	**51**	**13.1**	**93**	**11.2**	**91**	**14.0**	**74**
Russell 3000	*14.7*	*81*	*20.9*	*20*	*14.5*	*19*	*15.4*	*19*
Total International Equity	**20.6**	**9**	**18.6**	**14**	**10.2**	**7**	**11.3**	**20**
MSCI ACWI ex USA Gross	*17.1*	*56*	*11.1*	*69*	*5.4*	*58*	*9.4*	*65*
Total Domestic Fixed Income	**2.1**	**23**	**7.7**	**50**	**5.7**	**41**	**5.0**	**45**
BBgBarc US Aggregate TR	*0.7*	*68*	*7.5*	*57*	*5.3*	*52*	*4.4*	*57*
Total Global Fixed	**9.4**	**--**	**6.0**	**--**	**2.6**	**--**	**5.0**	**--**
FTSE World Govt Bond Index	*2.8*	*--*	*10.1*	*--*	*5.0*	*--*	*4.8*	*--*
Total Real Estate	**1.5**	**--**	**1.1**	**--**	**4.3**	**--**	**5.5**	**--**
NCREIF Property Index	*1.2*	*--*	*1.6*	*--*	*4.9*	*--*	*5.9*	*--*
Total Private Equity	**4.1**	**--**	**6.6**	**--**	**10.7**	**--**	**13.0**	**--**
Private Equity Benchmark	*4.1*	*--*	*--*	*--*	*--*	*--*	*--*	*--*
Total Private Credit	**0.3**	**--**	**-1.7**	**--**	**5.6**	**--**	**--**	**--**
Private Credit Benchmark	*0.3*	*--*	*--*	*--*	*--*	*--*	*--*	*--*
Total Cash	**0.5**	**--**	**1.9**	**--**	**1.9**	**--**	**1.4**	**--**
91 Day T-Bills	*0.0*	*--*	*0.5*	*--*	*1.5*	*--*	*1.1*	*--*
Total Opportunistic	**-0.9**	**--**	**-27.4**	**--**	**-4.1**	**--**	**0.8**	**--**
Russell 3000 + 3%	*15.5*	*--*	*24.5*	*--*	*17.9*	*--*	*18.9*	*--*





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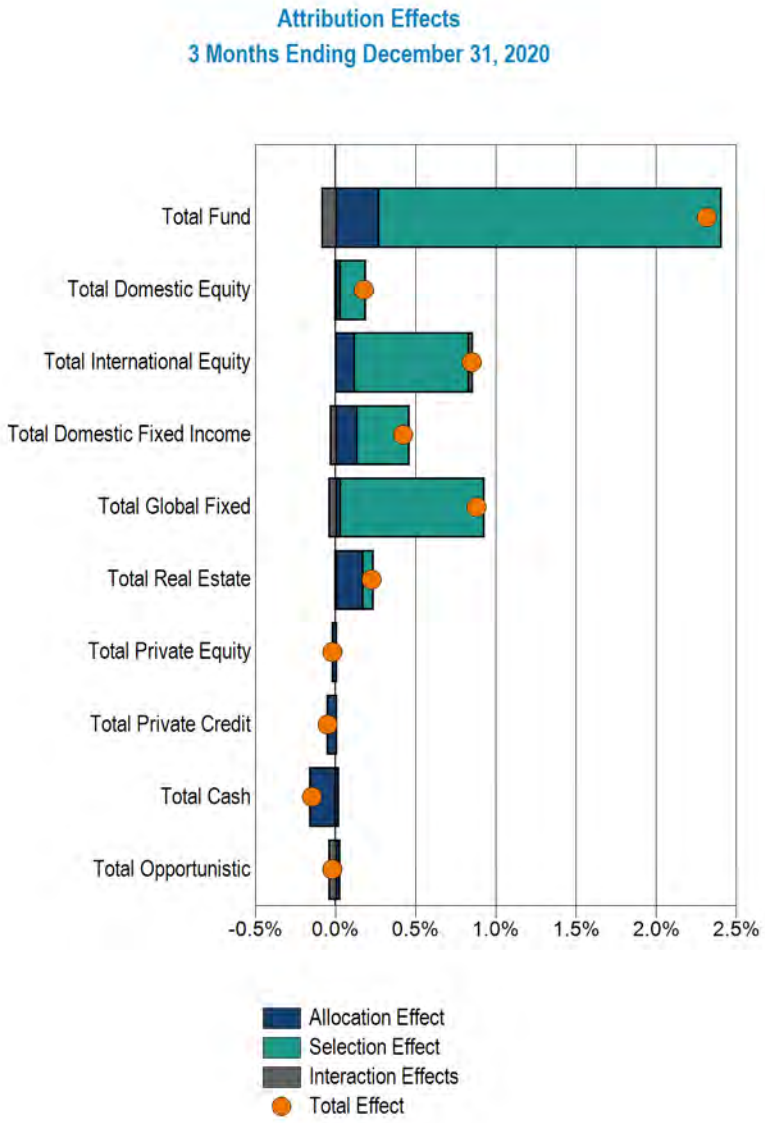
(e) To avoid unnecessary and possibly misleading Tracking Error, the Total Fund Policy Benchmark uses actual time-weighted private markets returns applied to actual private market asset class weights rounded to the nearest whole percentage point. The difference in actual weight versus target is allocated to the private market investment's public market "equivalent" (e.g., private equity to public equity; private credit to public fixed income).



Performance Attribution

	Last 3 Mo.
Wtd. Actual Return	9.67%
Wtd. Index Return *	7.36%
Excess Return	**2.32%**
Selection Effect	2.13%
Allocation Effect	0.27%
Interaction Effect	-0.08%

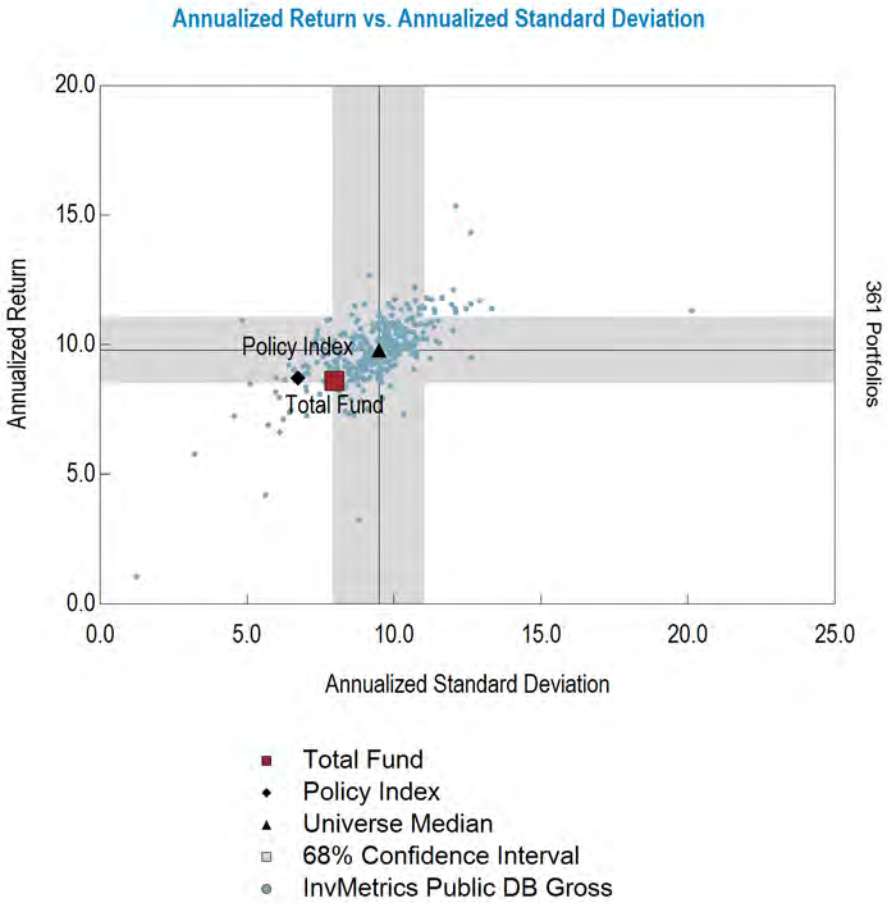
*Calculated from policy benchmark returns and policy weightings of each compenent of the policy benchmark.

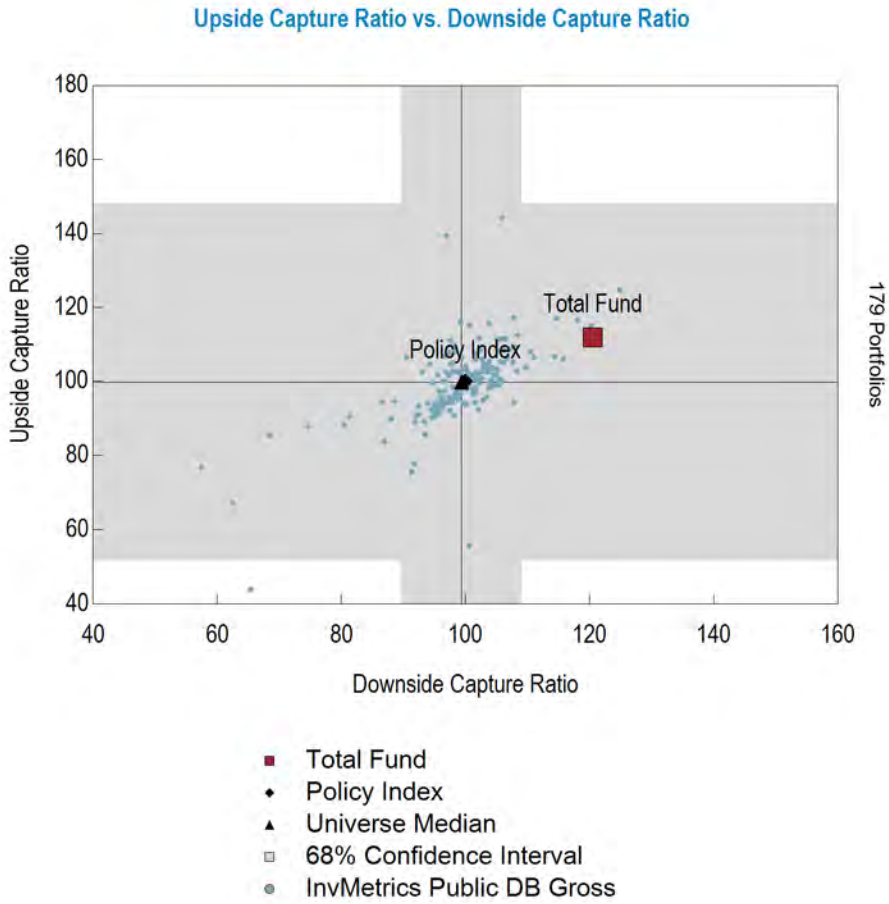
Attribution Summary
3 Months Ending December 31, 2020

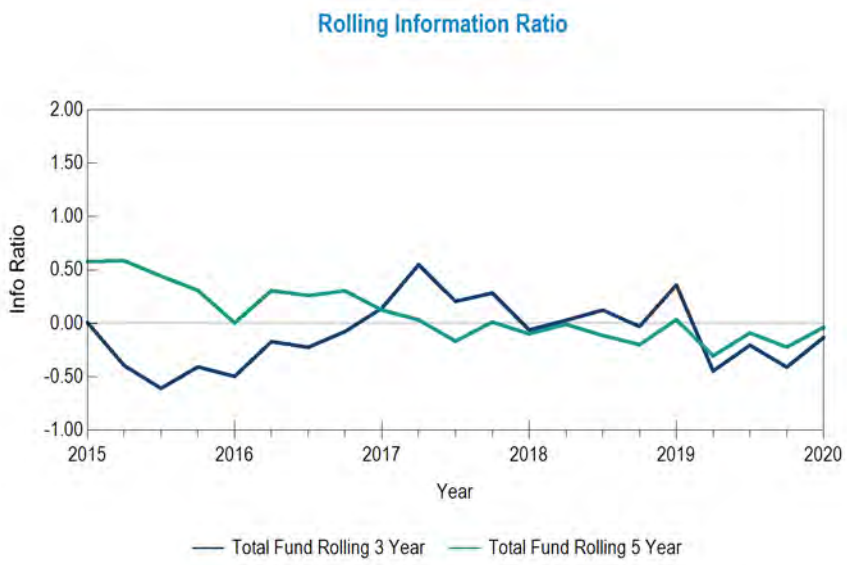
	Wtd. Actual Return	Wtd. Index Return	Excess Return	Selection Effect	Allocation Effect	Interaction Effects	Total Effects
Total Domestic Equity	15.47%	14.68%	0.79%	0.15%	0.03%	0.00%	0.18%
Total International Equity	20.57%	17.08%	3.49%	0.71%	0.12%	0.02%	0.85%
Total Domestic Fixed Income	2.13%	0.67%	1.46%	0.32%	0.13%	-0.03%	0.42%
Total Global Fixed	9.39%	0.67%	8.72%	0.89%	0.03%	-0.04%	0.88%
Total Real Estate	1.50%	1.15%	0.35%	0.06%	0.17%	0.00%	0.22%
Total Private Equity	4.09%	4.09%	0.00%	0.00%	-0.02%	0.00%	-0.02%
Total Private Credit	0.26%	0.26%	0.00%	0.00%	-0.05%	0.00%	-0.05%
Total Cash	0.48%	0.02%	0.46%	0.00%	-0.16%	0.01%	-0.15%
Total Opportunistic	-0.91%	15.50%	-16.41%	0.00%	0.02%	-0.04%	-0.02%
Total	**9.67%**	**7.36%**	**2.32%**	**2.13%**	**0.27%**	**-0.08%**	**2.32%**

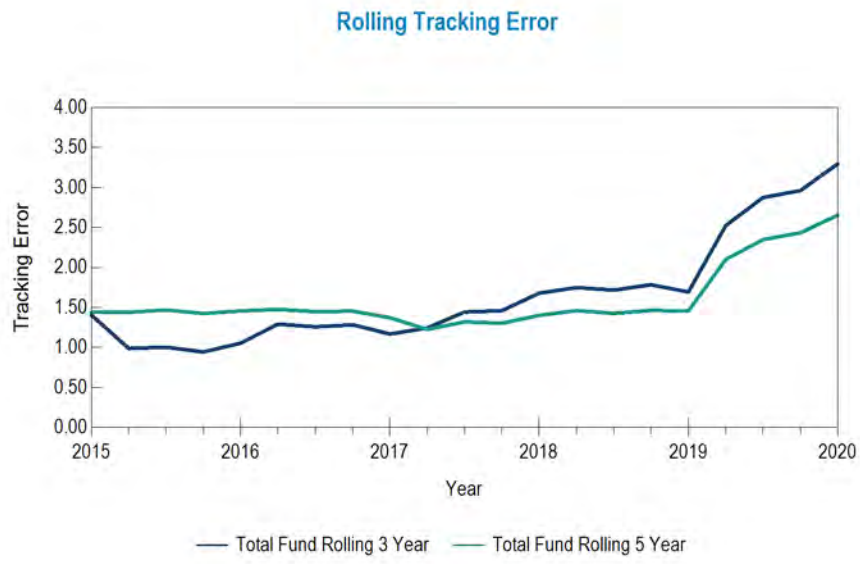
Attribution does not account for effects of overlay program. Weighted returns shown in attribution analysis may differ from actual returns. Wtd. Actual Return is the sum of the products of each group's return and its respective weight at the beginning of the period.

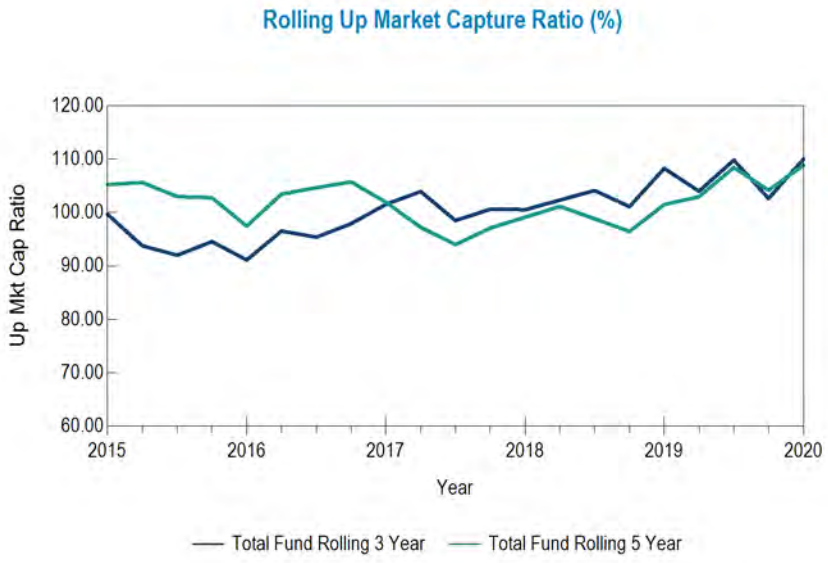
	Anlzd Ret	Ann Excess BM Return	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
Total Fund	8.59%	-0.10%	7.96%	-1.33%	1.14	2.32%	0.93	0.93	-0.04	111.84%	120.54%

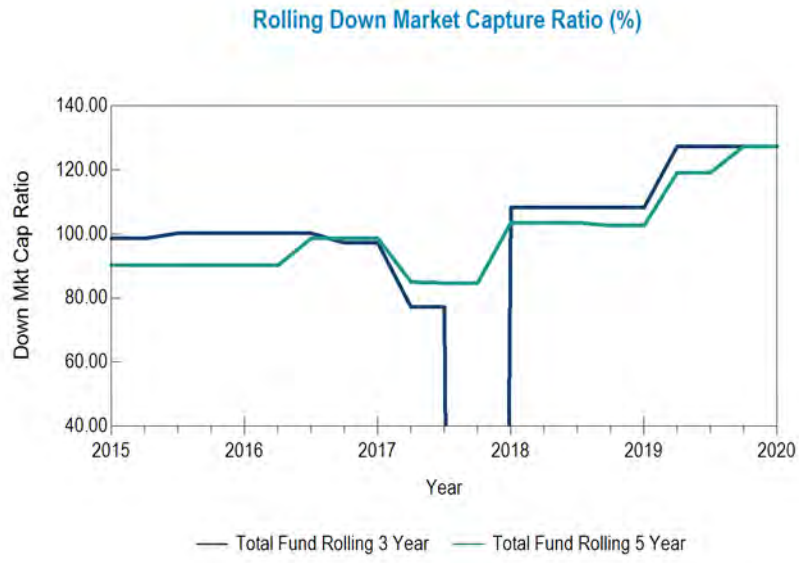





Rolling Information Ratio
Info Ratio
2.00
1.50
1.00
0.50
0.00
-0.50
-1.00
2015
2016
2017
2018
2019
2020
Year
Total Fund Rolling 3 Year
Total Fund Rolling 5 Year


Rolling Tracking Error
Tracking Error
4.00
3.50
3.00
2.50
2.00
1.50
1.00
0.50
0.00
2015
2016
2017
2018
2019
2020
Year
Total Fund Rolling 3 Year
Total Fund Rolling 5 Year


Rolling Up Market Capture Ratio (%)
Up Mkt Cap Ratio
120.00
110.00
100.00
90.00
80.00
70.00
60.00
2015
2016
2017
2018
2019
2020
Year
Total Fund Rolling 3 Year
Total Fund Rolling 5 Year


Rolling Down Market Capture Ratio (%)
Down Mkt Cap Ratio
140.00
120.00
100.00
80.00
60.00
40.00
2015
2016
2017
2018
2019
2020
Year
Total Fund Rolling 3 Year
Total Fund Rolling 5 Year

Total Fund
Performance Summary (Gross of Fees)

Period Ending: December 31, 2020

	Market Value	% of Portfolio	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2020	2019	2018	2017	2016	Inception	Inception Date
Total Fund	**1,552,085,716**	**100.0**	**9.6**	**8.9**	**7.1**	**8.6**	**7.7**	**8.9**	**16.3**	**-3.1**	**15.5**	**6.6**	**--**	**Feb-07**
Policy Index			*7.4*	*10.0*	*7.5*	*8.7*	*7.3*	*10.0*	*15.3*	*-2.1*	*13.3*	*7.8*	--	*Feb-07*
InvMetrics Public DB Gross Rank			*66*	*92*	*89*	*89*	*79*	*92*	*81*	*25*	*47*	*84*	--	*Feb-07*
Total Domestic Equity	**361,980,357**	**23.3**	**15.6**	**13.7**	**11.7**	**14.5**	**13.3**	**13.7**	**29.4**	**-5.2**	**25.1**	**13.0**	**--**	
Russell 3000			*14.7*	*20.9*	*14.5*	*15.4*	*13.8*	*20.9*	*31.0*	*-5.2*	*21.1*	*12.7*	--	
InvMetrics Public DB US Eq Gross Rank			*47*	*91*	*86*	*47*	*44*	*91*	*66*	*36*	*4*	*48*	--	
PIMCO RAE US	81,515,644	5.3	17.2	4.4	6.9	10.6	11.4	4.4	25.5	-6.6	17.0	15.9	8.1	Nov-07
S&P 500			*12.1*	*18.4*	*14.2*	*15.2*	*13.9*	*18.4*	*31.5*	*-4.4*	*21.8*	*12.0*	*9.7*	*Nov-07*
eV US Large Cap Core Equity Gross Rank			*5*	*96*	*94*	*93*	*94*	*96*	*83*	*72*	*89*	*6*	*95*	*Nov-07*
Loomis Sayles Large Cap Growth	109,850,461	7.1	8.7	32.8	20.1	--	--	32.8	32.7	-1.7	34.1	--	23.5	Dec-16
Russell 1000 Growth			*11.4*	*38.5*	*23.0*	--	--	*38.5*	*36.4*	*-1.5*	*30.2*	--	*24.8*	*Dec-16*
eV US Large Cap Growth Equity Gross Rank			*90*	*61*	*67*	--	--	*61*	*68*	*58*	*16*	--	*53*	*Dec-16*
Boston Partners Large Cap Value	99,314,957	6.4	19.0	2.4	5.2	--	--	2.4	24.3	-8.5	--	--	8.7	Jan-17
Russell 1000 Value			*16.3*	*2.8*	*6.1*	--	--	*2.8*	*26.5*	*-8.3*	--	--	*7.9*	*Jan-17*
eV US Large Cap Value Equity Gross Rank			*24*	*64*	*72*	--	--	*64*	*77*	*54*	--	--	*53*	*Jan-17*
Atlanta Capital Mgmt	71,299,294	4.6	20.8	11.4	12.9	15.4	15.1	11.4	35.1	-4.5	26.6	12.6	17.5	Aug-10
Russell 2500			*27.4*	*20.0*	*11.3*	*13.6*	*12.0*	*20.0*	*27.8*	*-10.0*	*16.8*	*17.6*	*14.3*	*Aug-10*
eV US Small-Mid Cap Equity Gross Rank			*83*	*62*	*44*	*36*	*20*	*62*	*14*	*25*	*15*	*62*	*13*	*Aug-10*
Total International Equity	**370,824,211**	**23.9**	**20.8**	**19.4**	**10.9**	**12.1**	**8.8**	**19.4**	**30.2**	**-12.2**	**26.6**	**2.2**	**--**	
MSCI ACWI ex USA Gross			*17.1*	*11.1*	*5.4*	*9.4*	*5.4*	*11.1*	*22.1*	*-13.8*	*27.8*	*5.0*	--	
InvMetrics Public DB ex-US Eq Gross Rank			*7*	*12*	*5*	*12*	*4*	*12*	*1*	*9*	*81*	*82*	--	
Dodge & Cox Intl Stock	168,922,976	10.9	24.9	2.8	1.6	7.3	5.3	2.8	23.6	-17.5	24.7	9.0	3.1	Dec-07
MSCI ACWI ex USA Value Gross			*20.5*	*-0.2*	*0.2*	*6.3*	*3.4*	*-0.2*	*16.5*	*-13.4*	*23.3*	*9.6*	*1.3*	*Dec-07*
eV ACWI ex-US All Cap Value Eq Gross Rank			*15*	*33*	*43*	*42*	*39*	*33*	*35*	*84*	*71*	*31*	*39*	*Dec-07*
WCM International Growth	201,901,235	13.0	17.5	34.0	19.6	--	--	34.0	36.7	-6.7	--	--	21.6	Feb-17
MSCI ACWI ex USA Growth Gross			*14.0*	*22.6*	*10.4*	--	--	*22.6*	*27.8*	*-14.1*	--	--	*14.5*	*Feb-17*
eV ACWI ex-US All Cap Growth Eq Gross Rank			*33*	*28*	*12*	--	--	*28*	*11*	*1*	--	--	*12*	*Feb-17*

Since Inception ranking is from the beginning of the first complete month of performance. Research Affiliates converted to PIMCO RAE Fundamental Plus Instl on 6/5/15 (performance prior to this date represents previously held Research Affiliates Equity US Large, L.P.). ARA American funded 6/22/2016. Fidelity Real Estate Growth II liquidated 12/31/2015. Loomis Sayles Large Cap Growth funded 12/31/2016. Boston Partners funded 1/31/2017. Vontobel liquidated 2/15/2017. WCM International funded 2/15/2017. PIMCO Core Plus liquidated 1/6/2017. BlackRock Core and Dodge & Cox Income funded 1/19/2017. Pathway Private Equity Fund Investors 9 L.P. funded 4/7/2017. Fidelity Real Estate Growth III liquidated 12/29/2017. SSGA S&P 500 Flagship liquidated 1/3/2018. SSGA TIPS liquidated 1/17/2018. Harbourvest 2018 Global Fund L.P. funded 12/14/2018. Stone Harbor Local Markets terminated 3/22/2019. Ashmore EM Blended Debt funded 3/31/2019. Direct RE liquidated as of 12/19/2019. Pathway Private Equity Fund Investors 10 L.P. funded 3/25/2020. TPG Adjacent Opportunities Partners funded 4/16/2020.

Total Fund
Performance Summary (Gross of Fees) — Period Ending: December 31, 2020

	Market Value	% of Portfolio	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2020	2019	2018	2017	2016	Inception	Inception Date
Total Domestic Fixed Income	**278,838,394**	**18.0**	**2.2**	**8.1**	**6.0**	**5.4**	**4.6**	**8.1**	**9.9**	**0.4**	**4.3**	**4.5**	**--**	
BBgBarc US Aggregate TR			*0.7*	*7.5*	*5.3*	*4.4*	*3.8*	*7.5*	*8.7*	*0.0*	*3.5*	*2.6*	--	
InvMetrics Public DB US Fix Inc Gross Rank			*22*	*46*	*26*	*33*	*42*	*46*	*11*	*55*	*50*	*49*	--	
BlackRock Core Bond	99,731,982	6.4	1.2	9.4	6.6	--	--	9.4	10.2	0.3	--	--	5.8	Jan-17
BBgBarc US Aggregate TR			*0.7*	*7.5*	*5.3*	--	--	*7.5*	*8.7*	*0.0*	--	--	*4.9*	*Jan-17*
eV US Core Fixed Inc Gross Rank			*37*	*23*	*10*	--	--	*23*	*10*	*27*	--	--	*27*	*Jan-17*
Dodge & Cox Income Fund	104,093,013	6.7	2.6	9.9	6.6	--	--	9.9	10.2	0.1	--	--	6.2	Jan-17
BBgBarc US Aggregate TR			*0.7*	*7.5*	*5.3*	--	--	*7.5*	*8.7*	*0.0*	--	--	*4.9*	*Jan-17*
eV US Core Fixed Inc Gross Rank			*3*	*14*	*9*	--	--	*14*	*11*	*43*	--	--	*8*	*Jan-17*
Pacific Asset Corporate Loan	75,013,399	4.8	3.0	3.0	4.3	5.4	--	3.0	9.1	1.0	4.9	9.2	4.4	Sep-14
S&P/LSTA Leveraged Loan Index			*3.8*	*3.1*	*4.0*	*5.2*	--	*3.1*	*8.6*	*0.4*	*4.1*	*10.2*	*3.8*	*Sep-14*
eV US Float-Rate Bank Loan Fixed Inc Gross Rank			*90*	*42*	*35*	*33*	--	*42*	*36*	*29*	*26*	*51*	*27*	*Sep-14*
Total Global Fixed	**147,060,308**	**9.5**	**9.6**	**6.7**	**3.1**	**5.5**	**2.7**	**6.7**	**7.4**	**-4.3**	**13.8**	**4.6**	**--**	
FTSE World Govt Bond Index			*2.8*	*10.1*	*5.0*	*4.8*	*2.3*	*10.1*	*5.9*	*-0.8*	*7.5*	*1.6*	--	
InvMetrics Public DB Glbl Fix Inc Gross Rank			--	--	--	--	--	--	*87*	*61*	*36*	*88*	--	
Brandywine Global Fixed Income	72,057,761	4.6	8.7	--	--	--	--	--	--	--	--	--	13.2	Jun-20
FTSE WGBI ex US TR			*4.8*	--	--	--	--	--	--	--	--	--	*9.6*	*Jun-20*
eV All Global Fixed Inc Gross Rank			*11*	--	--	--	--	--	--	--	--	--	*15*	*Jun-20*
Ashmore EM Blended Debt Fund	75,002,547	4.8	10.5	3.2	--	--	--	3.2	--	--	--	--	4.8	Mar-19
50% JPM EMBI GD/25% JPM GBI EM GD/25% JPM ELMI+			*6.8*	*3.9*	--	--	--	*3.9*	--	--	--	--	*6.4*	*Mar-19*
eV All Emg Mkts Fixed Inc Gross Rank			*18*	*85*	--	--	--	*85*	--	--	--	--	*94*	*Mar-19*
Total Real Estate	**206,417,084**	**13.3**	**1.5**	**1.1**	**4.3**	**5.7**	**8.8**	**1.1**	**4.3**	**7.5**	**7.8**	**7.8**	**--**	
NCREIF Property Index			*1.2*	*1.6*	*4.9*	*5.9*	*9.0*	*1.6*	*6.4*	*6.7*	*7.0*	*8.0*	--	
JP Morgan Core Real Estate	167,454,510	10.8	1.7	0.5	3.6	5.0	9.5	0.5	3.4	7.0	6.1	8.4	5.1	Mar-08
NCREIF-ODCE			*1.3*	*1.2*	*4.9*	*6.2*	*9.9*	*1.2*	*5.3*	*8.3*	*7.6*	*8.8*	*5.1*	*Mar-08*
NCREIF Property Index			*1.2*	*1.6*	*4.9*	*5.9*	*9.0*	*1.6*	*6.4*	*6.7*	*7.0*	*8.0*	*5.9*	*Mar-08*
ARA American Strategic Value Realty	38,962,573	2.5	0.6	3.8	6.7	--	--	3.8	7.3	9.1	7.4	--	7.4	Jun-16
NCREIF-ODCE			*1.3*	*1.2*	*4.9*	--	--	*1.2*	*5.3*	*8.3*	*7.6*	--	*5.9*	*Jun-16*
NCREIF Property Index			*1.2*	*1.6*	*4.9*	--	--	*1.6*	*6.4*	*6.7*	*7.0*	--	*5.6*	*Jun-16*

Since Inception ranking is from the beginning of the first complete month of performance. Research Affiliates converted to PIMCO RAE Fundamental Plus Instl on 6/5/15 (performance prior to this date represents previously held Research Affiliates Equity US Large, L.P.). ARA American funded 6/22/2016. Fidelity Real Estate Growth II liquidated 12/31/2015. Loomis Sayles Large Cap Growth funded 12/31/2016. Boston Partners funded 1/31/2017. Vontobel liquidated 2/15/2017. WCM International funded 2/15/2017. PIMCO Core Plus liquidated 1/6/2017. BlackRock Core and Dodge & Cox Income funded 1/19/2017. Pathway Private Equity Fund Investors 9 L.P. funded 4/7/2017. Fidelity Real Estate Growth III liquidated 12/29/2017. SSGA S&P 500 Flagship liquidated 1/3/2018. SSGA TIPS liquidated 1/17/2018. Harbourvest 2018 Global Fund L.P. funded 12/14/2018. Stone Harbor Local Markets terminated 3/22/2019. Ashmore EM Blended Debt funded 3/31/2019. Direct RE liquidated as of 12/19/2019. Pathway Private Equity Fund Investors 10 L.P. funded 3/25/2020. TPG Adjacent Opportunities Partners funded 4/16/2020. Brandywine has changed its strategy from Global Fixed Income to International Fixed Income as of 6/30/2020.

Total Fund
Performance Summary (Gross of Fees)

Period Ending: December 31, 2020

	Market Value	% of Portfolio	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2020	2019	2018	2017	2016	Inception	Inception Date
Total Private Equity	**63,227,388**	**4.1**												
Harbourvest Partners IX Buyout Fund L.P.	16,061,799	1.0												
Pathway Private Equity Fund Investors 9 L.P.	34,551,911	2.2												
Harbourvest 2018 Global Fund L.P.	12,403,796	0.8												
Pathway Private Equity Fund Investors 10 L.P.	209,882	0.0												
Total Private Credit	**79,182,238**	**5.1**												
Sixth Street Partners DCP	63,310,786	4.1												
Sixth Street Partners TAO	15,871,452	1.0												
Total Cash	**29,784,304**	**1.9**	**0.5**	**1.9**	**1.9**	**1.4**	**0.9**	**1.9**	**2.2**	**1.5**	**1.0**	**0.5**	**--**	
91 Day T-Bills			*0.0*	*0.5*	*1.5*	*1.1*	*0.6*	*0.5*	*2.1*	*1.9*	*0.9*	*0.3*	--	
Cash Account	29,784,304	1.9	0.5	1.9	1.9	1.4	0.9	1.9	2.2	1.5	1.0	0.5	--	
91 Day T-Bills			*0.0*	*0.5*	*1.5*	*1.1*	*0.6*	*0.5*	*2.1*	*1.9*	*0.9*	*0.3*	--	
Total Opportunistic	**3,417,031**	**0.2**												
Kohlberg Kravis Roberts & Co. Mezzanine Partners I	3,417,031	0.2												

Since Inception ranking is from the beginning of the first complete month of performance. Research Affiliates converted to PIMCO RAE Fundamental Plus Instl on 6/5/15 (performance prior to this date represents previously held Research Affiliates Equity US Large, L.P.). ARA American funded 6/22/2016. Fidelity Real Estate Growth II liquidated 12/31/2015. Loomis Sayles Large Cap Growth funded 12/31/2016. Boston Partners funded 1/31/2017. Vontobel liquidated 2/15/2017. WCM International funded 2/15/2017. PIMCO Core Plus liquidated 1/6/2017. BlackRock Core and Dodge & Cox Income funded 1/19/2017. Pathway Private Equity Fund Investors 9 L.P. funded 4/7/2017. Fidelity Real Estate Growth III liquidated 12/29/2017. SSGA S&P 500 Flagship liquidated 1/3/2018. SSGA TIPS liquidated 1/17/2018. Harbourvest 2018 Global Fund L.P. funded 12/14/2018. Stone Harbor Local Markets terminated 3/22/2019. Ashmore EM Blended Debt funded 3/31/2019. Direct RE liquidated as of 12/19/2019. Pathway Private Equity Fund Investors 10 L.P. funded 3/25/2020. TPG Adjacent Opportunities Partners funded 4/16/2020. Gresham liquidated as of 9/30/2020.

Total Fund
Performance Summary (Net of Fees)

Period Ending: December 31, 2020

	Market Value	% of Portfolio	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2020	2019	2018	2017	2016
Total Fund	**1,552,085,716**	**100.0**	**9.5**	**8.5**	**6.6**	**8.2**	**7.2**	**8.5**	**15.8**	**-3.5**	**15.0**	**6.0**
Policy Index			*7.4*	*10.0*	*7.5*	*8.7*	*7.3*	*10.0*	*15.3*	*-2.1*	*13.3*	*7.8*
Total Domestic Equity	**361,980,357**	**23.3**	**15.5**	**13.1**	**11.2**	**14.0**	**12.8**	**13.1**	**28.7**	**-5.7**	**24.5**	**12.7**
Russell 3000			*14.7*	*20.9*	*14.5*	*15.4*	*13.8*	*20.9*	*31.0*	*-5.2*	*21.1*	*12.7*
PIMCO RAE US	81,515,644	5.3	17.1	3.9	6.5	10.2	11.0	3.9	25.0	-7.0	16.5	15.4
S&P 500			*12.1*	*18.4*	*14.2*	*15.2*	*13.9*	*18.4*	*31.5*	*-4.4*	*21.8*	*12.0*
Loomis Sayles Large Cap Growth	109,850,461	7.1	8.6	32.3	19.6	--	--	32.3	32.1	-2.1	33.5	--
Russell 1000 Growth			*11.4*	*38.5*	*23.0*	--	--	*38.5*	*36.4*	*-1.5*	*30.2*	--
Boston Partners Large Cap Value	99,314,957	6.4	18.8	2.0	4.8	--	--	2.0	23.8	-8.9	--	--
Russell 1000 Value			*16.3*	*2.8*	*6.1*	--	--	*2.8*	*26.5*	*-8.3*	--	--
Atlanta Capital Mgmt	71,299,294	4.6	20.6	10.5	12.0	14.5	14.3	10.5	34.1	-5.3	25.6	11.7
Russell 2500			*27.4*	*20.0*	*11.3*	*13.6*	*12.0*	*20.0*	*27.8*	*-10.0*	*16.8*	*17.6*
Total International Equity	**370,824,211**	**23.9**	**20.6**	**18.6**	**10.2**	**11.3**	**8.0**	**18.6**	**29.3**	**-12.8**	**25.8**	**1.6**
MSCI ACWI ex USA Gross			*17.1*	*11.1*	*5.4*	*9.4*	*5.4*	*11.1*	*22.1*	*-13.8*	*27.8*	*5.0*
Dodge & Cox Intl Stock	168,922,976	10.9	24.7	2.1	0.9	6.6	4.6	2.1	22.8	-18.0	23.9	8.3
MSCI ACWI ex USA Value Gross			*20.5*	*-0.2*	*0.2*	*6.3*	*3.4*	*-0.2*	*16.5*	*-13.4*	*23.3*	*9.6*
WCM International Growth	201,901,235	13.0	17.3	33.1	18.8	--	--	33.1	35.8	-7.4	--	--
MSCI ACWI ex USA Growth Gross			*14.0*	*22.6*	*10.4*	--	--	*22.6*	*27.8*	*-14.1*	--	--
Total Domestic Fixed Income	**278,838,394**	**18.0**	**2.1**	**7.7**	**5.7**	**5.0**	**4.3**	**7.7**	**9.5**	**0.0**	**3.9**	**4.2**
BBgBarc US Aggregate TR			*0.7*	*7.5*	*5.3*	*4.4*	*3.8*	*7.5*	*8.7*	*0.0*	*3.5*	*2.6*
BlackRock Core Bond	99,731,982	6.4	1.2	9.1	6.3	--	--	9.1	9.9	0.1	--	--
BBgBarc US Aggregate TR			*0.7*	*7.5*	*5.3*	--	--	*7.5*	*8.7*	*0.0*	--	--
Dodge & Cox Income Fund	104,093,013	6.7	2.5	9.4	6.2	--	--	9.4	9.7	-0.3	--	--
BBgBarc US Aggregate TR			*0.7*	*7.5*	*5.3*	--	--	*7.5*	*8.7*	*0.0*	--	--
Pacific Asset Corporate Loan	75,013,399	4.8	2.9	2.6	4.0	5.0	--	2.6	8.7	0.7	4.6	8.8
S&P/LSTA Leveraged Loan Index			*3.8*	*3.1*	*4.0*	*5.2*	--	*3.1*	*8.6*	*0.4*	*4.1*	*10.2*
Total Global Fixed	**147,060,308**	**9.5**	**9.4**	**6.0**	**2.6**	**5.0**	**2.2**	**6.0**	**6.9**	**-4.7**	**13.3**	**4.1**
FTSE World Govt Bond Index			*2.8*	*10.1*	*5.0*	*4.8*	*2.3*	*10.1*	*5.9*	*-0.8*	*7.5*	*1.6*
Brandywine Global Fixed Income	72,057,761	4.6	8.5	--	--	--	--	--	--	--	--	--
FTSE WGBI ex US TR			*4.8*	--	--	--	--	--	--	--	--	--
Ashmore EM Blended Debt Fund	75,002,547	4.8	10.2	2.1	--	--	--	2.1	--	--	--	--
50% JPM EMBI GD/25% JPM GBI EM GD/25% JPM ELMI+			*6.8*	*3.9*	--	--	--	*3.9*	--	--	--	--

Research Affiliates converted to PIMCO RAE Fundamental Plus Instl on 6/5/15 (performance prior to this date represents previously held Research Affiliates Equity US Large, L.P.). ARA American funded 6/22/2016. Fidelity Real Estate Growth II liquidated 12/31/2015. Loomis Sayles Large Cap Growth funded 12/31/2016. Boston Partners funded 1/31/2017. Vontobel liquidated 2/15/2017. WCM International funded 2/15/2017. PIMCO Core Plus liquidated 1/6/2017. BlackRock Core and Dodge & Cox Income funded 1/19/2017. Pathway Private Equity Fund Investors 9 L.P. funded 4/7/2017. Fidelity Real Estate Growth III liquidated 12/29/2017. SSGA S&P 500 Flagship liquidated 1/3/2018. SSGA TIPS liquidated 1/17/2018. Harbourvest 2018 Global Fund L.P. funded 12/14/2018. Stone Harbor Local Markets terminated 3/22/2019. Ashmore EM Blended Debt funded 3/31/2019. Direct RE liquidatrf as of 12/19/2019. Pathway Private Equity Fund Investors 10 L.P. funded 3/25/2020. TPG Adjacent Opportunities Partners funded 4/16/2020. Brandywine has changed its strategy from Global Fixed Income to International Fixed Income as of 6/30/2020.

