



Board of Administration Agenda

REGULAR MEETING
TUESDAY, JULY 26, 2022
TIME: 10:00 A.M.
MEETING LOCATION:

In accordance with Government Code Section 54953, subsections (e)(1) and (e)(3), and in light of the State of Emergency proclaimed by the Governor on March 4, 2020 relating to COVID-19 and ongoing concerns that meeting in person would present imminent risks to the health or safety of attendees and/or that the State of Emergency continues to directly impact the ability of members to meet safely in person, the LACERS Board of Administration's July 26, 2022 meeting will be conducted via telephone and/or videoconferencing.

Important Message to the Public
Information to call-in to listen and or participate:
Dial: (669) 254-5252 or (669) 216-1590
Meeting ID# 160 312 9819

- Instructions for call-in participants:**
- 1- Dial in and enter Meeting ID
 - 2- Automatically enter virtual "Waiting Room"
 - 3- Automatically enter Meeting
 - 4- During Public Comment, **press *9** to raise hand
 - 5- Staff will call out the last 3-digits of your phone number to make your comment

Information to listen only: Live Board Meetings can be heard at: (213) 621-CITY (Metro), (818) 904-9450 (Valley), (310) 471-CITY (Westside), and (310) 547-CITY (San Pedro Area).

President:	Vacant
Vice President:	Sung Won Sohn
Commissioners:	Annie Chao Elizabeth Lee Sandra Lee Nilza R. Serrano Michael R. Wilkinson
Manager-Secretary:	Neil M. Guglielmo
Executive Assistant:	Ani Ghokassian
Legal Counsel:	City Attorney's Office Public Pensions General Counsel Division

Notice to Paid Representatives

If you are compensated to monitor, attend, or speak at this meeting, City law may require you to register as a lobbyist and report your activity. See Los Angeles Municipal Code §§ 48.01 *et seq.* More information is available at ethics.lacity.org/lobbying. For assistance, please contact the Ethics Commission at (213) 978-1960 or ethics.commission@lacity.org.

Request for Services

As a covered entity under Title II of the Americans with Disabilities Act, the City of Los Angeles does not discriminate on the basis of disability and, upon request, will provide reasonable accommodation to ensure equal access to its programs, services and activities.

Sign Language Interpreters, Communication Access Real-Time Transcription, Assistive Listening Devices, Telecommunication Relay Services (TRS), or other auxiliary aids and/or services may be provided upon request. To ensure availability, you are advised to make your request at least 72 hours prior to the meeting you wish to attend. Due to difficulties in securing Sign Language Interpreters, five or more business days' notice is strongly recommended. For additional information, please contact: Board of Administration Office at **(213) 855-9348** and/or email at ani.ghokassian@lacers.org.

Disclaimer to Participants

Please be advised that all LACERS Board and Committee Meeting proceedings are audio recorded.

- I. PUBLIC COMMENTS AND GENERAL PUBLIC COMMENTS ON MATTERS WITHIN THE BOARD'S JURISDICTION AND COMMENTS ON ANY SPECIFIC MATTERS ON THE AGENDA – *THIS WILL BE THE ONLY OPPORTUNITY FOR PUBLIC COMMENT - PRESS *9 TO RAISE HAND DURING PUBLIC COMMENT PERIOD*
- II. [APPROVAL OF MINUTES FOR THE REGULAR MEETING OF JUNE 28, 2022 AND POSSIBLE BOARD ACTION](#)
- III. BOARD PRESIDENT VERBAL REPORT
- IV. GENERAL MANAGER VERBAL REPORT
 - A. REPORT ON DEPARTMENT OPERATIONS
 - B. UPCOMING AGENDA ITEMS
 - C. [RECEIPT OF THE CITY'S CONTRIBUTION FOR FISCAL YEAR 2022-23](#)
 - D. RECOGNITION OF SERVICE FOR KELLY DICKINSON
- V. RECEIVE AND FILE ITEMS
 - A. [MONTHLY REPORT ON SEMINARS AND CONFERENCES FOR JUNE 2022](#)
- VI. COMMITTEE REPORT(S)
 - A. INVESTMENT COMMITTEE VERBAL REPORT FOR THE MEETINGS ON JULY 12, 2022 AND JULY 14, 2022
 - B. AUDIT COMMITTEE VERBAL REPORT FOR THE MEETING ON JULY 19, 2022
- VII. BOARD ELECTION
 - A. ELECTION OF BOARD OFFICERS FOR FISCAL YEAR 2022-23 AND POSSIBLE BOARD ACTION
- VIII. CLOSED SESSION
 - A. **CLOSED SESSION – PURSUANT TO GOVERNMENT CODE §54957(b)(1): GENERAL MANAGER 2021-22 PERFORMANCE EVALUATION REPORT AND POSSIBLE BOARD ACTION**
 - B. **CLOSED SESSION PURSUANT TO GOVERNMENT CODE SECTION 54956.81 TO CONSIDER A COMMITMENT TO EQT EXETER INDUSTRIAL VALUE FUND VI. L.P. AND POSSIBLE BOARD ACTION**
- IX. BOARD/DEPARTMENT ADMINISTRATION

- A. [CONSIDERATION OF 2022 GENERAL MANAGER'S MERIT PAY AND POSSIBLE BOARD ACTION](#)
- B. [CONSIDERATION OF GENERAL MANAGER'S COST OF LIVING ADJUSTMENT AND POSSIBLE BOARD ACTION](#)