Total Fund
Performance Summary (Net of Fees)

Period Ending: December 31, 2020

	Market Value	% of Portfolio	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2020	2019	2018	2017	2016
Total Real Estate	**206,417,084**	**13.3**	**1.5**	**1.1**	**4.3**	**5.5**	**8.4**	**1.1**	**4.3**	**7.5**	**7.8**	**6.8**
NCREIF Property Index			*1.2*	*1.6*	*4.9*	*5.9*	*9.0*	*1.6*	*6.4*	*6.7*	*7.0*	*8.0*
JP Morgan Core Real Estate	167,454,510	10.8	1.7	0.5	3.6	4.8	8.8	0.5	3.4	7.0	6.1	7.3
NCREIF-ODCE			*1.3*	*1.2*	*4.9*	*6.2*	*9.9*	*1.2*	*5.3*	*8.3*	*7.6*	*8.8*
NCREIF Property Index			*1.2*	*1.6*	*4.9*	*5.9*	*9.0*	*1.6*	*6.4*	*6.7*	*7.0*	*8.0*
ARA American Strategic Value Realty	38,962,573	2.5	0.6	3.8	6.7	--	--	3.8	7.3	9.1	7.4	--
NCREIF-ODCE			*1.3*	*1.2*	*4.9*	--	--	*1.2*	*5.3*	*8.3*	*7.6*	--
NCREIF Property Index			*1.2*	*1.6*	*4.9*	--	--	*1.6*	*6.4*	*6.7*	*7.0*	--
Total Private Equity	**63,227,388**	**4.1**										
Harbourvest Partners IX Buyout Fund L.P.	16,061,799	1.0										
Pathway Private Equity Fund Investors 9 L.P.	34,551,911	2.2										
Harbourvest 2018 Global Fund L.P.	12,403,796	0.8										
Pathway Private Equity Fund Investors 10 L.P.	209,882	0.0										
Total Private Credit	**79,182,238**	**5.1**										
Sixth Street Partners DCP	63,310,786	4.1										
Sixth Street Partners TAO	15,871,452	1.0										
Total Cash	**29,784,304**	**1.9**	**0.5**	**1.9**	**1.9**	**1.4**	**0.9**	**1.9**	**2.2**	**1.5**	**1.0**	**0.5**
91 Day T-Bills			*0.0*	*0.5*	*1.5*	*1.1*	*0.6*	*0.5*	*2.1*	*1.9*	*0.9*	*0.3*
Cash Account	29,784,304	1.9	0.5	1.9	1.9	1.4	0.9	1.9	2.2	1.5	1.0	0.5
91 Day T-Bills			*0.0*	*0.5*	*1.5*	*1.1*	*0.6*	*0.5*	*2.1*	*1.9*	*0.9*	*0.3*
Total Opportunistic	**3,417,031**	**0.2**										
Kohlberg Kravis Roberts & Co. Mezzanine Partners I	3,417,031	0.2										

Research Affiliates converted to PIMCO RAE Fundamental Plus Instl on 6/5/15 (performance prior to this date represents previously held Research Affiliates Equity US Large, L.P.). ARA American funded 6/22/2016. Fidelity Real Estate Growth II liquidated 12/31/2015. Loomis Sayles Large Cap Growth funded 12/31/2016. Boston Partners funded 1/31/2017. Vontobel liquidated 2/15/2017. WCM International funded 2/15/2017. PIMCO Core Plus liquidated 1/6/2017. BlackRock Core and Dodge & Cox Income funded 1/19/2017. Pathway Private Equity Fund Investors 9 L.P. funded 4/7/2017. Fidelity Real Estate Growth III liquidated 12/29/2017. SSGA S&P 500 Flagship liquidated 1/3/2018. SSGA TIPS liquidated 1/17/2018. Harbourvest 2018 Global Fund L.P. funded 12/14/2018. Stone Harbor Local Markets terminated 3/22/2019. Ashmore EM Blended Debt funded 3/31/2019. Direct RE liquidatrf as of 12/19/2019. Pathway Private Equity Fund Investors 10 L.P. funded 3/25/2020. TPG Adjacent Opportunities Partners funded 4/16/2020. Gresham liquidated as of 9/30/2020.

3 Years

	Anlzd Ret	Ann Excess BM Return	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
PIMCO RAE US	6.51%	-7.67%	20.90%	-8.83%	1.08	5.07%	0.95	0.24	-1.51	86.87%	114.19%
Loomis Sayles Large Cap Growth	19.59%	-3.40%	18.45%	-1.15%	0.90	4.63%	0.95	0.98	-0.74	84.64%	96.17%
Boston Partners Large Cap Value	4.79%	-1.27%	21.11%	-1.59%	1.05	2.85%	0.98	0.16	-0.45	101.49%	104.55%
Atlanta Capital Mgmt	11.98%	0.65%	21.54%	2.36%	0.85	6.53%	0.94	0.48	0.10	81.45%	86.37%
Dodge & Cox Intl Stock	0.93%	0.74%	23.71%	0.71%	1.14	4.59%	0.98	-0.03	0.16	123.94%	107.86%
WCM International Growth	18.76%	8.35%	16.66%	8.80%	0.96	4.76%	0.92	1.04	1.75	108.14%	73.66%
BlackRock Core Bond	6.27%	0.93%	4.34%	0.12%	1.15	1.92%	0.82	1.11	0.49	123.93%	128.31%
Dodge & Cox Income Fund	6.19%	0.85%	3.71%	1.80%	0.82	2.52%	0.57	1.27	0.34	104.41%	79.11%
Pacific Asset Corporate Loan	3.96%	-0.05%	6.53%	1.02%	0.73	2.57%	0.97	0.38	-0.02	81.03%	75.59%
JP Morgan Core Real Estate	3.60%	-1.31%	1.69%	2.48%	0.23	2.67%	0.14	1.21	-0.49	23.67%	109.77%
ARA American Strategic Value Realty	6.71%	1.79%	3.19%	8.41%	-0.35	4.84%	0.09	1.64	0.37	--	--

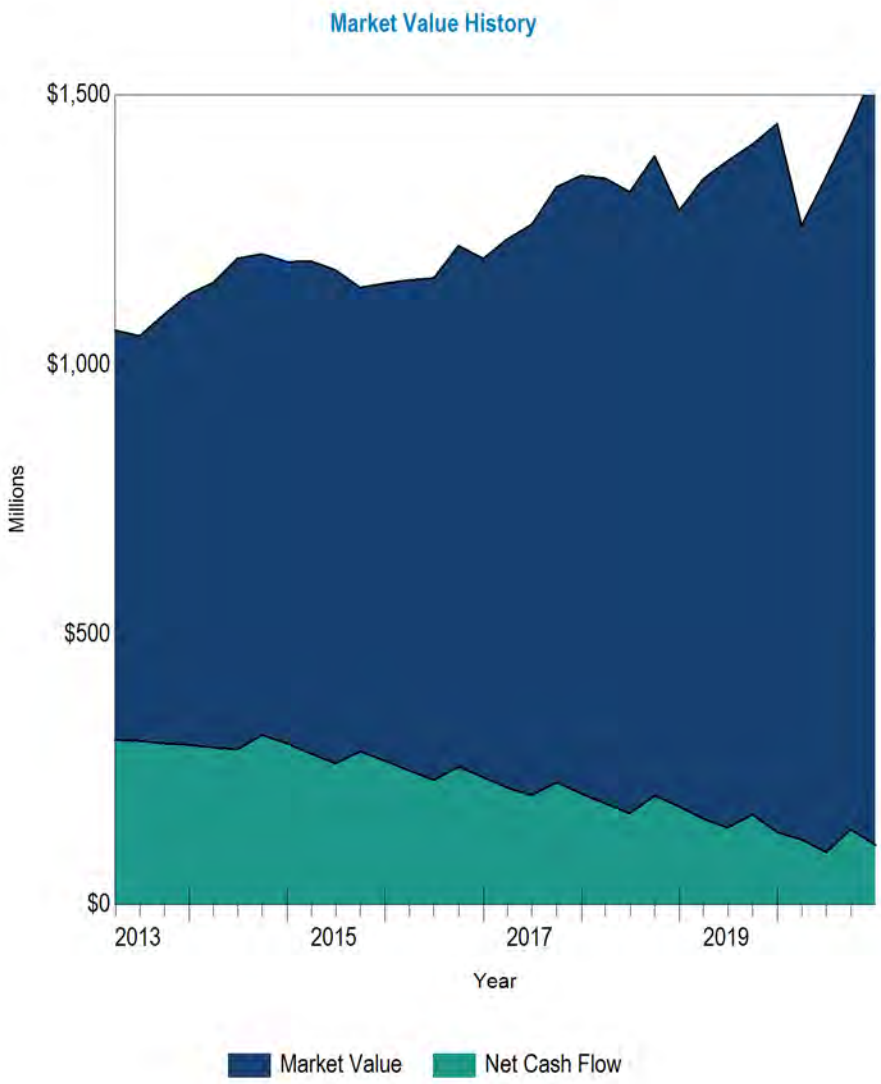
5 Years

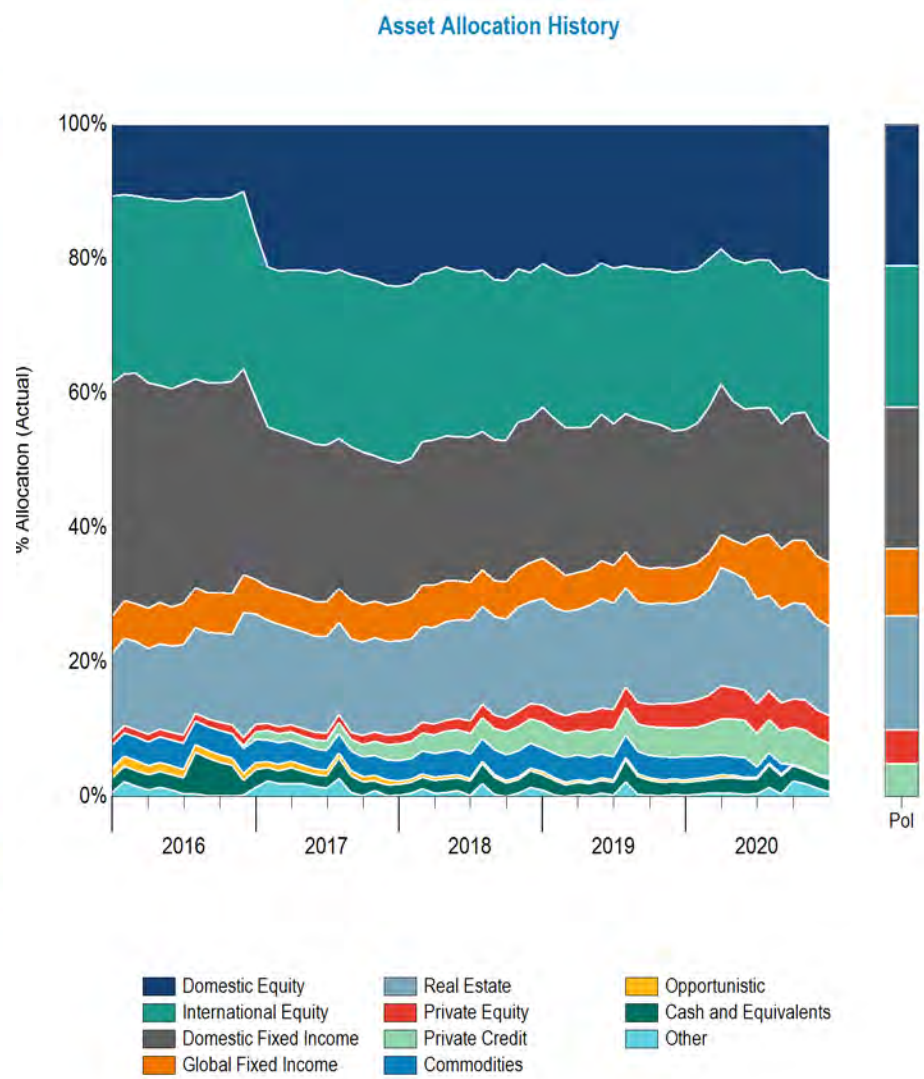
	Anlzd Ret	Ann Excess BM Return	Anlzd Std Dev	Anlzd Alpha	Beta	Tracking Error	R-Squared	Sharpe Ratio	Info Ratio	Up Mkt Cap Ratio	Down Mkt Cap Ratio
PIMCO RAE US	10.20%	-5.02%	16.96%	-6.17%	1.08	4.42%	0.94	0.53	-1.13	86.12%	111.34%
Atlanta Capital Mgmt	14.52%	0.88%	17.71%	3.13%	0.83	6.18%	0.91	0.75	0.14	82.02%	86.15%
Dodge & Cox Intl Stock	6.65%	0.31%	20.01%	-0.57%	1.14	4.37%	0.97	0.27	0.07	122.76%	107.94%
Pacific Asset Corporate Loan	5.04%	-0.20%	5.17%	1.21%	0.73	2.09%	0.97	0.75	-0.10	82.11%	73.33%
JP Morgan Core Real Estate	4.84%	-1.37%	1.45%	3.61%	0.20	2.77%	0.17	2.53	-0.50	27.55%	109.77%

Vintage	Manager & Fund Name	Estimated 12/31 Market Value[3]	Total Commitment	Capital Called	% Called	Remaining Commitment	Capital Returned	Market Value as of IRR date	Distrib./ Paid-In (DPI)[1]	Tot. Value/ Paid-In (TVPI)[2]	Net IRR Since Inception[5]	IRR Date
2011	HarbourVest Partners IX-Buyout Fund L.P.	$16,061,799	$20,000,000	$17,050,000	85%	$2,950,000	$13,934,500	$14,950,808	*81.7%*	*175.9%*	*18.1%*	*9/30/20*
2018	HarbourVest Partners 2018 Global Fund L.P.	$12,403,796	$20,000,000	$8,022,400	40%	$11,977,600	$4,467,898	$9,143,151	-	-	*24.2%*	*9/30/20*
2010	KKR Mezzanine Partners I L.P. [6]	$3,417,031	$20,000,000	$20,000,000	100%	$0	$29,566,840	$3,448,434	*147.8%*	*164.9%*	*9.9%*	*9/30/20*
2016	TPG Diversified Credit Program	$63,310,786	$113,750,000	$70,157,494	62%	$43,592,506	$12,523,848	$65,280,620	*17.9%*	*108.1%*	*8.9%*	*9/30/20*
2017	Pathway Private Equity Fund Investors 9 L.P.	$34,551,911	$65,000,000	$37,005,356	57%	$27,994,644	$394,145	-	*1.1%*	*94.4%*	-	-
2020	Pathway Private Equity Fund Investors 10 L.P.	$209,882	$20,000,000	$1,100,678	6%	$18,899,322	$46,848	-	*4.3%*	*23.3%*	-	-
2020	TPG Adjacent Opportunities Partners	$15,871,452	$60,000,000	$12,752,284	21%	$47,247,716	$0	$8,254,667	*0.0%*	*124.5%*	*8.4%*	*9/30/20*
	Total Alternative Illiquids	**$145,826,657**	$338,750,000	$186,088,212	55%	$152,661,788	$88,979,254	$101,178,309	*54.4%*	*102.2%*		
	% of Portfolio (Market Value)	***9.4%***										

	Management Fee	Admin Fee	Interest Expense	Other Expense	Total Expense[7]
HarbourVest Partners IX-Buyout Fund L.P.	$49,819	$0	$13	$7,223	$57,055
HarbourVest Partners 2018 Global Fund L.P.	$47,056	$0	$18	$18,187	$65,261
KKR Mezzanine Partners I L.P.	$16,024	$0	$0	$15,388	$31,412
TPG Diversified Credit Program	$0	$0	$0	$19,556	$19,556
Pathway Private Equity Fund Investors 9 L.P.	$0	$0	$0	$0	$0
Pathway Private Equity Fund Investors 10 L.P.	$0	$0	$0	$0	$0
TPG Adjacent Opportunities Partners	$217,539	$0	$229,263	$120,587	$567,389
	$330,438	$0	$229,294	$180,941	**$740,673**

[1](DPI) is equal to (capital returned / capital called)
[2](TVPI) is equal to (market value + capital returned) / capital called
[3]Last known market value + capital calls - distributions
[4]Investment period ended, no further capital to be called. Liquidated as of June 2020
[5]Net IRR is calculated on the cash flows of the underlying investments of the fund and is net of the underlying fund fees and carried interest.
[6]KKR: As of 3Q2020, total capital called is $23,714,418, which includes recycled distributions. Unused capital commitment is $1,988,589 after including distribution proceeds available for reinvestment
[7]All fees and expenses are for 3Q 2020.

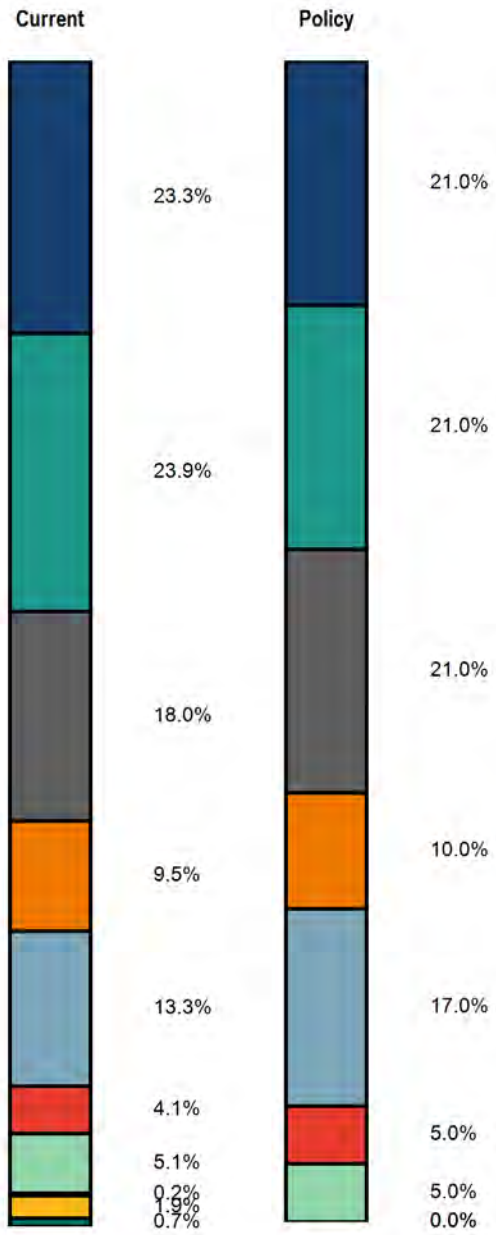




*Other balance represents Clifton Group

Total Fund
Asset Allocation vs. Policy

Period Ending: December 31, 2020



	Current Balance	Current Allocation	Policy	Difference	Policy Range	Within IPS Range?
Domestic Equity	$361,980,357	23.3%	21.0%	$36,042,356	15.0% - 31.0%	Yes
International Equity	$370,824,211	23.9%	21.0%	$44,886,211	15.0% - 31.0%	Yes
Domestic Fixed Income	$278,838,394	18.0%	21.0%	-$47,099,607	10.0% - 30.0%	Yes
Global Fixed Income	$147,060,308	9.5%	10.0%	-$8,148,264	0.0% - 20.0%	Yes
Real Estate	$206,417,084	13.3%	17.0%	-$57,437,488	5.0% - 22.0%	Yes
Private Equity	$63,227,388	4.1%	5.0%	-$14,376,898	0.0% - 10.0%	Yes
Private Credit	$79,182,238	5.1%	5.0%	$1,577,952	0.0% - 10.0%	Yes
Opportunistic	$3,417,031	0.2%	0.0%	$3,417,031	0.0% - 10.0%	Yes
Cash and Equivalents	$29,784,304	1.9%	0.0%	$29,784,304	0.0% - 5.0%	Yes
Other	$11,354,403	0.7%	--	$11,354,403	--	No
Total	**$1,552,085,716**	**100.0%**	**100.0%**			

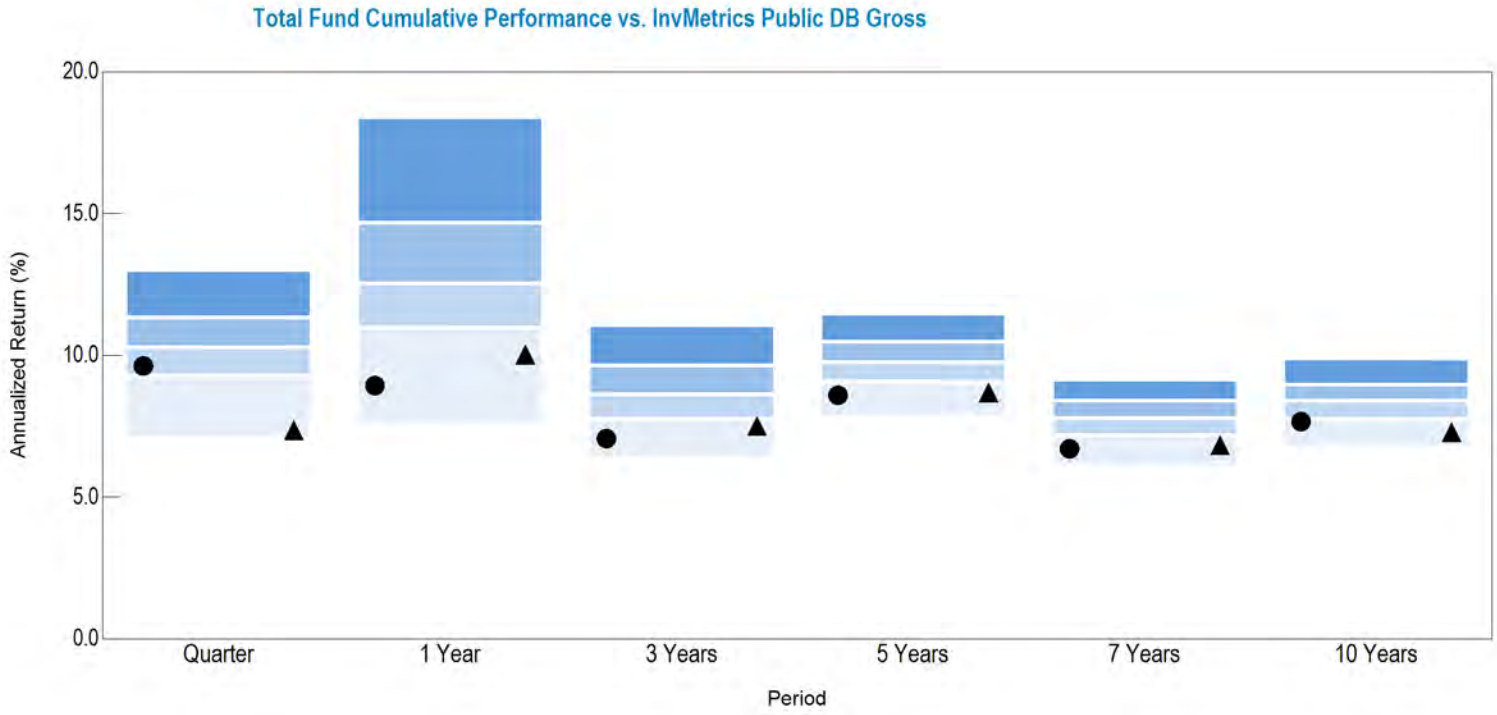
**Other balance represents Clifton Group*

Total Fund
Investment Fund Fee Analysis

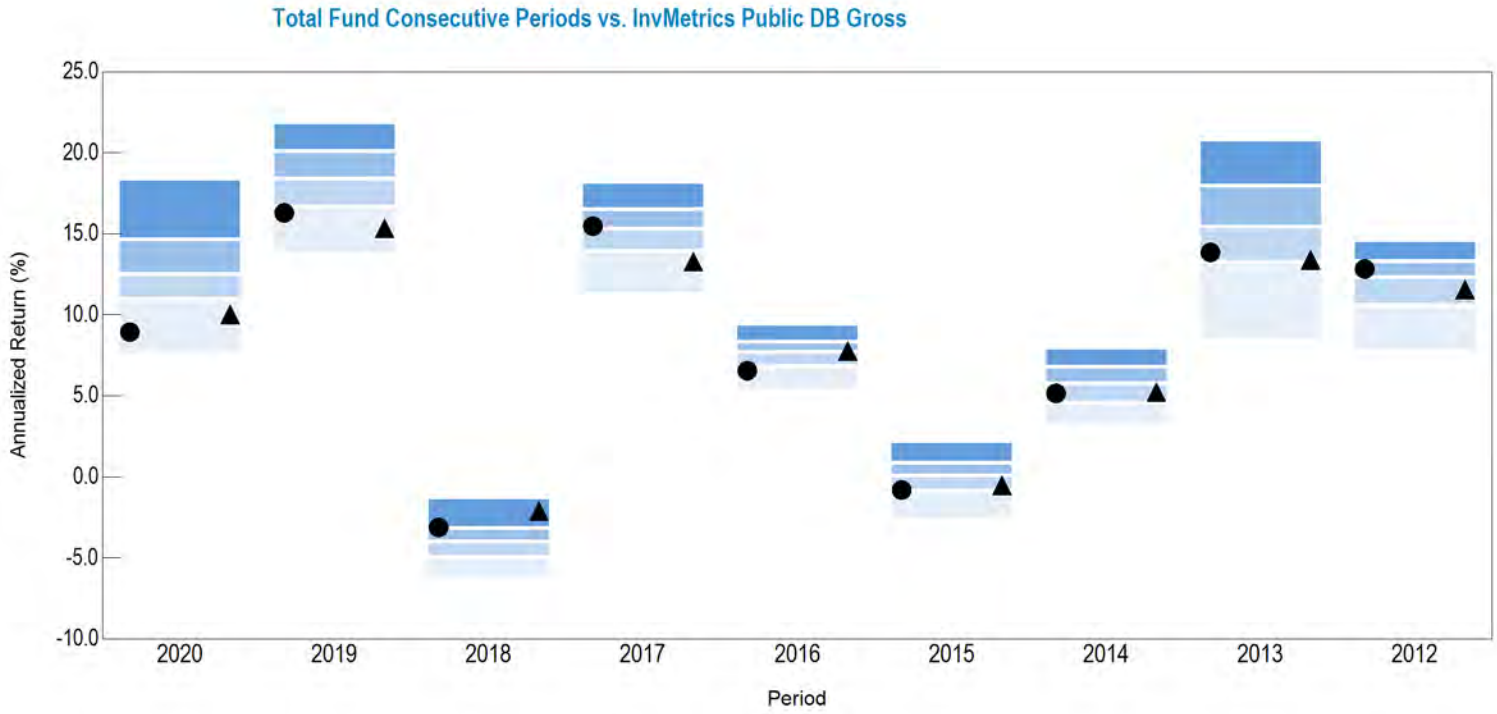
Period Ending: December 31, 2020

Account	Fee Schedule	Market Value As of 12/31/2020	% of Portfolio	Estimated Annual Fee ($)	Estimated Annual Fee (%)
ARA American Strategic Value Realty	1.25% of First 10.0 Mil, 1.20% of Next 15.0 Mil, 1.10% of Next 25.0 Mil, 1.00% Thereafter	$38,962,573	2.5%	$458,588	1.18%
Ashmore EM Blended Debt Fund	1.00% of Assets	$75,002,547	4.8%	$750,025	1.00%
Atlanta Capital Mgmt	0.80% of First 50.0 Mil, 0.70% of Next 100.0 Mil, 0.60% Thereafter	$71,299,294	4.6%	$549,095	0.77%
BlackRock Core Bond	0.28% of First 100.0 Mil, 0.26% Thereafter	$99,731,982	6.4%	$279,250	0.28%
Boston Partners Large Cap Value	0.40% of Assets	$99,314,957	6.4%	$397,260	0.40%
Brandywine Global Fixed Income	0.45% of First 50.0 Mil, 0.40% of Next 50.0 Mil, 0.35% Thereafter	$72,057,761	4.6%	$313,231	0.43%
Cash Account	No Fee	$29,784,304	1.9%	--	--
Dodge & Cox Income Fund	0.42% of Assets	$104,093,013	6.7%	$437,191	0.42%
Dodge & Cox Intl Stock	0.64% of Assets	$168,922,976	10.9%	$1,081,107	0.64%
Harbourvest 2018 Global Fund L.P.	282,000 Annually	$12,403,796	0.8%	$282,000	2.27%
Harbourvest Partners IX Buyout Fund L.P.	200,000 Annually	$16,061,799	1.0%	$200,000	1.25%
JP Morgan Core Real Estate	0.92% of First 100.0 Mil, 0.80% of Next 150.0 Mil, 0.70% of Next 250.0 Mil, 0.50% Thereafter	$167,454,510	10.8%	$1,459,636	0.87%
Kohlberg Kravis Roberts & Co. Mezzanine Partners I	300,000 Annually	$3,417,031	0.2%	$300,000	8.78%
Loomis Sayles Large Cap Growth	0.45% of First 100.0 Mil, 0.40% Thereafter	$109,850,461	7.1%	$489,402	0.45%
Pacific Asset Corporate Loan	0.37% of Assets	$75,013,399	4.8%	$277,550	0.37%
Pathway Private Equity Fund Investors 10 L.P.	Please see footnote	$209,882	0.0%	--	--
Pathway Private Equity Fund Investors 9 L.P.	Please see footnote	$34,551,911	2.2%	--	--
PIMCO RAE US	0.40% of Assets	$81,515,644	5.3%	$326,063	0.40%
Sixth Street Partners DCP	Please see footnote	$63,310,786	4.1%	--	--
Sixth Street Partners TAO	Please see footnote	$15,871,452	1.0%	--	--
The Clifton Group	50,000 Annually	$11,354,403	0.7%	$50,000	0.44%
WCM International Growth	0.70% of Assets	$201,901,235	13.0%	$1,413,309	0.70%
Investment Management Fee		**$1,552,085,716**	**100.0%**	**$9,063,706**	**0.58%**

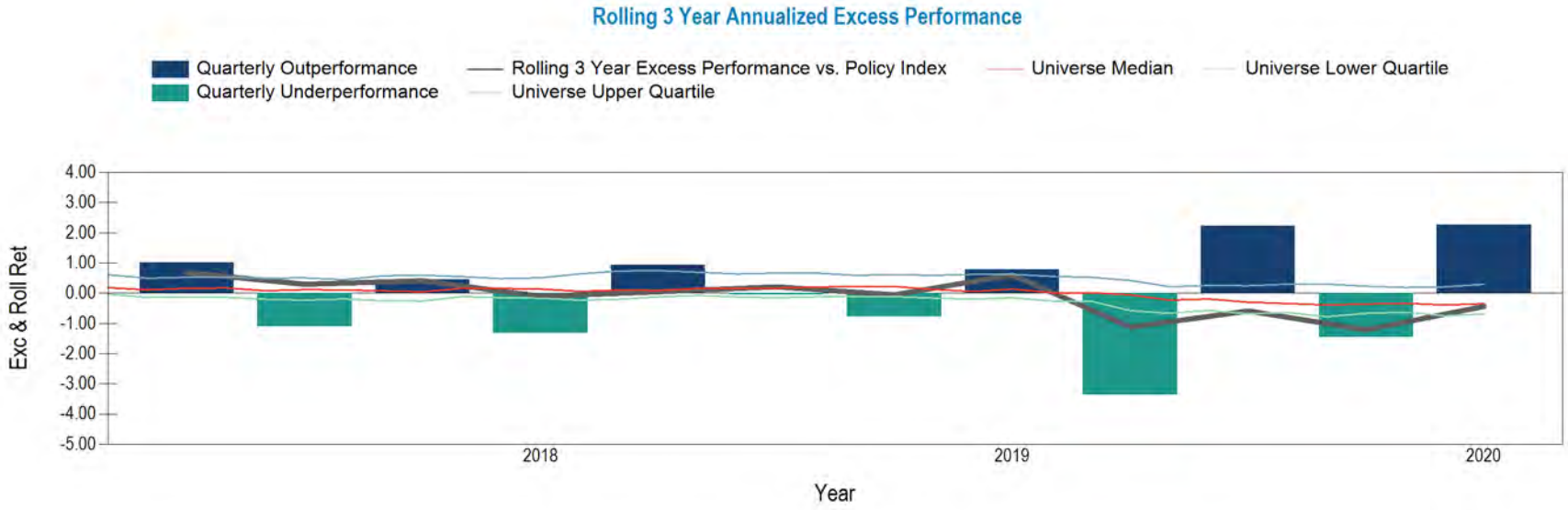
HarbourVest, KKR and PIMCO Distressed Credit fees are estimated gross management fees only and do not include incentive allocations or offsetting cash flows received by the fund. Pathway fee steps up and down over time, with an effective average of 0.71% up to $25m, 0.67% up to $50m, 0.63% up to $75m, and 0.40% above $75m.
Clifton Group fee schedule represents contractual minimum fee. Actual fee charged is $1,500 per month through at least 6/30/2015.
TPG: No management fee at SMA level. Subject to the annual fees of each of the underlying TSSP funds. (1) TAO 65bps on unfunded commitments and 1.35% on remaining capital contributions (long-term designation) (2) TSLE 1.5% on commitments, 1.25% on remaining capital contributions post commitment period (3) TICP 30bps on remaining capital contributions (4) TCS 1.0% on unfunded commitments, 1.5% on remaining capital contributions.

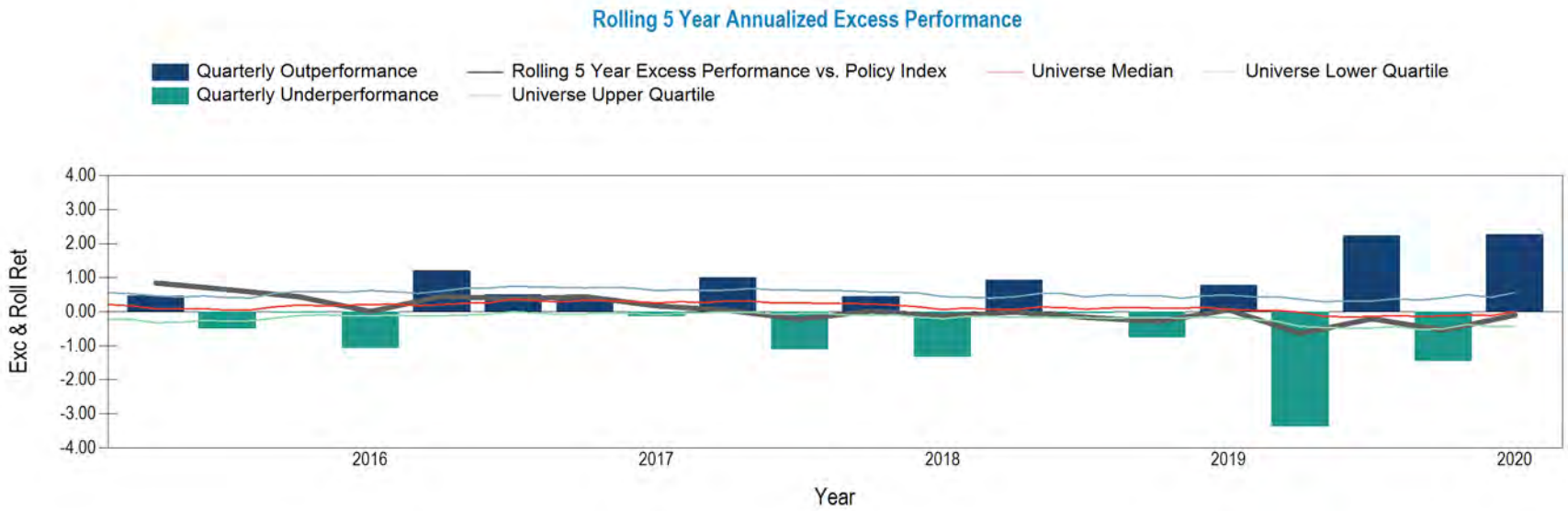


	Return (Rank)											
5th Percentile	13.0		18.4		11.1		11.5		9.1		9.9	
25th Percentile	11.4		14.7		9.7		10.5		8.4		9.0	
Median	10.3		12.5		8.6		9.8		7.8		8.4	
75th Percentile	9.3		11.0		7.8		9.1		7.2		7.8	
95th Percentile	7.1		7.6		6.4		7.9		6.1		6.8	
# of Portfolios	385		381		374		361		342		307	
● Total Fund	9.6	(66)	8.9	(92)	7.1	(89)	8.6	(89)	6.7	(90)	7.7	(79)
▲ Policy Index	7.4	(95)	10.0	(85)	7.5	(81)	8.7	(87)	6.8	(85)	7.3	(89)



	Return (Rank)																	
5th Percentile	18.4		21.9		-1.3		18.2		9.4		2.2		8.0		20.8		14.6	
25th Percentile	14.7		20.1		-3.1		16.5		8.4		0.9		6.8		18.0		13.4	
Median	12.5		18.4		-4.0		15.3		7.7		0.1		5.8		15.5		12.4	
75th Percentile	11.0		16.7		-4.9		14.0		6.9		-0.9		4.6		13.3		10.7	
95th Percentile	7.6		13.7		-6.3		11.3		5.3		-2.6		3.2		8.5		7.8	
# of Portfolios	381		330		319		304		305		316		248		231		236	
● Total Fund	8.9	(92)	16.3	(81)	-3.1	(25)	15.5	(47)	6.6	(84)	-0.8	(74)	5.1	(66)	13.8	(71)	12.8	(40)
▲ Policy Index	10.0	(85)	15.3	(90)	-2.1	(10)	13.3	(86)	7.8	(49)	-0.5	(67)	5.2	(64)	13.4	(74)	11.6	(69)


Rolling 3 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 3 Year Excess Performance vs. Policy Index
Universe Upper Quartile
Universe Median
Universe Lower Quartile
Exc & Roll Ret
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
-5.00
2018
2019
2020
Year


Rolling 5 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 5 Year Excess Performance vs. Policy Index
Universe Upper Quartile
Universe Median
Universe Lower Quartile
Exc & Roll Ret
4.00
3.00
2.00
1.00
0.00
-1.00
-2.00
-3.00
-4.00
2016
2017
2018
2019
2020
Year

Total Domestic Equity
Asset Class Overview (Gross of Fees)

Period Ending: December 31, 2020

	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2020	2019	2018	2017	2016
Total Domestic Equity	**361,980,357**	**15.6**	**13.7**	**11.7**	**14.5**	**13.3**	**13.7**	**29.4**	**-5.2**	**25.1**	**13.0**
Russell 3000		*14.7*	*20.9*	*14.5*	*15.4*	*13.8*	*20.9*	*31.0*	*-5.2*	*21.1*	*12.7*
InvMetrics Public DB US Eq Gross Rank		*47*	*91*	*86*	*47*	*44*	*91*	*66*	*36*	*4*	*48*
PIMCO RAE US	81,515,644	17.2	4.4	6.9	10.6	11.4	4.4	25.5	-6.6	17.0	15.9
S&P 500		*12.1*	*18.4*	*14.2*	*15.2*	*13.9*	*18.4*	*31.5*	*-4.4*	*21.8*	*12.0*
eV US Large Cap Core Equity Gross Rank		*5*	*96*	*94*	*93*	*94*	*96*	*83*	*72*	*89*	*6*
Loomis Sayles Large Cap Growth	109,850,461	8.7	32.8	20.1	--	--	32.8	32.7	-1.7	34.1	--
Russell 1000 Growth		*11.4*	*38.5*	*23.0*	--	--	*38.5*	*36.4*	*-1.5*	*30.2*	--
eV US Large Cap Growth Equity Gross Rank		*90*	*61*	*67*	--	--	*61*	*68*	*58*	*16*	--
Boston Partners Large Cap Value	99,314,957	19.0	2.4	5.2	--	--	2.4	24.3	-8.5	--	--
Russell 1000 Value		*16.3*	*2.8*	*6.1*	--	--	*2.8*	*26.5*	*-8.3*	--	--
eV US Large Cap Value Equity Gross Rank		*24*	*64*	*72*	--	--	*64*	*77*	*54*	--	--
Atlanta Capital Mgmt	71,299,294	20.8	11.4	12.9	15.4	15.1	11.4	35.1	-4.5	26.6	12.6
Russell 2500		*27.4*	*20.0*	*11.3*	*13.6*	*12.0*	*20.0*	*27.8*	*-10.0*	*16.8*	*17.6*
eV US Small-Mid Cap Equity Gross Rank		*83*	*62*	*44*	*36*	*20*	*62*	*14*	*25*	*15*	*62*

U.S. Effective Style Map
3 Years Ending December 31, 2020

U.S. Effective Style Map
5 Years Ending December 31, 2020

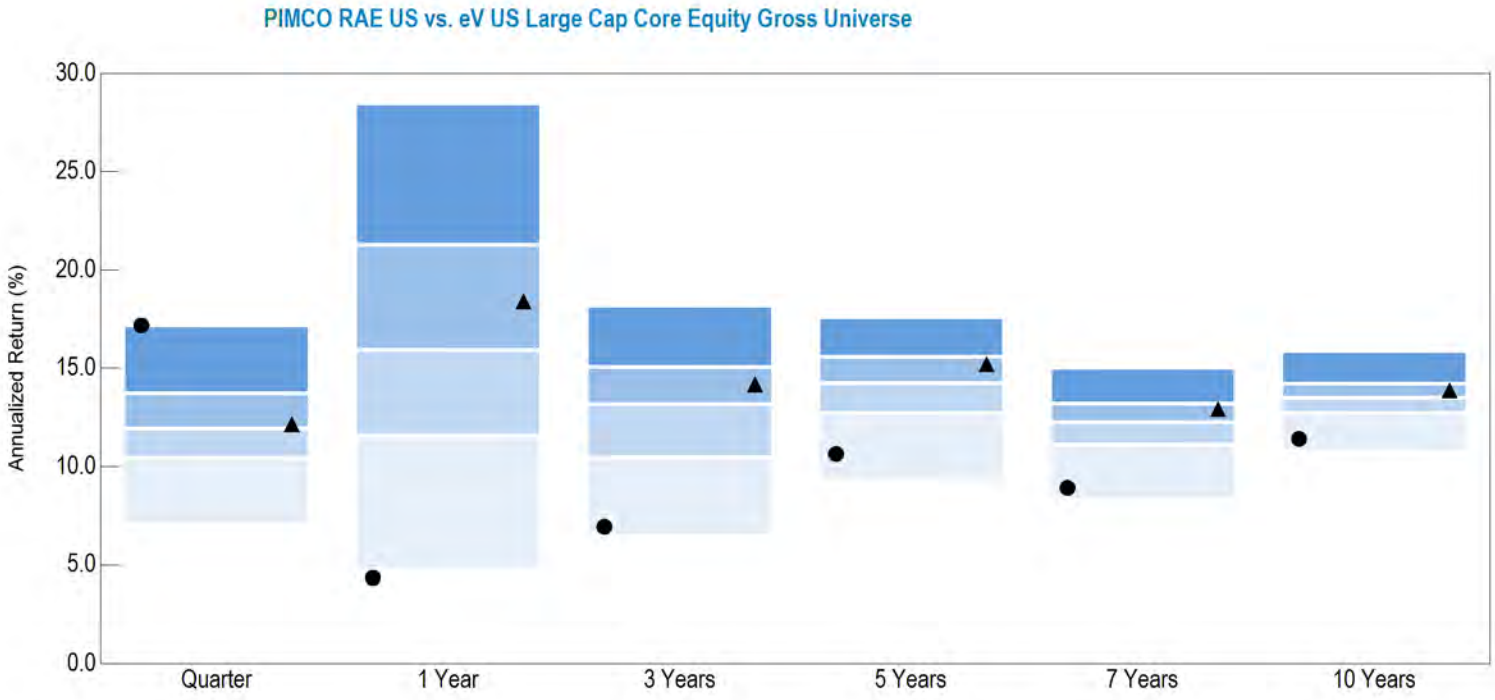
Total Domestic Equity
Asset Class Overview (Net of Fees)

Period Ending: December 31, 2020

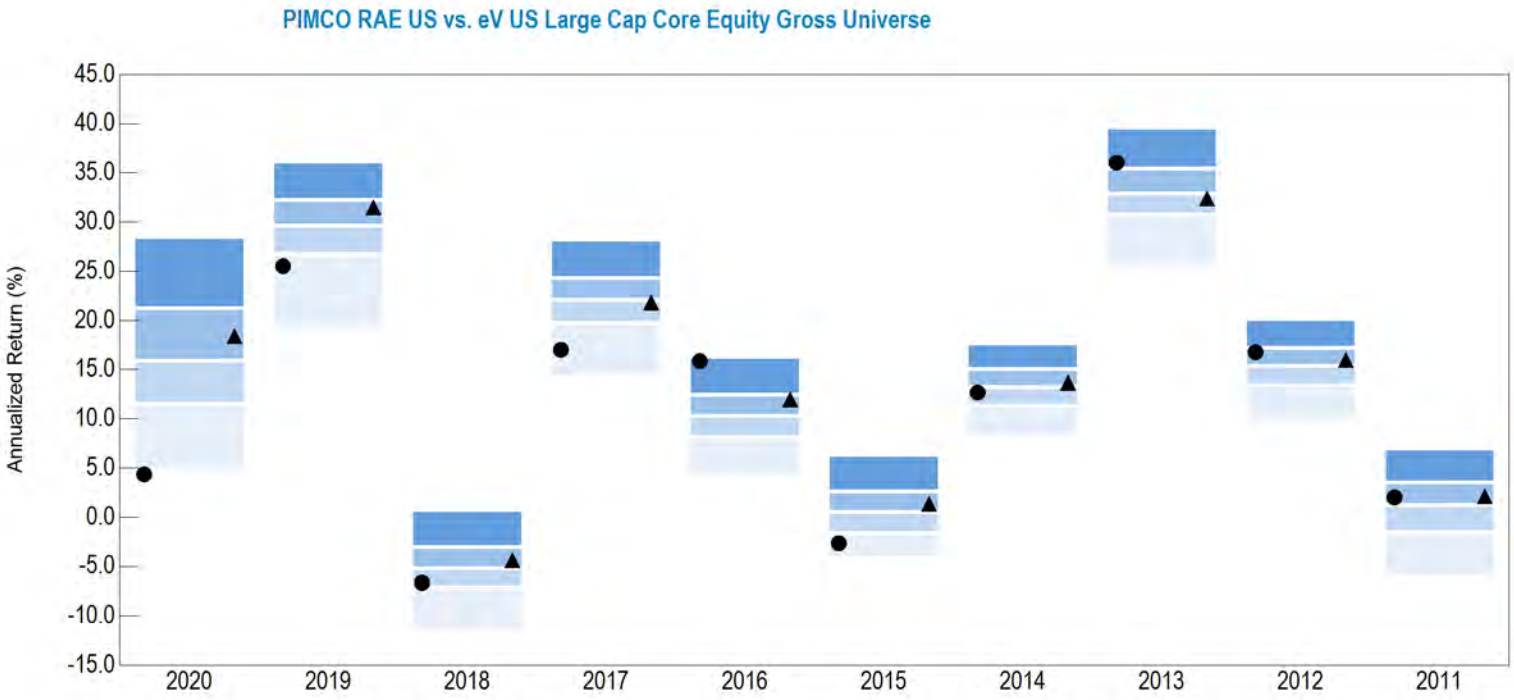
	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2020	2019	2018	2017	2016
Total Domestic Equity	**361,980,357**	**15.5**	**13.1**	**11.2**	**14.0**	**12.8**	**13.1**	**28.7**	**-5.7**	**24.5**	**12.7**
Russell 3000		*14.7*	*20.9*	*14.5*	*15.4*	*13.8*	*20.9*	*31.0*	*-5.2*	*21.1*	*12.7*
PIMCO RAE US	81,515,644	17.1	3.9	6.5	10.2	11.0	3.9	25.0	-7.0	16.5	15.4
S&P 500		*12.1*	*18.4*	*14.2*	*15.2*	*13.9*	*18.4*	*31.5*	*-4.4*	*21.8*	*12.0*
Loomis Sayles Large Cap Growth	109,850,461	8.6	32.3	19.6	--	--	32.3	32.1	-2.1	33.5	--
Russell 1000 Growth		*11.4*	*38.5*	*23.0*	--	--	*38.5*	*36.4*	*-1.5*	*30.2*	--
Boston Partners Large Cap Value	99,314,957	18.8	2.0	4.8	--	--	2.0	23.8	-8.9	--	--
Russell 1000 Value		*16.3*	*2.8*	*6.1*	--	--	*2.8*	*26.5*	*-8.3*	--	--
Atlanta Capital Mgmt	71,299,294	20.6	10.5	12.0	14.5	14.3	10.5	34.1	-5.3	25.6	11.7
Russell 2500		*27.4*	*20.0*	*11.3*	*13.6*	*12.0*	*20.0*	*27.8*	*-10.0*	*16.8*	*17.6*

Correlation Matrix
Last 1 Year

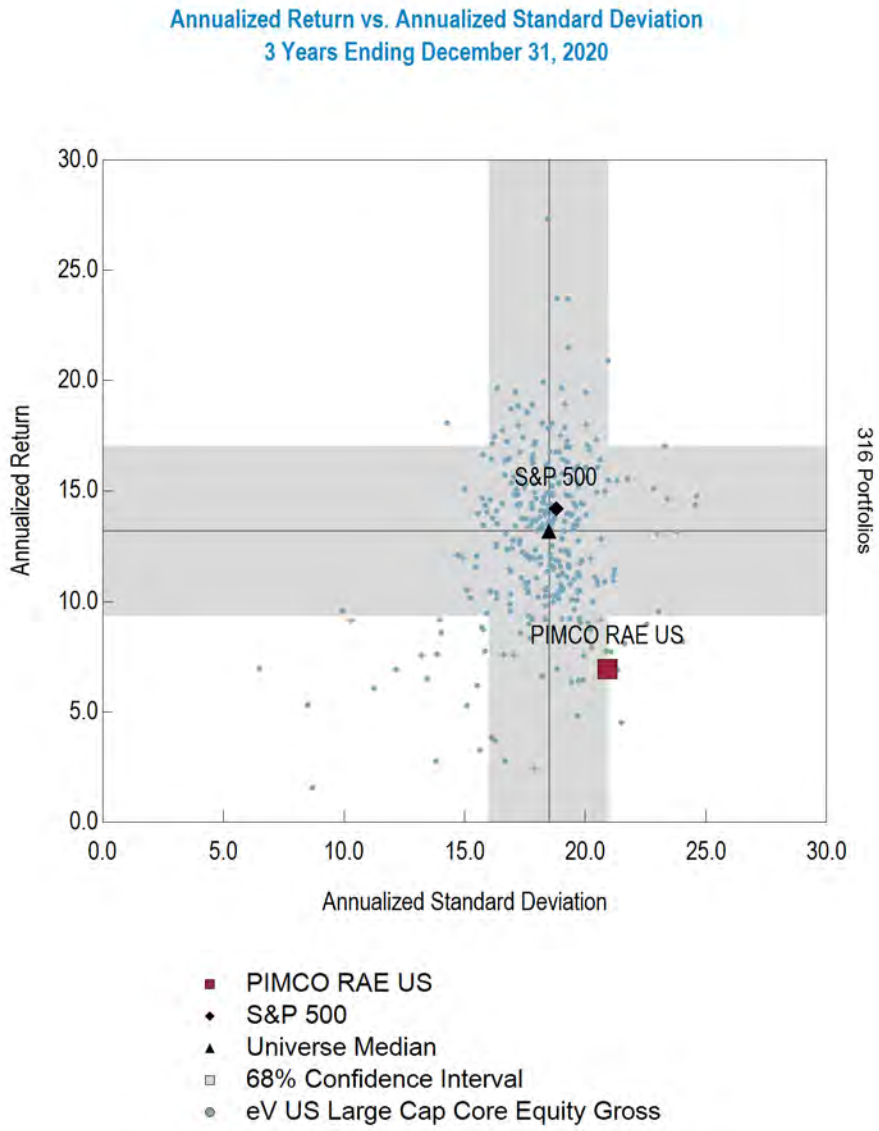
	Total Domestic Equity	PIMCO RAE US	Loomis Sayles Large Cap Growth	Boston Partners Large Cap Value	Atlanta Capital Mgmt	Russell 3000
Total Domestic Equity	1.00	--	--	--	--	--
PIMCO RAE US	0.99	1.00	--	--	--	--
Loomis Sayles Large Cap Growth	0.94	0.89	1.00	--	--	--
Boston Partners Large Cap Value	0.99	1.00	0.88	1.00	--	--
Atlanta Capital Mgmt	0.99	0.99	0.90	0.99	1.00	--
Russell 3000	1.00	0.98	0.96	0.98	0.98	1.00

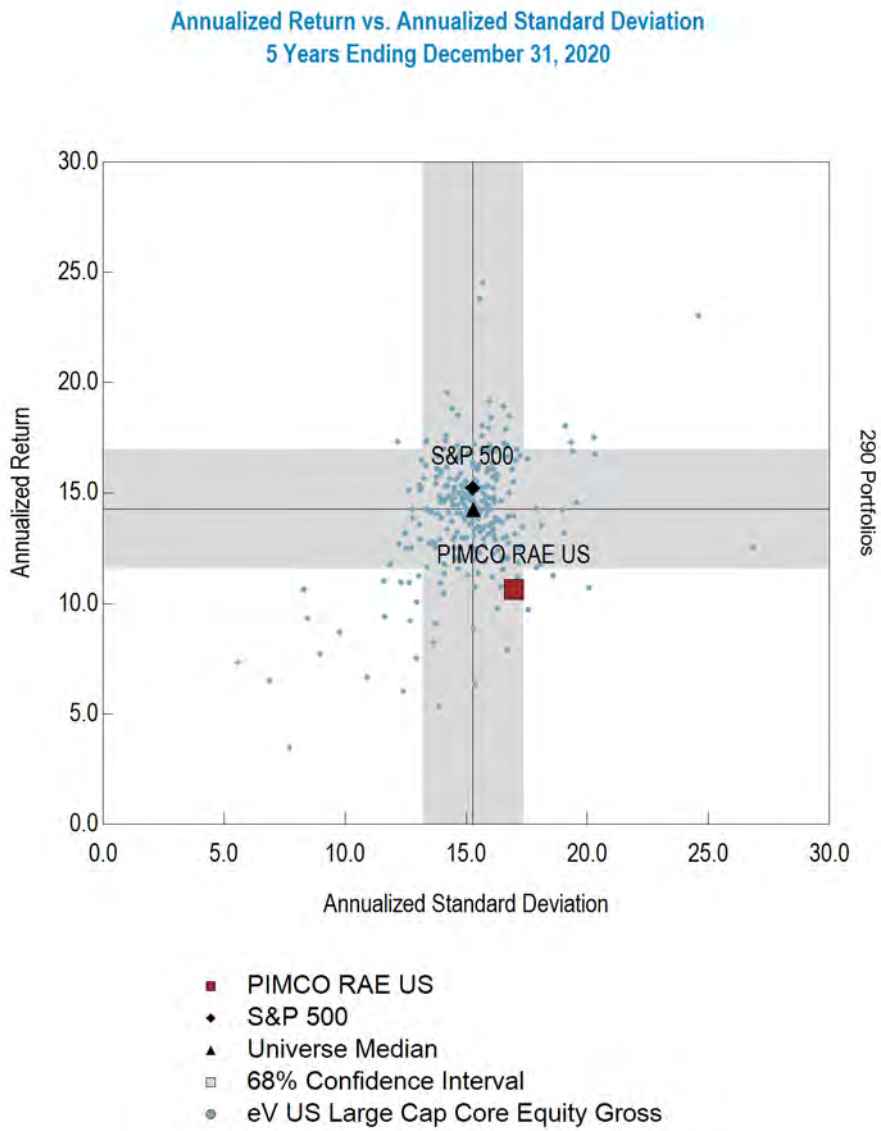


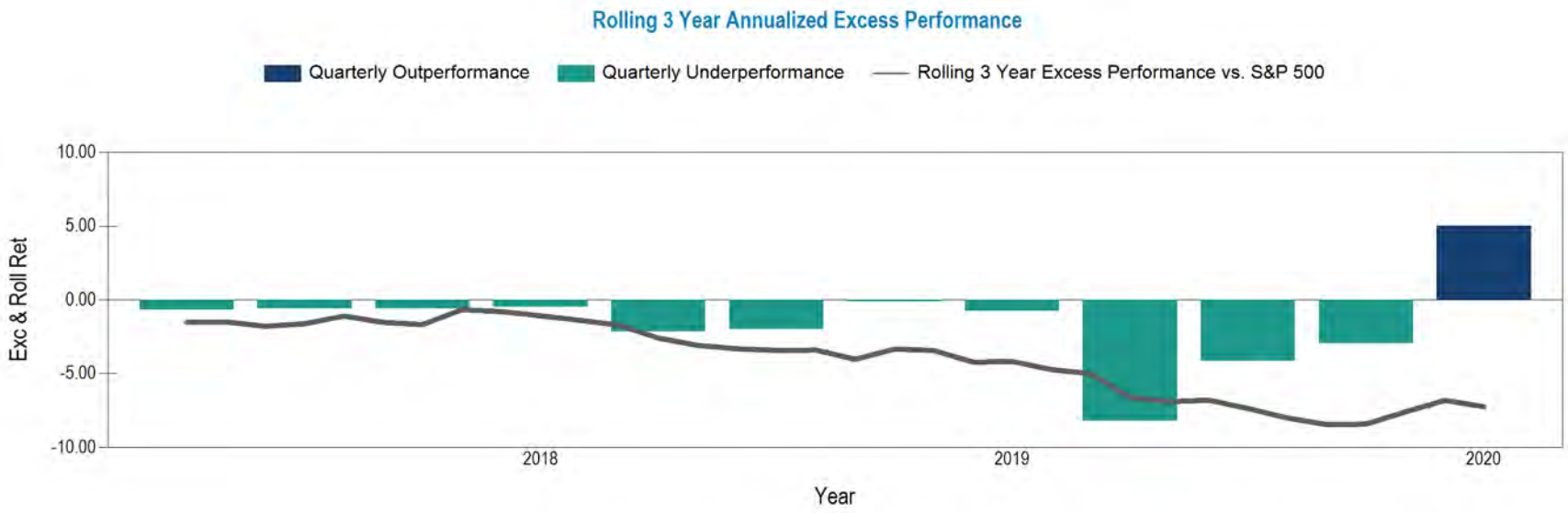
	Return (Rank)											
5th Percentile	17.2		28.5		18.2		17.6		15.0		15.8	
25th Percentile	13.7		21.3		15.1		15.6		13.2		14.2	
Median	12.0		15.9		13.2		14.3		12.3		13.5	
75th Percentile	10.5		11.6		10.5		12.8		11.2		12.7	
95th Percentile	7.1		4.8		6.5		9.3		8.3		10.8	
# of Portfolios	323		323		316		290		270		226	
● PIMCO RAE US	17.2	(5)	4.4	(96)	6.9	(94)	10.6	(93)	8.9	(95)	11.4	(94)
▲ S&P 500	12.1	(46)	18.4	(41)	14.2	(36)	15.2	(33)	12.9	(30)	13.9	(39)

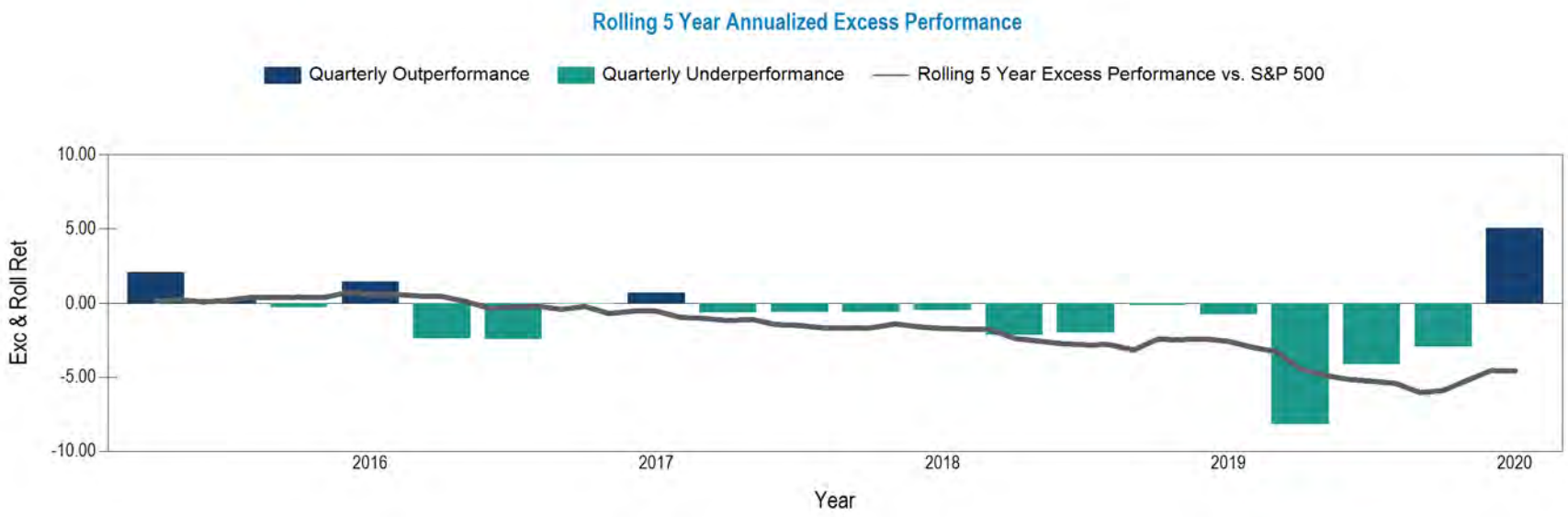


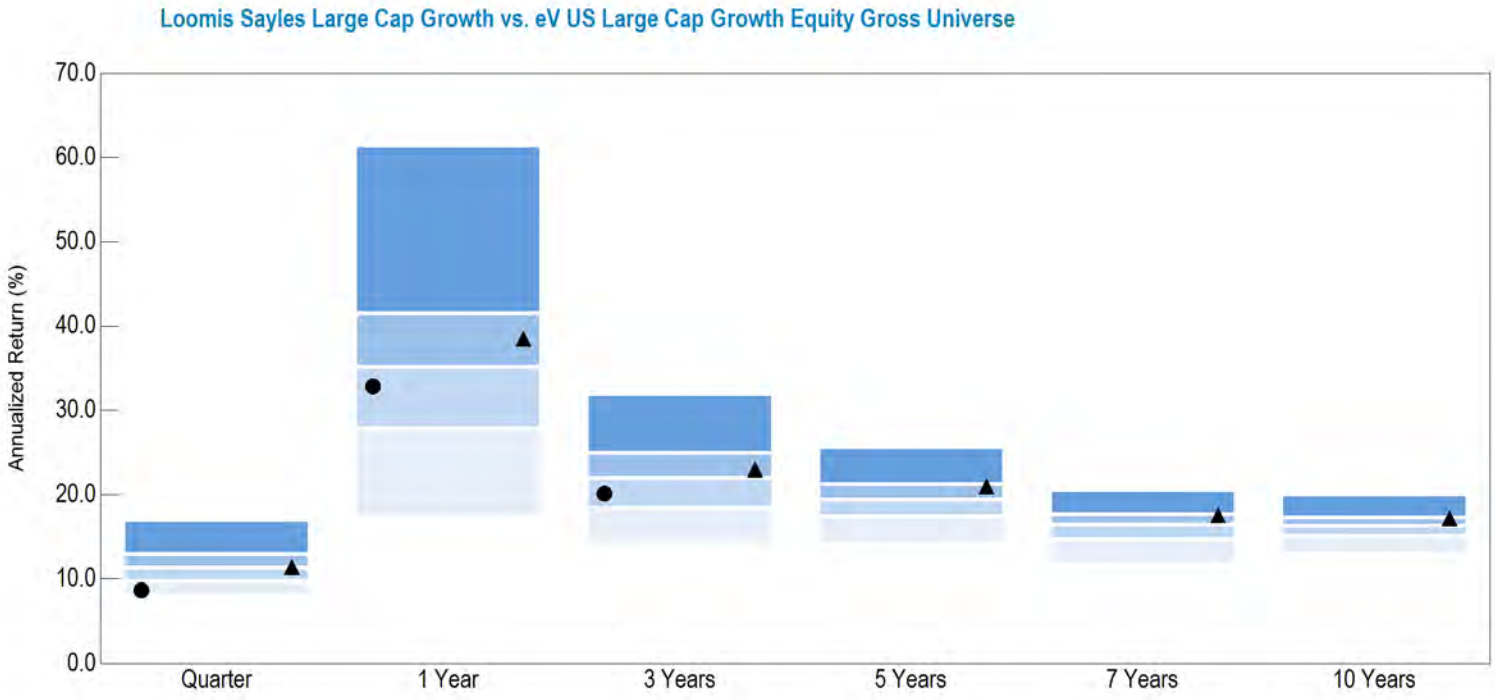
	Return (Rank)									
5th Percentile	28.5	36.1	0.7	28.2	16.3	6.3	17.7	39.6	20.1	7.0
25th Percentile	21.3	32.3	-3.0	24.3	12.5	2.7	15.1	35.5	17.2	3.6
Median	15.9	29.7	-5.1	22.1	10.4	0.6	13.3	32.9	15.4	1.3
75th Percentile	11.6	26.8	-7.1	19.8	8.2	-1.6	11.4	30.8	13.4	-1.5
95th Percentile	4.8	19.2	-11.4	14.4	4.3	-4.1	8.2	25.4	9.8	-5.9
# of Portfolios	323	318	316	318	308	267	267	261	254	259
● PIMCO RAE US	4.4 (96)	25.5 (83)	-6.6 (72)	17.0 (89)	15.9 (6)	-2.7 (86)	12.7 (58)	36.0 (22)	16.8 (29)	2.0 (41)
▲ S&P 500	18.4 (41)	31.5 (33)	-4.4 (40)	21.8 (53)	12.0 (31)	1.4 (42)	13.7 (42)	32.4 (58)	16.0 (41)	2.1 (40)


Annualized Return vs. Annualized Standard Deviation
3 Years Ending December 31, 2020
Annualized Return
Annualized Standard Deviation
S&P 500
PIMCO RAE US
316 Portfolios
PIMCO RAE US
S&P 500
Universe Median
68% Confidence Interval
eV US Large Cap Core Equity Gross

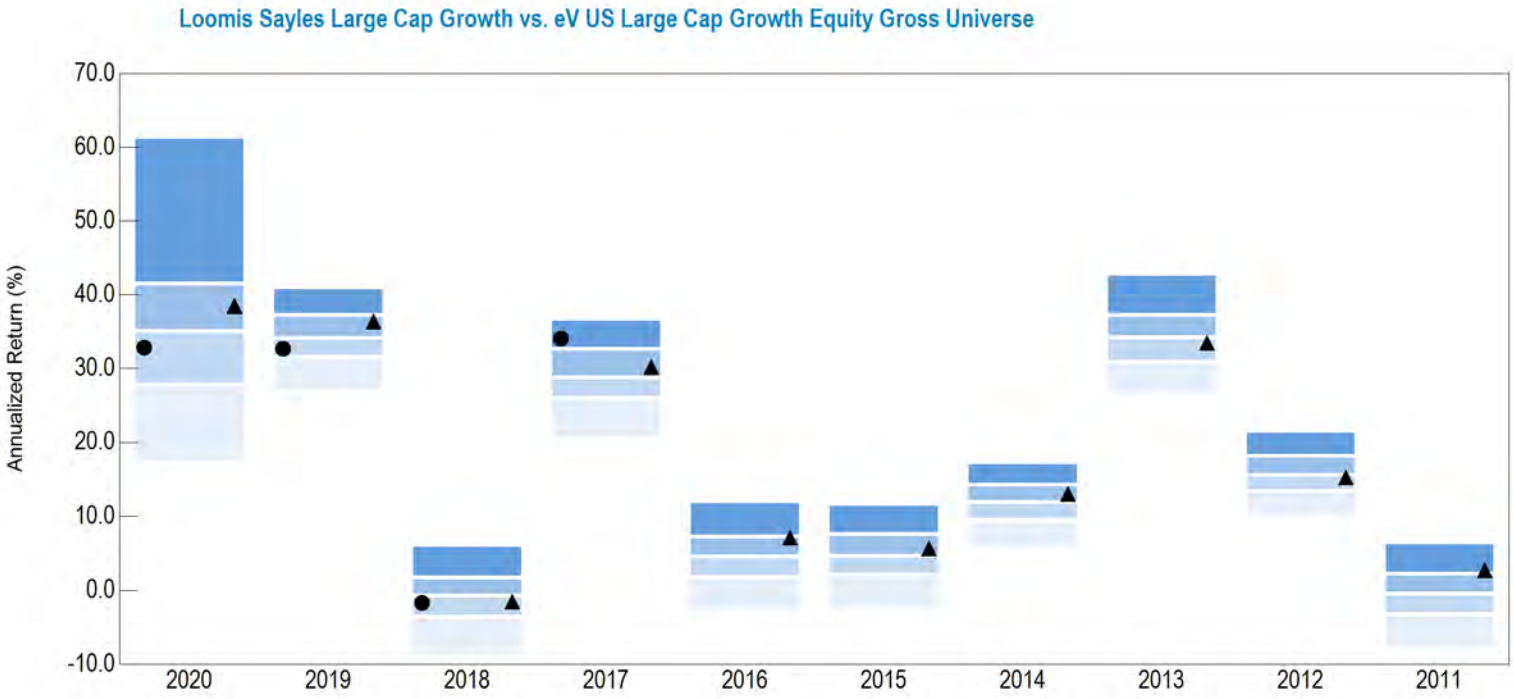

Annualized Return vs. Annualized Standard Deviation
5 Years Ending December 31, 2020
Annualized Return
Annualized Standard Deviation
S&P 500
PIMCO RAE US
290 Portfolios
PIMCO RAE US
S&P 500
Universe Median
68% Confidence Interval
eV US Large Cap Core Equity Gross


Rolling 3 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 3 Year Excess Performance vs. S&P 500
10.00
5.00
0.00
-5.00
-10.00
Exc & Roll Ret
2018
2019
2020
Year

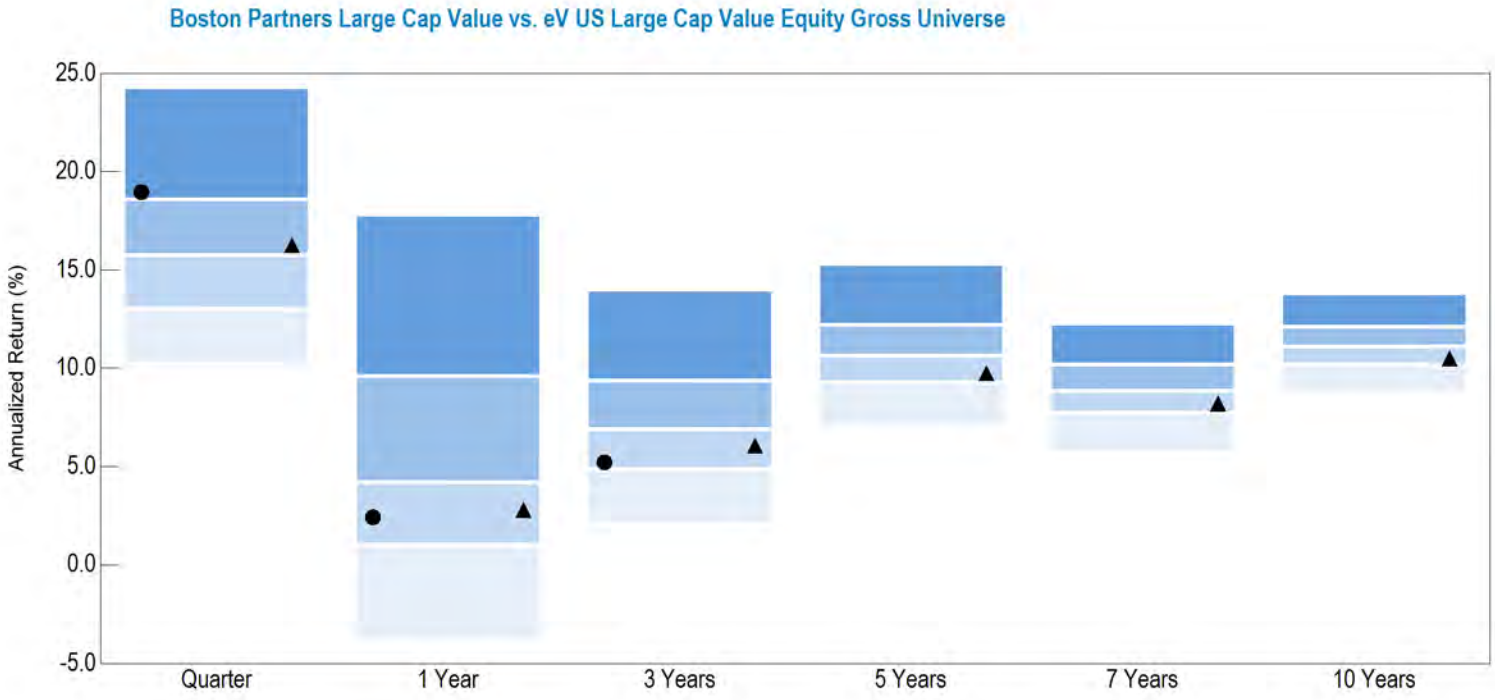

Rolling 5 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 5 Year Excess Performance vs. S&P 500
10.00
5.00
0.00
-5.00
-10.00
Exc & Roll Ret
2016
2017
2018
2019
2020
Year



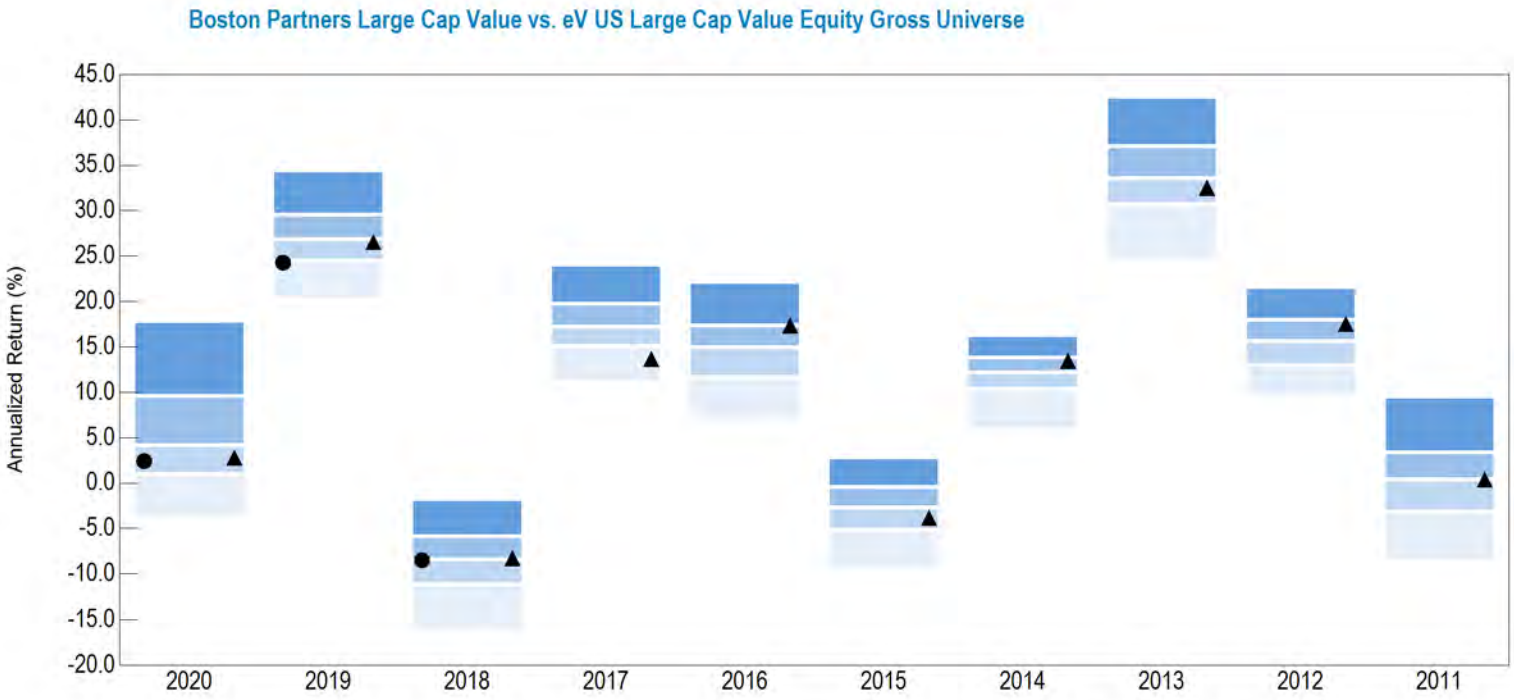
	Return (Rank)											
5th Percentile	17.0		61.4		31.9		25.6		20.5		20.0	
25th Percentile	13.0		41.6		25.0		21.3		17.7		17.3	
Median	11.4		35.2		22.0		19.4		16.5		16.4	
75th Percentile	9.8		27.9		18.5		17.5		14.8		15.1	
95th Percentile	8.1		17.4		14.4		14.3		11.9		13.1	
# of Portfolios	264		263		257		241		234		218	
● Loomis Sayles Large Cap Growth	8.7	(90)	32.8	(61)	20.1	(67)	--	(--)	--	(--)	--	(--)
▲ Russell 1000 Growth	11.4	(50)	38.5	(34)	23.0	(42)	21.0	(29)	17.5	(28)	17.2	(27)



	Return (Rank)									
5th Percentile	61.4	41.0	6.1	36.7	12.0	11.6	17.3	42.8	21.6	6.4
25th Percentile	41.6	37.3	1.7	32.7	7.3	7.6	14.3	37.3	18.2	2.2
Median	35.2	34.2	-0.6	28.8	4.6	4.7	12.0	34.3	15.7	-0.3
75th Percentile	27.9	31.7	-3.5	26.2	1.8	2.1	9.5	31.0	13.4	-3.2
95th Percentile	17.4	26.9	-8.8	20.5	-2.7	-2.4	5.8	26.6	10.2	-8.0
# of Portfolios	263	253	255	265	282	270	291	274	274	294
● Loomis Sayles Large Cap Growth	32.8 (61)	32.7 (68)	-1.7 (58)	34.1 (16)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
▲ Russell 1000 Growth	38.5 (34)	36.4 (32)	-1.5 (57)	30.2 (42)	7.1 (26)	5.7 (42)	13.0 (38)	33.5 (56)	15.3 (55)	2.6 (22)



	Return (Rank)											
5th Percentile	24.3		17.8		14.0		15.3		12.3		13.8	
25th Percentile	18.6		9.6		9.4		12.2		10.2		12.1	
Median	15.8		4.2		6.9		10.7		8.9		11.1	
75th Percentile	13.0		1.1		4.9		9.3		7.8		10.2	
95th Percentile	10.2		-3.8		2.1		7.1		5.8		8.8	
# of Portfolios	326		326		322		307		296		264	
● Boston Partners Large Cap Value	19.0	(24)	2.4	(64)	5.2	(72)	--	(--)	--	(--)	--	(--)
▲ Russell 1000 Value	16.3	(42)	2.8	(62)	6.1	(60)	9.7	(65)	8.2	(67)	10.5	(67)



	Return (Rank)									
5th Percentile	17.8	34.4	-1.8	24.0	22.1	2.8	16.3	42.5	21.5	9.5
25th Percentile	9.6	29.6	-5.8	19.8	17.4	-0.4	13.9	37.2	18.0	3.4
Median	4.2	26.9	-8.3	17.2	15.0	-2.6	12.2	33.6	15.7	0.5
75th Percentile	1.1	24.5	-11.1	15.1	11.8	-5.1	10.4	30.8	13.0	-3.1
95th Percentile	-3.8	20.3	-16.1	11.2	7.0	-9.4	5.9	24.6	9.6	-8.6
# of Portfolios	326	331	336	342	346	312	307	310	303	310
● Boston Partners Large Cap Value	2.4 (64)	24.3 (77)	-8.5 (54)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
▲ Russell 1000 Value	2.8 (62)	26.5 (54)	-8.3 (50)	13.7 (87)	17.3 (26)	-3.8 (64)	13.5 (33)	32.5 (60)	17.5 (30)	0.4 (51)

Characteristics

	Portfolio	Russell 2500
Number of Holdings	57	2,545
Weighted Avg. Market Cap. ($B)	10.08	6.89
Median Market Cap. ($B)	9.66	1.29
Price To Earnings	34.11	24.93
Price To Book	3.45	3.16
Price To Sales	2.30	1.68
Return on Equity (%)	12.39	-1.81
Yield (%)	0.63	1.17
Beta	0.85	1.00

Sector Allocation (%) vs Russell 2500

*Unclassified includes Cash

Top Holdings
Ending Period Weight

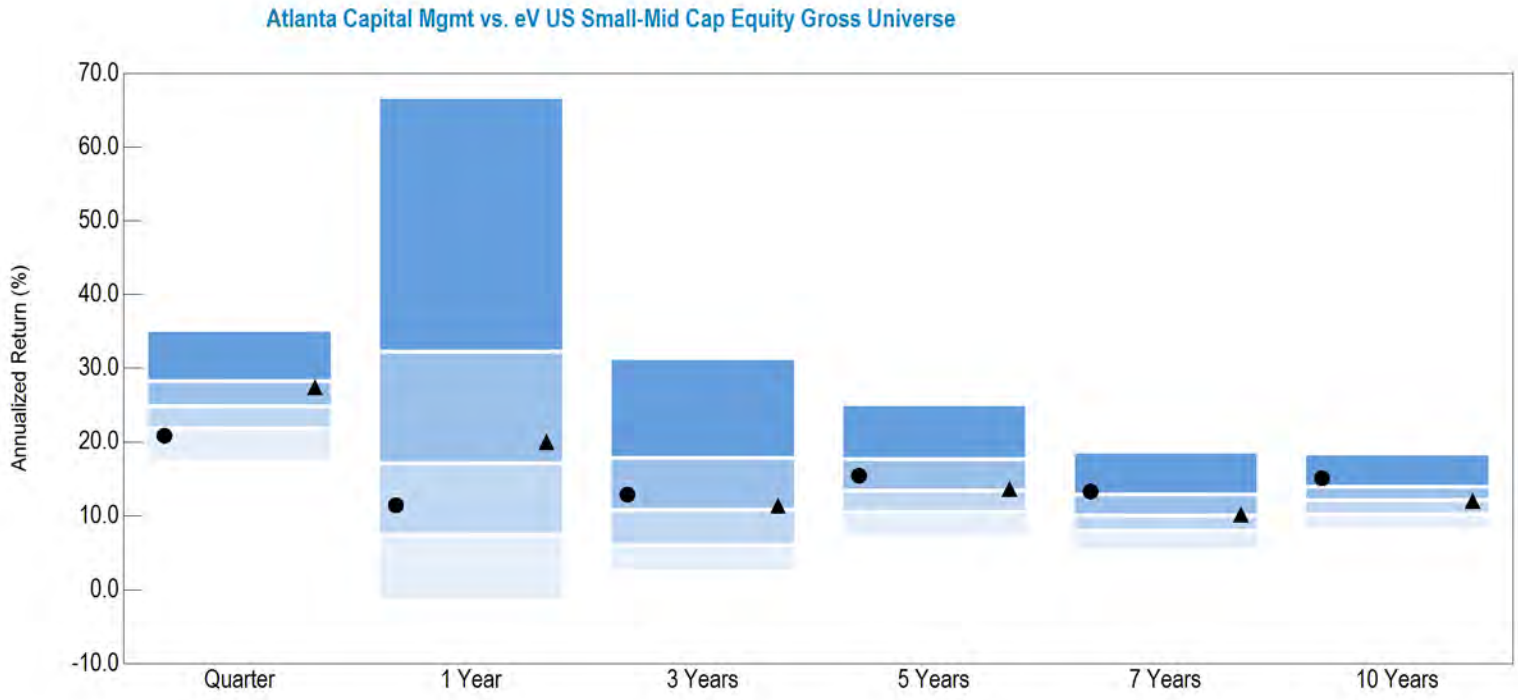
BERKLEY (W.R.) CORP	4.11%
ARAMARK	4.00%
JPMORGAN FEDERAL MMKT - AGENCY SHR FUND 355 MONTHLY VARIABLE 12312049	3.73%
TERMINIX GLOBAL HOLDINGS INC	3.67%
CARLISLE COS INC	3.67%
WEX INC	3.65%
J.B. HUNT TRANSPORT SERVICES INC.	3.11%
APTARGROUP INC.	2.86%
ENVISTA HOLDINGS CORP	2.80%
GARTNER INC	2.40%
Total	**34.00%**

Top Contributors

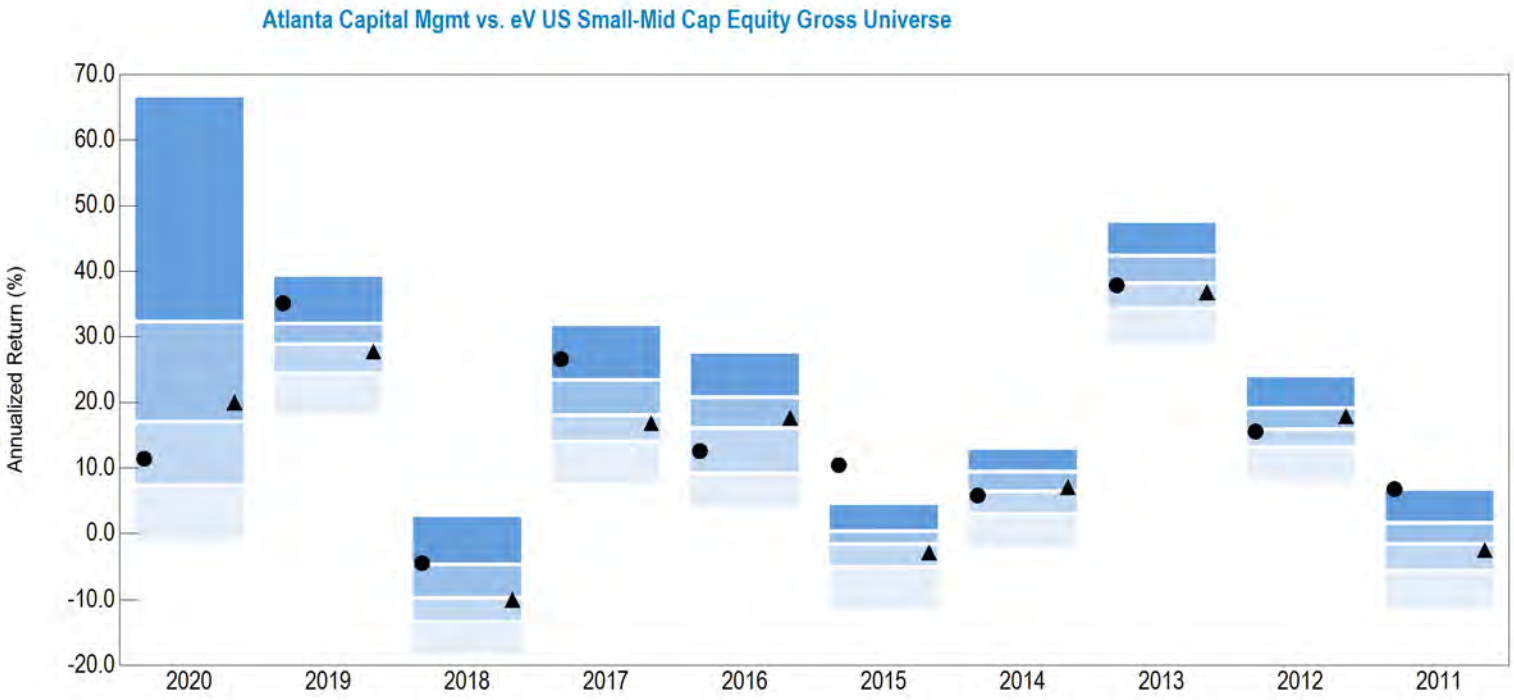
	Avg Wgt	Return	Contribution
ARAMARK	3.32	45.94	1.53
WEX INC	3.01	46.46	1.40
TERMINIX GLOBAL HOLDINGS INC	3.47	27.91	0.97
ENVISTA HOLDINGS CORP	2.47	36.67	0.91
CARLISLE COS INC	3.09	28.09	0.87
MORNINGSTAR INC	1.76	44.62	0.79
JONES LANG LASALLE INC	1.25	55.10	0.69
HEXCEL CORP	1.55	44.53	0.69
GARTNER INC	2.26	28.20	0.64
TRIMBLE INC	1.68	37.11	0.62