X. INVESTMENTS

- A. CHIEF INVESTMENT OFFICER VERBAL REPORT INCLUDING DISCUSSION ON THE PORTFOLIO EXPOSURE TO GLOBAL EVENTS
- B. [PRESENTATION BY AKSIA CA LLC AND DELOITTE & TOUCHE LLP REGARDING PRIVATE EQUITY PORTFOLIO VALUATION PROCESS](#)
- C. [FINALIST FIRMS OF THE PASSIVE U.S., NON-U.S., AND GLOBAL INDEX STRATEGIES INVESTMENT MANAGER SEARCH AND POSSIBLE BOARD ACTION](#)
- D. [RESPONSE TO CITY CONTROLLER REGARDING RUSSIAN ASSET HOLDINGS AND POSSIBLE BOARD ACTION](#)
- E. [UNIQUE INVESTMENT OPPORTUNITIES POLICY AND POSSIBLE BOARD ACTION](#)

XI. OTHER BUSINESS

- XII. NEXT MEETING: The next Regular meeting of the Board is scheduled for Tuesday, August 9, 2022 at 10:00 a.m. at LACERS, 202 West 1st Street, Suite 500, Los Angeles, CA 90012, and/or via telephone and/or videoconferencing. Please continue to view the LACERS website for updated information on public access to Board meetings while response to public health concerns relating to the novel coronavirus continue.

XIII. ADJOURNMENT

MINUTES OF THE REGULAR MEETING
BOARD OF ADMINISTRATION
LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

In accordance with Government Code Section 54953, subsections (e)(1) and (e)(3), and in light of the State of Emergency proclaimed by the Governor on March 4, 2020 relating to COVID-19 and ongoing concerns that meeting in person would present imminent risks to the health or safety of attendees and/or that the State of Emergency continues to directly impact the ability of members to meet safely in person, the LACERS Board of Administration's June 28, 2022 meeting will be conducted via telephone and/or videoconferencing.

June 28, 2022

10:02 a.m.

PRESENT via Videoconferencing:	President:	Vacant
	Vice President:	Sung Won Sohn
	Commissioners:	Annie Chao Elizabeth Lee Michael R. Wilkinson
	Legal Counselor:	Joshua Geller
	Executive Assistant:	Ani Ghoukassian
PRESENT at LACERS Office:	Manager-Secretary:	Todd Bouey
ABSENT:	Commissioners:	Sandra Lee Nilza R. Serrano

The Items in the Minutes are numbered to correspond with the Agenda.

I

PUBLIC COMMENTS AND GENERAL PUBLIC COMMENTS ON MATTERS WITHIN THE BOARD'S JURISDICTION AND COMMENTS ON ANY SPECIFIC MATTERS ON THE AGENDA – *THIS WILL BE THE ONLY OPPORTUNITY FOR PUBLIC COMMENT – PRESS *9 TO RAISE HAND DURING PUBLIC COMMENT PERIOD* – Vice President Sohn asked if any persons wanted to make a general public comment to which there was one response. Sosseh Prom, member of the public and State Policy Manager at African Communities Together, stated that LACERS invests in CIM and since CIM acquired Southern Towers in Alexandria, VA, tenants have found they are living in slumlord conditions.

II

APPROVAL OF MINUTES FOR THE MEETING OF MAY 24, 2022 AND POSSIBLE BOARD ACTION – Commissioner Chao moved approval, seconded by Vice President Sohn, and adopted by the

following vote: Ayes, Commissioners Chao, Elizabeth Lee, Wilkinson, and Vice President Sohn -4; Nays, None.

III

BOARD PRESIDENT VERBAL REPORT – There was no report.

IV

GENERAL MANAGER VERBAL REPORT

- A. REPORT ON DEPARTMENT OPERATIONS – Todd Bouey, Executive Officer, advised the Board of the following items:
- Update on Insurance: Directors and Officers Liability Insurance policy, Cyber Security Insurance policy, and Commercial Property Liability Insurance policy
 - Roe v. Wade Demonstrations
 - Update on LACERS HQ
 - Retirement Services Division update
 - Health Benefits Administration update
 - Member Services update
- B. UPCOMING AGENDA ITEMS – There were no items.

V

RECEIVE AND FILE ITEMS

- A. MONTHLY REPORT ON SEMINARS AND CONFERENCES FOR MAY 2022 – This report was received by the Board and filed.
- B. COMMISSIONER SOHN EDUCATION EVALUATION ON SACRS SPRING CONFERENCE, RANCHO MIRAGE, CA; MAY 10-13, 2022 – This report was received by the Board and filed.

VI

COMMITTEE REPORT(S)

- A. INVESTMENT COMMITTEE VERBAL REPORT FOR THE MEETING ON JUNE 14, 2022 – Vice President Sohn stated there was no quorum at the June 14th Investment Committee Meeting and therefore all the action items were directed to the June 28th Board Meeting agenda.
- B. BENEFITS ADMINISTRATION COMMITTEE VERBAL REPORT FOR THE MEETING ON JUNE 28, 2022 – Commissioner Wilkinson stated the Committee was presented with the Health Management Data Report and provided with a verbal update on the 2023 Health Plan Contract Renewals.

VII

BOARD/DEPARTMENT ADMINISTRATION

Items VII-C and VII-D were taken out of order.