Bottom Contributors

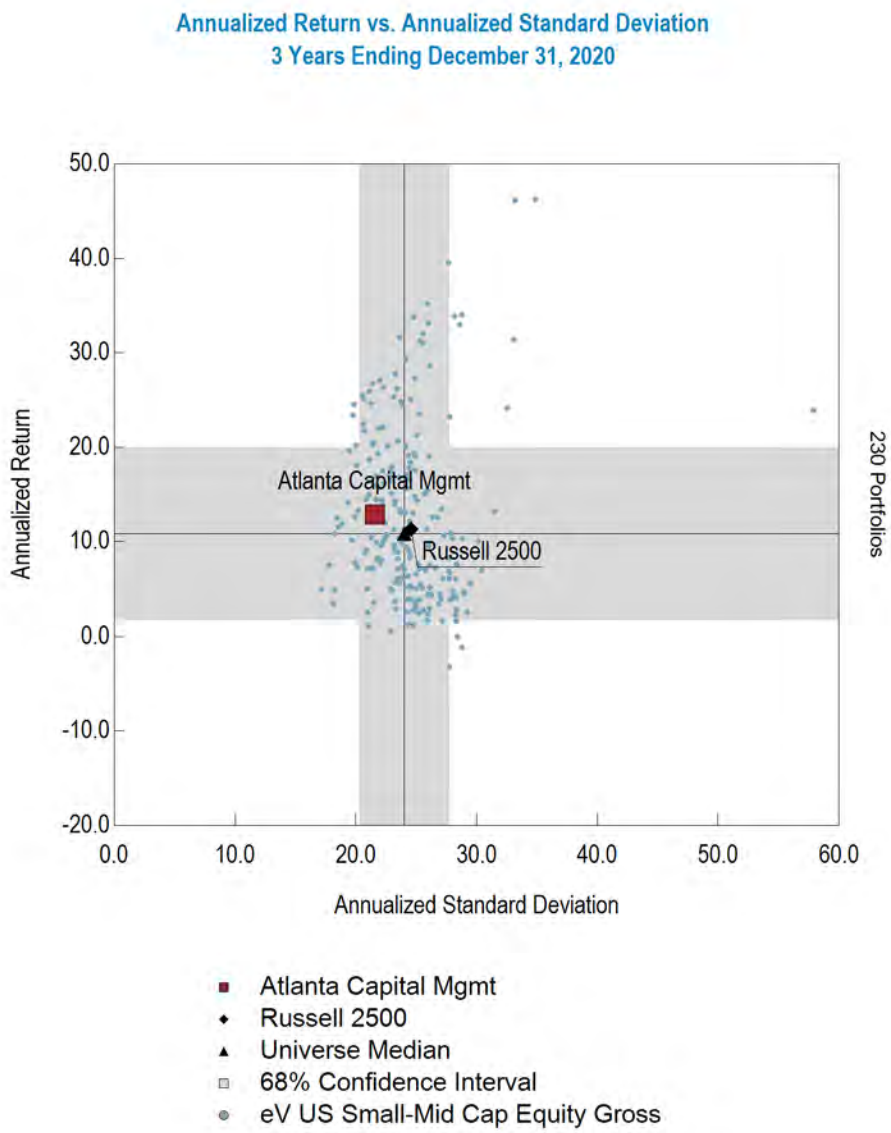
	Avg Wgt	Return	Contribution
FACTSET RESEARCH SYSTEMS INC.	1.14	-0.47	-0.01
HENRY (JACK) & ASSOCIATES INC	1.00	-0.10	0.00
COLUMBIA SPORTSWEAR CO	1.86	0.46	0.01
LENNOX INTERNATIONAL INC.	2.25	0.78	0.02
VARIAN MEDICAL SYSTEMS INC	1.39	1.75	0.02
BLACKBAUD INC	1.58	3.10	0.05
BOOZ ALLEN HAMILTON HOLDING CORP	1.27	5.43	0.07
NORDSON CORP	1.83	4.97	0.09
HENRY SCHEIN INC	0.66	13.75	0.09

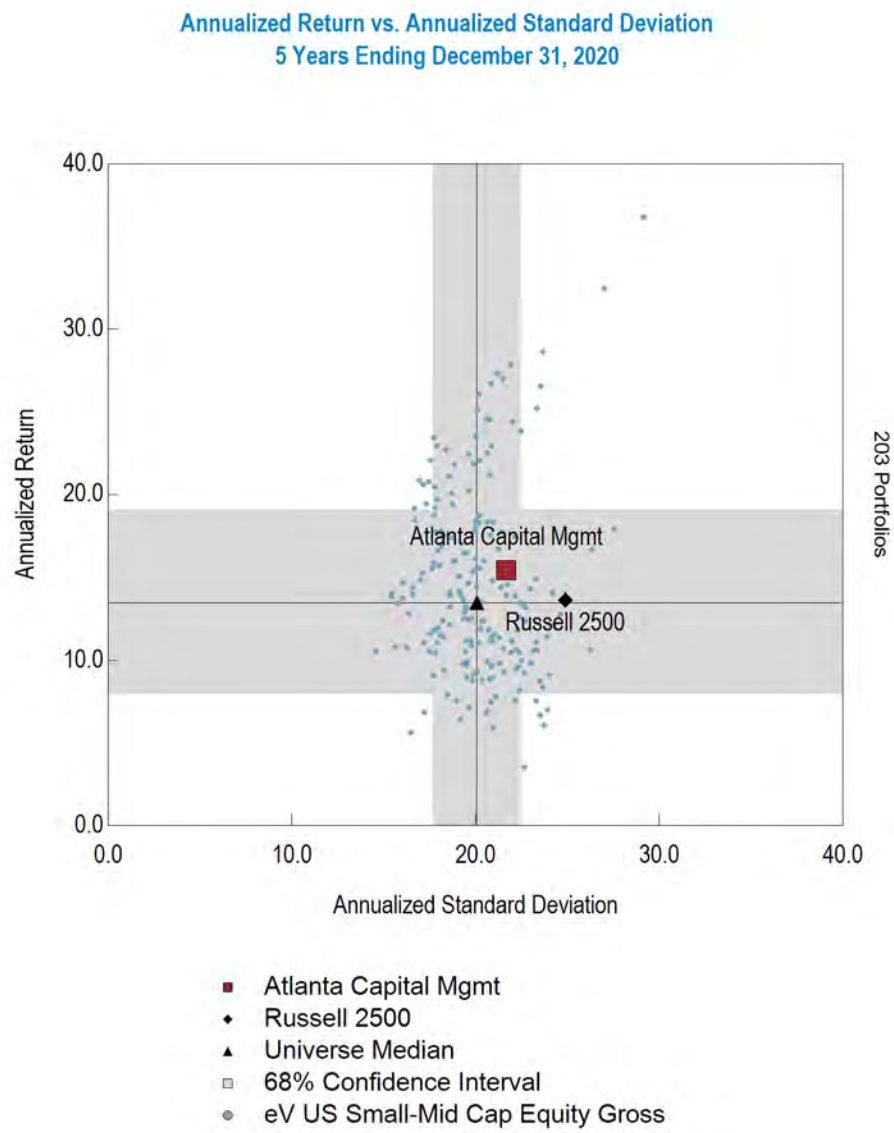


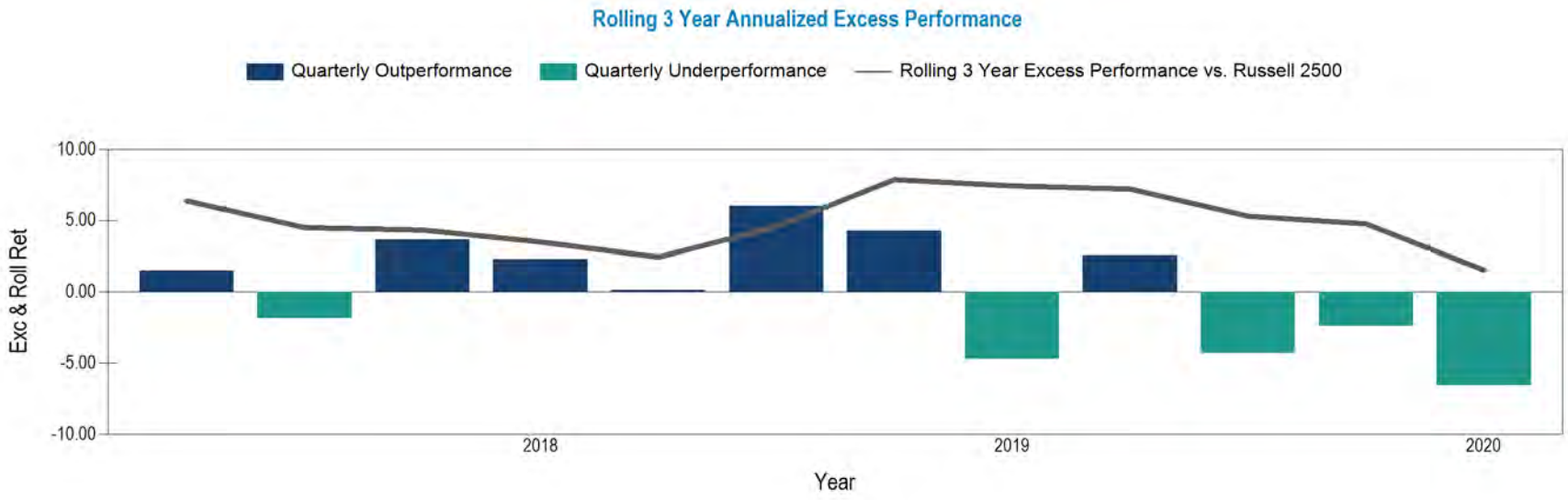
	Return (Rank)											
5th Percentile	35.1		66.8		31.3		25.1		18.7		18.4	
25th Percentile	28.3		32.3		17.9		17.7		12.9		14.0	
Median	24.9		17.2		10.8		13.5		10.0		12.1	
75th Percentile	21.9		7.4		6.1		10.6		8.0		10.3	
95th Percentile	17.4		-1.4		2.5		7.2		5.3		8.2	
# of Portfolios	238		238		230		203		182		154	
● Atlanta Capital Mgmt	20.8	(83)	11.4	(62)	12.9	(44)	15.4	(36)	13.3	(23)	15.1	(20)
▲ Russell 2500	27.4	(33)	20.0	(45)	11.3	(48)	13.6	(50)	10.2	(50)	12.0	(53)

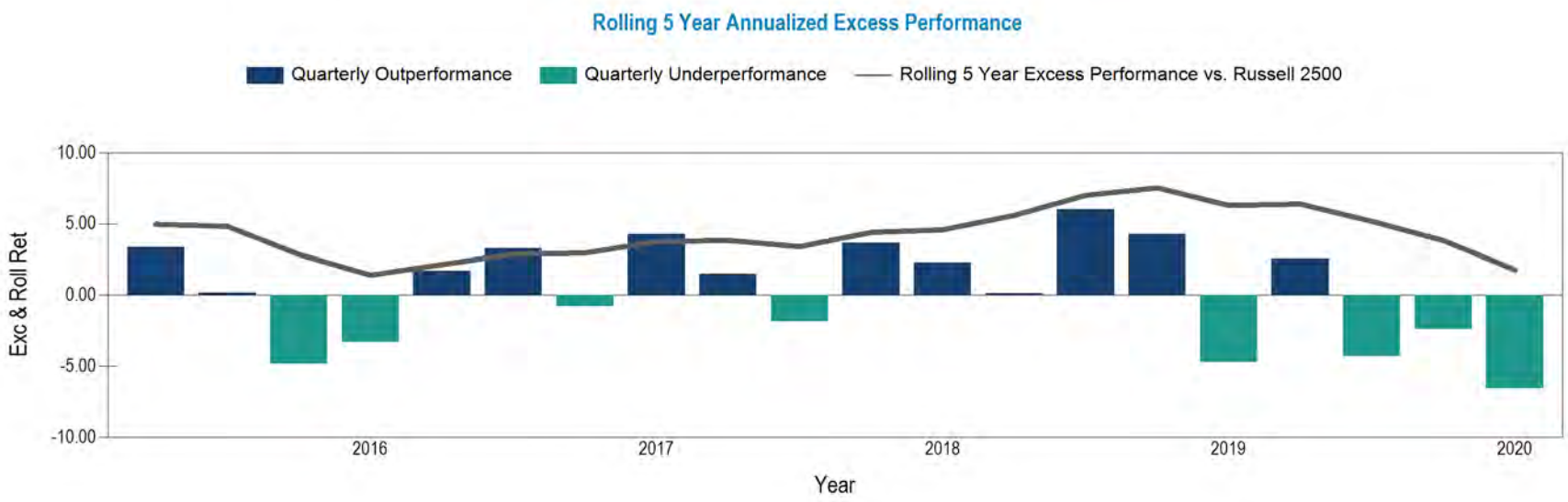


	Return (Rank)									
5th Percentile	66.8	39.4	2.8	31.9	27.6	4.6	13.0	47.6	24.1	6.8
25th Percentile	32.3	32.1	-4.6	23.5	20.8	0.4	9.6	42.5	19.2	1.7
Median	17.2	29.0	-9.6	18.1	16.1	-1.5	6.5	38.2	16.0	-1.5
75th Percentile	7.4	24.5	-13.3	14.1	9.2	-5.0	3.1	34.4	13.3	-5.6
95th Percentile	-1.4	18.1	-18.5	7.5	3.8	-11.6	-2.3	28.7	7.8	-11.6
# of Portfolios	238	237	236	233	238	215	210	210	216	211
● Atlanta Capital Mgmt	11.4 (62)	35.1 (14)	-4.5 (25)	26.6 (15)	12.6 (62)	10.4 (1)	5.8 (56)	37.8 (52)	15.5 (55)	6.8 (5)
▲ Russell 2500	20.0 (45)	27.8 (58)	-10.0 (53)	16.8 (61)	17.6 (38)	-2.9 (64)	7.1 (46)	36.8 (58)	17.9 (36)	-2.5 (56)


Annualized Return vs. Annualized Standard Deviation
3 Years Ending December 31, 2020
Annualized Return
Annualized Standard Deviation
Atlanta Capital Mgmt
Russell 2500
230 Portfolios
50.0
40.0
30.0
20.0
10.0
0.0
-10.0
-20.0
0.0
10.0
20.0
30.0
40.0
50.0
60.0
Atlanta Capital Mgmt
Russell 2500
Universe Median
68% Confidence Interval
eV US Small-Mid Cap Equity Gross


Annualized Return vs. Annualized Standard Deviation
5 Years Ending December 31, 2020
Annualized Return
Annualized Standard Deviation
Atlanta Capital Mgmt
Russell 2500
203 Portfolios
40.0
30.0
20.0
10.0
0.0
0.0
10.0
20.0
30.0
40.0
Atlanta Capital Mgmt
Russell 2500
Universe Median
68% Confidence Interval
eV US Small-Mid Cap Equity Gross


Rolling 3 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 3 Year Excess Performance vs. Russell 2500
10.00
5.00
0.00
-5.00
-10.00
Exc & Roll Ret
2018
2019
2020
Year


Rolling 5 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 5 Year Excess Performance vs. Russell 2500
10.00
5.00
0.00
-5.00
-10.00
Exc & Roll Ret
2016
2017
2018
2019
2020
Year

Total International Equity
Asset Class Overview (Gross of Fees)

Period Ending: December 31, 2020

	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2020	2019	2018	2017	2016
Total International Equity	**370,824,211**	**20.8**	**19.4**	**10.9**	**12.1**	**8.8**	**19.4**	**30.2**	**-12.2**	**26.6**	**2.2**
MSCI ACWI ex USA Gross		*17.1*	*11.1*	*5.4*	*9.4*	*5.4*	*11.1*	*22.1*	*-13.8*	*27.8*	*5.0*
InvMetrics Public DB ex-US Eq Gross Rank		*7*	*12*	*5*	*12*	*4*	*12*	*1*	*9*	*81*	*82*
Dodge & Cox Intl Stock	168,922,976	24.9	2.8	1.6	7.3	5.3	2.8	23.6	-17.5	24.7	9.0
MSCI ACWI ex USA Value Gross		*20.5*	*-0.2*	*0.2*	*6.3*	*3.4*	*-0.2*	*16.5*	*-13.4*	*23.3*	*9.6*
eV ACWI ex-US All Cap Value Eq Gross Rank		*15*	*33*	*43*	*42*	*39*	*33*	*35*	*84*	*71*	*31*
WCM International Growth	201,901,235	17.5	34.0	19.6	--	--	34.0	36.7	-6.7	--	--
MSCI ACWI ex USA Growth Gross		*14.0*	*22.6*	*10.4*	--	--	*22.6*	*27.8*	*-14.1*	--	--
eV ACWI ex-US All Cap Growth Eq Gross Rank		*33*	*28*	*12*	--	--	*28*	*11*	*1*	--	--

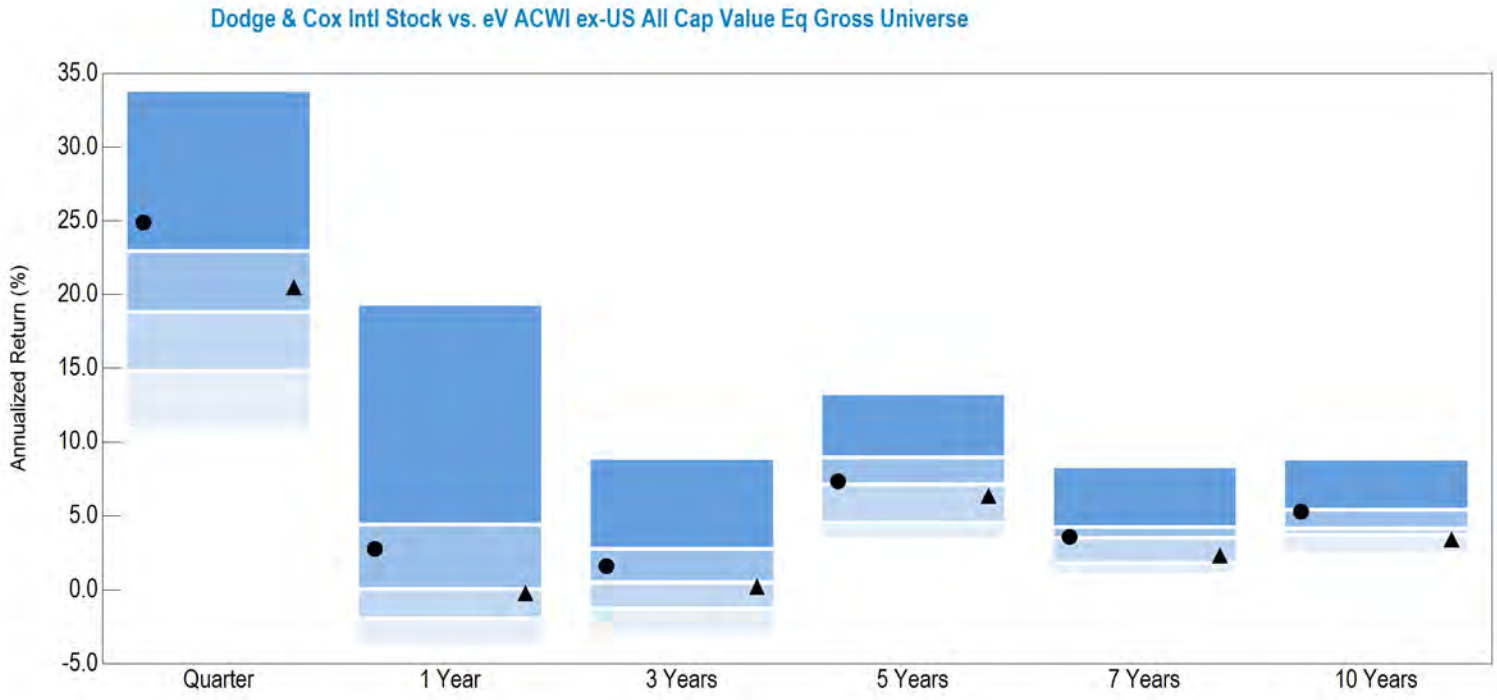
EAFE Effective Style Map
3 Years 6 Months Ending December 31, 2020

EAFE Effective Style Map
5 Years 6 Months Ending December 31, 2020

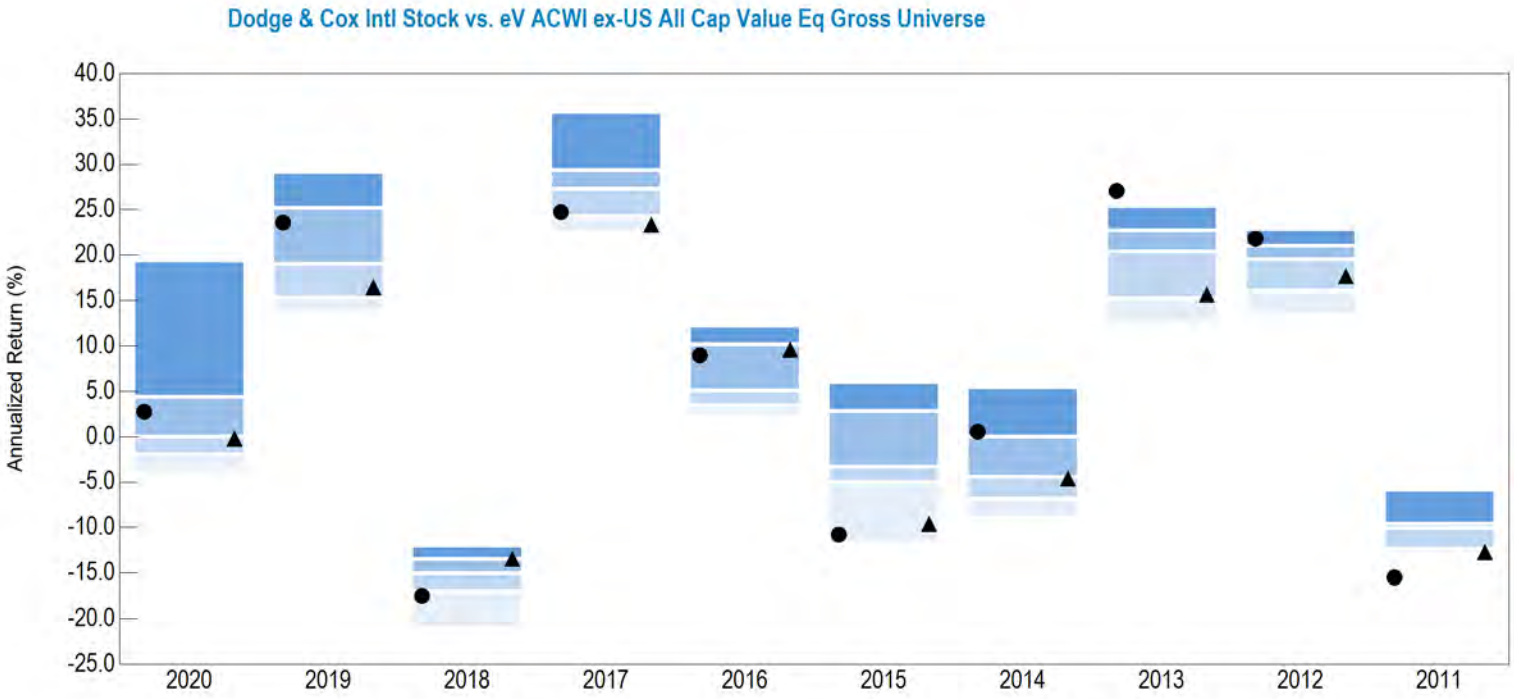
Total International Equity
Asset Class Overview (Net of Fees)

Period Ending: December 31, 2020

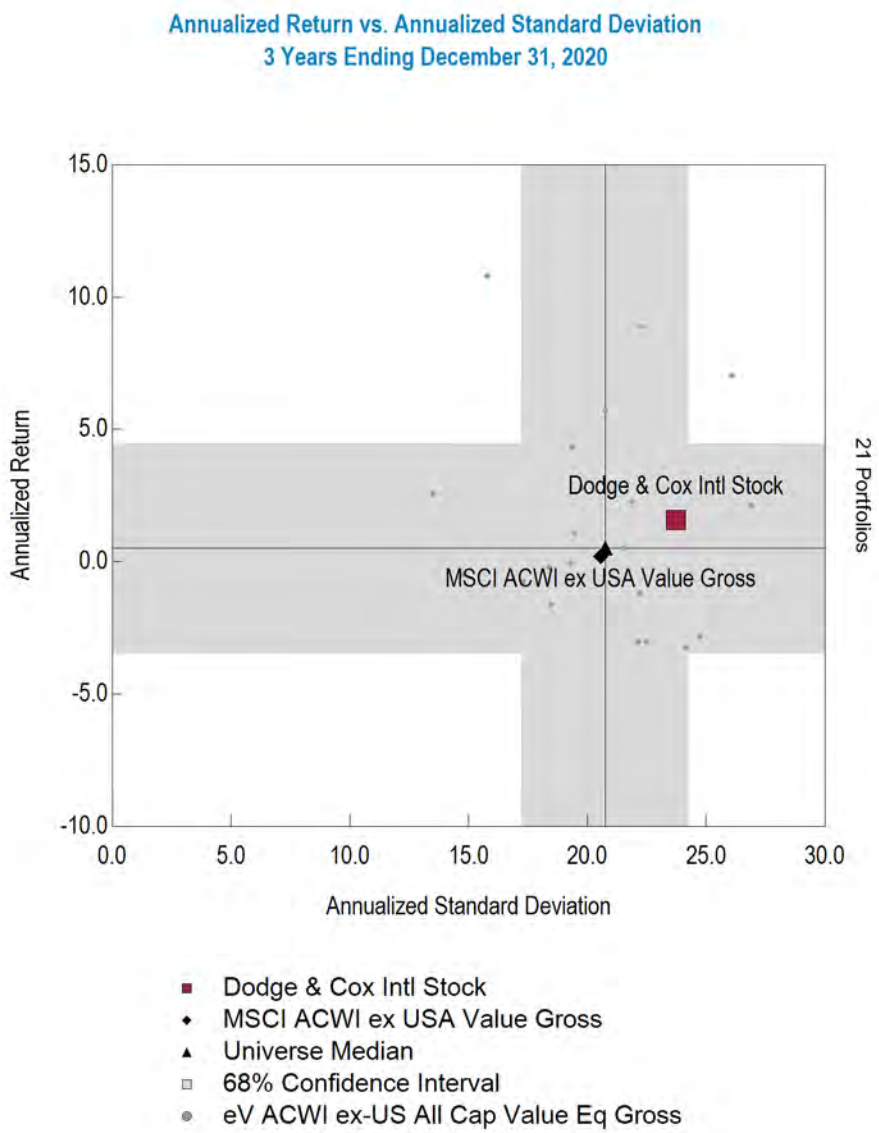
	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2020	2019	2018	2017	2016
Total International Equity	**370,824,211**	**20.6**	**18.6**	**10.2**	**11.3**	**8.0**	**18.6**	**29.3**	**-12.8**	**25.8**	**1.6**
MSCI ACWI ex USA Gross		*17.1*	*11.1*	*5.4*	*9.4*	*5.4*	*11.1*	*22.1*	*-13.8*	*27.8*	*5.0*
Dodge & Cox Intl Stock	168,922,976	24.7	2.1	0.9	6.6	4.6	2.1	22.8	-18.0	23.9	8.3
MSCI ACWI ex USA Value Gross		*20.5*	*-0.2*	*0.2*	*6.3*	*3.4*	*-0.2*	*16.5*	*-13.4*	*23.3*	*9.6*
WCM International Growth	201,901,235	17.3	33.1	18.8	--	--	33.1	35.8	-7.4	--	--
MSCI ACWI ex USA Growth Gross		*14.0*	*22.6*	*10.4*	--	--	*22.6*	*27.8*	*-14.1*	--	--

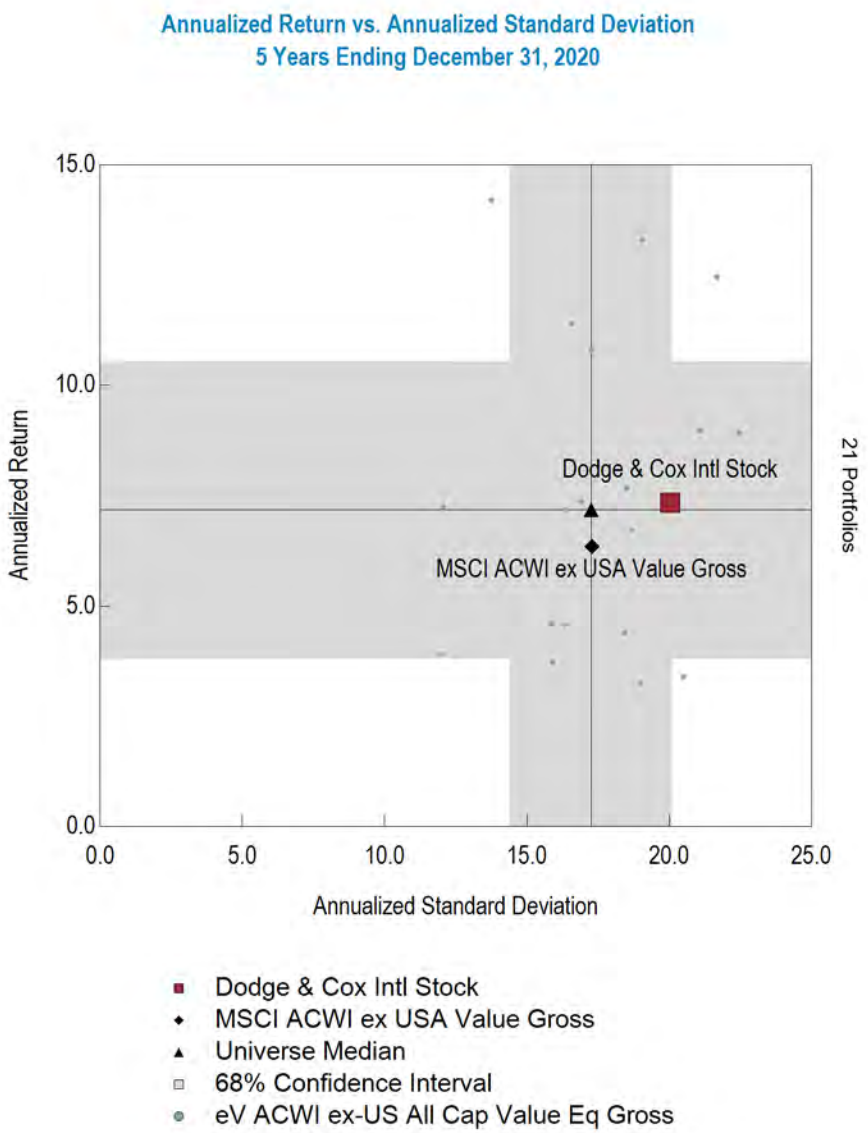


	Return (Rank)											
5th Percentile	33.9		19.4		8.9		13.3		8.3		8.9	
25th Percentile	23.0		4.4		2.8		9.0		4.3		5.4	
Median	18.8		0.1		0.5		7.2		3.5		4.2	
75th Percentile	14.8		-1.9		-1.2		4.6		1.8		3.7	
95th Percentile	10.9		-3.7		-3.0		3.4		1.1		2.5	
# of Portfolios	21		21		21		21		17		13	
● Dodge & Cox Intl Stock	24.9	(15)	2.8	(33)	1.6	(43)	7.3	(42)	3.6	(50)	5.3	(39)
▲ MSCI ACWI ex USA Value Gross	20.5	(43)	-0.2	(52)	0.2	(53)	6.3	(58)	2.3	(67)	3.4	(81)

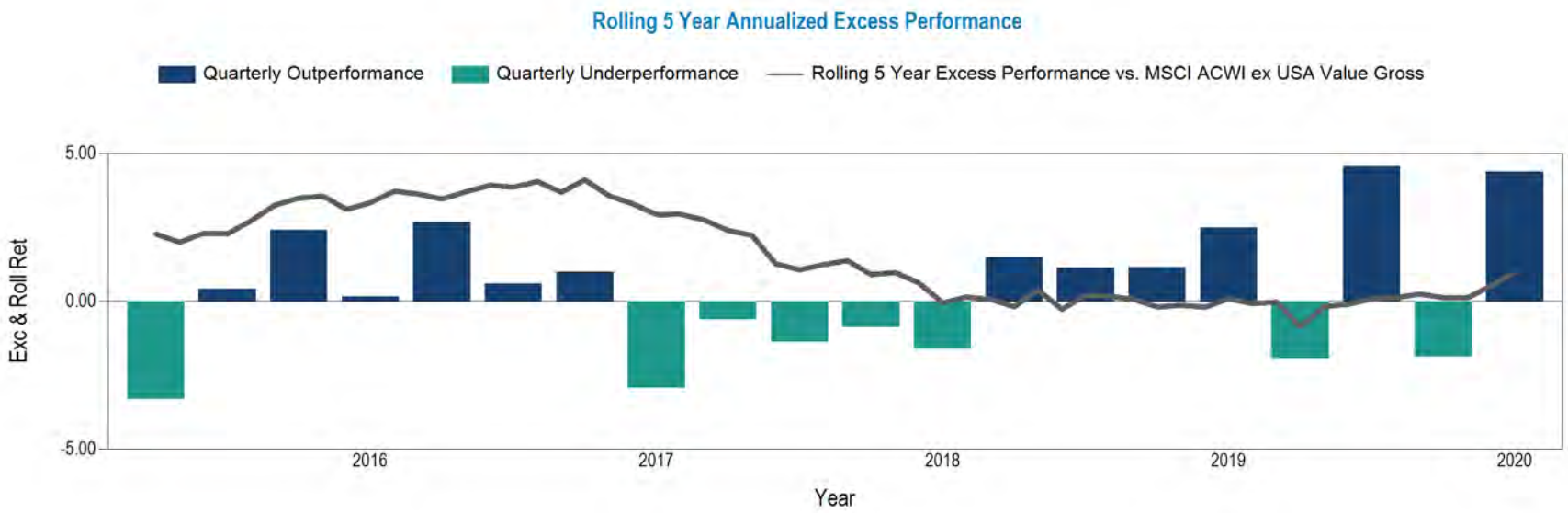


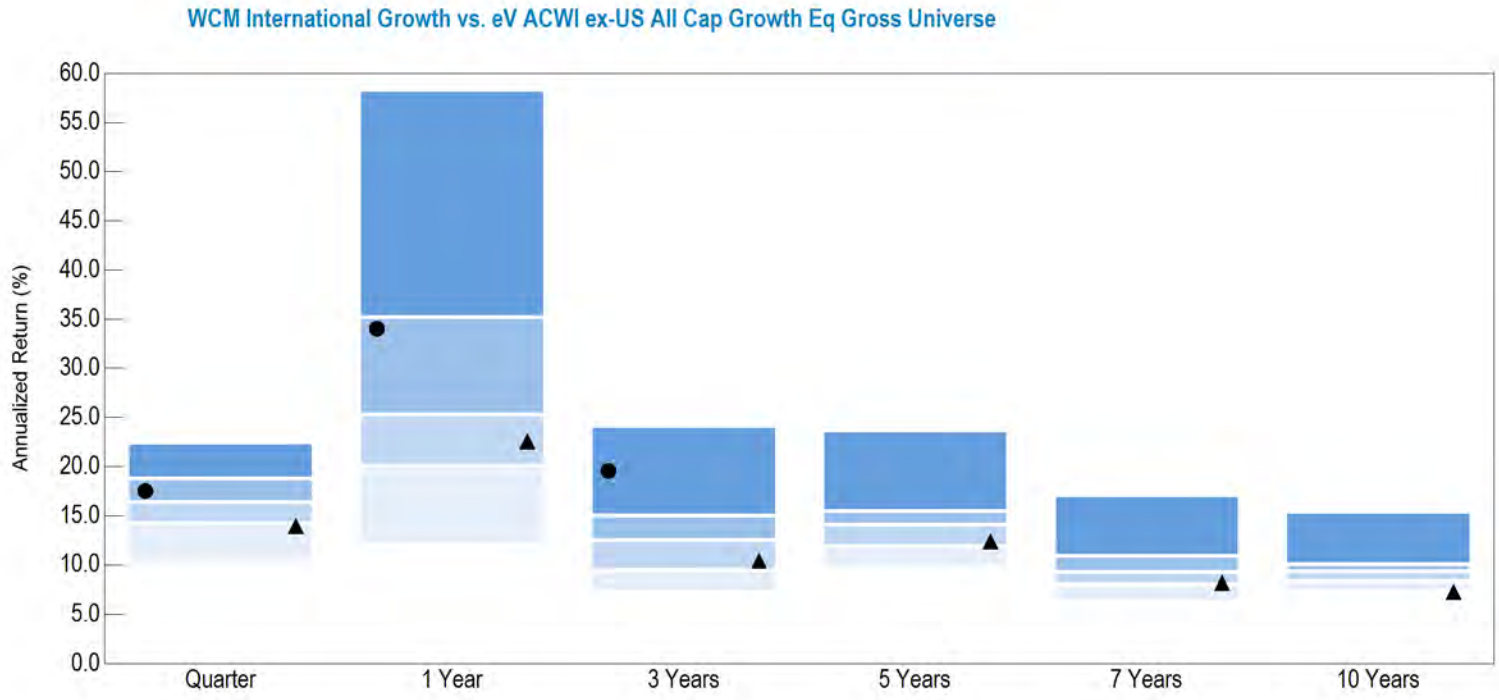
	Return (Rank)									
5th Percentile	19.4	29.1	-12.0	35.8	12.2	6.0	5.4	25.4	22.9	-5.9
25th Percentile	4.4	25.2	-13.4	29.4	10.2	2.9	0.0	22.8	21.1	-9.6
Median	0.1	19.1	-15.0	27.3	5.1	-3.3	-4.4	20.5	19.6	-10.1
75th Percentile	-1.9	15.4	-16.9	24.3	3.5	-4.9	-6.8	15.3	16.1	-12.3
95th Percentile	-3.7	13.8	-21.0	22.6	2.4	-11.7	-8.9	12.5	13.5	-12.9
# of Portfolios	21	21	24	23	21	13	13	12	11	9
● Dodge & Cox Intl Stock	2.8 (33)	23.6 (35)	-17.5 (84)	24.7 (71)	9.0 (31)	-10.8 (92)	0.6 (16)	27.1 (2)	21.8 (18)	-15.5 (99)
▲ MSCI ACWI ex USA Value Gross	-0.2 (52)	16.5 (71)	-13.4 (26)	23.3 (81)	9.6 (30)	-9.6 (89)	-4.6 (52)	15.7 (74)	17.7 (66)	-12.7 (93)


Annualized Return vs. Annualized Standard Deviation
3 Years Ending December 31, 2020
15.0
10.0
5.0
0.0
-5.0
-10.0
Annualized Return
0.0
5.0
10.0
15.0
20.0
25.0
30.0
Annualized Standard Deviation
Dodge & Cox Intl Stock
MSCI ACWI ex USA Value Gross
21 Portfolios
Dodge & Cox Intl Stock
MSCI ACWI ex USA Value Gross
Universe Median
68% Confidence Interval
eV ACWI ex-US All Cap Value Eq Gross

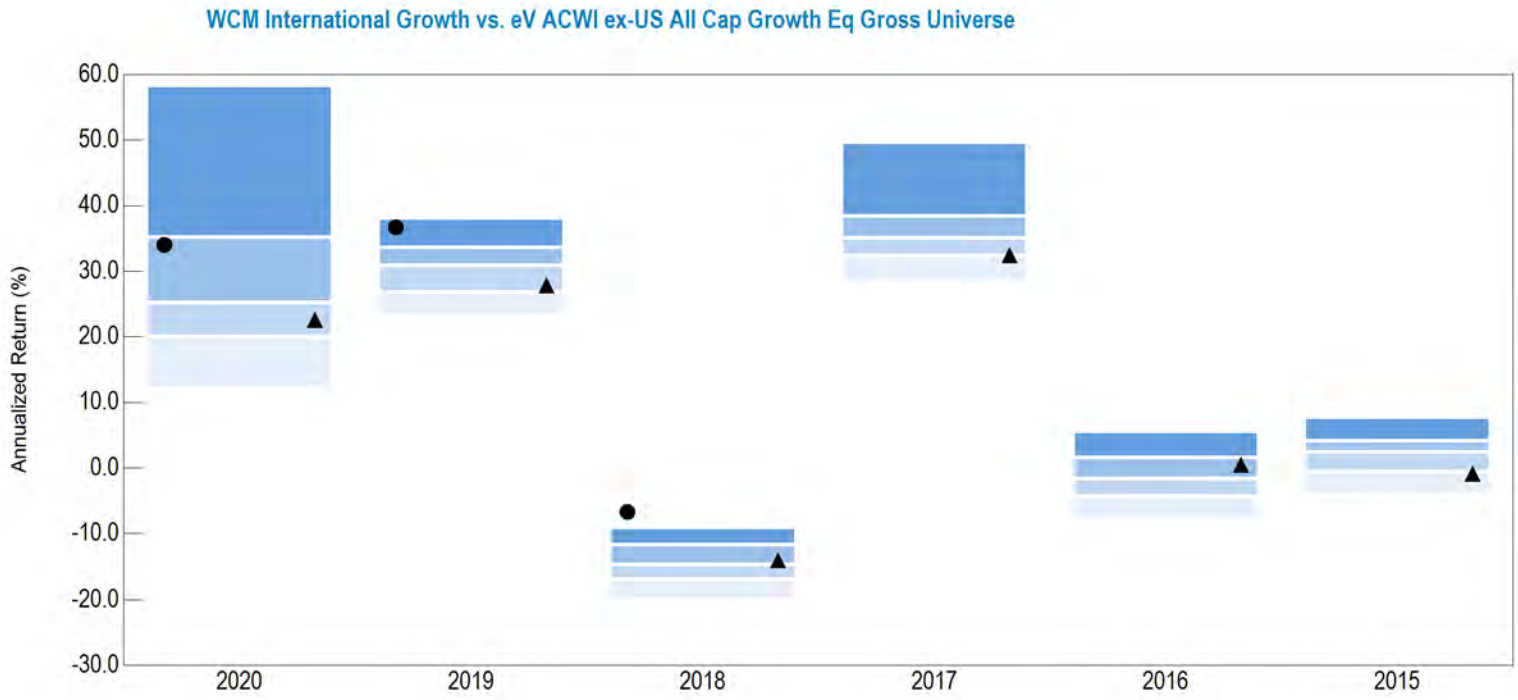

Annualized Return vs. Annualized Standard Deviation
5 Years Ending December 31, 2020
15.0
10.0
5.0
0.0
Annualized Return
0.0
5.0
10.0
15.0
20.0
25.0
Annualized Standard Deviation
Dodge & Cox Intl Stock
MSCI ACWI ex USA Value Gross
21 Portfolios
Dodge & Cox Intl Stock
MSCI ACWI ex USA Value Gross
Universe Median
68% Confidence Interval
eV ACWI ex-US All Cap Value Eq Gross

Rolling 3 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 3 Year Excess Performance vs. MSCI ACWI ex USA Value Gross
5.00
0.00
-5.00
Exc & Roll Ret
2018
2019
2020
Year


Rolling 5 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 5 Year Excess Performance vs. MSCI ACWI ex USA Value Gross
5.00
0.00
-5.00
Exc & Roll Ret
2016
2017
2018
2019
2020
Year



	Return (Rank)											
5th Percentile	22.4		58.3		24.1		23.6		17.1		15.4	
25th Percentile	18.8		35.2		15.1		15.5		10.9		10.1	
Median	16.4		25.3		12.6		14.1		9.3		9.4	
75th Percentile	14.3		20.1		9.5		11.9		8.1		8.4	
95th Percentile	10.3		12.2		7.4		9.7		6.3		7.3	
# of Portfolios	38		38		37		34		31		27	
● WCM International Growth	17.5	(33)	34.0	(28)	19.6	(12)	--	(--)	--	(--)	--	(--)
▲ MSCI ACWI ex USA Growth Gross	14.0	(80)	22.6	(62)	10.4	(68)	12.4	(70)	8.2	(74)	7.3	(97)



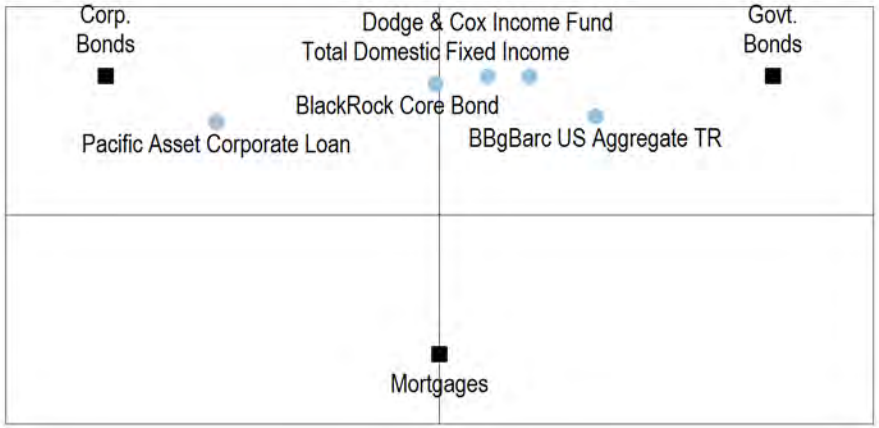
	Return (Rank)											
5th Percentile	58.3		38.1		-9.1		49.7		5.5		7.7	
25th Percentile	35.2		33.7		-11.6		38.5		1.7		4.2	
Median	25.3		31.0		-14.6		35.2		-1.6		2.5	
75th Percentile	20.1		26.9		-16.9		32.4		-4.2		-0.5	
95th Percentile	12.2		23.3		-19.8		28.5		-7.7		-3.9	
# of Portfolios	38		35		28		29		28		25	
● WCM International Growth	34.0	(28)	36.7	(11)	-6.7	(1)	--	(--)	--	(--)	--	(--)
▲ MSCI ACWI ex USA Growth Gross	22.6	(62)	27.8	(71)	-14.1	(50)	32.5	(70)	0.5	(37)	-0.9	(86)

Total Domestic Fixed Income
Asset Class Overview (Gross of Fees)

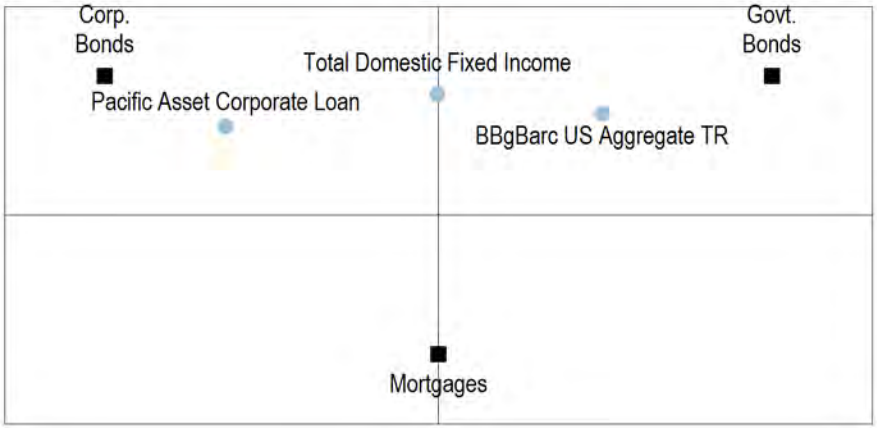
Period Ending: December 31, 2020

	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2020	2019	2018	2017	2016
Total Domestic Fixed Income	**278,838,394**	**2.2**	**8.1**	**6.0**	**5.4**	**4.6**	**8.1**	**9.9**	**0.4**	**4.3**	**4.5**
BBgBarc US Aggregate TR		*0.7*	*7.5*	*5.3*	*4.4*	*3.8*	*7.5*	*8.7*	*0.0*	*3.5*	*2.6*
InvMetrics Public DB US Fix Inc Gross Rank		*22*	*46*	*26*	*33*	*42*	*46*	*11*	*55*	*50*	*49*
BlackRock Core Bond	99,731,982	1.2	9.4	6.6	--	--	9.4	10.2	0.3	--	--
BBgBarc US Aggregate TR		*0.7*	*7.5*	*5.3*	--	--	*7.5*	*8.7*	*0.0*	--	--
eV US Core Fixed Inc Gross Rank		*37*	*23*	*10*	--	--	*23*	*10*	*27*	--	--
Dodge & Cox Income Fund	104,093,013	2.6	9.9	6.6	--	--	9.9	10.2	0.1	--	--
BBgBarc US Aggregate TR		*0.7*	*7.5*	*5.3*	--	--	*7.5*	*8.7*	*0.0*	--	--
eV US Core Fixed Inc Gross Rank		*3*	*14*	*9*	--	--	*14*	*11*	*43*	--	--
Pacific Asset Corporate Loan	75,013,399	3.0	3.0	4.3	5.4	--	3.0	9.1	1.0	4.9	9.2
S&P/LSTA Leveraged Loan Index		*3.8*	*3.1*	*4.0*	*5.2*	--	*3.1*	*8.6*	*0.4*	*4.1*	*10.2*
eV US Float-Rate Bank Loan Fixed Inc Gross Rank		*90*	*42*	*35*	*33*	--	*42*	*36*	*29*	*26*	*51*

Fixed Income Effective Style Map
3 Years 6 Months Ending December 31, 2020



Fixed Income Effective Style Map
5 Years 6 Months Ending December 31, 2020



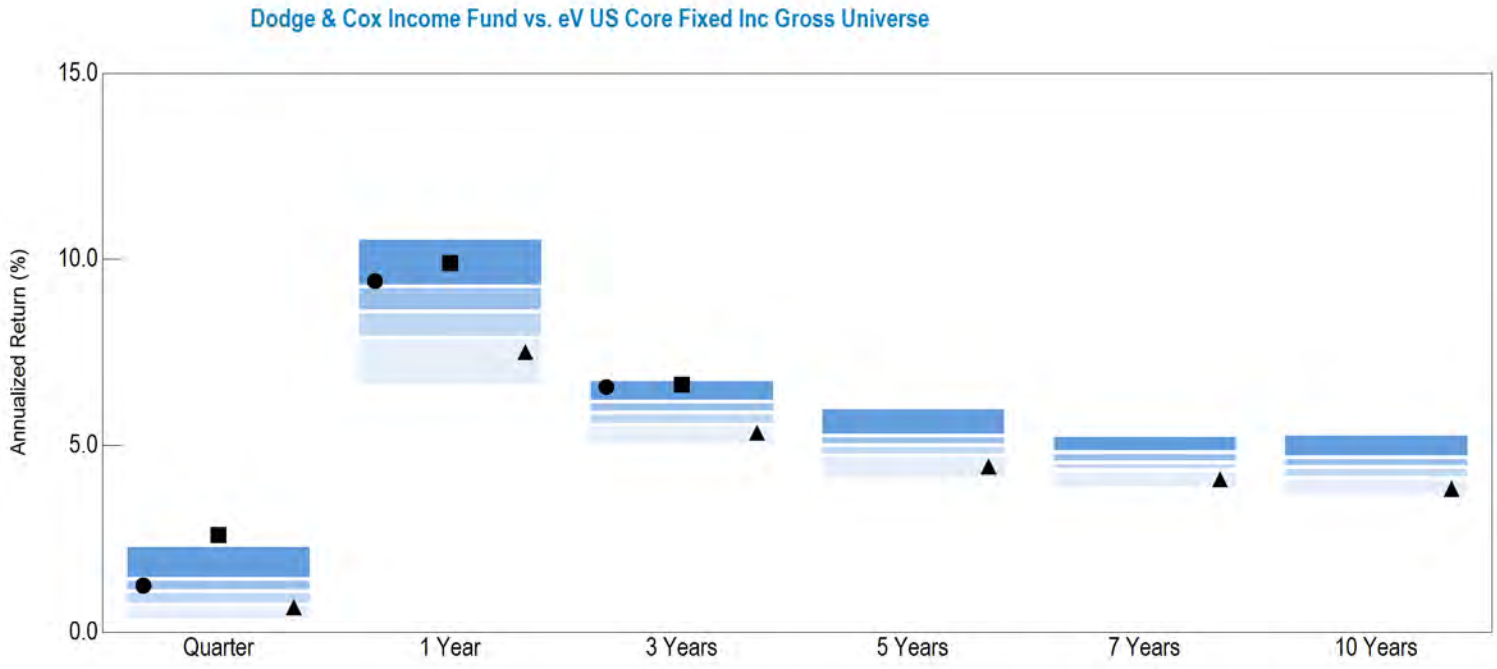
Total Domestic Fixed Income
Asset Class Overview (Net of Fees)

Period Ending: December 31, 2020

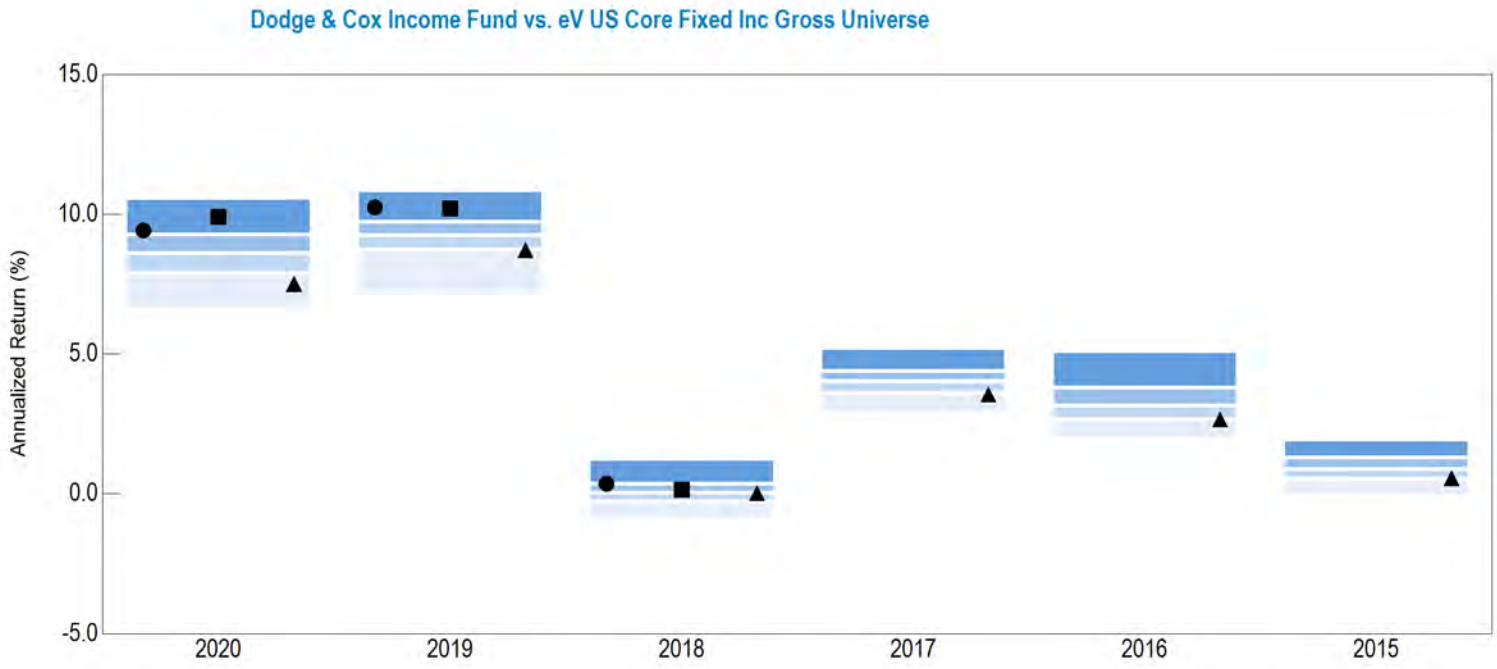
	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2020	2019	2018	2017	2016
Total Domestic Fixed Income	**278,838,394**	**2.1**	**7.7**	**5.7**	**5.0**	**4.3**	**7.7**	**9.5**	**0.0**	**3.9**	**4.2**
BBgBarc US Aggregate TR		*0.7*	*7.5*	*5.3*	*4.4*	*3.8*	*7.5*	*8.7*	*0.0*	*3.5*	*2.6*
BlackRock Core Bond	99,731,982	1.2	9.1	6.3	--	--	9.1	9.9	0.1	--	--
BBgBarc US Aggregate TR		*0.7*	*7.5*	*5.3*	--	--	*7.5*	*8.7*	*0.0*	--	--
Dodge & Cox Income Fund	104,093,013	2.5	9.4	6.2	--	--	9.4	9.7	-0.3	--	--
BBgBarc US Aggregate TR		*0.7*	*7.5*	*5.3*	--	--	*7.5*	*8.7*	*0.0*	--	--
Pacific Asset Corporate Loan	75,013,399	2.9	2.6	4.0	5.0	--	2.6	8.7	0.7	4.6	8.8
S&P/LSTA Leveraged Loan Index		*3.8*	*3.1*	*4.0*	*5.2*	--	*3.1*	*8.6*	*0.4*	*4.1*	*10.2*

Correlation Matrix
Last 1 Year

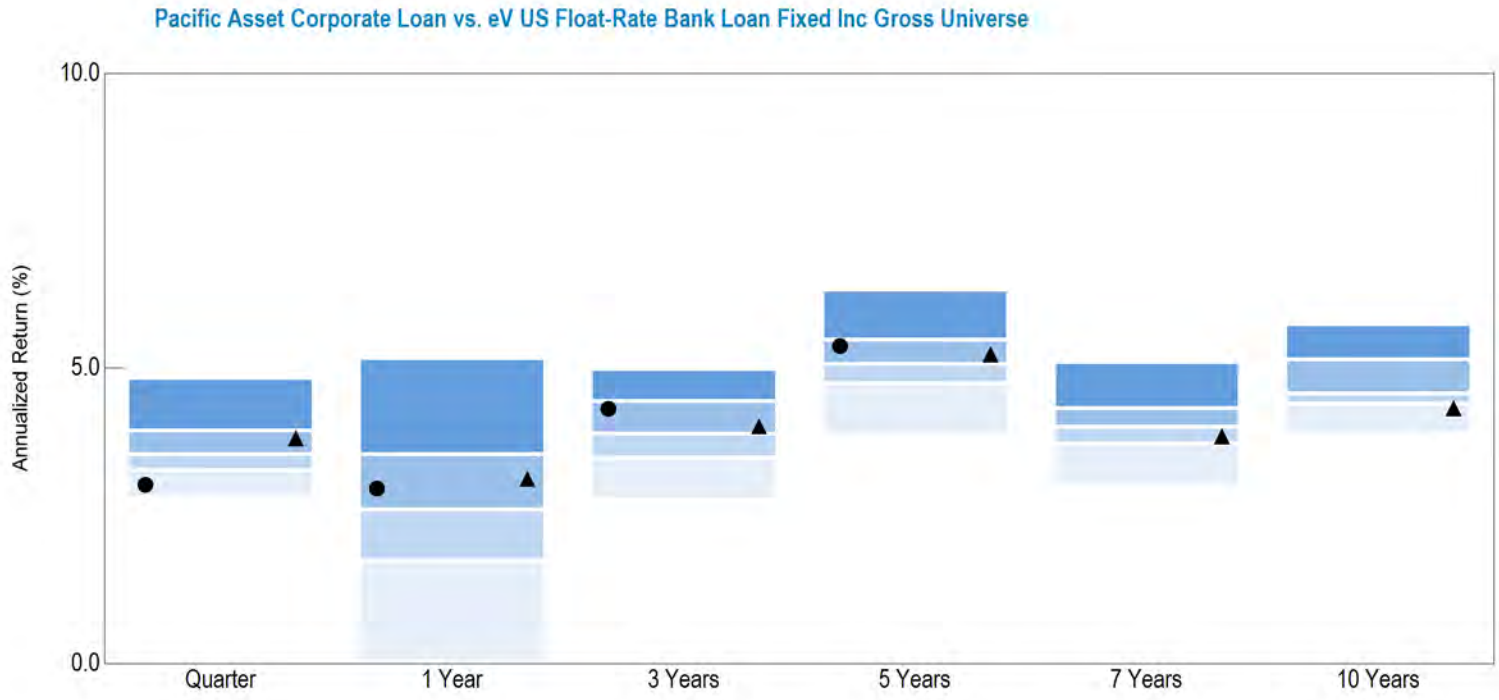
	Total Domestic Fixed Income	BlackRock Core Bond	Dodge & Cox Income Fund	Pacific Asset Corporate Loan	BBgBarc US Aggregate TR
Total Domestic Fixed Income	1.00	--	--	--	--
BlackRock Core Bond	0.87	1.00	--	--	--
Dodge & Cox Income Fund	0.98	0.93	1.00	--	--
Pacific Asset Corporate Loan	0.94	0.66	0.87	1.00	--
BBgBarc US Aggregate TR	-0.09	0.40	0.06	-0.42	1.00



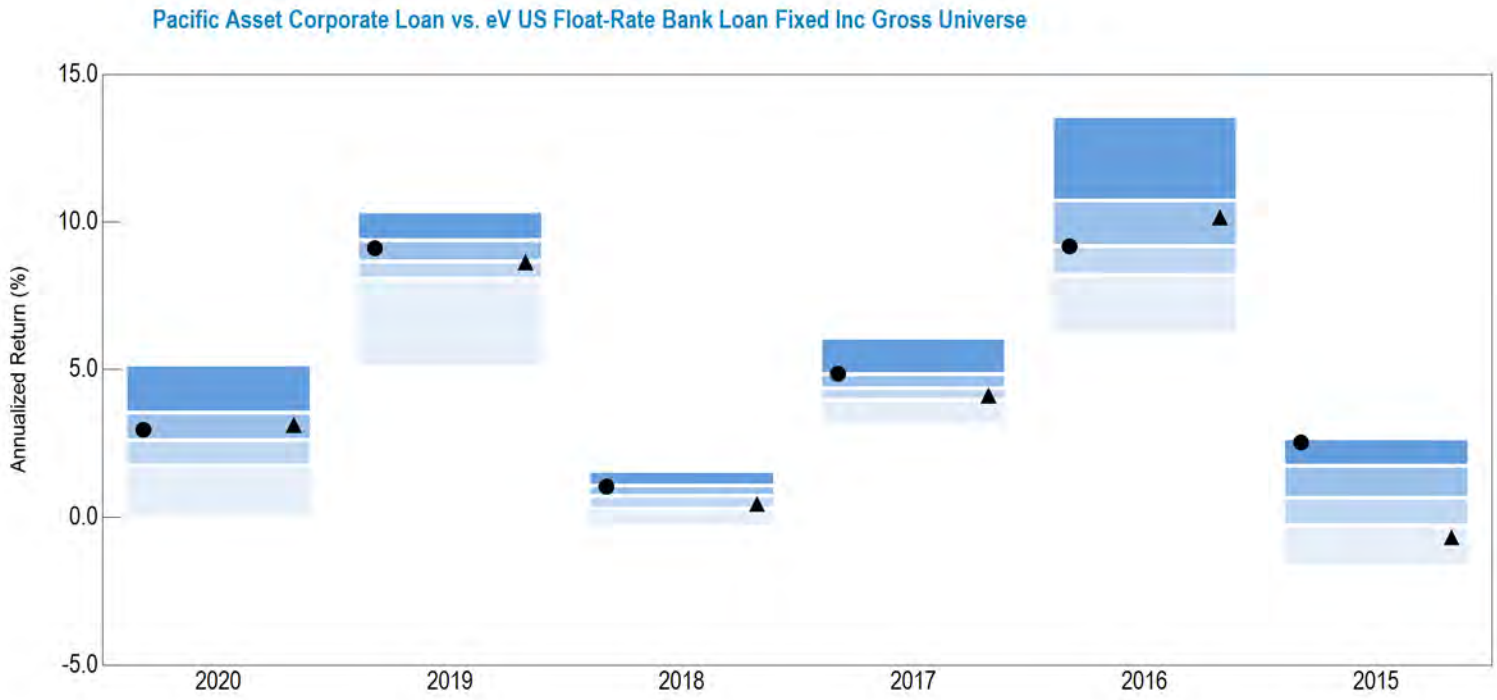
	Return (Rank)											
5th Percentile	2.3		10.6		6.8		6.0		5.3		5.3	
25th Percentile	1.4		9.3		6.2		5.3		4.8		4.7	
Median	1.1		8.6		5.9		5.0		4.6		4.4	
75th Percentile	0.8		7.9		5.6		4.7		4.3		4.1	
95th Percentile	0.3		6.6		5.0		4.1		3.9		3.7	
# of Portfolios	225		225		222		219		215		208	
● BlackRock Core Bond	1.2	(37)	9.4	(23)	6.6	(10)	--	(--)	--	(--)	--	(--)
■ Dodge & Cox Income Fund	2.6	(3)	9.9	(14)	6.6	(9)	--	(--)	--	(--)	--	(--)
▲ BBgBarc US Aggregate TR	0.7	(81)	7.5	(85)	5.3	(89)	4.4	(91)	4.1	(89)	3.8	(92)



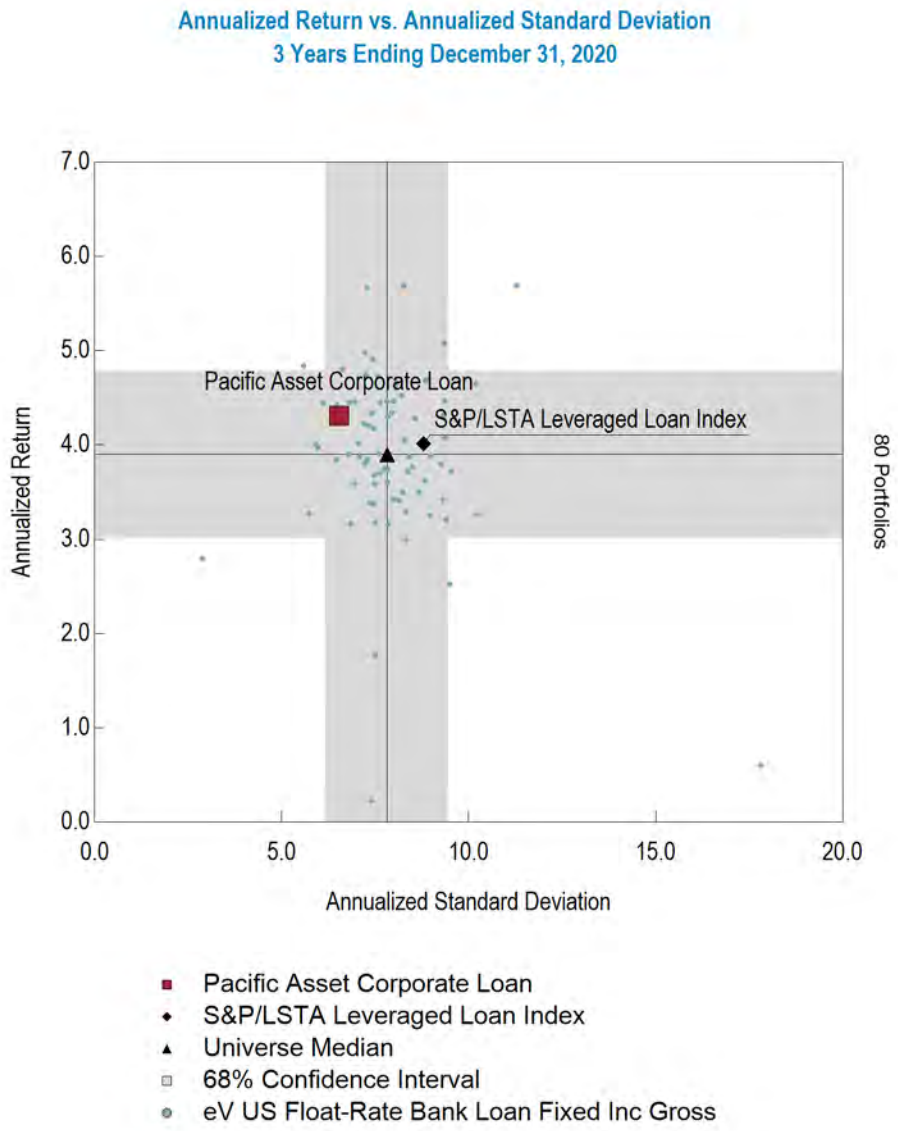
	Return (Rank)											
5th Percentile	10.6		10.9		1.2		5.2		5.1		1.9	
25th Percentile	9.3		9.8		0.4		4.4		3.8		1.3	
Median	8.6		9.3		0.0		4.0		3.2		0.9	
75th Percentile	7.9		8.7		-0.3		3.6		2.7		0.5	
95th Percentile	6.6		7.2		-0.9		2.9		2.0		-0.1	
# of Portfolios	225		228		240		233		223		196	
● BlackRock Core Bond	9.4	(23)	10.2	(10)	0.3	(27)	--	(--)	--	(--)	--	(--)
■ Dodge & Cox Income Fund	9.9	(14)	10.2	(11)	0.1	(43)	--	(--)	--	(--)	--	(--)
▲ BBgBarc US Aggregate TR	7.5	(85)	8.7	(77)	0.0	(54)	3.5	(79)	2.6	(77)	0.6	(75)

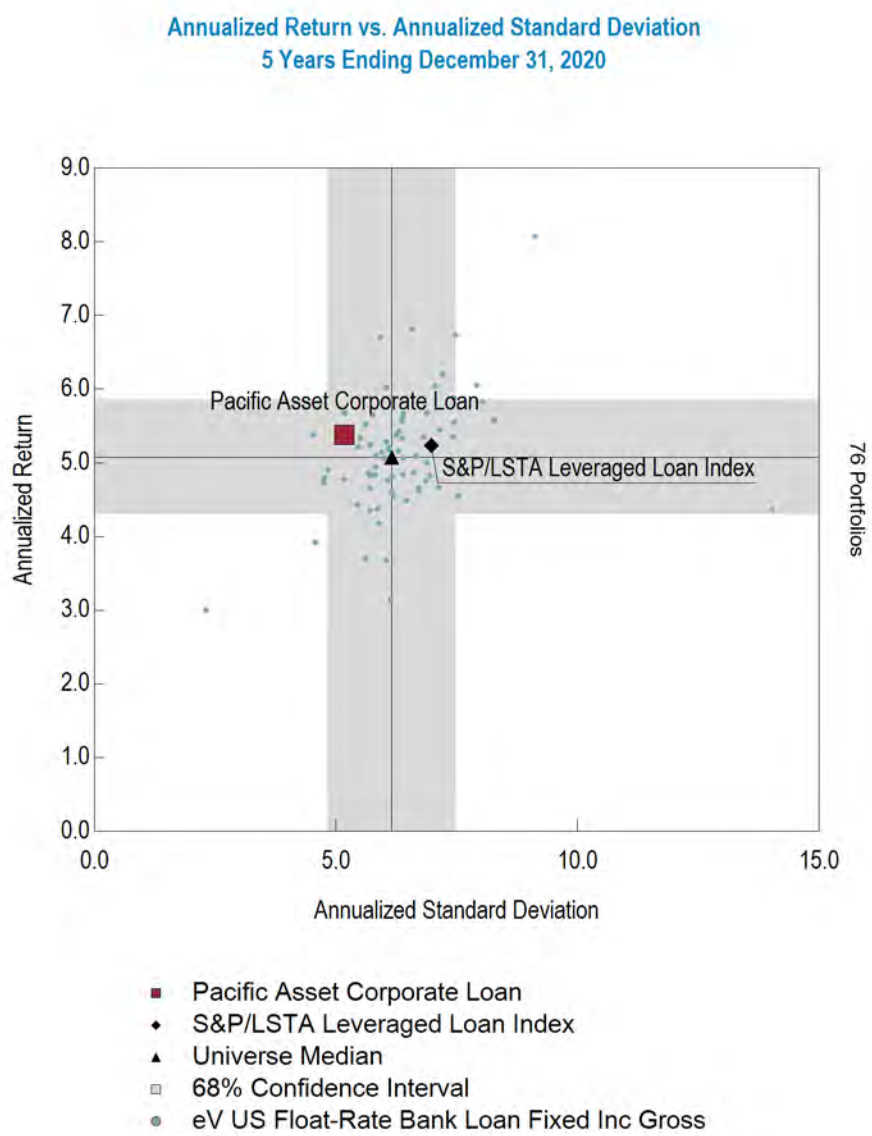


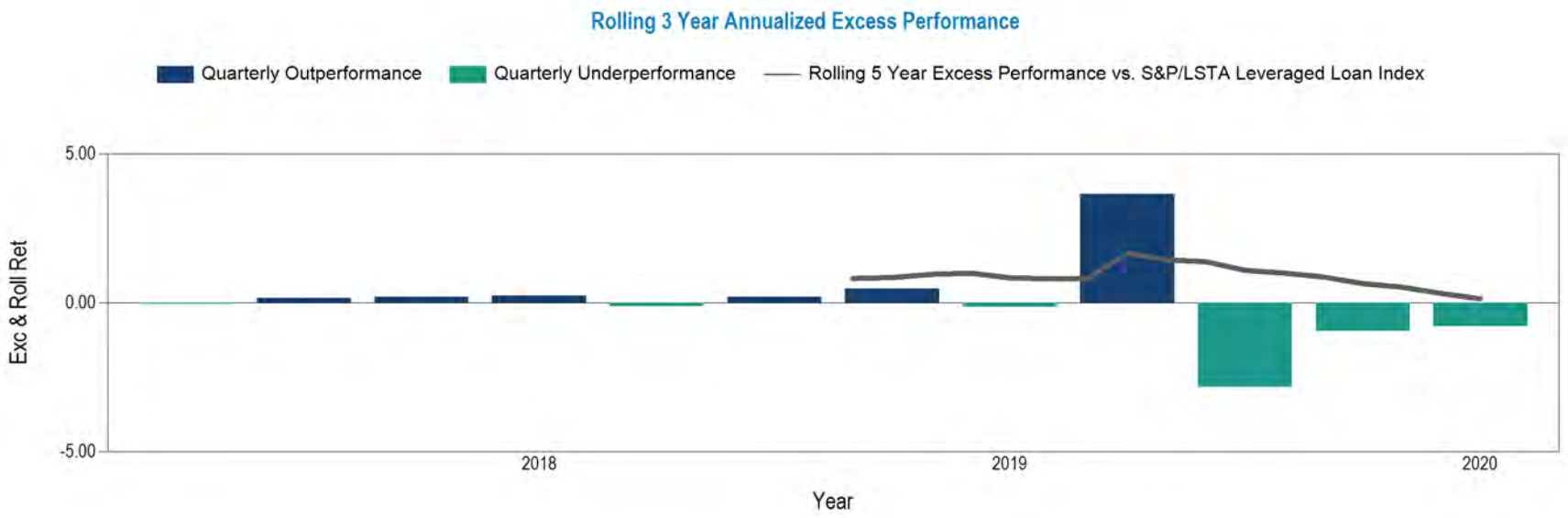
	Return (Rank)											
5th Percentile	4.8		5.2		5.0		6.3		5.1		5.7	
25th Percentile	4.0		3.6		4.5		5.5		4.3		5.2	
Median	3.5		2.6		3.9		5.1		4.0		4.6	
75th Percentile	3.3		1.7		3.5		4.8		3.7		4.4	
95th Percentile	2.8		0.0		2.8		3.9		3.0		3.9	
# of Portfolios	82		82		80		76		74		56	
● Pacific Asset Corporate Loan	3.0	(90)	3.0	(42)	4.3	(35)	5.4	(33)	--	(--)	--	(--)
▲ S&P/LSTA Leveraged Loan Index	3.8	(34)	3.1	(36)	4.0	(46)	5.2	(41)	3.8	(64)	4.3	(79)



	Return (Rank)											
5th Percentile	5.2		10.3		1.6		6.1		13.6		2.7	
25th Percentile	3.6		9.4		1.1		4.9		10.7		1.8	
Median	2.6		8.7		0.7		4.4		9.2		0.7	
75th Percentile	1.7		8.1		0.3		4.0		8.2		-0.3	
95th Percentile	0.0		5.1		-0.3		3.1		6.2		-1.7	
# of Portfolios	82		76		76		75		69		54	
● Pacific Asset Corporate Loan	3.0	(42)	9.1	(36)	1.0	(29)	4.9	(26)	9.2	(51)	2.5	(9)
▲ S&P/LSTA Leveraged Loan Index	3.1	(36)	8.6	(52)	0.4	(68)	4.1	(71)	10.2	(35)	-0.7	(82)


Annualized Return vs. Annualized Standard Deviation
3 Years Ending December 31, 2020
Annualized Return
Annualized Standard Deviation
Pacific Asset Corporate Loan
S&P/LSTA Leveraged Loan Index
80 Portfolios
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
0.0
5.0
10.0
15.0
20.0
Pacific Asset Corporate Loan
S&P/LSTA Leveraged Loan Index
Universe Median
68% Confidence Interval
eV US Float-Rate Bank Loan Fixed Inc Gross


Annualized Return vs. Annualized Standard Deviation
5 Years Ending December 31, 2020
Annualized Return
Annualized Standard Deviation
Pacific Asset Corporate Loan
S&P/LSTA Leveraged Loan Index
76 Portfolios
9.0
8.0
7.0
6.0
5.0
4.0
3.0
2.0
1.0
0.0
0.0
5.0
10.0
15.0
Pacific Asset Corporate Loan
S&P/LSTA Leveraged Loan Index
Universe Median
68% Confidence Interval
eV US Float-Rate Bank Loan Fixed Inc Gross


Rolling 3 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 5 Year Excess Performance vs. S&P/LSTA Leveraged Loan Index
5.00
0.00
-5.00
Exc & Roll Ret
2018
2019
2020
Year

Rolling 5 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 5 Year Excess Performance vs. S&P/LSTA Leveraged Loan Index
5.00
0.00
-5.00
Exc & Roll Ret
2016
2017
2018
2019
2020
Year

Total Global Fixed
Asset Class Overview (Gross of Fees)

Period Ending: December 31, 2020

	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2020	2019	2018	2017	2016
Total Global Fixed	**147,060,308**	**9.6**	**6.7**	**3.1**	**5.5**	**2.7**	**6.7**	**7.4**	**-4.3**	**13.8**	**4.6**
FTSE World Govt Bond Index		*2.8*	*10.1*	*5.0*	*4.8*	*2.3*	*10.1*	*5.9*	*-0.8*	*7.5*	*1.6*
InvMetrics Public DB Glbl Fix Inc Gross Rank		--	--	--	--	--	--	*87*	*61*	*36*	*88*
Brandywine Global Fixed Income	72,057,761	8.7	--	--	--	--	--	--	--	--	--
FTSE WGBI ex US TR		*4.8*	--	--	--	--	--	--	--	--	--
eV All Global Fixed Inc Gross Rank		*11*	--	--	--	--	--	--	--	--	--
Ashmore EM Blended Debt Fund	75,002,547	10.5	3.2	--	--	--	3.2	--	--	--	--
50% JPM EMBI GD/25% JPM GBI EM GD/25% JPM ELMI+		*6.8*	*3.9*	--	--	--	*3.9*	--	--	--	--
eV All Emg Mkts Fixed Inc Gross Rank		*18*	*85*	--	--	--	*85*	--	--	--	--

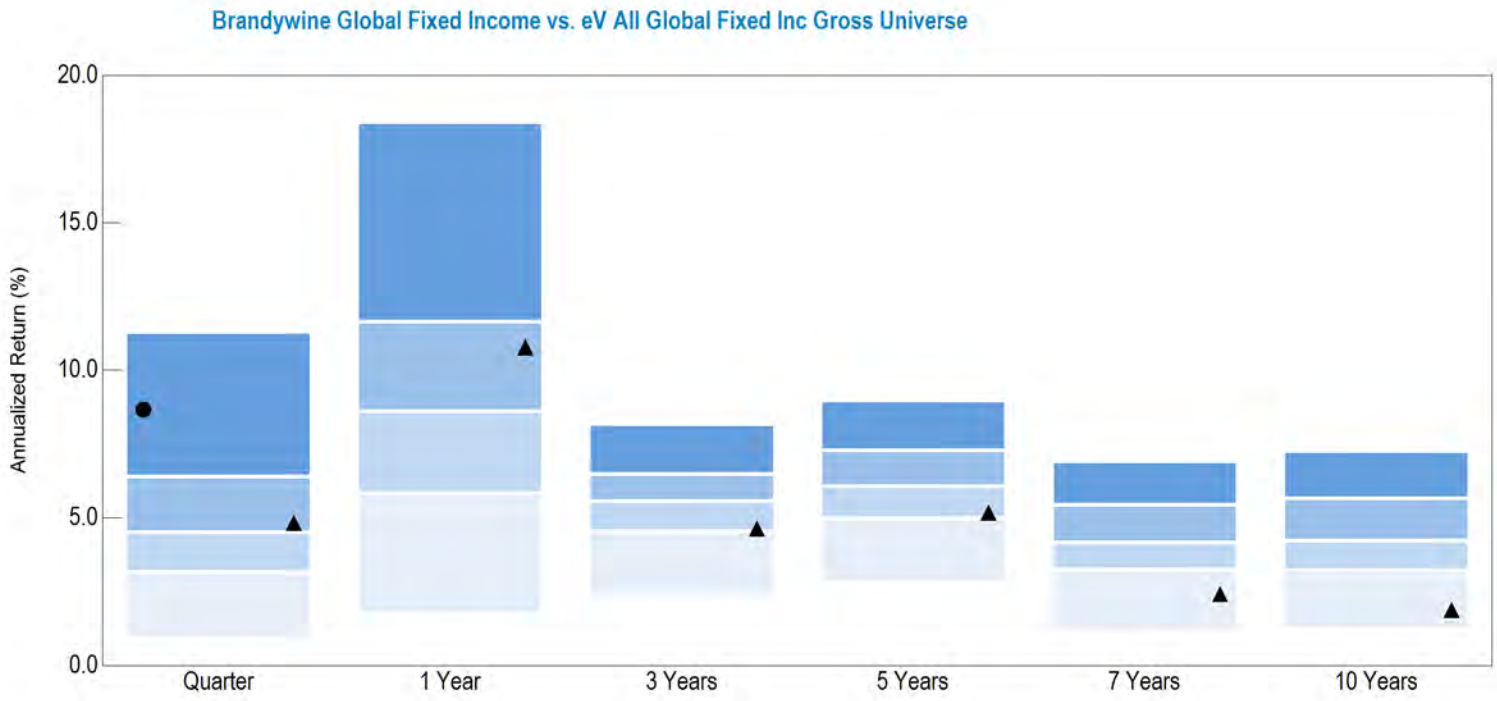
Total Global Fixed
Asset Class Overview (Net of Fees)

Period Ending: December 31, 2020

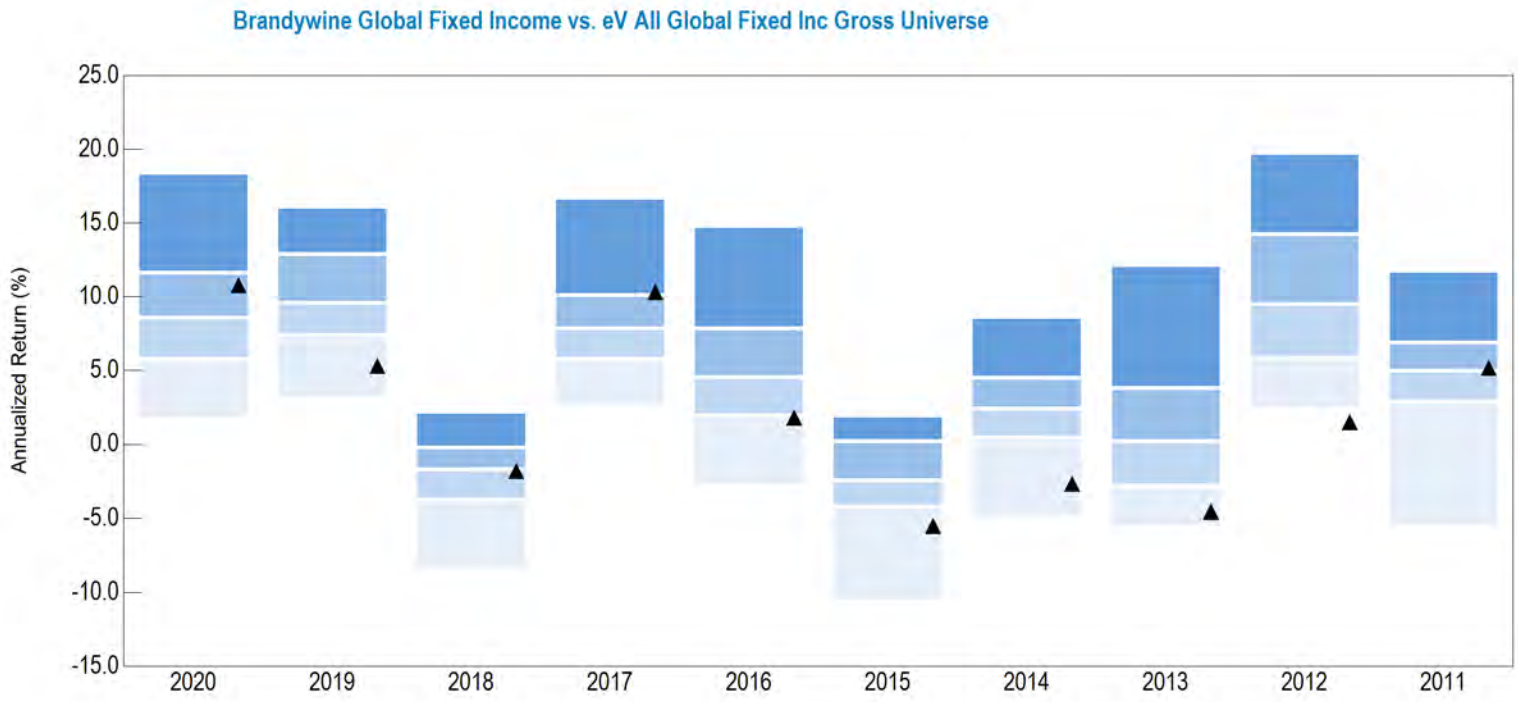
	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2020	2019	2018	2017	2016
Total Global Fixed	**147,060,308**	**9.4**	**6.0**	**2.6**	**5.0**	**2.2**	**6.0**	**6.9**	**-4.7**	**13.3**	**4.1**
FTSE World Govt Bond Index		*2.8*	*10.1*	*5.0*	*4.8*	*2.3*	*10.1*	*5.9*	*-0.8*	*7.5*	*1.6*
Brandywine Global Fixed Income	72,057,761	8.5	--	--	--	--	--	--	--	--	--
FTSE WGBI ex US TR		*4.8*	--	--	--	--	--	--	--	--	--
Ashmore EM Blended Debt Fund	75,002,547	10.2	2.1	--	--	--	2.1	--	--	--	--
50% JPM EMBI GD/25% JPM GBI EM GD/25% JPM ELMI+		*6.8*	*3.9*	--	--	--	*3.9*	--	--	--	--