- C. PROPOSED LIST OF PRE-APPROVED BOARD EDUCATIONAL SEMINARS FOR FISCAL YEAR 2022-23 AND POSSIBLE BOARD ACTION – Vice President Sohn requested that the Harvard Business School-Behavioral Economics-Virtual education be added to the list. Commissioner Elizabeth Lee requested that the IFEBP Advanced Trustees and Administrators Institute be added to the list. Commissioner Chao requested that the ILPA-Private Equity for the Trustee, in addition to any other education staff recommends be added to the list. Commissioner Elizabeth Lee moved approval to include the additional requests from Commissioners, seconded by Commissioner Wilkinson, and adopted by the following vote: Ayes, Commissioners Chao, Elizabeth Lee, Wilkinson, and Vice President Sohn -4; Nays, None.
- D. CONTRACT AWARD TO AP KEENAN FOR HEALTH PLAN CONSULTING SERVICES AND POSSIBLE BOARD ACTION – Karen Freire, Chief Benefits Analyst, and Rainbow Sun, Benefits Analyst, presented and discussed this item with the Board. Commissioner Wilkinson moved approval of the following Resolution:

**AUTHORIZATION TO CONTRACT WITH
AP KEENAN
FOR HEALTH PLAN CONSULTING SERVICES**

RESOLUTION 220628-A

WHEREAS, on April 1, 2022, LACERS released a Request for Proposal (RFP) for a three-year contract for a health plan consultant and administrator and;

WHEREAS, on May 6, 2022, five health benefit consulting firms – Aon, AP Keenan, Mercer, Segal, and USI – responded to the RFP and;

WHEREAS, selected LACERS Health and Wellness staff and senior staff served as reviewers and analyzed and evaluated each firm’s proposals with the criteria set forth in the RFP and;

WHEREAS, the result of the multi-level review concluded that AP Keenan had the highest rating and demonstrated understanding of LACERS goals, values, culture, the population LACERS serves; has the requisite breadth and depth of experience to consult and address challenges facing LACERS health and wellness programs, including LACERS’ self-funded plans; has demonstrated and proven the quality and value of service in past and current services; and offers the best value of cost for their proposal;

NOW, THEREFORE, BE IT RESOLVED, that the Board: award AP Keenan the LACERS’ Health Plan Consulting Services contract for a term of three years, beginning January 1, 2023, in an amount not-to-exceed \$650,000 per year; and authorize the General Manager to negotiate and execute a three-year contract with AP Keenan, subject to satisfactory legal review by the City Attorney.

Which motion was seconded by Commissioner Chao, and adopted by the following vote: Ayes, Commissioners Chao, Elizabeth Lee, Wilkinson, and Vice President Sohn -4; Nays, None.

- A. ELECTION TO FILL UNEXPIRED TERM OF THE VACANT OFFICE OF THE BOARD PRESIDENT PURSUANT TO LOS ANGELES CITY CHARTER SECTION 503(A) AND

POSSIBLE BOARD ACTION – Todd Bouey, Executive Officer, advised that the nominations for President were being considered and under advisement from Joshua Geller, Deputy City Attorney, since only four Commissioners are present, a unanimous vote is needed on any Board action, including election. Commissioner Chao nominated Vice President Sohn and Commissioner Elizabeth Lee nominated Commissioner Wilkinson. Mr. Bouey called for the vote on the nomination of Vice President Sohn as President: Ayes, Commissioners Chao, Wilkinson, and Vice President Sohn -3; Nays, Commissioner Elizabeth Lee. Mr. Bouey next called for the vote on the nomination of Commissioner Wilkinson as President: Ayes, Commissioners Elizabeth Lee and Wilkinson -2; Nays, Commissioner Chao and Vice President Sohn -2. There was no action on this item since no unanimous vote was taken.

- B. IF VACANCY CREATED IN OFFICE OF THE VICE PRESIDENT BY BOARD ACTION ON VII.A, ELECTION TO FILL UNEXPIRED TERM OF BOARD VICE PRESIDENT, PURSUANT TO LOS ANGELES CITY CHARTER SECTION 503(A) AND POSSIBLE BOARD ACTION – No action was taken on this as there was no change to the Board Vice President.

VIII

DISABILITY RETIREMENT APPLICATION(S)

- A. CONSIDERATION OF DISABILITY RETIREMENT BENEFIT FOR DECEASED MEMBER WINFRED WHITE AND POSSIBLE BOARD ACTION – Susann Hernandez, Benefits Analyst, presented this item to the Board. Commissioner Elizabeth Lee moved approval, seconded by Commissioner Chao, and adopted by the following vote: Ayes, Commissioners Chao, Elizabeth Lee, Wilkinson, and Vice President Sohn -4; Nays, None.

IX

INVESTMENTS

- A. CHIEF INVESTMENT OFFICER VERBAL REPORT INCLUDING DISCUSSION ON THE PORTFOLIO EXPOSURE TO GLOBAL EVENTS – Bryan Fujita, Investment Officer III, reported on the portfolio value of \$20.95 billion as of June 27, 2022. Mr. Fujita discussed the following items:

- Steve Nelson has stepped down as Institutional Limited Partnership Association's (ILPA) CEO. Jennifer Choi, a long-tenured senior leader of ILPA, has been appointed Acting CEO.
- Camille Wright, LACERS new summer intern from Girls Who Invest, begins her first day at LACERS on July 5th.
- Future Agenda items: NEPC presentation on revised interim asset class policy targets and Real Estate notification

Mr. Fujita shared that Russian exposure is 4 bps or about \$9 million in market value. Based on recent discussion with LACERS investment managers, there is still no ability for US investors to transact in Russian securities due to market closures and trading halts. On June 27th, Russia was declared to be in default on its sovereign debt due to non-payment of interest. Staff will continue to keep the Board apprised of any new developments.