Correlation Matrix
Last 1 Year

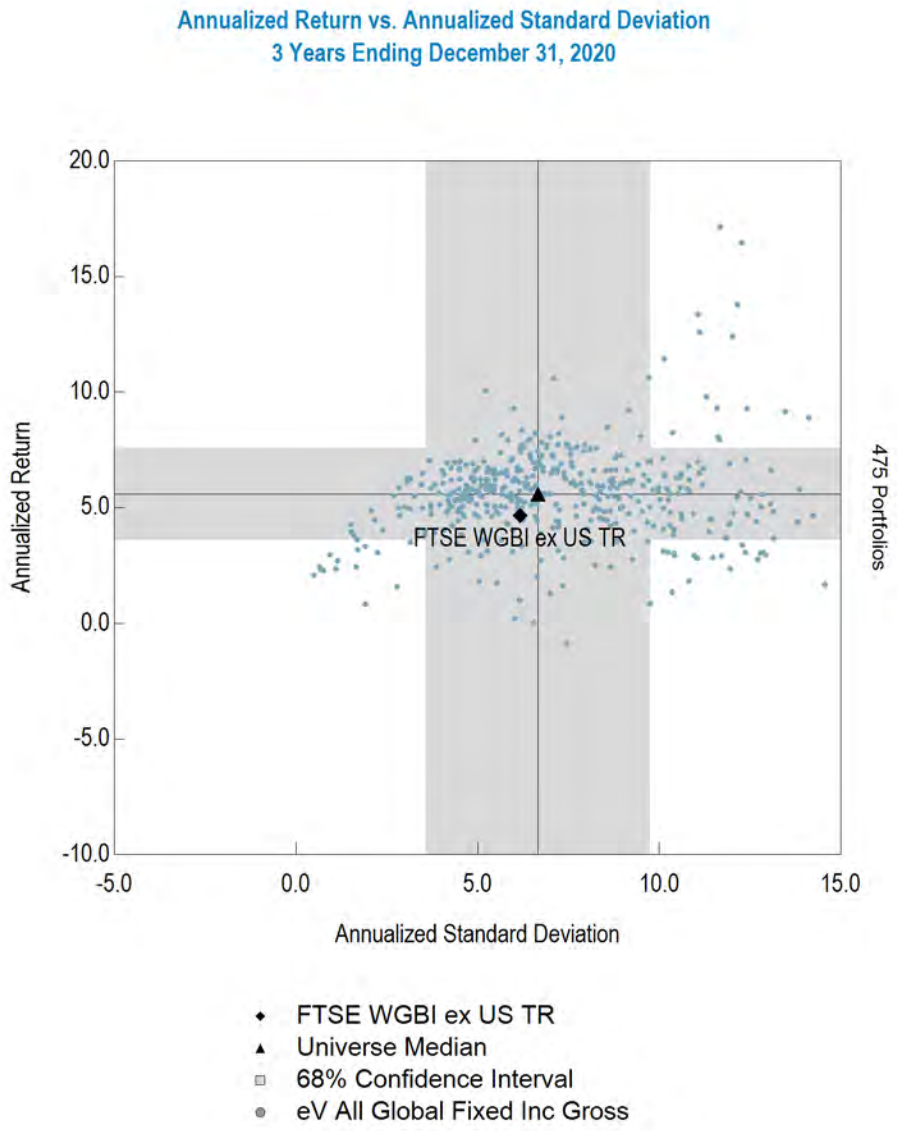
	Total Global Fixed	Brandywine Global Fixed Income	Ashmore EM Blended Debt Fund	FTSE World Govt Bond Index
Total Global Fixed	1.00	--	--	--
Brandywine Global Fixed Income	--	--	--	--
Ashmore EM Blended Debt Fund	1.00	--	1.00	--
FTSE World Govt Bond Index	0.42	--	0.36	1.00

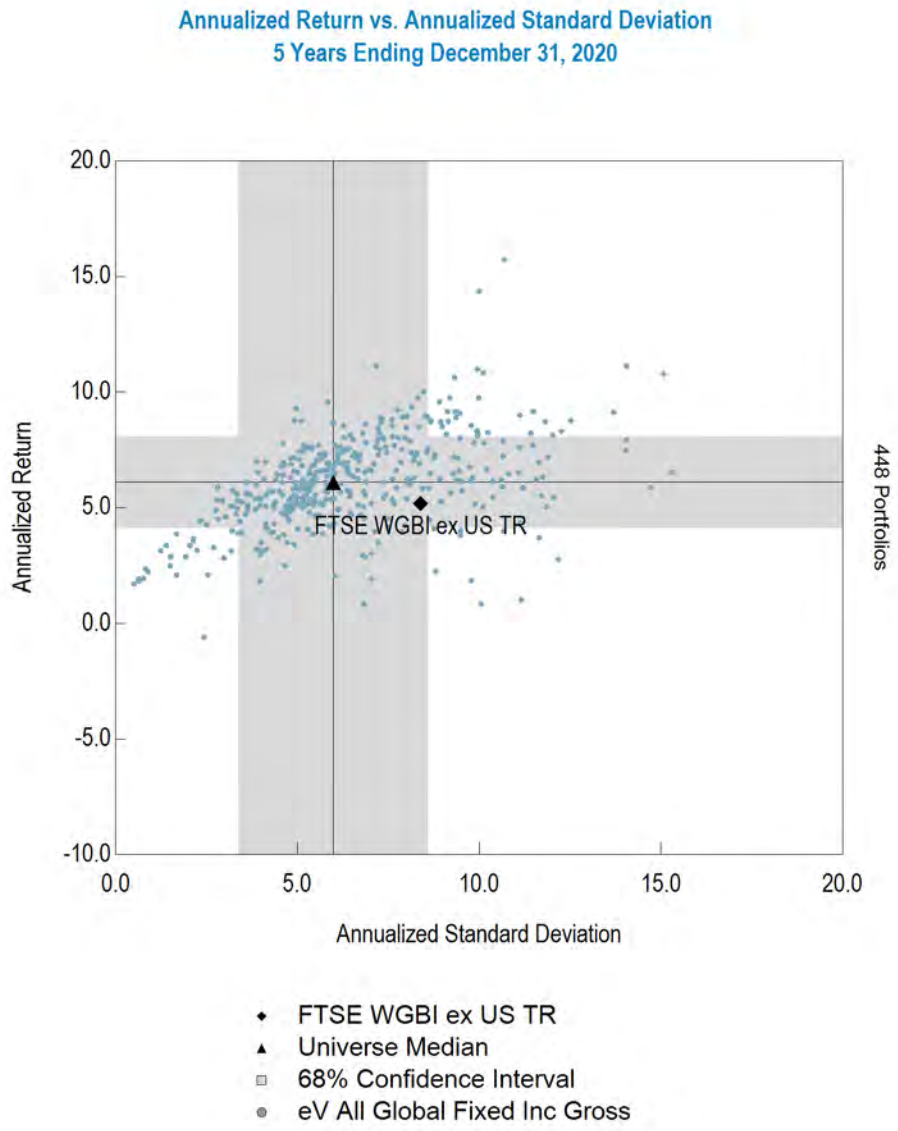


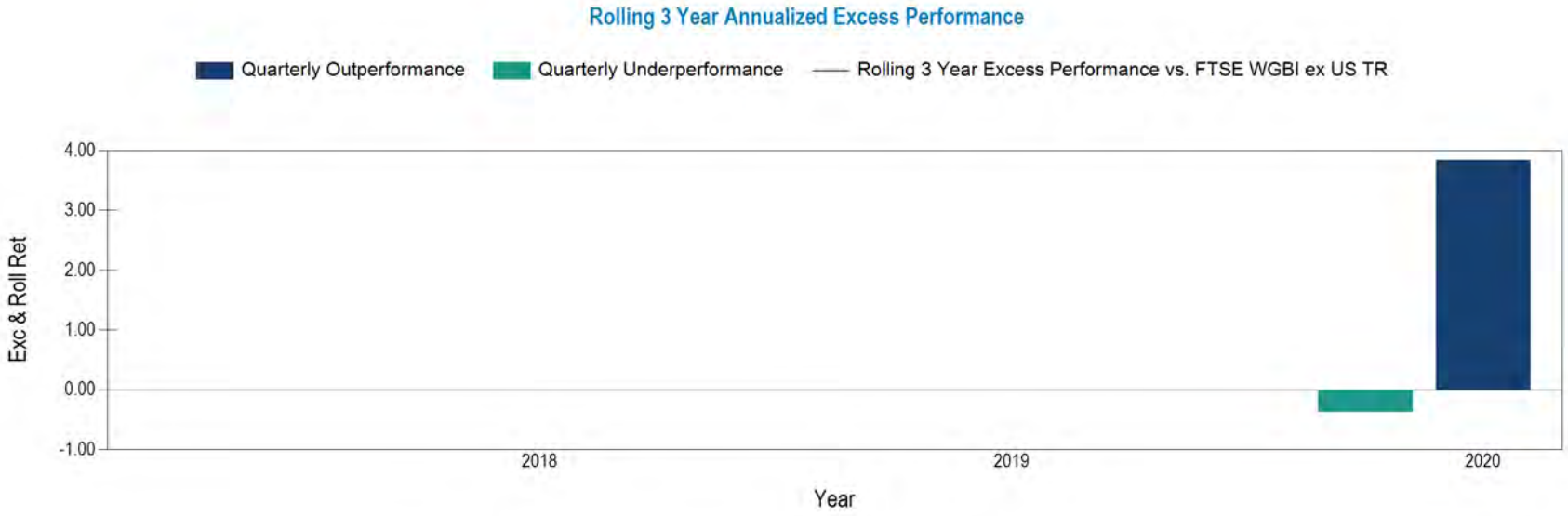
	Return (Rank)											
5th Percentile	11.3		18.4		8.2		9.0		6.9		7.3	
25th Percentile	6.4		11.7		6.5		7.3		5.4		5.7	
Median	4.5		8.6		5.6		6.1		4.2		4.2	
75th Percentile	3.2		5.8		4.6		5.0		3.3		3.2	
95th Percentile	0.9		1.7		2.4		2.8		1.2		1.3	
# of Portfolios	506		506		475		448		392		289	
● Brandywine Global Fixed Income	8.7	(11)	--	(--)	--	(--)	--	(--)	--	(--)	--	(--)
▲ FTSE WGBI ex US TR	4.8	(45)	10.8	(34)	4.6	(74)	5.2	(71)	2.4	(87)	1.9	(93)

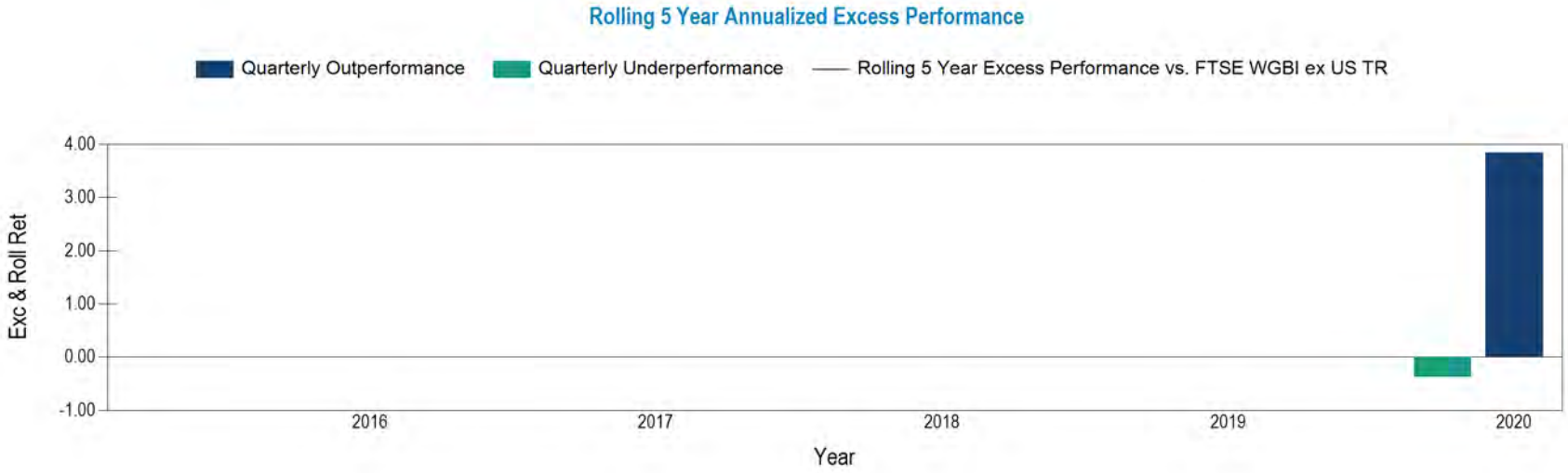


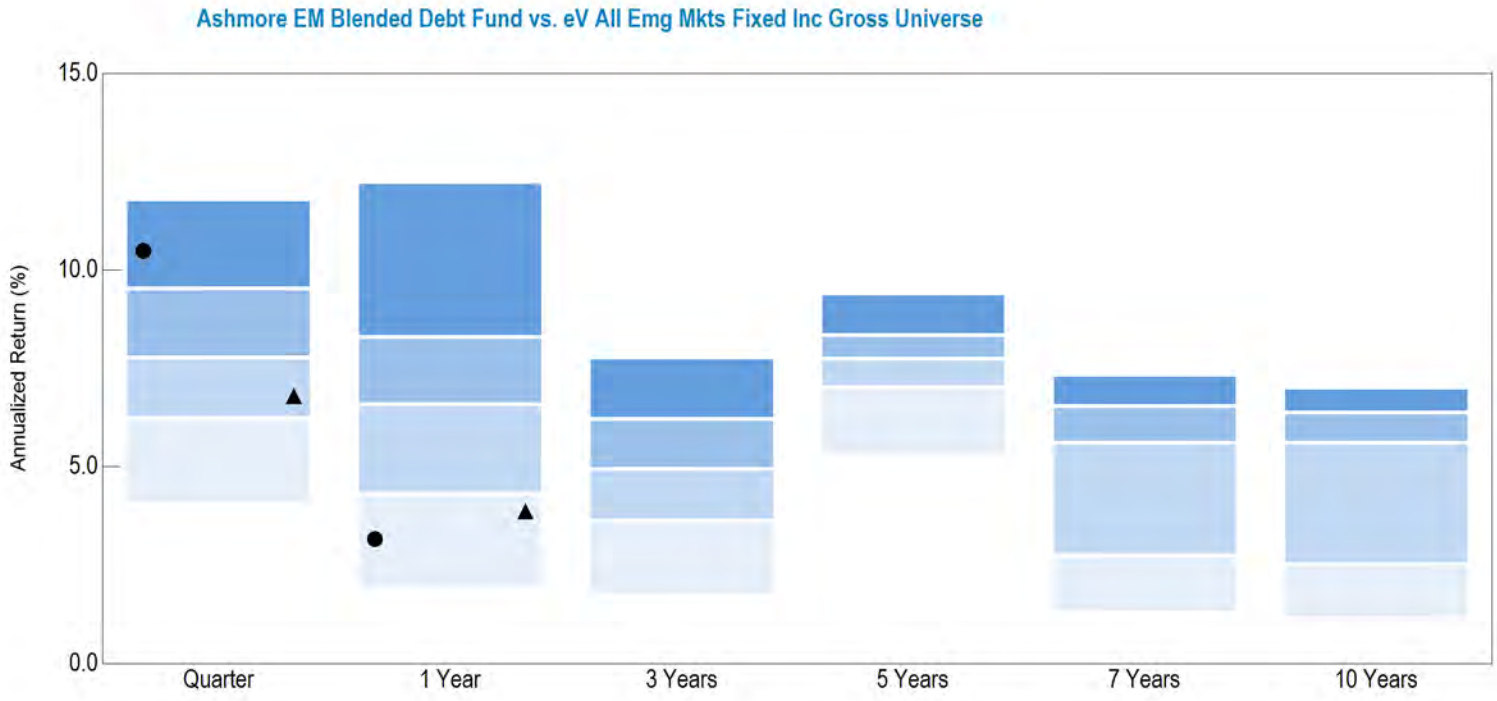
	Return (Rank)									
5th Percentile	18.4	16.1	2.2	16.7	14.8	1.9	8.6	12.1	19.7	11.7
25th Percentile	11.7	12.9	-0.2	10.1	7.9	0.3	4.5	3.9	14.3	6.9
Median	8.6	9.6	-1.7	7.9	4.6	-2.4	2.5	0.2	9.5	5.0
75th Percentile	5.8	7.5	-3.7	5.8	2.0	-4.2	0.5	-2.8	5.9	2.9
95th Percentile	1.7	3.1	-8.4	2.6	-2.8	-10.6	-4.9	-5.6	2.5	-5.5
# of Portfolios	506	491	458	445	432	332	263	225	197	171
● Brandywine Global Fixed Income	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)	-- (--)
▲ FTSE WGBI ex US TR	10.8 (34)	5.3 (89)	-1.8 (53)	10.3 (23)	1.8 (77)	-5.5 (85)	-2.7 (92)	-4.6 (90)	1.5 (99)	5.2 (46)


Annualized Return vs. Annualized Standard Deviation
3 Years Ending December 31, 2020
Annualized Return
Annualized Standard Deviation
FTSE WGBI ex US TR
475 Portfolios
20.0
15.0
10.0
5.0
0.0
-5.0
-10.0
-5.0
0.0
5.0
10.0
15.0
FTSE WGBI ex US TR
Universe Median
68% Confidence Interval
eV All Global Fixed Inc Gross


Annualized Return vs. Annualized Standard Deviation
5 Years Ending December 31, 2020
Annualized Return
Annualized Standard Deviation
FTSE WGBI ex US TR
448 Portfolios
20.0
15.0
10.0
5.0
0.0
-5.0
-10.0
0.0
5.0
10.0
15.0
20.0
FTSE WGBI ex US TR
Universe Median
68% Confidence Interval
eV All Global Fixed Inc Gross


Rolling 3 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 3 Year Excess Performance vs. FTSE WGBI ex US TR
4.00
3.00
2.00
1.00
0.00
-1.00
Exc & Roll Ret
2018
2019
2020
Year


Rolling 5 Year Annualized Excess Performance
Quarterly Outperformance
Quarterly Underperformance
Rolling 5 Year Excess Performance vs. FTSE WGBI ex US TR
4.00
3.00
2.00
1.00
0.00
-1.00
Exc & Roll Ret
2016
2017
2018
2019
2020
Year



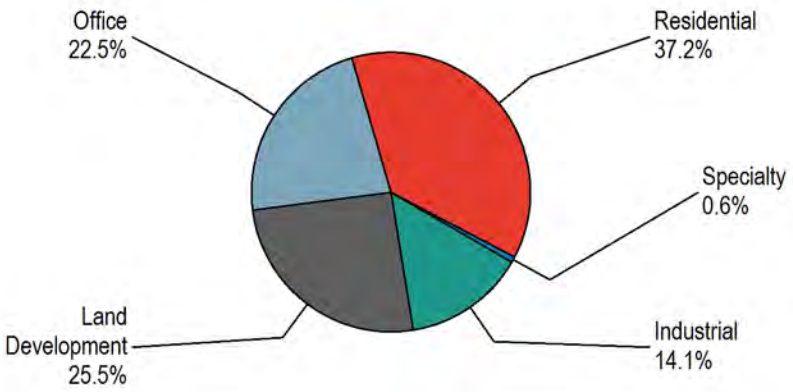
	Return (Rank)											
5th Percentile	11.8		12.2		7.8		9.4		7.3		7.0	
25th Percentile	9.5		8.3		6.2		8.4		6.5		6.4	
Median	7.8		6.6		5.0		7.7		5.6		5.6	
75th Percentile	6.2		4.3		3.6		7.0		2.8		2.5	
95th Percentile	4.1		1.9		1.8		5.3		1.3		1.2	
# of Portfolios	299		298		286		261		227		143	
● Ashmore EM Blended Debt Fund	10.5	(18)	3.2	(85)	--	(--)	--	(--)	--	(--)	--	(--)
▲ 50% JPM EMBI GD/25% JPM GBI EM GD/25%	6.8	(69)	3.9	(79)	--	(--)	--	(--)	--	(--)	--	(--)

Total Real Estate
Asset Class Overview (Gross of Fees)

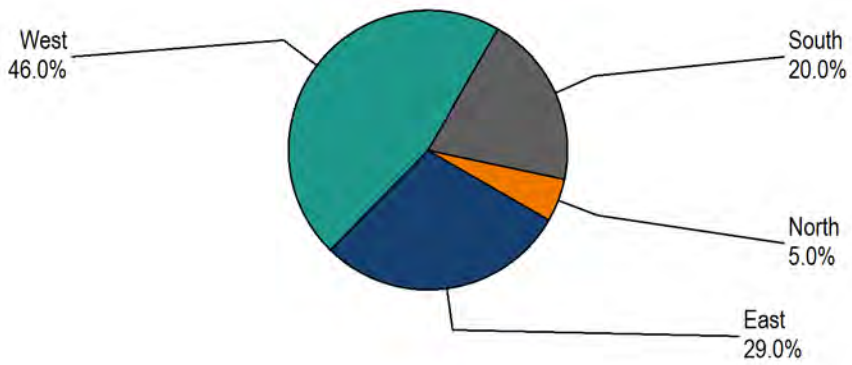
Period Ending: December 31, 2020

	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2020	2019	2018	2017	2016
Total Real Estate	**206,417,084**	**1.5**	**1.1**	**4.3**	**5.7**	**8.8**	**1.1**	**4.3**	**7.5**	**7.8**	**7.8**
NCREIF Property Index		*1.2*	*1.6*	*4.9*	*5.9*	*9.0*	*1.6*	*6.4*	*6.7*	*7.0*	*8.0*
JP Morgan Core Real Estate	167,454,510	1.7	0.5	3.6	5.0	9.5	0.5	3.4	7.0	6.1	8.4
NCREIF-ODCE		*1.3*	*1.2*	*4.9*	*6.2*	*9.9*	*1.2*	*5.3*	*8.3*	*7.6*	*8.8*
NCREIF Property Index		*1.2*	*1.6*	*4.9*	*5.9*	*9.0*	*1.6*	*6.4*	*6.7*	*7.0*	*8.0*
ARA American Strategic Value Realty	38,962,573	0.6	3.8	6.7	--	--	3.8	7.3	9.1	7.4	--
NCREIF-ODCE		*1.3*	*1.2*	*4.9*	--	--	*1.2*	*5.3*	*8.3*	*7.6*	--
NCREIF Property Index		*1.2*	*1.6*	*4.9*	--	--	*1.6*	*6.4*	*6.7*	*7.0*	--

Property Type Allocation
Allocation as of December 31, 2020



Geographic Diversification
Allocation as of December 31, 2020



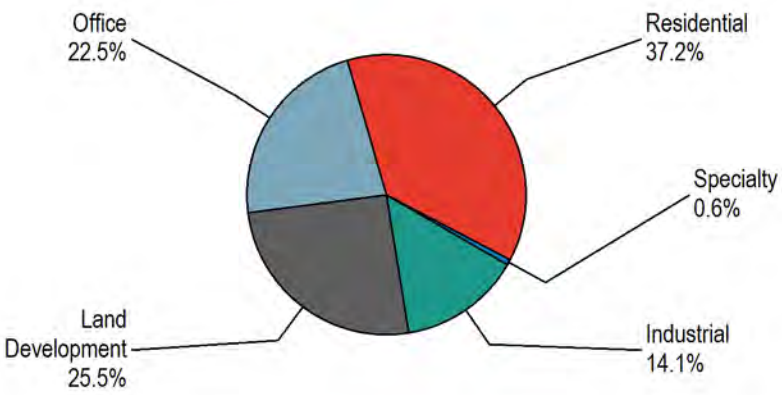
ARA American Strategic Value Realty is lagged one quarter.

Total Real Estate
Asset Class Overview (Net of Fees)

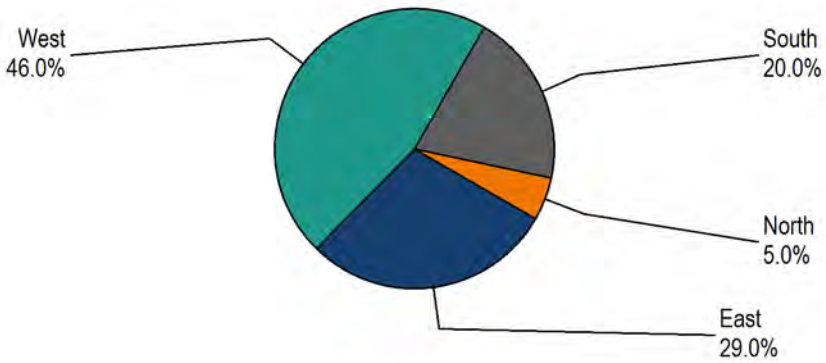
Period Ending: December 31, 2020

	Market Value	3 Mo	1 Yr	3 Yrs	5 Yrs	10 Yrs	2020	2019	2018	2017	2016
Total Real Estate	**206,417,084**	**1.5**	**1.1**	**4.3**	**5.5**	**8.4**	**1.1**	**4.3**	**7.5**	**7.8**	**6.8**
NCREIF Property Index		*1.2*	*1.6*	*4.9*	*5.9*	*9.0*	*1.6*	*6.4*	*6.7*	*7.0*	*8.0*
JP Morgan Core Real Estate	167,454,510	1.7	0.5	3.6	4.8	8.8	0.5	3.4	7.0	6.1	7.3
NCREIF-ODCE		*1.3*	*1.2*	*4.9*	*6.2*	*9.9*	*1.2*	*5.3*	*8.3*	*7.6*	*8.8*
NCREIF Property Index		*1.2*	*1.6*	*4.9*	*5.9*	*9.0*	*1.6*	*6.4*	*6.7*	*7.0*	*8.0*
ARA American Strategic Value Realty	38,962,573	0.6	3.8	6.7	--	--	3.8	7.3	9.1	7.4	--
NCREIF-ODCE		*1.3*	*1.2*	*4.9*	--	--	*1.2*	*5.3*	*8.3*	*7.6*	--
NCREIF Property Index		*1.2*	*1.6*	*4.9*	--	--	*1.6*	*6.4*	*6.7*	*7.0*	--

Property Type Allocation
Allocation as of December 31, 2020



Geographic Diversification
Allocation as of December 31, 2020



ARA American Strategic Value Realty is lagged one quarter.

Performance Return Calculations

Performance is calculated using Time Weighted Rates of Return (TWRR) methodologies. Monthly returns are geometrically linked and annualized for periods longer than one year.

Data Source

Verus is an independent third party consulting firm and calculates returns from best source book of record data. Returns calculated by Verus may deviate from those shown by the manager in part, but not limited to, differences in prices and market values reported by the custodian and manager, as well as significant cash flows into or out of an account. It is the responsibility of the manager and custodian to provide insight into the pricing methodologies and any difference in valuation.

Illiquid Alternatives

Due to the inability to receive final valuation prior to report production, closed end funds (including but are not limited to Real Estate, Hedge Funds, Private Equity, and Private Credit) performance is typically reported at a one-quarter lag. Valuation is reported at a one-quarter lag, adjusted for current quarter flow (cash flows are captured real time). Closed end fund performance is calculated using a time-weighted return methodology consistent with all portfolio and total fund performance calculations. For Private Markets, performance reports also include Verus-calculated multiples based on flows and valuations (e.g. DPI and TVPI) and manager-provided IRRs.

Manager Line Up

Manager	Inception Date	Data Source	Manager	Inception Date	Data Source
PIMCO RAE Fundamental PLUS	11/30/2007	J.P. Morgan	JP Morgan Core Real Estate	3/6/2008	J.P. Morgan
Loomis Sayles Large Cap Growth	12/31/2016	J.P. Morgan	Gresham MTAP Commodity	8/31/2013	BNY Mellon
Boston Partners Large Cap Value	1/31/2017	Boston Partners	Cash Account	-	SLOCPT
Atlanta Capital Management	8/31/2010	J.P. Morgan	HarbourVest Partners IX-Buyout	2011[1]	HarbourVest
Dodge & Cox Intl Stock	12/6/2007	J.P. Morgan	HarbourVest 2018 Global Fund L.P.	-	HarbourVest
WCM International Growth	2/15/2017	WCM	KKR Mezzanine Partners	2010[1]	KKR
BlackRock Core Bond	1/19/2017	J.P. Morgan	PIMCO Distressed Credit Fund	2010[1]	Brown Brothers Harriman
Dodge & Cox Income	1/19/2017	Deutsche Bank	ARA American Strategic Value	6/22/2016	American Realty Adv.
Pacific Asset Corporate Loan	9/1/2014	Deutsche Bank	Sixth Street Partners DCP	2016[1]	TPG
Brandywine Global Fixed	6/24/2020	J.P. Morgan	Pathway Private Equity Fund 9	2017[1]	Pathway
Ashmore EM Blended Debt Fund	3/31/2019	Ashmore	Pathway Private Equity Fund 10	3/25/2020	Pathway
			Sixth Street Partners TAO	4/16/2020	TPG

[1] *Represents fund vintage year.*

Policy & Custom Index Composition

Policy Index (10/1/2020-Current)	21% Russell 3000, 21% MSCI ACWI ex-US (Gross), 31% BBgBarc U.S. Aggregate, 17% NCREIF Property Index, 1% Russell 3000,4 Private Equity Benchmark, 5% Private Credit Benchmark.
Policy Index (4/1/2020-9/30/2020)	21% Russell 3000, 21% MSCI ACWI ex-US (Gross), 31% BBgBarc U.S. Aggregate, 17% NCREIF Property Index, 5% Russell 3000+ 300 bps (lagged), 5% BBgBarc High Yield +2% (lagged).
Policy Index (1/1/2017-3/31/2020)	20% Russell 3000, 20% MSCI ACWI ex-US (Gross), 30% BBgBarc U.S. Aggregate, 15% NCREIF Property Index, 5% Bloomberg Commodity Index, 5% Russell 3000+ 300 bps (lagged), 5% BBgBarc High Yield +2% (lagged).
Policy Index (10/1/2016-12/31/2016)	20% Russell 3000, 20% MSCI ACWI ex-US (Gross), 30% BBgBarc U.S. Aggregate, 15% NCREIF Property Index, 5% Bloomberg Commodity Index, 5% Russell 3000+ 300 bps, 5% BBgBarc High Yield +2% (lagged).
Policy Index (7/1/2014-9/30/2016)	23% Russell 3000, 22% MSCI ACWI ex-US (Gross), 35% BBgBarc U.S. Aggregate, 10% NCREIF Property Index, 5% Bloomberg Commodity Index, 5% Russell 3000+ 300 bps.
Policy Index (7/1/2013-6/30/2014)	27% Russell 3000, 23% MSCI ACWI ex-US (Gross), 30% BBgBarc U.S. Aggregate, 10% NCREIF Property Index, 5% Bloomberg Commodity Index, 5% Russell 3000+ 300 bps.
Policy Index (4/1/2011-6/30/2013)	27% Russell 3000, 23% MSCI ACWI ex-US (Gross), 20% BBgBarc U.S. Aggregate, 5% Citi World Gov't Bond, 5% Barclays US TIPS, 10% NCREIF Property Index, 5% Bloomberg Commodity Index, 5% Russell 3000+ 300 bps.
Private Equity Index (1/1/2017-Current)	Russell 3000 +3% (Lagged)
Private Equity Index (6/1/2011-12/31/2016)	Russell 3000 +3%

Private Equity Benchmark and Private Credit Benchmarks are equal to the actual private equity and private credit returns, respectively.

Glossary

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Board of Trustees

1000 Mill Street
San Luis Obispo, CA 93408
Phone: (805) 781-5465
Fax: (805) 781-5697
www.SLOPensionTrust.org

San Luis Obispo County
Pension Trust
SLOCPT

Date: February 22, 2021

To: Board of Trustees

From: Carl Nelson – Executive Director
Amy Burke – Deputy Director

Item 9: Monthly Investment Report for January 2021

	January	**Year to Date 2021**		2020	2019	2018	2017	2016
Total Trust Investments ($ millions)	$1,534			$1,552 year end	$1,446 year end	$1,285 year end	$1,351 year end	$1,196 year end
Total Fund Return	-0.4% Gross	-0.4% Gross		8.9 % Gross	16.3 % Gross	-3.2 % Gross	15.5 % Gross	6.6 % Gross
Policy Index Return (r)	-0.3%	-0.3%		10.0 %	16.4 %	-3.2 %	13.4 %	7.7 %

(r) Policy index as of April 1, 2020 revision to Strategic Asset Allocation Policy: 21% domestic equity, 21% international equity, 15% core bonds, 6% bank loans, 5% global bonds, 5% emerging market debt, 17% real estate, 0% commodities, 5% private equity, 5% private credit. Pending revision to Revised Investment Policy adopted Sept. 2020 to be effective in 2021.

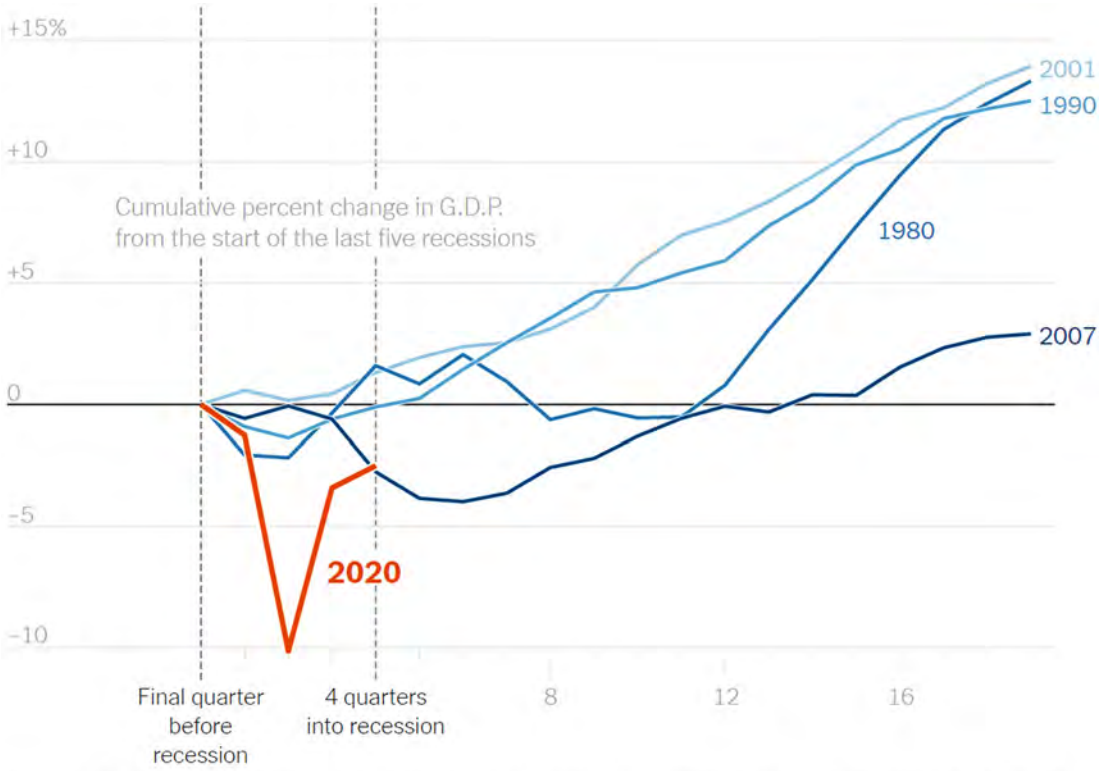
SLOCPT Investment Returns:

The attached report from Verus covers the preliminary investment returns of the SLOCPT portfolio and general market conditions through the end of January. The attached market commentary from Verus details market conditions in January, but subsequent activity in February is not yet factored into these numbers.

The Economy and Capital Markets:

- **GDP Growth**
  - The initial Bureau of Economic Statistics estimate on 4Q20 real GDP growth showed the following –
    - ✓ 4Q20 GDP +1.0% (4.0% annual rate)
    - ✓ 3Q20 GDP +7.5% (33.4% annual rate)
    - ✓ 2020 Full year -3.5%

  - GDP in the U.S. is rebounding rapidly from the early 2020 shock of pandemic response as shown in this graphic comparing it to prior recessions -



Note: Gross domestic product is adjusted for inflation and seasonality. Recessions are labeled by the year they started. Source: Bureau of Economic Analysis By Ella Koeze

  - In the January 28th New York Times article on the GDP report the following quotes provide a good summary of the 4Q20 economic climate.

    "Last year's overall showing was "bad but not historically bad, and not as bad as what was experienced in the Great Recession, and not nearly as bad as what was expected midyear," said Jason Furman, a Harvard economist who ran the Council of Economic Advisers under President Barack Obama.

    The stronger-than-expected rebound is partly a reflection of businesses' flexibility — retailers embraced online sales, restaurants built outdoor patios, and factories reorganized production lines to allow for social distancing. But it is also a result of

trillions of dollars in federal aid, which kept households and small businesses afloat when much of the economy was shut down. Despite the loss of millions of jobs, personal income and saving both rose in 2020.

"The fiscal stimulus package was not perfect," said Stephanie Aaronson, an economist at the Brookings Institution. "But the truth is both Congress and the Fed acted very, very quickly, and I think that did save the economy from a much worse outcome."

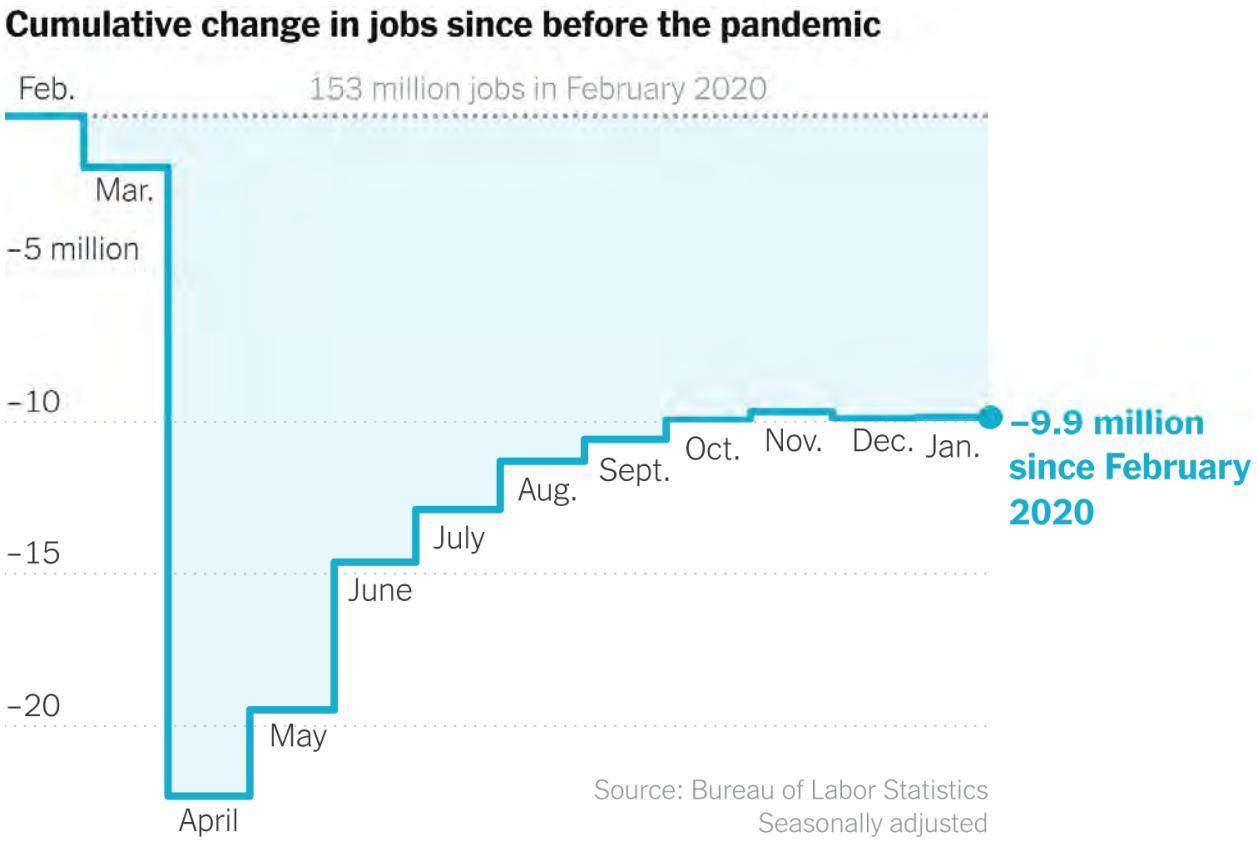
Also, the International Monetary Fund upgraded its outlook for the global economy this year but the recovery is expected to be uneven. The Washington-based institution said the economy would grow 4.2% in 2021; three months ago, it had predicted a 5.2 percent increase. It downgraded its forecast for the eurozone because of the increase in coronavirus infections and lengthy lockdowns."

- **Policy Responses to Pandemic**
  - **Outlook for Covid** –
    - July – vaccinations for all of the ~70% willing to get vaccinated
    - Public life nearing normal late in year
  - **Monetary Policy** –
    - Fed comments after January 27th meeting reinforced interest rates kept low for the foreseeable future in terms of Fed Funds rate and asset purchases. Fed Chair Powell also noted that short term increases in inflation late in 2021 due to stimulus measures may be treated as transitory by the Fed and not prompt immediate tightening.
    - Mr. Powell also commented that the Fed would provide the markets with "plenty of notice" before any small moves towards rate normalization.
    - The level of Fed support for a recovering economy is distinctly different from historical foci of the Fed. As a former Fed Governor famously commented – "The role of the Fed is to take away the punch bowl before the party gets out of hand." The Fed approach in the pandemic era is more akin to "keep pouring the punch to make sure the party doesn't end too soon even if it gets a bit wild."
  - **Fiscal Policy** –
    - Biden package – expect compromises and then passage by Reconciliation in March
    - Will pour stimulus into an economy already recovering leading to strong 6%+ real rates late in 2021.
    - Unemployment expected to be 5% or less by year end
    - Inflation expected at a little above 2% in 4Q21 and about 2% in 2022

- Deficits are more problematic if the level of debt service is excessive. With low interest rates, deficits are bearable for the sake of stimulus. However, with the outlook that interest rates will eventually increase it is important that fiscal deficits cannot grow without discipline and trigger significant tax increase needs.

➢ **Employment and Wages –**

- The January jobs report from the BLS on nonfarm employment with a gain of only 49k new jobs showed an economy slowing significantly. The Unemployment rate did fall to 6.3% from 6.7% in December (February low was 3.5% / April high was 14.7%). Total jobs remain 10 million under pre-pandemic levels.
- The decline in the unemployment rate in the face of flat new job creation mathematically implies a large number of job-seekers dropping out of the labor force. If the 4 million people working in early 2020 who are not currently looking for work were included in the unemployment rate calculation, the true unemployment rate would be close to 9%.



- **Market Outlook –**
  - Surging equity markets during November and December moderated for small losses in January..
  - US Corporate earnings coming in for 4Q20 above 4Q19 levels – surprisingly strong in the pandemic year.
  - Valuation levels of capital markets are all elevated which suppresses expectations for future returns. US domestic stocks have P/E ratios near two standard deviations above long-term averages. Combined with unprecedented low interest rates on bonds, JP Morgan Asset Management estimates that the long term returns of a 60% stocks / 40% bonds portfolio is only about 4.2%. Valuation levels and expected returns are less excessive for emerging markets equities and debt.