- B. PRESENTATION BY NEPC, LLC OF THE PORTFOLIO PERFORMANCE REVIEW FOR THE QUARTER ENDING MARCH 31, 2022 – Carolyn Smith, Partner with NEPC, LLC, presented and discussed this item with the Board for 45 minutes.
- C. SEMI-FINALISTS OF THE PRIVATE CREDIT CONSULTANT REQUEST FOR PROPOSAL AND POSSIBLE BOARD ACTION – Wilkin Ly, Investment Officer III, and Robert King, Investment Officer II, presented and discussed this item with the Board for 10 minutes. Commissioner Elizabeth Lee moved approval, seconded by Commissioner Chao, and adopted by the following vote: Ayes, Commissioners Chao, Elizabeth Lee, Wilkinson, and Vice President Sohn -4; Nays, None.

Vice President Sohn recessed the Regular Meeting at 11:35 a.m. to convene in Closed Session discussion.

D. CLOSED SESSION PURSUANT TO GOVERNMENT CODE SECTION 54956.81 TO CONSIDER A COMMITMENT TO CORTLAND GROWTH AND INCOME, L.P. AND POSSIBLE BOARD ACTION

X

LEGAL/LITIGATION

A. ANNUAL LITIGATION REPORT

- 1. **CLOSED SESSION PURSUANT TO SUBDIVISIONS (a),(d)(1) OF GOVERNMENT CODE SECTION 54956.9, TO CONFER WITH AND/OR RECEIVE ADVICE FROM LEGAL COUNSEL REGARDING PENDING LITIGATION IN THE FOLLOWING SIX (6) CASES, AND POSSIBLE BOARD ACTION**
 - a. **American Fed. of State, County, and Municipal Employees et al. v. City of Los Angeles et al. (LASC, Case No. BS 166535);**
 - b. **Josephine Hubbard v. Los Angeles City Employees Retirement System (LASC, Case No. 21STCP02219);**
 - c. **In re ASHINC Corp et al. v. Yucaipa American Alliance Fund I, LLC, et al. (Bankr.D.Del., Case No. 12-11564);**
 - d. **Youngman v. Yucaipa American Alliance Fund I, LLC, et al. (LASC, Case No. 21STCV37137);**
 - e. **In re Tribune Company Fraudulent Conveyance Litigation, (U.S. Ct. App., 2d Cir., Case No. 19-CV-3049); and**
 - f. **Steinhoff International Holdings N.V. Global Settlement.**
- 2. **CLOSED SESSION PURSUANT TO SUBDIVISIONS (a),(d)(4) OF GOVERNMENT CODE SECTION 54956.9, TO CONFER WITH AND/OR RECEIVE ADVICE FROM LEGAL COUNSEL REGARDING THE INITIATION OF LITIGATION IN ONE (1) CASE; AND POSSIBLE BOARD ACTION**

Vice President Sohn reconvened the Regular Meeting at 12:39 p.m.

XI

OTHER BUSINESS – Commissioner Elizabeth Lee asked Todd Bouey, Executive Officer, when the next Experience Study is for LACERS. Mr. Bouey indicated the Study would be conducted in late Spring/early Summer 2023.

XII

NEXT MEETING: The next Regular meeting of the Board is scheduled for Tuesday, July 12, 2022, at 10:00 a.m. at LACERS, 202 W. 1st Street, Suite 500, Los Angeles, CA 90012, and/or via telephone and/or videoconferencing. Please continue to view the LACERS website for updated information on public access to Board meetings while response to public health concerns relating to the novel coronavirus continue.

XII

ADJOURNMENT – There being no further business before the Board, Vice President Sohn adjourned the Meeting at 12:43 p.m.

Sung Won Sohn
Vice President

Todd Bouey
Manager-Secretary

Board Mtg: 07/26/22
Item No.: IV-C

Date: July 15, 2022
To: Neil M. Guglielmo, General Manager
From: Jo Ann Peralta, Principal Accountant II
Fiscal Management Division



SUBJECT: RECEIPT OF CITY'S CONTRIBUTIONS FOR FISCAL YEAR 2022-23

The purpose of this memorandum is to advise you of the receipt of the employer's contribution to LACERS of \$767,688,758 and the disposition of those funds by the Fiscal Management Division.

The net payment reflects the City's contribution toward LACERS' Members retirement and postemployment healthcare benefits for the Fiscal Year (FY) 2023, a credit adjustment for a true-up of the advance payment of contributions made for the prior fiscal year, and adjustments shifting the cost of Airport Peace Officers' enhanced benefits to the Los Angeles World Airports (LAWA).

The City has paid in full the required contributions for FY 2023 calculated based on the City's final covered payroll of \$1,805,146,838 for Tier 1 and \$730,343,841 for Tier 3, and applying the contribution rates for payment on July 15, 2022, of 33.93% for Tier 1 and 31.35% for Tier 3 as adopted by the Board. The payment also includes the employer share of other costs consisting of the Family Death Benefit Plan (FDBP), the Limited Term Retirement Plan (LTRP) and the Excess Benefit Plan (EBP).

The five City entities contributed to the full required contributions¹, and the disposition of those funds are as follows:

- On Monday, July 11, 2022, the Office of the City Administrative Officer (CAO) disbursed \$636,523,163 to LACERS from the proceeds of Tax Revenue Anticipation Note (TRAN) issuance. Of this amount, \$559,672,526 and \$75,687,968 were wired to LACERS' Benefit Payment and Healthcare Trust (115 Trust) accounts in Northern Trust respectively on Tuesday, July 12, 2022. The balance of \$1,162,670 remains with the City Treasury for the administration of the LTRP and EBP.
- On Thursday, July 14, 2022, the LAWA paid \$91,249,099 to LACERS. Of this amount, \$80,913,778 and \$10,178,757 were wired to LACERS' Benefit Payment and Healthcare Trust accounts in Northern Trust respectively on Friday, July 15, 2022. The balance of \$156,564 remains with the City Treasury for the administration of LTRP and EBP.

- On Thursday, July 7, 2022, the Harbor Department paid \$29,112,518 to LACERS. Of this amount, \$25,701,269 and \$3,361,439 were wired to LACERS' Benefit Payment and Healthcare Trust accounts in Northern Trust respectively on Wednesday, July 13, 2022. The balance of \$49,809 remains with the City Treasury for the administration of the LTRP and EBP.
- On Thursday, July 14, 2022, the Los Angeles Fire and Police Pensions (LAFPP) paid \$4,443,390 to LACERS. Of this amount, \$3,914,993 and \$520,813 were wired out to LACERS' Benefit Payment and Healthcare Trust accounts in Northern Trust respectively on Friday, July 15, 2022. The balance of \$7,584 remains with City Treasury for the administration of the LTRP and EBP.
- LACERS' share of the required contribution totals \$6,360,587. Of this amount, \$761,545 was wired out to LACERS' Healthcare Trust account in Northern Trust on Thursday, July 15, 2022. Funds totaling \$411 and \$9,962 were transferred to LTRP account (Fund 900) and the EBP account (Fund 901), respectively. The remaining amount of \$5,588,669 remained in City Retirement fund (Fund 800). The total contribution was recorded as expenditure incurred and revenue earned in FY 2023 excluding the contribution true-up adjustment of \$79,768 pertaining to the prior fiscal year's contribution, reflected as addition to expenditure and revenue for the FY 2022.

Please refer to the summary attached.

TB:JP

Attachment: Summary of City Contributions and Disposition for Fiscal Year 2022-23

¹ LACERS coordinated with respective departments to streamline the City Contribution process in accordance with the recent changes in banking and process requirements by departments involved in this transaction including Office of Finance and Office of the Controller. For Fiscal Year 2023, the payment deadline was set on or before Thursday, July 14, 2022 in order to wire out contributions to LACERS' Custodian bank on or before Friday, July 15, 2022 and have the funds available for LACERS' Investment on the next business day.

LACERS
SUMMARY OF CITY CONTRIBUTIONS AND DISPOSITIONS
For the Fiscal Year 2022-23

Description	General Fund (CAO)	Airport (LAWA)	Harbor	LAFPP	LACERS *	Total
Retirement Plan:						
FY 23 Actuarial Contributions	\$ 620,427,232	\$ 84,017,768	\$ 27,020,178	\$ 4,096,725	\$ 5,551,979	\$ 741,113,882
Adjustment: Enhanced Benefits	(3,379,396)	3,587,354	(154,334)	(23,118)	(30,506)	-
FDBP Contributions	39,399	5,305	1,687	257	352	47,000
Total	\$ 617,087,235	\$ 87,610,427	\$ 26,867,531	\$ 4,073,864	\$ 5,521,825	\$ 741,160,882
LTRP & EBP Contributions	1,162,670	156,564	49,809	7,584	10,374	1,387,001
FY 22 True-Up	(57,414,709)	(6,696,649)	(1,166,262)	(158,871)	66,844	(65,369,647)
Retirement Contributions Due	\$ 560,835,195	\$ 81,070,342	\$ 25,751,079	\$ 3,922,577	\$ 5,599,042	\$ 677,178,236
Healthcare Plan:						
FY 23 Actuarial Contributions	\$ 84,272,343	\$ 11,253,081	\$ 3,521,441	\$ 539,749	\$ 748,621	\$ 100,335,235
Adjustment: Enhanced Benefits	-	-	-	-	-	-
Total	\$ 84,272,343	\$ 11,253,081	\$ 3,521,441	\$ 539,749	\$ 748,621	\$ 100,335,235
FY 22 True-Up	(8,584,375)	(1,074,324)	(160,002)	(18,936)	12,924	(9,824,713)
Healthcare Contributions Due	\$ 75,687,968	\$ 10,178,757	\$ 3,361,439	\$ 520,813	\$ 761,545	\$ 90,510,522
Total Contributions Received	\$ 636,523,163	\$ 91,249,099	\$ 29,112,518	\$ 4,443,390	\$ 6,360,587	\$ 767,688,758
Date Received	07/11/22	07/14/22	07/07/22	07/14/22	N/A *	
Disposition of Funds:						
Wired to NT Acct 93688 (Benefit Payment)	559,672,526	80,913,778	25,701,269	3,914,993	N/A *	670,202,566
Wired to NT Acct 4483228 (Healthcare Trust)	75,687,968	10,178,757	3,361,439	520,813	761,545	90,510,522
Date Wired	07/12/22	07/15/22	07/13/22	07/15/22	07/15/22	
Transfer to Limited Term Retirement Plan	46,104	6,208	1,976	301	411	55,000
Transfer to Excess Benefit Plan	1,116,565	150,356	47,834	7,283	9,962	1,332,000
Retained in LACERS Fund 800	-	-	-	-	5,588,669	5,588,669
Total Fund Disposed	\$ 636,523,163	\$ 91,249,099	\$ 29,112,518	\$ 4,443,390	\$ 6,360,587	\$ 767,688,758

* LACERS only requires to wire out \$761,545 Healthcare Plan contributions to LACERS' Healthcare Trust (115 Trust) account with Northern Trust (NT) and interfund transfer of \$10,374 to LTRP and EBP funds. 115 Trust account with NT was opened in December 2018 to avoid comingling of 115 funds with any other funds as required. \$5,588,669 of LACERS contributions will remain in LACERS City retirement account.