Respectfully Submitted,

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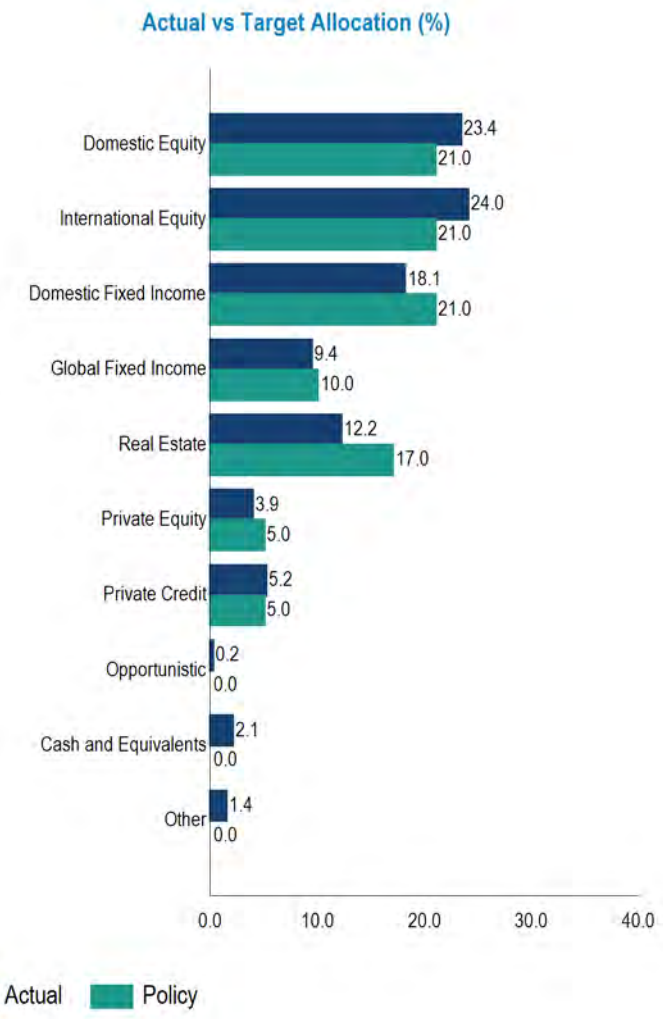
San Luis Obispo County Pension Trust
Executive Summary - Preliminary (Gross of Fees)

Period Ending: January 31, 2021

	Market Value	% of Portfolio	1 Mo	YTD
Total Fund	**1,534,499,644**	**100.0**	**-0.4**	**-0.4**
Policy Index			*-0.3*	*-0.3*
Total Domestic Equity	**359,122,220**	**23.4**	**-0.8**	**-0.8**
Russell 3000			*-0.4*	*-0.4*
PIMCO RAE US	84,309,668	5.5	3.5	3.5
S&P 500			*-1.0*	*-1.0*
Loomis Sayles Large Cap Growth	107,319,200	7.0	-2.3	-2.3
Russell 1000 Growth			*-0.7*	*-0.7*
Boston Partners Large Cap Value	98,568,707	6.4	-0.7	-0.7
Russell 1000 Value			*-0.9*	*-0.9*
Atlanta Capital Mgmt	68,924,645	4.5	-3.3	-3.3
Russell 2500			*2.5*	*2.5*
Total International Equity	**369,010,920**	**24.0**	**-0.5**	**-0.5**
MSCI ACWI ex USA Gross			*0.2*	*0.2*
Dodge & Cox Intl Stock	167,686,012	10.9	-0.7	-0.7
MSCI ACWI ex USA Value Gross			*-0.1*	*-0.1*
WCM International Growth	201,324,908	13.1	-0.3	-0.3
MSCI ACWI ex USA Growth Gross			*0.6*	*0.6*
Total Domestic Fixed Income	**278,463,407**	**18.1**	**-0.1**	**-0.1**
BBgBarc US Aggregate TR			*-0.7*	*-0.7*
BlackRock Core Bond	99,097,512	6.5	-0.6	-0.6
BBgBarc US Aggregate TR			*-0.7*	*-0.7*
Dodge & Cox Income Fund	103,666,694	6.8	-0.4	-0.4
BBgBarc US Aggregate TR			*-0.7*	*-0.7*
Pacific Asset Corporate Loan	75,699,201	4.9	0.9	0.9
S&P/LSTA Leveraged Loan Index			*1.2*	*1.2*
Total Global Fixed	**144,578,847**	**9.4**	**-1.7**	**-1.7**
FTSE World Govt Bond Index			*-1.3*	*-1.3*
Brandywine Global Fixed Income	71,318,048	4.6	-1.0	-1.0
FTSE WGBI ex US TR			*-1.4*	*-1.4*
Ashmore EM Blended Debt Fund	73,260,799	4.8	-2.4	-2.4
50% JPM EMBI GD/25% JPM GBI EM GD/25% JPM ELMI+			*-1.0*	*-1.0*



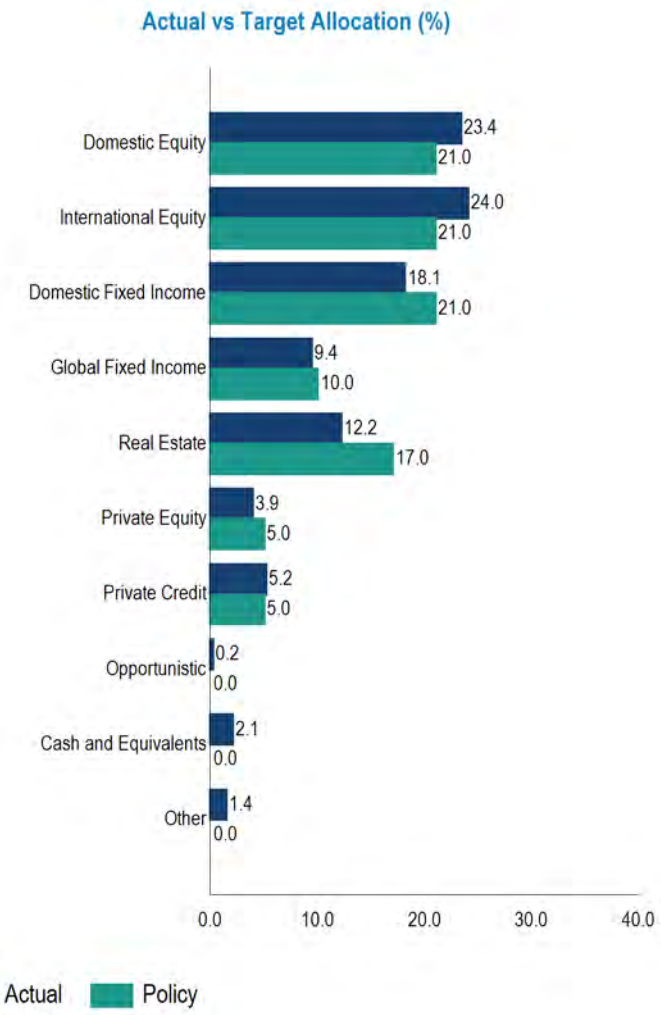
**Other balance represents Clifton Group.*

Policy Index (4/1/2020): 21% Russell 3000, 21% MSCI ACWI ex. US, 31% BBgBarc Aggregate, 17% NCREIF Property, 5% Russell 3000 + 300 bp lagged, 5% BBgBarc High Yield + 200 bp lagged. Effective 1/01/2017, only traditional asset class (public equity, public fixed income, REITs) investment management fees will be included in the gross of fee return calculation. Stone Harbor liquidated 3/22/2019. Ashmore EM Blended Debt funded 3/31/2019. Direct RE liquidated 5/3/2019. Pathway 10 funded 3/25/2020. Sixth Street Partners TAO funded 4/16/2020. Brandywine transitioned from International FI to Global FI on 6/24/2020. PIMCO Distressed Credit liquidated 6/25/2020. Most recently reported market values for private equity/credit, opportunistic, and illiquid real estate funds adjusted for calls and distributions through the report end date. All data is preliminary.

San Luis Obispo County Pension Trust
Executive Summary - Preliminary (Gross of Fees)

Period Ending: January 31, 2021

	Market Value	% of Portfolio	1 Mo	YTD
Total Real Estate	**186,992,770**	**12.2**	**0.5**	**0.5**
NCREIF Property Index			*0.0*	*0.0*
JP Morgan Core Real Estate	147,696,285	9.6	0.4	0.4
NCREIF-ODCE			*0.0*	*0.0*
NCREIF Property Index			*0.0*	*0.0*
ARA American Strategic Value Realty	39,296,485	2.6	0.9	0.9
NCREIF-ODCE			*0.0*	*0.0*
NCREIF Property Index			*0.0*	*0.0*
Total Private Equity	**60,109,374**	**3.9**		
Harbourvest Partners IX Buyout Fund L.P.	15,562,730	1.0		
Pathway Private Equity Fund Investors 9 L.P.	32,213,820	2.1		
Harbourvest 2018 Global Fund L.P.	12,403,796	0.8		
Pathway Private Equity Fund Investors 10 L.P.	-70,972	0.0		
Total Private Credit	**79,182,238**	**5.2**		
Sixth Street Partners DCP	63,310,786	4.1		
Sixth Street Partners TAO	15,871,452	1.0		
Total Cash	**31,474,921**	**2.1**	**0.3**	**0.3**
91 Day T-Bills			*0.0*	*0.0*
Cash Account	31,474,921	2.1	0.3	0.3
91 Day T-Bills			*0.0*	*0.0*
Total Opportunistic	**3,417,031**	**0.2**		
Kohlberg Kravis Roberts & Co. Mezzanine Partners I	3,417,031	0.2		
The Clifton Group	22,147,916	1.4		



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Verus
PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS
JANUARY 2021
Capital Markets Update
Agenda Item 9

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

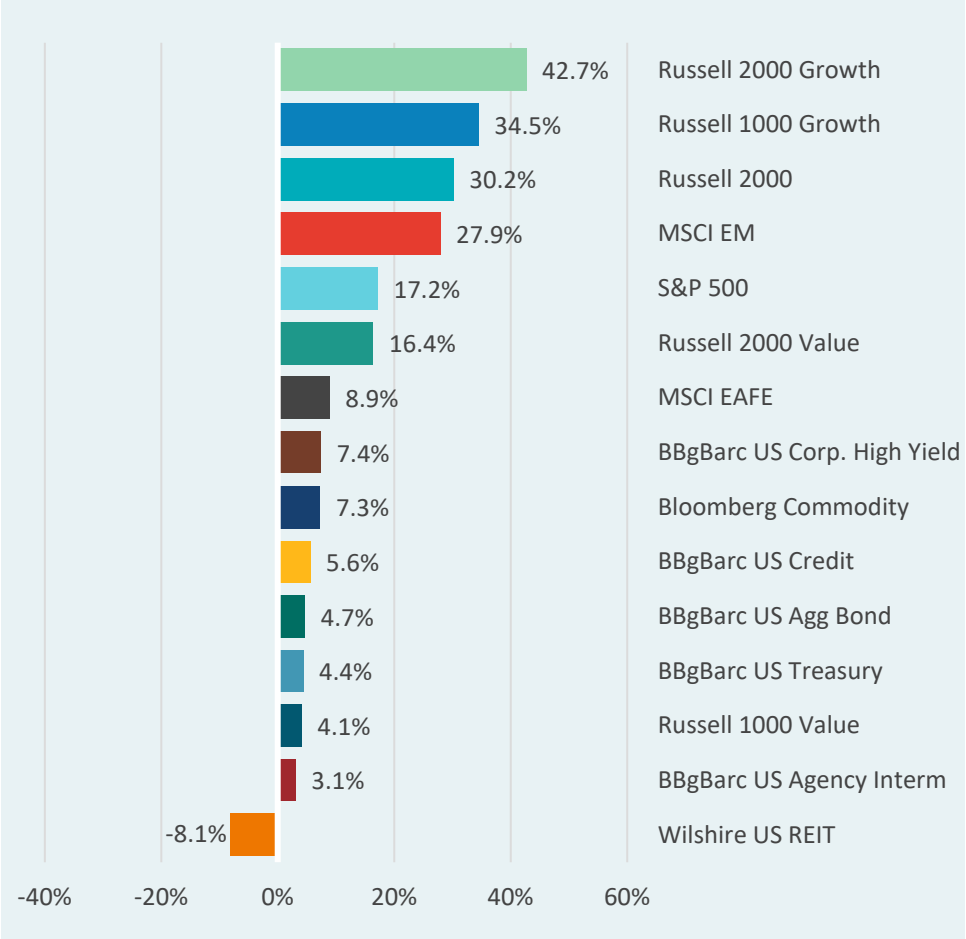
— The global vaccination campaign picked up steam over the course of the month, though progress has varied widely from country to country. The number of vaccine doses administered around the globe grew from just over 10 million to just over 98 million.

— 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.

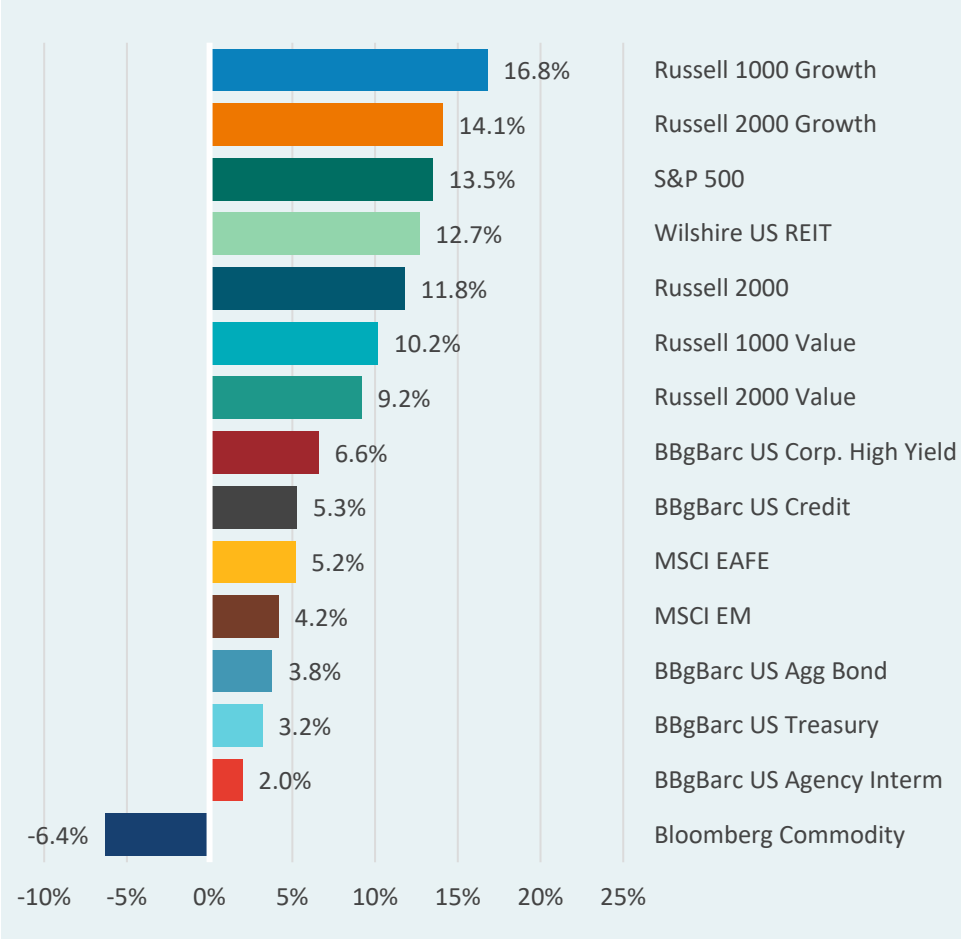
— Italian yields fell 10 basis points to 0.5% and Germany yields rose 10 basis points to -0.5%. The spread between Italian and German bonds is a key metric of political risk and is testing new lows.

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.

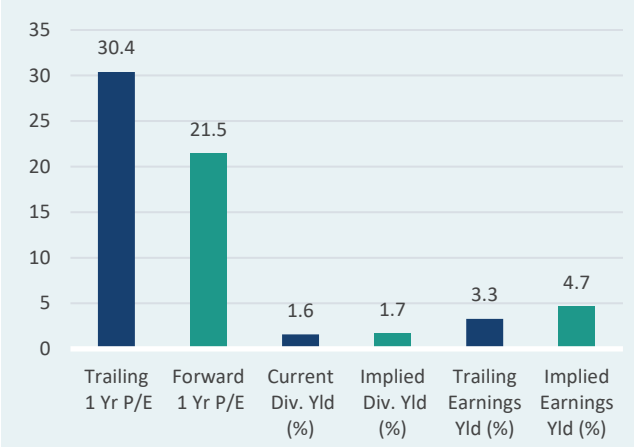
S&P 500 PRICE INDEX

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

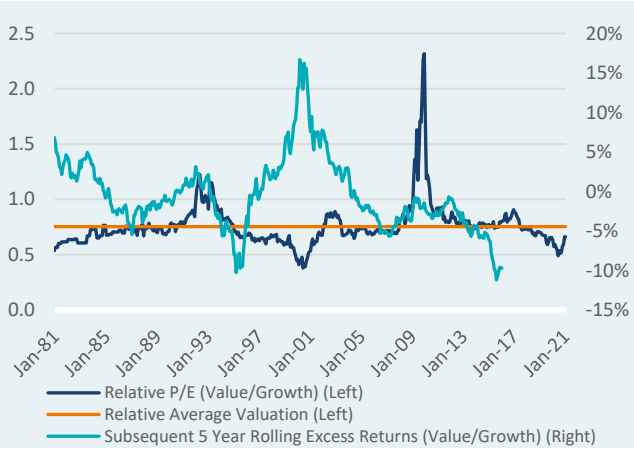
— Small-cap equities (Russell 2000 Index +5.0%) extended their rally and outperformed large-cap equities (Russell 1000 Index -0.8%) in a volatile month for the U.S. equity market. By month-end, the 1-year trailing outperformance of small-caps relative to large-caps (+10.3%) was the largest since early 2017.

— Bullish speculation from retail investors on Robinhood sparked squeezes on a number of heavily-shorted 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.

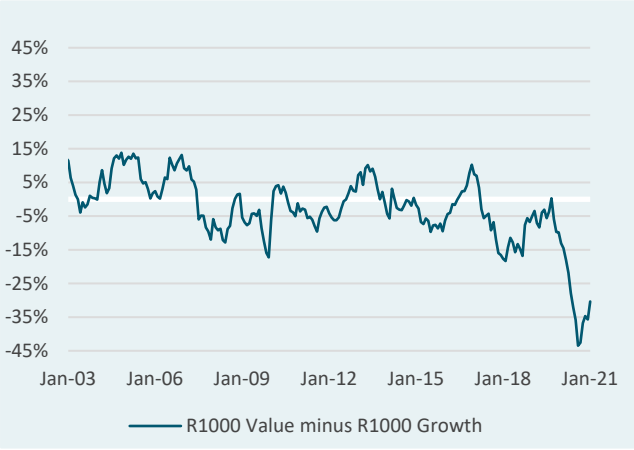
— Within small cap stocks, the value factor (Russell 2000 Value +5.3%) outperformed the growth factor (Russell 2000 +4.8%). The outperformance of value was likely aided by strong returns in energy and losses in lower-weighted information technology companies.

VALUE VS. GROWTH RELATIVE VALUATIONS



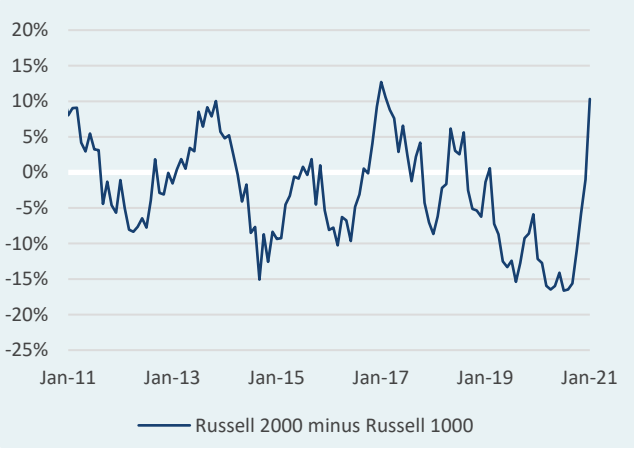
Source: FTSE, Bloomberg, as of 1/31/21

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

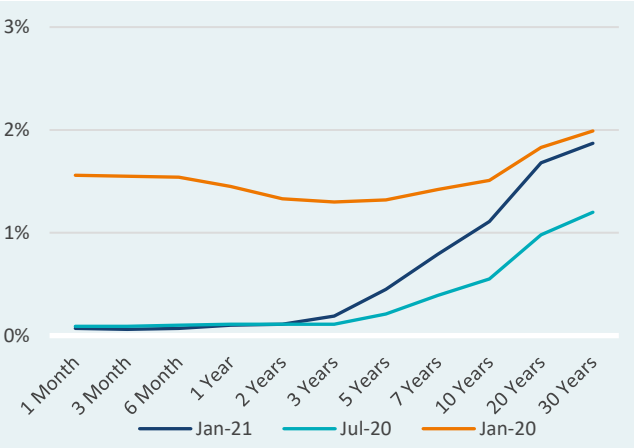
— The yield curve continued to steepen in January, as the 30-year U.S. Treasury yield rose 22 basis points to 1.87% and the 2-year yield fell another basis point to 0.11%. Historically, steepening of the yield curve has represented a positive sign for future economic growth and inflation.

— 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.

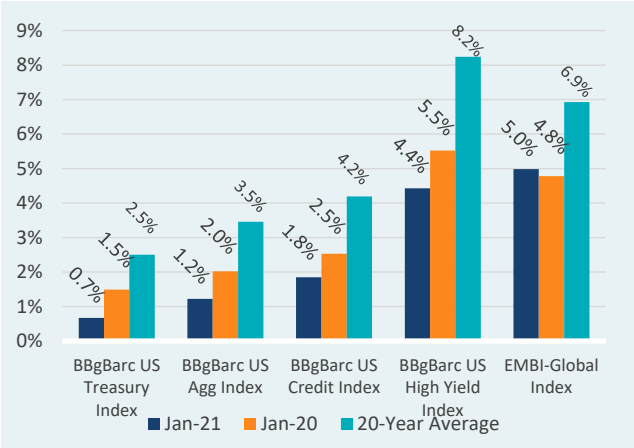
— High investor appetite for junk bonds has pushed yields on CCC-rated debt to the lowest level in history (ICE BofA CCC & Lower US High Yield Index 7.8%). It appears that in the current environment, investors have shown a willingness to reach out in terms of credit quality for a chance at boosting returns.

U.S. TREASURY YIELD CURVE



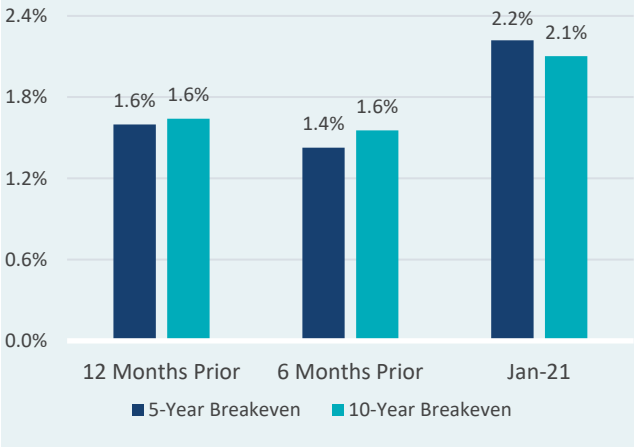
Source: Bloomberg, as of 1/31/21

NOMINAL YIELDS



Source: Morningstar, as of 1/31/21

BREAKEVEN INFLATION RATES



Source: Bloomberg, as of 1/31/21

Global markets

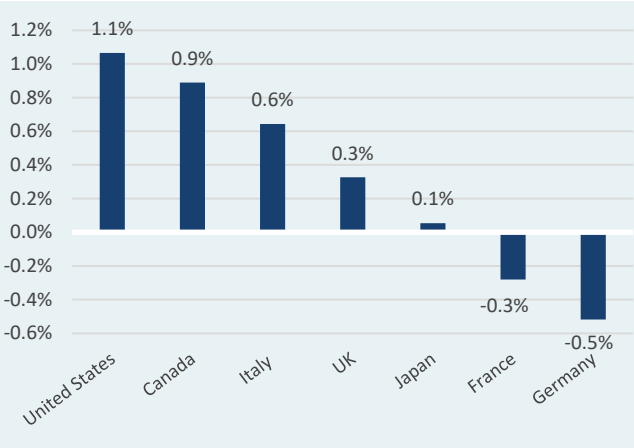
— Global equities (MSCI ACWI -0.5%) took a step back in January, and international developed equities (MSCI EAFE -1.1%) underperformed. Countries in the Eurozone (MSCI Europe -1.4%) underperformed other international developed countries including the U.K. (MSCI UK -0.2%) and Japan (MSCI Japan -1.0%).

— 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%.

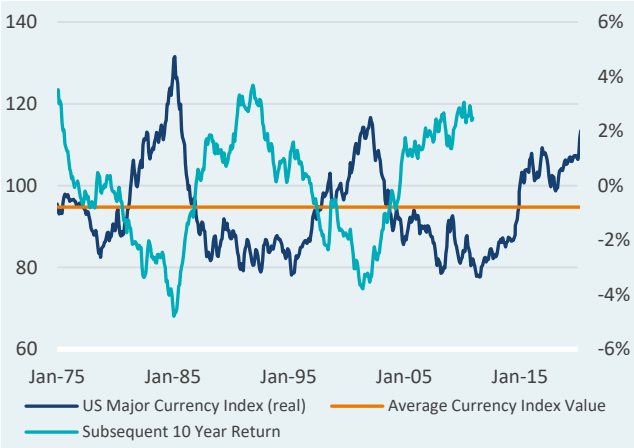
— U.S. credit outperformed global risky credit in January. While the BBgBarc U.S. Agg Bond Index faded -0.7% over the month, it held up better than hard-currency denominated emerging market debt (JPM EMBI Global Diversified Index -1.1%).

GLOBAL SOVEREIGN 10-YEAR YIELDS



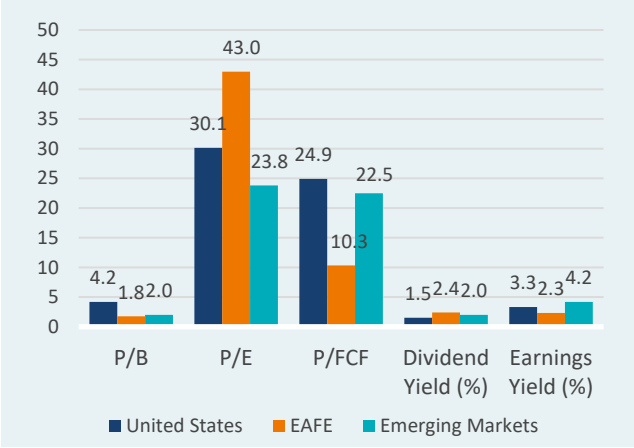
Source: Bloomberg, as of 1/31/21

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%.

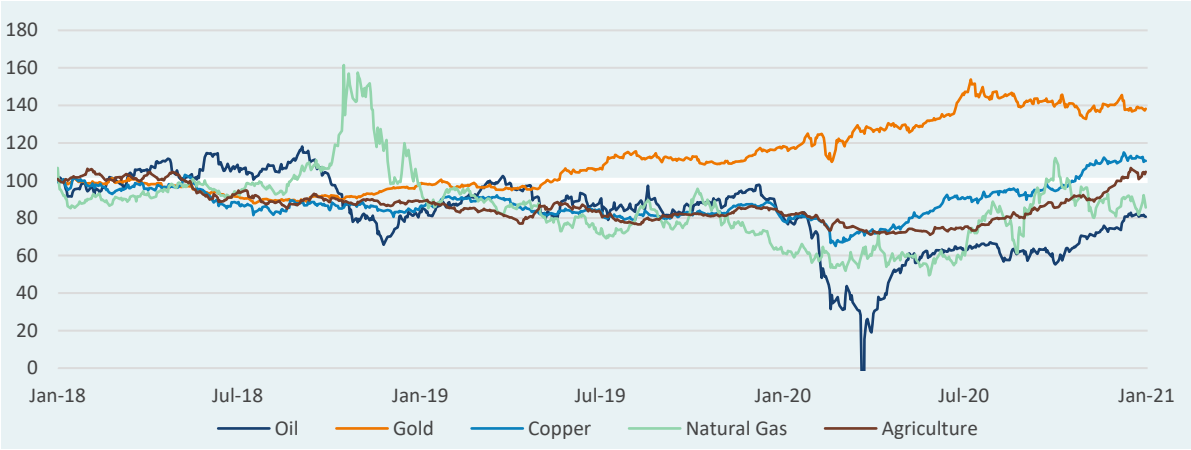
— Precious metals (-1.6%) were the only major commodities sub-index to post a negative return over the month. Gold sold off over the month and spot prices declined -2.2% to $1848 per ounce.

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

BEST

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	YTD	5-Year	10-Year
Small Cap Value	66.4	31.8	14.0	25.9	56.3	26.0	34.5	32.6	39.8	5.2	79.0	29.1	14.3	18.6	43.3	13.5	13.3	31.7	37.3	6.7	36.4	38.5	5.3	22.2	16.8
Small Cap Equity	43.1	22.8	8.4	10.3	48.5	22.2	21.4	26.9	16.2	1.4	37.2	26.9	7.8	18.1	38.8	13.2	5.7	21.3	30.2	1.9	31.4	34.6	5.0	20.2	14.1
Small Cap Growth	33.2	12.2	7.3	6.7	47.3	20.7	20.1	23.5	15.8	-6.5	34.5	24.5	2.6	17.9	34.5	13.0	0.9	17.3	25.0	0.0	28.5	21.0	4.8	16.7	13.6
Emerging Markets Equity	27.3	11.6	3.3	1.6	46.0	18.3	14.0	22.2	11.8	-21.4	32.5	19.2	1.5	17.5	33.5	11.8	0.6	12.1	22.2	-1.5	26.5	20.0	3.1	16.5	11.8
Commodities	26.5	7.0	2.8	1.0	39.2	16.5	7.5	18.4	11.6	-25.9	28.4	16.8	0.4	16.4	33.1	6.0	0.0	11.8	21.7	-3.5	25.5	18.3	2.6	15.0	10.2
Cash	21.3	4.1	-2.4	-6.0	29.9	14.3	6.3	15.5	10.3	-33.8	23.3	16.1	-2.1	15.3	23.3	4.9	-0.8	11.2	14.6	-6.0	22.4	14.0	0.0	12.3	9.2
Real Estate	24.3	6.0	2.5	-5.9	30.0	14.5	7.1	16.6	10.9	-28.9	27.2	16.7	0.1	16.3	32.5	5.6	-0.4	11.3	17.1	-4.8	22.0	10.3	0.0	10.7	9.0
60/40 Global Portfolio	20.9	-3.0	-5.6	-11.4	29.7	12.9	5.3	15.1	7.0	-35.6	20.6	15.5	-2.9	14.6	12.1	4.2	-1.4	8.0	13.7	-8.3	18.6	7.8	-0.6	10.1	6.6
US Bonds	13.2	-7.3	-9.1	-15.5	25.2	11.4	4.7	13.3	7.0	-36.8	19.7	13.1	-4.2	11.5	11.0	3.4	-2.5	7.1	7.8	-9.3	18.4	7.5	-0.7	8.8	5.2
Large Cap Growth	11.4	-7.8	-9.2	-15.7	23.9	9.1	4.6	10.4	5.8	-37.6	18.9	10.2	-5.5	10.5	9.0	2.8	-3.8	5.7	7.7	-11.0	8.7	4.6	-0.7	5.9	4.2
Large Cap Equity	7.3	-14.0	-12.4	-20.5	11.6	6.9	4.6	9.1	4.4	-38.4	11.5	8.2	-5.7	4.8	0.1	0.0	-4.4	2.6	7.0	-11.2	7.8	2.8	-0.8	4.9	3.8
Large Cap Value	4.8	-22.4	-19.5	-21.7	9.0	6.3	4.2	4.8	-0.2	-38.5	5.9	6.5	-11.7	4.2	-2.0	-1.8	-7.5	1.0	3.5	-12.9	7.7	1.6	-0.9	4.0	3.2
Hedge Funds of Funds	-0.8	-22.4	-20.4	-27.9	4.1	4.3	3.2	4.3	-1.6	-43.1	0.2	5.7	-13.3	0.1	-2.3	-4.5	-14.9	0.5	1.7	-13.8	6.4	0.5	-1.0	1.1	0.6
International Equity	-1.5	-30.6	-21.2	-30.3	1.0	1.4	2.4	2.1	-9.8	-53.2	-16.9	0.1	-18.2	-1.1	-9.5	-17.0	-24.7	0.3	0.9	-14.6	2.1	-3.1	-1.1	1.9	-6.4

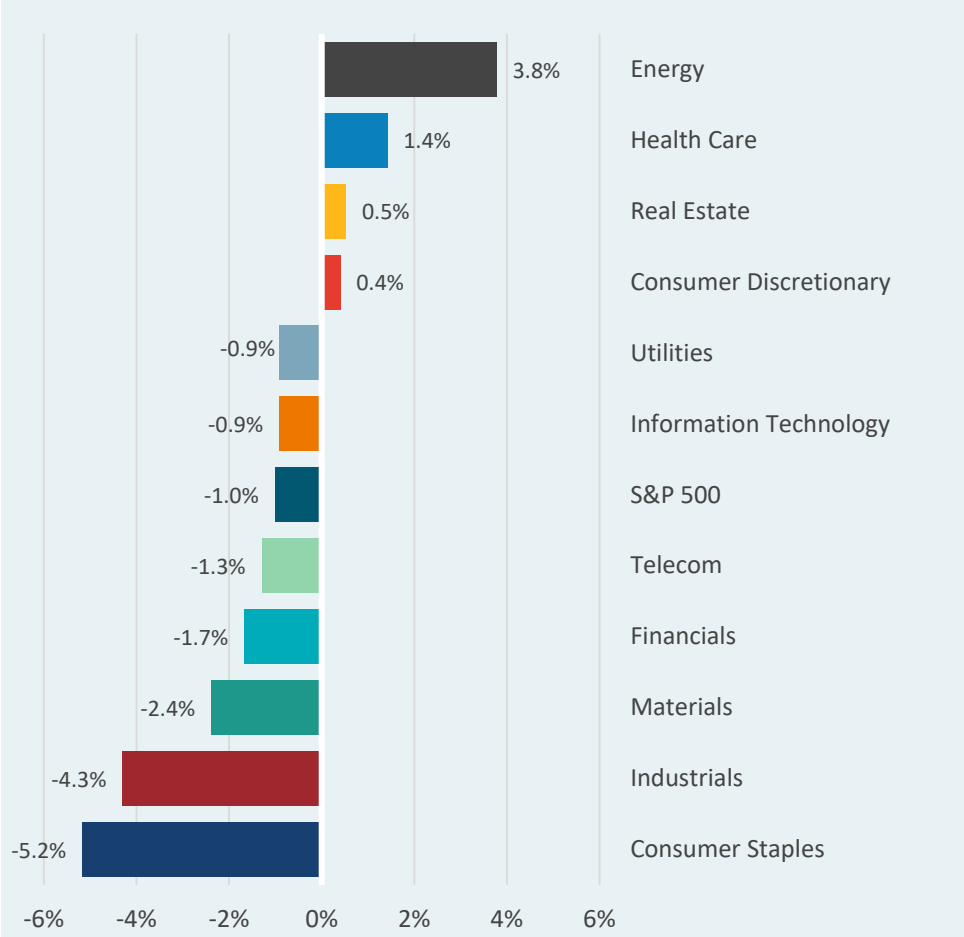
WORST

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

Source Data: Morningstar, Inc., Hedge Fund Research, Inc. (HFR), National Council of Real Estate Investment Fiduciaries (NCREIF). Indices used: Russell 1000, Russell 1000 Value, Russell 1000 Growth, Russell 2000, Russell 2000 Value, Russell 2000 Growth, MSCI EAFE, MSCI EM, BBgBarc US Aggregate, T-Bill 90 Day, Bloomberg Commodity, NCREIF Property, HFRI FOF, MSCI ACWI, BBgBarc Global Bond. NCREIF Property Index performance data as of 12/31/20.

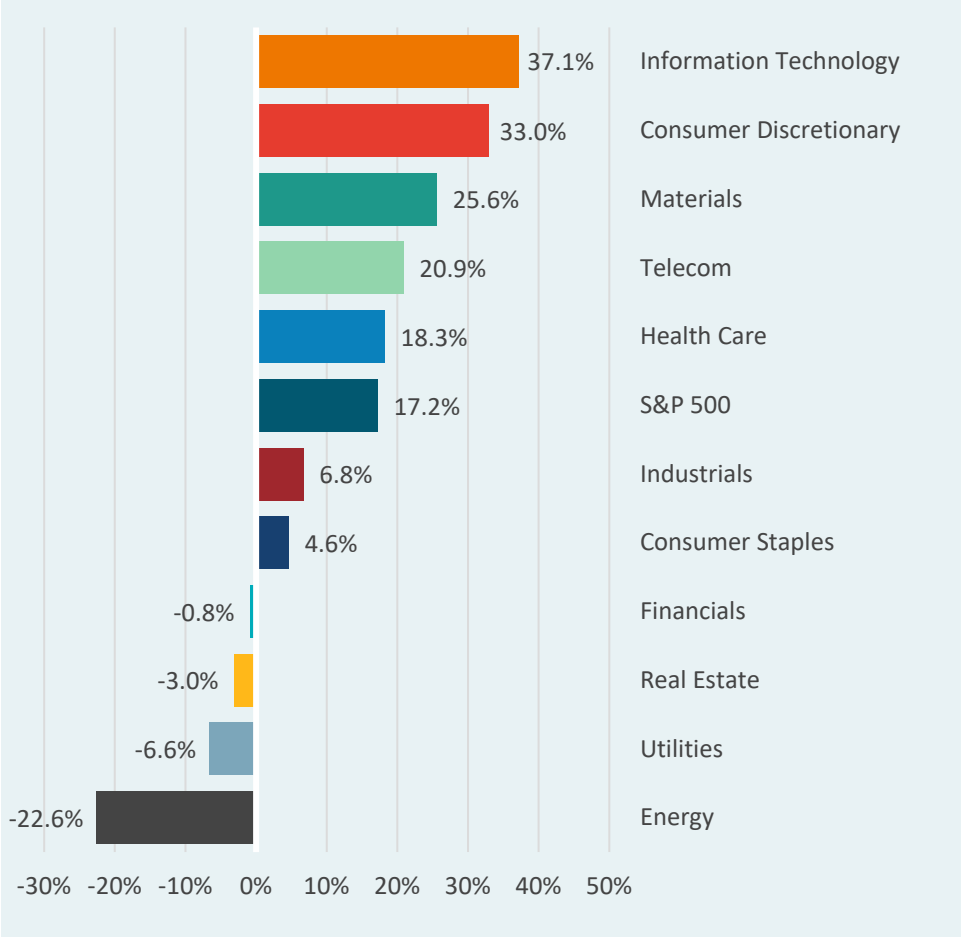
S&P 500 sector returns

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

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

INTERNATIONAL EQUITY

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
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)

OTHER

	Month	QTD	YTD	1 Year	3 Year	5 Year	10 Year
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				
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				
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				
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				
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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Board of Trustees
1000 Mill Street
San Luis Obispo, CA 93408
Phone: (805) 781-5465
Fax: (805) 781-5697
www.SLOPensionTrust.org

San Luis Obispo County
Pension Trust
SLOCPT

Date: February 22, 2021

To: Board of Trustees

From: Carl Nelson – Executive Director
Amy Burke – Deputy Director
Scott Whalen - Verus

Agenda Item 10: Capital Market Assumptions 2021 - Verus

Recommendation:

Staff recommends that the Board of Trustees review and discuss the presentation to be given by Scott Whalen of Verus, the Pension Trust's investment consultant.

Capital Market Assumptions:

It is the practice of the Pension Trust to include in the February Board of Trustees meeting an annual review of asset allocation and Capital Market Assumptions (CMA). Verus' CMAs are primarily for a 10-year period. CMAs are inherently heavily influenced by current market valuation levels and interest rates. The starting point determines the path to the eventual reversion-to-the-mean of returns. In the current investment environment -

- Pervasively low interest rates suppress lower risk assets' return expectations.
- Elevated equity market valuations (high P/E ratios) lower future expectations in anticipation of at some point contracting equity valuations.

For context the impact of CMA changes on forecasted performance expectations from SAA reviews conducted over the past five years is shown in the table below:

Year	Exp. 10-year Annualized Return	Expected Risk (Std. Dev.)	Range of 10-year Annualized Return Outcomes (95% Confidence Interval)
2017	6.3%	11.1%	0.5% - 12.1%
2018	6.0%	11.4%	0.1% - 11.9%
2019	6.7%	11.4%	0.8% - 12.6%
2020 (legacy)	6.2%	11.1%	0.4% - 12.0%
2020 (FFP)	6.9%	11.4%	1.0% - 12.8%
2021	5.6%	11.4%	-0.3% - 11.5%

Discount Rate Considerations:

As a summarized review of pension funding and discount rates – the Discount Rate for pension liabilities in the actuarial process should reflect very long-term expectations for investment returns at an appropriate level of risk for the fund. Actual returns will, of course, vary widely year to year. If a long-term discount rate is used that is unrealistically high, it increases the probability that actual returns will average below that rate. This will have the effect of creating actuarial losses over time that will be smoothed into the necessary contribution rates to fund the Plan. If this is consistently the case, it will defer pension costs properly attributable to the current generation of pension rate payers to future generations. Hence, the importance of using a realistic long term expected investment return as the discount rate for Plan liabilities.

The range of reasonable discount rates has been reducing significantly in recent years. This guides the widespread lowering of pension funding discount rates across the universe of defined benefit pension funds. In conversations with other California public sector retirement systems, we find that long term CMAs from various consultants falling below 6% is a common theme this year.

Pension Trust practice has been to consider changes to the long-term actuarial discount rate in conjunction with biennial Actuarial Experience Studies. This allows for an integrated consideration of not just the discount rate, but the other key actuarial assumptions (e.g., inflation, mortality, etc.) that go into determining the necessary funding for the Plan.

During the 2020 Actuarial Valuation and Experience Study the discount rate for the SLOCPT Plan was lowered to 6.875%. The discussion at that time among the Trustees indicated interest in further lowering of the discount rate on a gradual path, possibly starting in 2021. The selection of a prudent discount rate is done by the Board of Trustees in consultation with the Plan's Actuary. It considers the CMAs of SLOCPT's investment consultant and other consultants. This discussion on discount rates is scheduled for the March, May and June Board of Trustees meetings

Respectfully Submitted,

Verus

PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS

FEBRUARY 2021

Capital Market Assumptions – 2021 Update

San Luis Obispo County Pension Trust

Agenda Item 10

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VERUSINVESTMENTS.COM

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SAN FRANCISCO 415-362-3484
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I. 2021 Capital Market Assumptions

Methodology

CORE INPUTS

— We use a fundamental building block approach based on several inputs, including historical data and academic research to create asset class return forecasts.
— For most asset classes, we use the long-term historical volatility after adjusting for autocorrelation.
— Correlations between asset classes are calculated based on the last 10 years. For illiquid assets, such as private equity and private real estate, we use BarraOne correlation estimates.