Agenda of: JULY 26, 2022

Item No: V-A

**MONTHLY REPORT ON SEMINARS AND CONFERENCES
ATTENDED BY BOARD MEMBERS ON BEHALF OF LACERS
(FOR THE MONTH OF JUNE 2022)**

In accordance with Section V.H.2 of the approved Board Education and Travel Policy, Board Members are required to report to the Board, on a monthly basis at the last Board meeting of each month, seminars and conferences they attended as a LACERS representative or in the capacity of a LACERS Board Member which are either complimentary (no cost involved) or with expenses fully covered by the Board Member. This monthly report shall include all seminars and conferences attended during the 4-week period preceding the Board meeting wherein the report is to be presented.

BOARD MEMBERS:

Vice President Sung Wohn Sohn

Commissioner Annie Chao

Commissioner Elizabeth Lee

Commissioner Sandra Lee

Commissioner Nilza R. Serrano

Commissioner Michael R. Wilkinson

DATE(S) OF EVENT	SEMINAR / CONFERENCE TITLE	EVENT SPONSOR (ORGANIZATION)	LOCATION (CITY, STATE)
	NOTHING TO REPORT		



REPORT TO BOARD OF ADMINISTRATION
From: Lin Lin, Senior Personnel Analyst II

MEETING: JULY 26, 2022
ITEM: IX – A

Lin Lin

SUBJECT: CONSIDERATION OF 2022 GENERAL MANAGER'S MERIT PAY AND POSSIBLE BOARD ACTION

ACTION: CLOSED: CONSENT: RECEIVE & FILE:

Recommendation

That the Board take action to recommend Merit Salary adjustment based on the merits of the FY 21-22 evaluation in a percentage between 0 to 5% effective July 1, 2022.

Executive Summary

The Los Angeles City Charter Section 508 requires that the amount of compensation for the General Manager be adjusted by the appointing commission within guideline established by the City Council.

Discussion

Based on the performance evaluation discussed during closed session, the Board may set or adjust the General Manager's salary within the guidelines established by the City Council, with any salary increase being effective as of July 1, 2022.

General Manager salary range is set by ordinance between M-7 through M-13. Each M range identifies specific classifications entitled to compensation within the range. LACERS' General Manager falls within the M-9 salary range. Please refer to attachment 1 for the listing of General Managers' M range.

Prepared By: Lin Lin, Departmental Personnel Director

LL

- Attachments: 1. General Manager Salary Range 2019 to 2023
2. Resolution Salary Compensation for General Manager

Salaries for Non-Represented Employees
2018-19 through ~~2021-22~~ 2022-23*
(C.F. 19-1164; C.F. 19-1164-S-2*)

Salaries and benefits for non-represented employees (employees whose classification is not included in a bargaining unit) are provided through ordinances. The following is a list of salary rates or ranges for non-represented classifications effective October 18, 2018 through ~~June 19, 2022~~ June 18, 2023.* The list only includes salary rates or ranges. Employment provisions pertaining to other benefits are contained in the Los Angeles Administrative Code, Division 4.

*Ordinance No. 186922 (C.F. 19-1164-S2) postponed the effective dates of salary increases for non-represented employees, as follows:

<u>From</u>	<u>To</u>
January 31, 2021	June 19, 2022
January 30, 2022	January 29, 2023
June 19, 2022	June 18, 2023

ORDINANCE NO. ~~186352~~ _____

An ordinance amending Ordinance No. 186352, pertaining to the City's classification listing in Schedule "A" of Section 4.61 of the Los Angeles Administrative Code, to postpone salary increases of non-represented classifications scheduled for January 31, 2021, January 30, 2022, and June 19, 2022, to the dates of June 19, 2022, January 29, 2023, and June 18, 2023, respectively.

**THE PEOPLE OF THE CITY OF LOS ANGELES
DO ORDAIN AS FOLLOWS:**

Section 1. Section 8 of Ordinance No. 186352 is amended to read as follows:

The provisions of Section 7 of this Ordinance shall be operative June 19, 2022.

Sec. 2. Section 10 of Ordinance No. 186352 is amended to read as follows:

The provisions of Section 9 of this Ordinance shall be operative January 29, 2023.

Sec. 3. Section 12 of Ordinance No. 186352 is amended to read as follows:

The provisions of Section 11 of this Ordinance shall be operative June 18, 2023.

Sec. 4. This ordinance shall be effective upon publication, pursuant to Charter Section 252(g).

Sec. 5. The City Clerk shall certify to the passage of this ordinance and have it published in accordance with Council policy, either in a daily newspaper circulated in the City of Los Angeles or by posting for ten days in three public places in the City of Los Angeles: one copy on the bulletin board located at the Main Street entrance to the Los Angeles City Hall; one copy on the bulletin board located at the Main Street entrance to the Los Angeles City Hall East; and one copy on the bulletin board located at the Temple Street entrance to the Los Angeles County Hall of Records.

Approved as to Form and Legality

MICHAEL N. FEUER, City Attorney

By 
VIVIENNE SWANIGAN
Assistant City Attorney

Date 1/25/2021

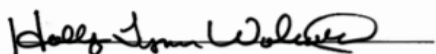
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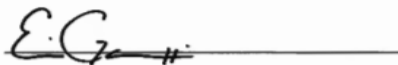
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The Clerk of the City of Los Angeles hereby certifies that the foregoing ordinance was passed by the Council of the City of Los Angeles.

CITY CLERK

MAYOR





Ordinance Passed 02/09/2021

Approved 02/18/2021

Published Date: 02/24/2021
Ordinance Effective Date: 02/24/2021
Council File No.: 19-1164-S2

ATTACHMENT B-II
SALARIES - GENERAL MANAGERS
LOS ANGELES ADMINISTRATIVE CODE SECTION 4.61

(The biweekly salaries for General Manager positions reflect adjustments of 2.75% effective January 19, 2020; 2.0% effective January 31, 2021; 2.0% effective January 30, 2022; and 1.5% effective June 19, 2022, unless otherwise listed. The Mayor or appropriate Board/Commission, pursuant to Charter Section 508, shall set or adjust the amount of compensation for General Managers within the identified "M" ranges.)

RANGE NO. CLASSIFICATION	Effective 1/19/2020	Effective 6/19/2022** 1/31/20/21	Effective 1/29/2023** 1/30/2022	Effective 6/18/2023** 6/19/2022
M-13 Range	\$293,635 - \$506,925	\$299,503 - \$517,072	\$305,495 - \$527,408	\$310,068 - \$535,321
General Manager and Chief Engineer Water and Power	\$15,748.00 BW (\$411,023)*	\$16,063.20 BW (\$419,250)*	\$16,384.80 BW (\$427,643)*	\$16,630.40 BW (\$434,053)*
M-12 Range	\$253,024 - \$448,649	\$258,077 - \$457,627	\$263,234 - \$466,772	\$267,180 - \$473,767
General Manager Airports Department	\$15,547.20 BW (\$405,782)*	\$15,858.40 BW (\$413,904)*	\$16,175.20 BW (\$422,173)*	\$16,417.60 BW (\$428,499)*
Chief of Police	\$13,814.40 BW (\$360,556)*	\$14,090.40 BW (\$367,759)*	\$14,372.00 BW (\$375,109)*	\$14,587.20 BW (\$380,726)*
City Administrative Officer	\$11,629.60 BW (\$303,533)	\$11,862.40 BW (\$309,609)	\$12,100.00 BW (\$315,810)	\$12,281.60 BW (\$320,550)
Chief Legislative Analyst	\$15,063.20 BW (\$393,150)	\$15,364.80 BW (\$401,021)	\$15,672.00 BW (\$409,039)	\$15,907.20 BW (\$415,178)
General Manager Harbor Department	\$13,936.80 BW (\$363,750)*	\$14,215.20 BW (\$371,017)*	\$14,499.20 BW (\$378,429)*	\$14,716.80 BW (\$384,108)*
M-11 Range	\$224,544 - \$398,098	\$229,033 - \$406,053	\$233,605 - \$414,176	\$237,113 - \$420,398
Executive Director, Convention Center	\$10,789.60 BW (\$281,609)	\$11,005.60 BW (\$287,246)	\$11,225.60 BW (\$292,988)	\$11,393.60 BW (\$297,373)
Fire Chief	\$13,024.00 BW (\$339,926)	\$13,284.80 BW (\$346,733)	\$13,550.40 BW (\$353,665)	\$13,753.60 BW (\$358,969)
Superintendent of Building	\$10,065.60 BW (\$262,712)	\$10,267.20 BW (\$267,974)	\$10,472.80 BW (\$273,340)	\$10,629.60 BW (\$277,433)
City Engineer	\$12,141.60 BW (\$316,896)	\$12,384.80 BW (\$323,243)	\$12,632.80 BW (\$329,716)	\$12,822.40 BW (\$334,665)
Director of Planning	\$9,961.60 BW (\$259,998)	\$10,160.80 BW (\$265,197)	\$10,364.00 BW (\$270,500)	\$10,519.20 BW (\$274,551)
General Manager Dept. of Transportation	\$9,814.40 BW (\$256,156)	\$10,010.40 BW (\$261,271)	\$10,210.40 BW (\$266,491)	\$10,363.20 BW (\$270,480)
General Manager Recreation and Parks	\$9,985.60 BW (\$260,624)	\$10,185.60 BW (\$265,844)	\$10,389.60 BW (\$271,169)	\$10,545.60 BW (\$275,240)
Director Bureau of Sanitation	\$11,696.80 BW (\$305,286)	\$11,930.40 BW (\$311,383)	\$12,168.80 BW (\$317,606)	\$12,351.20 BW (\$322,366)
General Manager Zoo Department	\$9,919.20 BW (\$258,891)	\$10,117.60 BW (\$264,069)	\$10,320.00 BW (\$269,352)	\$10,475.20 BW (\$273,403)
M-10 Range	\$199,613 - \$354,020	\$203,601 - \$361,099	\$207,672 - \$368,323	\$210,784 - \$373,856
General Manager Personnel Department	\$9,713.60 BW (\$253,525)	\$9,908.00 BW (\$258,599)	\$10,106.40 BW (\$263,777)	\$10,257.60 BW (\$267,723)
General Manager Information Technology Agency	\$10,320.00 BW (\$269,352)	\$10,526.40 BW (\$274,739)	\$10,736.80 BW (\$280,230)	\$10,897.60 BW (\$284,427)
Director of Finance	\$10,632.80 BW (\$277,516)	\$10,845.60 BW (\$283,070)	\$11,062.40 BW (\$288,729)	\$11,228.00 BW (\$293,051)
M-9 Range	\$178,148 - \$315,768	\$181,719 - \$322,074	\$185,352 - \$328,526	\$188,129 - \$333,454
City Clerk	\$9,210.40 BW (\$240,391)	\$9,394.40 BW (\$245,194)	\$9,582.40 BW (\$250,101)	\$9,726.40 BW (\$253,859)
City Librarian	\$9,776.00 BW (\$255,154)	\$9,971.20 BW (\$260,248)	\$10,170.40 BW (\$265,447)	\$10,323.20 BW (\$269,436)
Director Bureau of Street Services	\$9,814.40 BW (\$256,156)	\$10,010.40 BW (\$261,271)	\$10,210.40 BW (\$266,491)	\$10,363.20 BW (\$270,480)
General Manager Community Development	Vacant	Vacant	Vacant	Vacant
RANGE NO. CLASSIFICATION	Effective 1/19/2020	Effective 6/19/2022** 1/31/20/21	Effective 1/29/2023** 1/30/2022	Effective 6/18/2023** 6/19/2022
M-9 Range (Cont'd)	\$178,148 - \$315,768	\$181,719 - \$322,074	\$185,352 - \$328,526	\$188,129 - \$333,454
General Manager Economic and Workforce Development Department	Vacant	Vacant	Vacant	Vacant
General Manager Fire & Police Pensions	\$11,524.80 BW (\$300,797)*	\$11,755.20 BW (\$306,811)*	\$11,990.40 BW (\$312,949)*	\$12,170.40 BW (\$317,647)*
General Manager Department of General Services	\$10,057.60 BW (\$262,503)	\$10,258.40 BW (\$267,744)	\$10,463.20 BW (\$273,090)	\$10,620.00 BW (\$277,182)
General Manager Los Angeles City Employees Retirement System	\$11,002.40 BW (\$287,163)*	\$11,222.40 BW (\$292,905)*	\$11,447.20 BW (\$298,772)*	\$11,619.20 BW (\$303,261)*
General Manager Housing and Community Investment Department	\$9,517.60 BW (\$248,409)	\$9,708.00 BW (\$253,379)	\$9,902.40 BW (\$258,453)	\$10,051.20 BW (\$262,336)
M-8 Range	\$159,356 - \$282,611	\$162,551 - \$288,269	\$165,808 - \$294,032	\$168,293 - \$298,438
Treasurer	\$9,966.40 BW (\$260,123)	\$10,165.60 BW (\$265,322)	\$10,368.80 BW (\$270,626)	\$10,524.00 BW (\$274,676)
Inspector Public Works	\$9,357.60 BW (\$244,233)	\$9,544.80 BW (\$249,119)	\$9,736.00 BW (\$254,110)	\$9,882.40 BW (\$257,931)
Director Bureau of Street Lighting	\$7,572.00 BW (\$197,629)	\$7,723.20 BW (\$201,576)	\$7,877.60 BW (\$205,605)	\$7,996.00 BW (\$208,696)
Executive Director Cannabis Department	\$9,209.60 BW (\$240,371)	\$9,393.60 BW (\$245,173)	\$9,581.60 BW (\$250,080)	\$9,725.60 BW (\$253,838)
General Manager Animal Services	\$7,396.00 BW (\$193,036)	\$7,544.00 BW (\$196,898)	\$7,695.20 BW (\$200,845)	\$7,810.40 BW (\$203,851)
General Manager Cultural Affairs	Vacant	Vacant	Vacant	Vacant
General Manager Department of Environmental Affairs	Vacant	Vacant	Vacant	Vacant
General Manager Neighborhood Empowerment	\$7,572.00 BW (\$197,629)	\$7,723.20 BW (\$201,576)	\$7,877.60 BW (\$205,605)	\$7,996.00 BW (\$208,696)
M-7 Range	\$143,132 - \$253,817	\$145,993 - \$258,891	\$148,916 - \$264,069	\$151,150 - \$268,037
General Manager Department of Aging	\$7,958.40 BW (\$207,714)	\$8,117.60 BW (\$211,869)	\$8,280.00 BW (\$216,108)	\$8,404.00 BW (\$219,344)
General Manager Emergency Management Department	\$7,587.20 BW (\$198,026)	\$7,739.20 BW (\$201,993)	\$7,893.60 BW (\$206,023)	\$8,012.00 BW (\$209,113)
General Manager El Pueblo Historical Monument	\$6,638.40 BW (\$173,262)	\$6,771.20 BW (\$176,728)	\$6,906.40 BW (\$180,257)	\$7,009.60 BW (\$182,951)
Executive Director Commission on Children, Youth & Their Families	Vacant	Vacant	Vacant	Vacant
Executive Director Department on Disability	\$7,426.40 BW (\$193,829)	\$7,575.20 BW (\$197,713)	\$7,726.40 BW (\$201,659)	\$7,842.40 BW (\$204,687)