Asset	Return Methodology	Volatility Methodology*
Inflation	25% weight to the University of Michigan Survey 5-10 year ahead inflation expectation and the Survey of Professional Forecasters (Fed Survey), and the remaining 50% to the market's expectation for inflation as observed through the 10-year TIPS breakeven rate	-
Cash	75% * current federal funds rate + 25% * U.S. 10-year Treasury yield	Long-term volatility
Bonds	Nominal bonds: current yield; Real bonds: real yield + inflation forecast	Long-term volatility
International Bonds	Current yield	Long-term volatility
Credit	Current option-adjusted spread + U.S. 10-year Treasury – effective default rate	Long-term volatility
International Credit	Current option-adjusted spread + foreign 10-year Treasury – effective default rate	Long-term volatility
Private Credit	Bank loan forecast + 1.75% private credit premium**	Long-term volatility
Equity	Current yield + real earnings growth (historical average) + inflation on earnings (inflation forecast) + expected P/E change	Long-term volatility
Intl Developed Equity	Current yield + real earnings growth (historical average) + inflation on earnings (intl. inflation forecast) + expected P/E change	Long-term volatility
Private Equity	US large cap domestic equity forecast * 1.85 beta adjustment	1.2 * Long-term volatility of U.S. small cap
Commodities	Collateral return (cash) + spot return (inflation forecast) + roll return (assumed to be zero)	Long-term volatility
Hedge Funds	Return coming from traditional betas + 15-year historical idiosyncratic return	Long-term volatility
Core Real Estate	Cap rate + real income growth – capex + inflation forecast	65% of REIT volatility
REITs	Core real estate	Long-term volatility
Value-Add Real Estate	Core real estate + 2%	Volatility to produce Sharpe Ratio (g) equal to core real estate
Opportunistic Real Estate	Core real estate + 4%	Volatility to produce Sharpe Ratio (g) equal to core real estate
Infrastructure	Current yield + real income growth + inflation on earnings (inflation forecast)	Long-term volatility
Risk Parity	Expected Sharpe Ratio * target volatility + cash rate	Target volatility

**Long-term historical volatility data is adjusted for autocorrelation (see Appendix)*
***The private credit premium is generated by illiquidity, issuer size, and lack of credit rating*

10-year return & risk assumptions

Asset Class	Index Proxy	Ten Year Return Forecast Geometric	Ten Year Return Forecast Arithmetic	Standard Deviation Forecast	Sharpe Ratio Forecast (g)	Sharpe Ratio Forecast (a)	10-Year Historical Sharpe Ratio (g)	10-Year Historical Sharpe Ratio (a)
Equities								
U.S. Large	S&P 500	5.1%	6.3%	15.7%	0.31	0.38	0.99	0.99
U.S. Small	Russell 2000	5.2%	7.3%	21.4%	0.23	0.33	0.51	0.58
International Developed	MSCI EAFE	5.2%	6.7%	17.9%	0.28	0.36	0.27	0.34
International Small	MSCI EAFE Small Cap	4.4%	6.7%	22.4%	0.19	0.29	0.43	0.49
Emerging Markets	MSCI EM	5.4%	8.3%	25.5%	0.20	0.32	0.11	0.19
Global Equity	MSCI ACWI	5.2%	6.6%	17.3%	0.29	0.37	0.58	0.62
Private Equity*	Cambridge Private Equity	9.3%	12.1%	25.7%	0.35	0.46	-	-
Fixed Income								
Cash	30 Day T-Bills	0.2%	0.2%	1.2%	-	-	-	-
U.S. TIPS	BBgBarc U.S. TIPS 5-10	1.1%	1.2%	5.3%	0.15	0.18	0.66	0.67
U.S. Treasury	BBgBarc Treasury 7-10 Year	0.7%	0.9%	6.7%	0.07	0.10	0.67	0.68
Global Sovereign ex U.S.	BBgBarc Global Treasury ex U.S.	0.2%	0.6%	9.6%	-0.01	0.04	0.09	0.12
Global Aggregate	BBgBarc Global Aggregate	1.1%	1.3%	6.1%	0.14	0.17	0.38	0.39
Core Fixed Income	BBgBarc U.S. Aggregate Bond	1.5%	1.6%	4.0%	0.31	0.36	1.02	1.01
Core Plus Fixed Income	BBgBarc U.S. Universal	2.2%	2.3%	4.0%	0.49	0.50	1.13	1.12
Short-Term Gov't/Credit	BBgBarc U.S. Gov't/Credit 1-3 Year	0.7%	0.8%	3.6%	0.14	0.16	1.23	1.22
Short-Term Credit	BBgBarc Credit 1-3 Year	1.0%	1.1%	3.6%	0.21	0.23	1.23	1.22
Long-Term Credit	BBgBarc Long U.S. Corporate	2.2%	2.6%	9.3%	0.21	0.25	0.76	0.77
High Yield Corp. Credit	BBgBarc U.S. Corporate High Yield	3.4%	4.0%	11.3%	0.28	0.34	0.82	0.83
Bank Loans	S&P/LSTA Leveraged Loan	2.9%	3.2%	9.5%	0.28	0.32	0.66	0.67
Global Credit	BBgBarc Global Credit	0.3%	0.6%	7.4%	0.01	0.05	0.63	0.64
Emerging Markets Debt (Hard)	JPM EMBI Global Diversified	5.2%	6.0%	12.7%	0.39	0.45	0.60	0.63
Emerging Markets Debt (Local)	JPM GBI-EM Global Diversified	4.3%	5.0%	12.2%	0.33	0.39	-0.01	0.05
Private Credit	Bank Loans + 175bps	4.6%	5.2%	11.2%	0.39	0.45	-	-
Other								
Commodities	Bloomberg Commodity	2.2%	3.4%	15.9%	0.13	0.20	-0.47	-0.41
Hedge Funds*	HFRI Fund Weighted Composite	3.8%	4.1%	7.8%	0.46	0.49	0.47	0.49
Real Estate Debt	BBgBarc CMBS IG	2.2%	2.5%	7.5%	0.26	0.30	1.18	1.17
Core Real Estate	NCREIF Property	5.8%	6.5%	12.6%	0.44	0.50	2.06	1.99
Value-Add Real Estate	NCREIF Property + 200bps	7.8%	9.1%	17.1%	0.44	0.52	-	-
Opportunistic Real Estate	NCREIF Property + 400bps	9.8%	11.8%	21.6%	0.44	0.54	-	-
REITs	Wilshire REIT	5.8%	7.5%	19.3%	0.29	0.38	0.46	0.52
Global Infrastructure	S&P Global Infrastructure	7.8%	9.4%	18.8%	0.40	0.49	0.28	0.35
Risk Parity	Risk Parity	5.2%	5.9%	10.0%	0.50	0.56	-	-
Currency Beta	MSCI Currency Factor Index	1.2%	1.3%	3.5%	0.28	0.30	0.15	0.16
Inflation		2.0%	-	-	-	-	-	-

Investors wishing to produce expected geometric return forecasts for their portfolios should use the arithmetic return forecasts provided here as inputs into that calculation, rather than the single-asset-class geometric return forecasts. This is the industry standard approach, but requires a complex explanation only a heavy quant could love, so we have chosen not to provide further details in this document – we will happily provide those details to any readers of this who are interested.

**Return expectations differ depending on method of implementation*

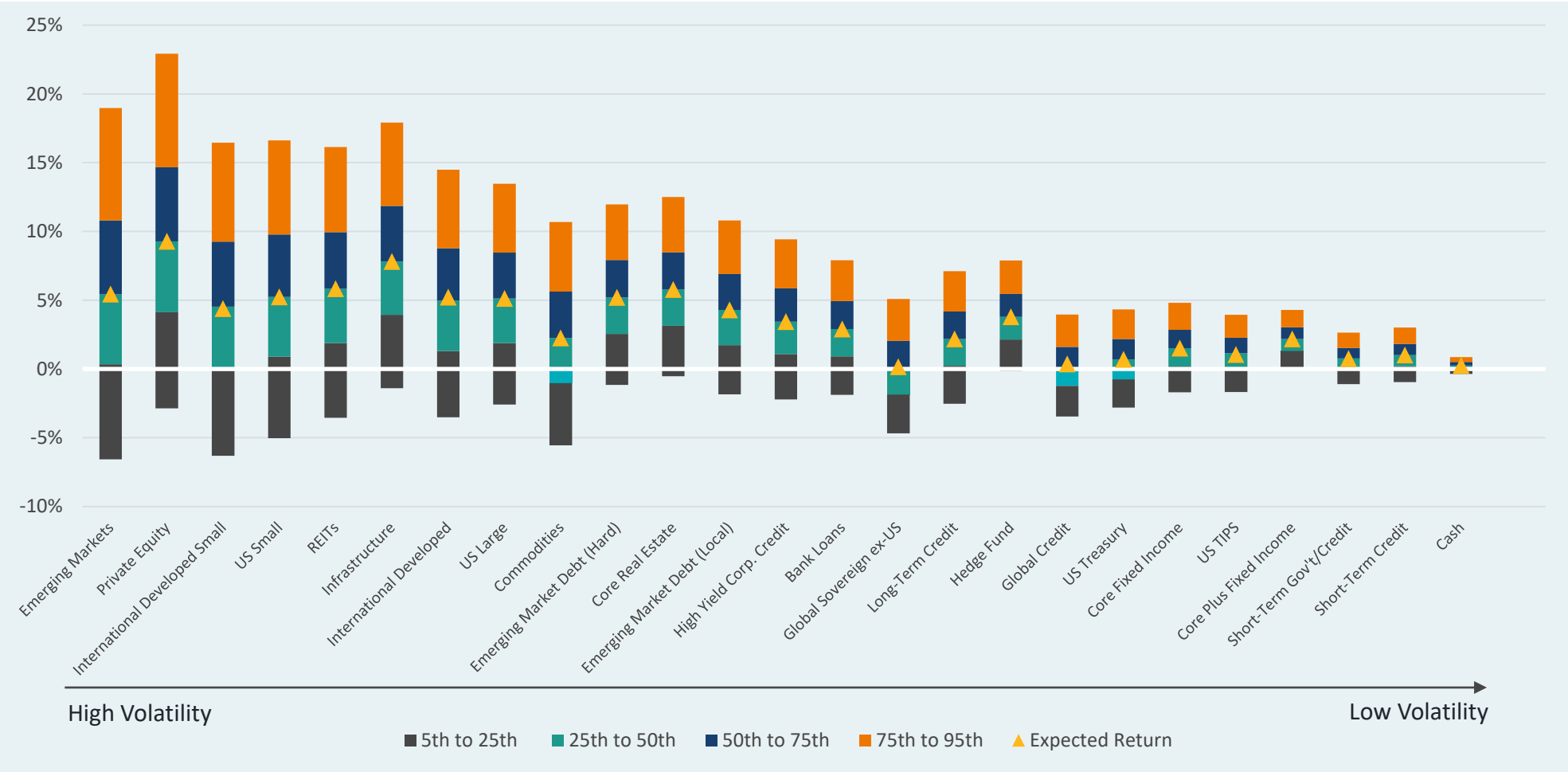
Correlation assumptions

	Cash	US Large	US Small	Intl Large	Intl Small	EM	Global Equity	PE	US TIPS	US Treasury	Global Sovereign ex-US	US Core	Core Plus	Short-Term Gov't/Credit	Short-Term Credit	Long-Term Credit	US HY	Bank Loans	Global Credit	EMD USD	EMD Local	Commodities	Hedge Funds	Real Estate	REITs	Infrastructure	Risk Parity	Currency Beta
Cash	1.0																											
US Large	-0.2	1.0																										
US Small	-0.2	0.9	1.0																									
Intl Large	-0.1	0.9	0.8	1.0																								
Intl Small	-0.2	0.9	0.8	1.0	1.0																							
EM	-0.1	0.7	0.7	0.8	0.8	1.0																						
Global Equity	-0.2	1.0	0.9	1.0	0.9	0.9	1.0																					
PE	-0.2	0.6	0.6	0.6	0.6	0.5	0.7	1.0																				
US TIPS	0.0	0.1	0.1	0.2	0.2	0.3	0.2	0.1	1.0																			
US Treasury	0.2	-0.4	-0.5	-0.4	-0.4	-0.3	-0.4	-0.2	0.7	1.0																		
Global Sovereign ex-US	0.1	0.2	0.1	0.3	0.3	0.5	0.3	0.0	0.6	0.3	1.0																	
US Core	0.1	-0.1	-0.2	-0.1	-0.1	0.1	-0.1	0.0	0.8	0.9	0.5	1.0																
Core Plus	0.1	0.1	0.0	0.1	0.1	0.2	0.1	0.0	0.8	0.7	0.6	0.9	1.0															
Short-Term Gov't/Credit	0.4	-0.1	-0.2	0.0	-0.1	0.1	0.0	-0.2	0.6	0.7	0.5	0.8	0.8	1.0														
Short-Term Credit	0.0	0.4	0.4	0.4	0.4	0.5	0.4	0.0	0.5	0.2	0.5	0.5	0.8	0.7	1.0													
Long-Term Credit	0.0	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.7	0.5	0.5	0.8	0.9	0.5	0.6	1.0												
US HY	-0.2	0.8	0.7	0.8	0.8	0.8	0.8	0.5	0.4	-0.2	0.4	0.2	0.4	0.1	0.7	0.5	1.0											
Bank Loans	-0.3	0.7	0.7	0.6	0.7	0.6	0.7	0.4	0.2	-0.3	0.2	0.0	0.2	0.0	0.6	0.4	0.9	1.0										
Global Credit	-0.1	0.6	0.5	0.7	0.7	0.7	0.7	0.4	0.6	0.1	0.7	0.5	0.6	0.4	0.8	0.7	0.8	0.6	1.0									
EMD USD	-0.2	0.5	0.5	0.6	0.6	0.7	0.6	0.4	0.6	0.1	0.5	0.5	0.6	0.3	0.7	0.6	0.8	0.7	0.9	1.0								
EMD Local	0.0	0.5	0.4	0.7	0.7	0.8	0.7	0.4	0.4	0.0	0.6	0.3	0.4	0.3	0.5	0.4	0.7	0.5	0.8	0.8	1.0							
Commodities	-0.1	0.5	0.5	0.6	0.6	0.6	0.6	0.3	0.2	-0.3	0.4	-0.1	0.0	0.0	0.3	0.1	0.6	0.5	0.5	0.5	0.6	1.0						
Hedge Funds	-0.2	0.8	0.8	0.8	0.9	0.7	0.9	0.6	0.2	-0.4	0.2	0.0	0.2	0.0	0.5	0.3	0.8	0.8	0.7	0.6	0.5	0.5	1.0					
Real Estate	-0.1	0.5	0.5	0.4	0.5	0.4	0.5	0.4	0.1	-0.1	0.1	0.0	-0.1	0.0	0.1	0.0	0.3	0.3	0.4	0.3	0.3	0.3	0.4	1.0				
REITs	-0.2	0.6	0.6	0.6	0.6	0.5	0.6	0.5	0.4	0.1	0.3	0.4	0.4	0.2	0.5	0.5	0.6	0.6	0.7	0.6	0.5	0.4	0.5	0.8	1.0			
Infrastructure	-0.2	0.8	0.7	0.8	0.8	0.7	0.8	0.7	0.4	-0.2	0.5	0.2	0.4	0.2	0.6	0.5	0.8	0.7	0.8	0.8	0.7	0.5	0.7	0.3	0.7	1.0		
Risk Parity	-0.1	0.6	0.6	0.7	0.6	0.6	0.7	0.3	0.4	0.0	0.4	0.2	0.5	0.3	0.6	0.5	0.8	0.6	0.7	0.7	0.6	0.6	0.7	0.0	0.5	0.7	1.0	
Currency Beta	0.0	0.2	0.2	0.1	0.1	0.1	0.2	0.0	0.0	-0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.2	0.0	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.2	1.0

Note: Correlation assumptions are based on the last ten years. Private Equity and Real Estate correlations are especially difficult to model – we have therefore used BarraOne correlation data to strengthen these correlation estimates.

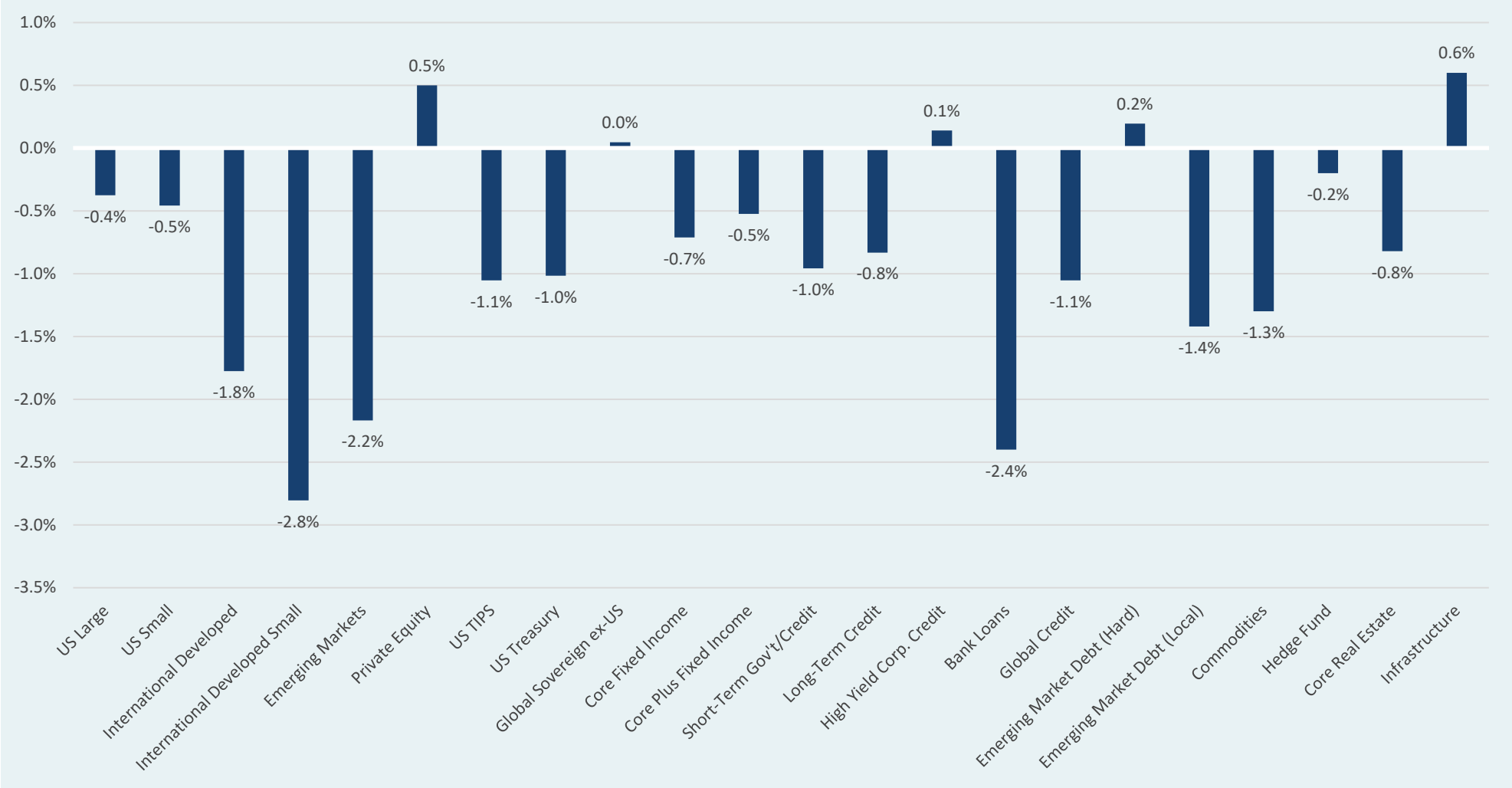
Range of likely 10-year outcomes

10-YEAR RETURN 90% CONFIDENCE INTERVAL



Source: Verus, MPI

2021 vs. 2020 return forecast



Note: year-over-year change of the select group of asset classes above is based on the 2020 CMA methodology

Verus

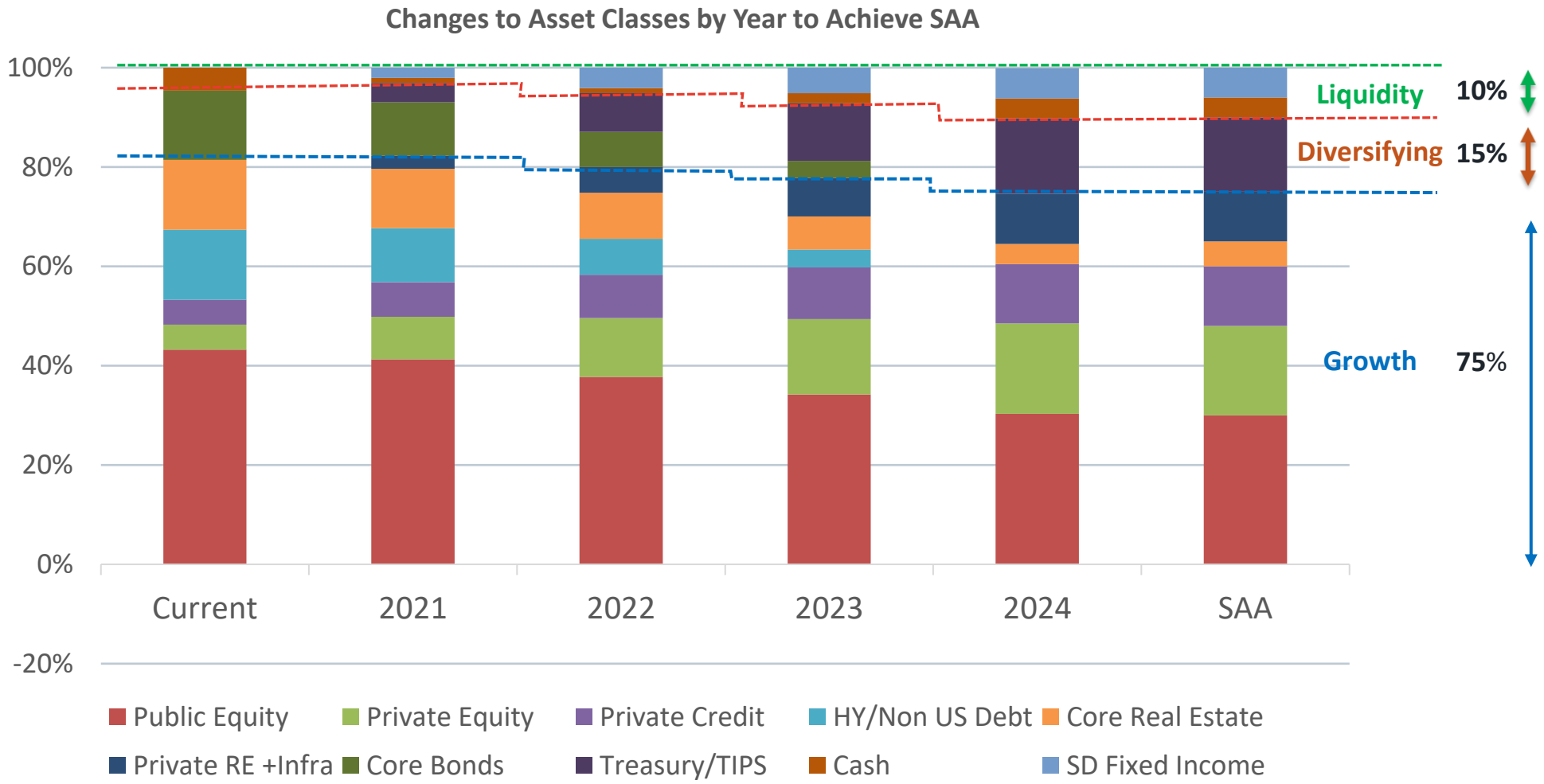
Relevant forecast changes

- Fixed income return expectations fell markedly across most asset classes as bond yields headed towards zero. Equity return expectations also fell due to a corporate earnings recession and quick recovery in prices, both of which pushed valuations significantly higher. Most of our fixed income forecasts are 0.5-1.5% lower, while our equity forecasts are 0.4-2.8% lower.
- Inflation expectations were mixed during the year. The U.S. TIPS breakeven inflation rate increased from 1.5% to 1.7%, and household inflation expectations (University of Michigan) rose from 2.4% to 2.7%. However, the Survey of Professional Forecasters moved in the opposite direction, indicating a decrease from 2.20% to 2.04%. Overall, our inflation forecast increased very slightly from 1.9% to 2.0%. Inflation is an important component of the performance of asset classes such as equities, real estate, and commodities. It is important to note that inflation expectations affect *nominal* returns, rather than *real* returns.
- Credit spreads spiked in March and April as the spread of COVID-19 contributed to extreme market volatility. Although spreads later moved back towards normal levels, they remain elevated and supportive of long-term return expectations. Core fixed income spreads increased from 62 bps to 90 bps, and high yield spreads rose from 396 bps to 551 bps.
- The yield curve fell as the Federal Reserve brought interest rates down to zero. The short end of the curve felt most of this move, though the longer end of the curve was also considerably impacted. As indicated by the Federal Reserve, interest rates will likely be kept at 0% for the foreseeable future. The three-month U.S. dollar LIBOR reference rate fell from 2.09% to 0.23%.
- Emerging market hard and local currency debt forecasts were mixed. Hard currency-denominated debt spreads to U.S. Treasury yields jumped from 351 bps to 471 bps, although the broader 1% fall in interest rates brought expectations down commensurately, leading to little overall change. The yield of local-denominated debt fell from 6.0% to 4.6% alongside the broader fixed income market.

All data cited above is as of 9/30/20

II. CMA impact on transition portfolios

Implementation glide path - interim annual targets



Forecasted transition portfolios

		Implementation Benchmark				
	Current	**2021**	**2022**	**2023**	**2024**	**SAA**
Growth	**81%**	**81%**	**79%**	**76%**	**75%**	**75%**
Public Equity	43%	40%	37%	33%	30%	30%
Private Equity	5%	8%	12%	15%	18%	18%
Private Credit	5%	7%	9%	10%	12%	12%
Non-US Debt	14%	11%	7%	4%	0%	0%
Core Real Estate	14%	12%	9%	7%	5%	5%
Private RE + Infra	0%	3%	5%	8%	10%	10%
Diversifying	**14%**	**15%**	**15%**	**15%**	**15%**	**15%**
Core US Bonds	14%	10%	7%	4%	0%	0%
LD Treasury/TIPS	0%	5%	8%	11%	15%	15%
Liquidity	**5%**	**4%**	**6%**	**8%**	**10%**	**10%**
Cash	5%	2%	2%	3%	4%	4%
ST Fixed Income	0%	2%	4%	5%	6%	6%

- Public equities decline from 43% to 30%
- Private investments (PE, PC, RE, Infra) increase from 10% to 40%
- Core real estate declines from 15% to 5%
- Treasuries and TIPS increase from 0% to 15%
- Cash/short term investments increase from 5% to 10%

CMA impact on transition portfolios

	Policy	Current 12/31/20	2021	2022	2023	2024	2021 CMA's (10 Yr) Return (g)	Return (a)	Standard Deviation	Sharpe Ratio (a)
Growth	***75***	***85***	***81***	***79***	***77***	***75***				
Global Equity	30.0	47.9	40.0	37.0	33.0	30.0	*5.2*	*6.6*	*17.3*	*0.37*
Private Equity	18.0	4.1	8.0	12.0	15.0	18.0	*9.3*	*12.1*	*28.1*	*0.46*
Private Credit	12.0	5.3	7.0	9.0	10.0	12.0	*4.6*	*5.2*	*11.2*	*0.45*
Global Sovereign ex-US	0.0	4.7	11.0	7.0	4.0	0.0	*0.2*	*0.6*	*9.6*	*0.04*
Bank Loans	0.0	4.8	0.0	0.0	0.0	0.0	*2.9*	*3.2*	*9.5*	*0.32*
Emerging Market Debt (Hard)	0.0	2.4	0.0	0.0	0.0	0.0	*5.2*	*6.0*	*12.7*	*0.45*
Emerging Market Debt (Local)	0.0	2.4	0.0	0.0	0.0	0.0	*4.3*	*5.0*	*12.2*	*0.39*
Core Real Estate	5.0	10.8	12.0	9.0	7.0	5.0	*5.8*	*6.5*	*12.6*	*0.50*
Value Add Real Estate	5.0	2.5	1.5	2.5	4.0	5.0	*7.8*	*9.1*	*17.1*	*0.52*
Infrastructure	5.0	0.0	1.5	2.5	4.0	5.0	*7.8*	*9.4*	*18.8*	*0.49*
Diversifying	***15***	***13***	***15***	***15***	***15***	***15***				
Core Fixed Income	0.0	13.2	10.0	7.0	4.0	0.0	*1.5*	*1.6*	*4.0*	*0.36*
US Treasury	8.0	0.0	2.5	4.0	5.5	8.0	*0.7*	*0.9*	*6.7*	*0.10*
US TIPS	7.0	0.0	2.5	4.0	5.5	7.0	*1.1*	*1.2*	*5.3*	*0.18*
Liquidity	***15***	***13***	***15***	***14***	***15***	***15***				
Cash	4.0	1.9	2.0	2.0	3.0	4.0	*0.2*	*0.2*	*1.2*	*-*
Short-Term Gov't/Credit	6.0	0.0	2.0	4.0	5.0	6.0	*0.7*	*0.8*	*3.6*	*0.16*
Total Allocation	**100**	**100**	**100**	**100**	**100**	**100**				

Mean Variance Analysis						
Forecast 10 Year Return	***5.6***	***4.9***	***4.8***	***5.1***	***5.4***	***5.6***
Standard Deviation	11.4	11.4	10.6	10.9	11.1	11.4
Return/Std. Deviation	*0.5*	*0.4*	*0.5*	*0.5*	*0.5*	*0.5*
1st percentile ret. 1 year	*-17.6*	*-18.4*	*-17.1*	*-17.3*	*-17.4*	*-17.6*
Sharpe Ratio	0.51	0.45	0.47	0.48	0.50	0.51

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Board of Trustees
1000 Mill Street
San Luis Obispo, CA 93408
Phone: (805) 781-5465
Fax: (805) 781-5697
www.SLOPensionTrust.org

San Luis Obispo County
Pension Trust
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Date: February 22, 2021

To: Board of Trustees

From: Carl Nelson – Executive Director
Amy Burke – Deputy Director
Scott Whalen – Verus – Investment Consultant

Agenda Item 11: Risk Diversifying Portfolio Strategy Review and Investment Manager Selection – Treasuries and TIPS Portfolios

Recommendation:

1. Review and discuss the accompanying presentation from Scott Whalen of Verus on the Diversifying Portfolio portion of the Pension Trust Investments under the Strategic Asset Allocation (SAA) Policy adopted September 28, 2020.

2. Approve the hiring of State Street Global Advisors (SSGA) to be investment manager of the Treasury allocation in the Diversifying Portfolio using **SSGA's US Government Bond Index Fund**.

3. Approve the hiring of BlackRock to be investment manager of the TIPS allocation in the Diversifying Portfolio using **BlackRock's US Treasury Inflation Protection Securities Index Fund**.

Background:

The Pension Trust amended its SAA policy September 28, 2020 to include, among other changes, an allocation to a Risk Diversifying Sub-Portfolio of 15% of total assets. The purpose of the Risk Diversifying Portfolio is to provide a risk mitigation in extreme market dislocations including inflation surprises. The Risk Diversifying Portfolio balances an increase in higher expected return, but illiquid, private market investments in the Growth Sub-Portfolio of the fund.

The SAA policy specifies that the Risk Diversifying Portfolio will be allocated –

US Treasury Bonds	8%
US Treasury Inflation Protection Securities (TIPS)	7%

The attached presentation material from Verus details their research on recommended IMs for the US Treasury and TIPS roles. Verus maintains in-depth research on numerous IMs and the firms presented here are all highly competent and recommended for the Risk Diversifying assignments.

Respectfully submitted,

Verus

PERSPECTIVES THAT DRIVE ENTERPRISE SUCCESS

FEBRUARY 2021

Diversifying portfolio manager search

San Luis Obispo Pension Trust

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Verus

VERUSINVESTMENTS.COM

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

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Executive summary

- The approved FFP strategic allocation includes a Diversifying sub-portfolio of 15% of the Total Fund once fully implemented. The Diversifying sub-portfolio will be split roughly evenly between US Government Bonds and US Treasury Inflation Protected Securities.
- Given the low-rate environment and relatively high fees of active management, we recommend filling both mandates with passive index funds.
- Differentiation across index funds is minimal and measured by tracking error, fees, and use of securities lending to generate additional return.
- Based on our evaluation, we recommend State Street's index fun for the Government Bond mandate and BlackRock's index fund for the TIPS mandate for the following reasons:

State Street

- Large, stable firm
- Low tracking error
- Reasonable fees
- (BlackRock's strategy in this space has insufficient assets)

BlackRock

- Large, stable firm
- Successful existing relationship
- Reasonable fees
- Modest excess returns from risk-controlled securities lending operation

I. US Government Bonds

Overview of US Government Index account managers

- The preferred broad index in this space is the Bloomberg Barclays US Government Index (96% Treasuries, 4% Agencies as of 1/31/2021), not the pure US Treasuries Index
- Additional products exist for shorter or longer maturity indices, but the current 8-year average maturity of the US Government Index is within the 7-10 target segment
- Considering both indices, there are three major providers with products in this space:
  - BlackRock – Intermediate Government Bond Index Fund
  - Northern Trust Asset Management (NTAM) – NT Government Bond Index Strategy
  - Northern Trust Asset Management (NTAM) – NT US Treasury Index Strategy
  - State Street Global Advisors (SSgA) – U.S. Government Bond Index Fund

Key Statistics

ANNUALIZED QUARTERLY TRACKING ERROR

5-YEARS ENDED DEC 2020

	Northern Trust (Treas)	State Street (Gov)	Northern Trust (Gov)	BlackRock (Gov)
Tracking Error	0.22	0.10	0.19	NA
Excess Returns	-0.18	-0.05	0.09	NA
Information Ratio	-0.82	-0.49	0.47	NA

Manager composites gross of fees and include sec. lending, vs. Bloomberg Barclays US Government Ir

REPRESENTATIVE COMMINGLED FEES (BPS)

Account Size	Northern Trust (Treas)	State Street (Gov)	Northern Trust (Gov)	BlackRock (Gov)
$100M	NA	4	4	NA
$400M	5	3	NA	NA

REPRESENTATIVE SEPARATE ACCOUNT FEES (BPS)

Account Size	Northern Trust (Treas)	State Street (Gov)	Northern Trust (Gov)	BlackRock (Gov)
$100M	8	4	NA	NA
$400M	NA	3	3	NA

PUBLISHED ACCOUNT MINIMUMS ($M)

	Northern Trust (Treas)	State Street (Gov)	Northern Trust (Gov)	BlackRock (Gov)
Commingled Fund	NA	5	NA	NA
Separate Account	25	0	NA	NA

EFFECTIVE ACCOUNT MINIMUMS ($M)

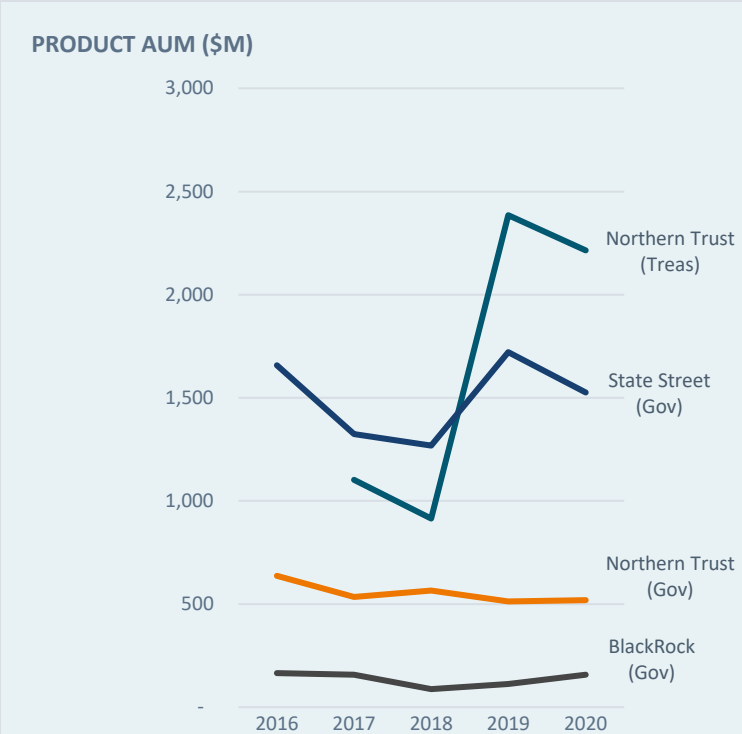
	Northern Trust (Treas)	State Street (Gov)	Northern Trust (Gov)	BlackRock (Gov)
Separate Account	50	438	NA	NA

Minimum fee divided by bps fee at $100M account size

Source: eVestment

- The performance drag on the Northern Trust US Treasury product is less when it is measured against its preferred US Treasury benchmark, as that index has a slightly lower yield than the US Government benchmark used here
- State Street shows both lowest cost and lowest tracking error
- The level of assets at BlackRock is considered insufficient for SLOCPT's ultimate mandate size

Product Growth



	2016	2017	2018	2019	2020
Northern Trust (Treas)		1,103	914	2,386	2,215
State Street (Gov)	1,658	1,324	1,269	1,722	1,526
Northern Trust (Gov)	636	534	566	513	518
BlackRock (Gov)	166	158	88	112	157

	2016	2017	2018	2019	2020
State Street (Gov)	18	15	15	16	15
Northern Trust (Treas)		10	6	8	10
BlackRock (Gov)	3	3	3	3	3
Northern Trust (Gov)	1	1	1	1	1

— Asset and account growth has remained low and relatively steady over the past five years

Source: eVestment

II. TIPS

Overview of TIPS index account managers

— We considered the five most significant providers in this space

- Two market leaders
  - BlackRock – US Treasury Inflation Protection Securities Index
  - State Street Global Advisors (SSgA) – U.S. TIPS Index
- One market challenger
  - Northern Trust Asset Management (NTAM) – NT TIPS Strategy
- Two niche players
  - Rhumbline Advisors (boutique, high touch) – Bloomberg Barclay's US TIPS Index Strategty
  - Mellon Investments (large provider with small footprint in this space) – US TIPS Index Strategy

Key Statistics

ANNUALIZED QUARTERLY TRACKING ERROR

5-YEARS ENDED DEC 2020

	BlackRock	State Street	Northern Trust	RhumbLine	Mellon
Tracking Error	0.09	0.02	0.11	0.11	0.06
Excess Returns	0.17	0.00	0.04	0.02	0.03
Information Ratio	1.85	0.16	0.40	0.21	0.59

Manager composites gross of fees and include sec. lending, vs. Bloomberg Barclays US TIPS Index

REPRESENTATIVE COMMINGLED FEES (BPS)

Account Size	BlackRock	State Street	Northern Trust	RhumbLine	Mellon
$100M	4	4	3	NA	2
$400M	2	3	2	NA	1

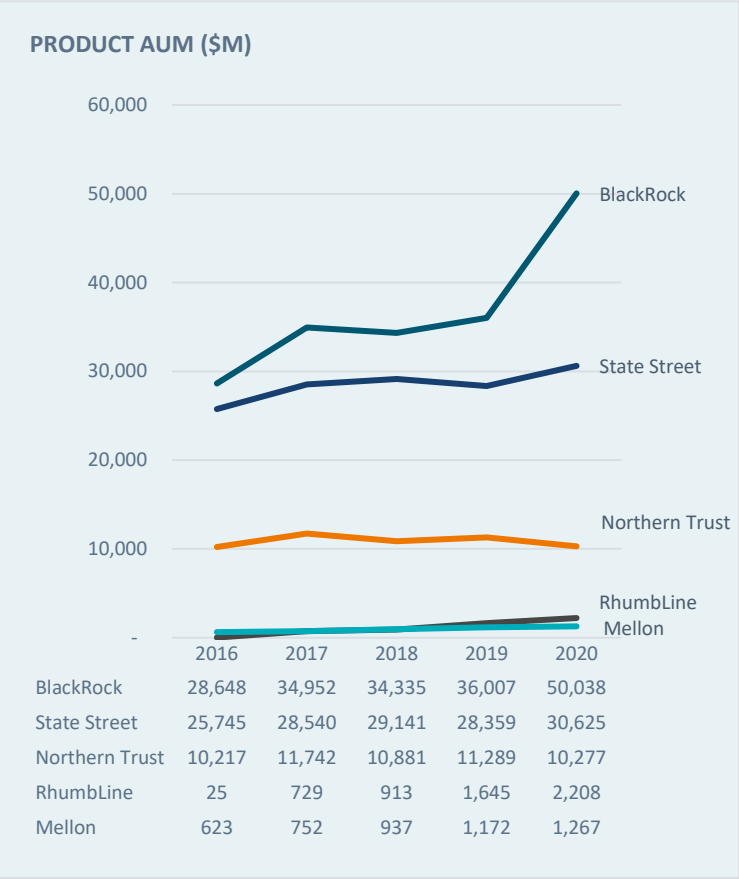
REPRESENTATIVE SEPARATE ACCOUNT FEES (BPS)

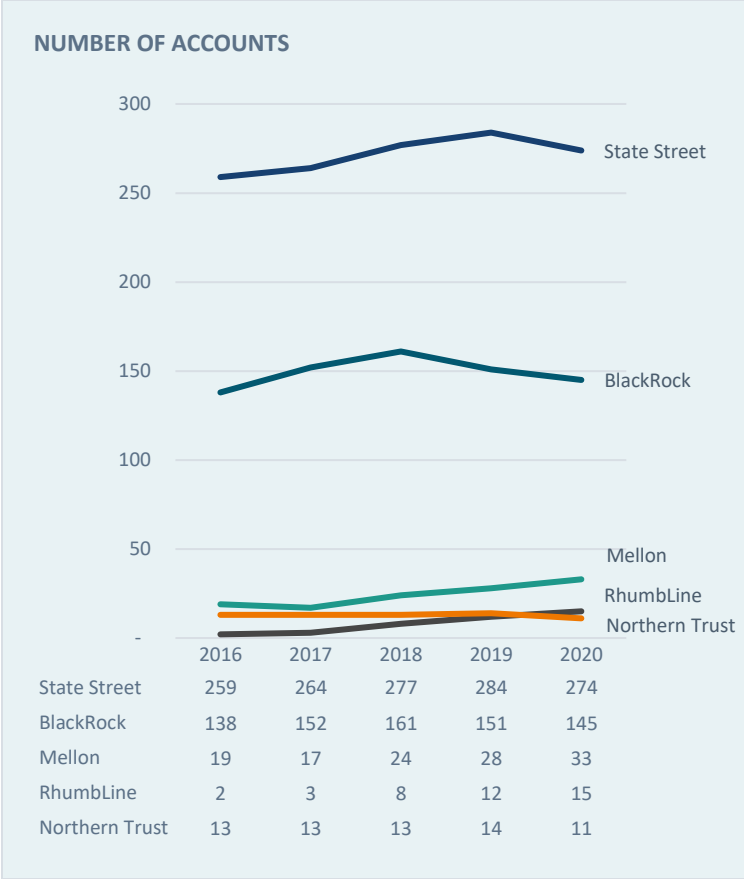
Account Size	BlackRock	State Street	Northern Trust	RhumbLine	Mellon
$100M	6	4	8	NA	4
$400M	4	3	5	NA	3

- As it does with many of its index products, BlackRock uses its scale and sophisticated systems to slightly outperform the benchmark at the cost of some tracking error
- State Street's exceptionally tight tracking indicates full replication of the index
- As market followers, Northern Trust and Mellon represent opportunities for the negotiation of exceptionally low fees

Source: eVestment

Product Growth





- Product AUM has grown over then past five years for the two market leaders, but the number of accounts has been relatively steady
- Northern Trust has not shown any growth in this space
- The two niche players have posted steady growth both in product AUM and number of accounts

Source: eVestment

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Date: February 22, 2021

To: Board of Trustees

From: Carl Nelson – Executive Director
Amy Burke – Deputy Director

Agenda Item 12: Asset Allocation - February 2020

This item on the agenda provides a properly noticed opportunity for the Board of Trustees to discuss and take action, if necessary, regarding asset allocation and related investment matters.

Respectfully submitted,

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