* Salary pending Board/Commission action.

** Ordinance No. 186922 (C.F. 19-1164-S2) postponed the effective dates as indicated.

SALARY COMPENSATION FOR
GENERAL MANAGER
NEIL M. GUGLIELMO

PROPOSED RESOLUTION

WHEREAS, the Board of Administration has authorization to set the salary for the position of General Manager-LACERS; and

WHEREAS, the salary is consistent with the range allowable and set by City Council;

BE IT RESOLVED, that the Board of Administration approves a yearly salary at X% higher than the current salary for Neil M. Guglielmo, General Manager, to be effective on July 1, 2022, pursuant to Charter Section 1108(c).

July 26, 2022



LACERS
LA CITY EMPLOYEES'
RETIREMENT SYSTEM



REPORT TO BOARD OF ADMINISTRATION

MEETING: JULY 26, 2022

From: Lin Lin, Senior Personnel Analyst II

ITEM: IX – B

SUBJECT: CONSIDERATION OF GENERAL MANAGER'S COST OF LIVING ADJUSTMENT AND POSSIBLE BOARD ACTION

ACTION: CLOSED: CONSENT: RECEIVE & FILE:

Recommendation

That the Board take action to recommend Cost of Living Adjustments: 2.75% effective January 19, 2020, 2% effective June 19, 2022, 2% effective January 29, 2023, and 1.5% effective June 18, 2023.

Executive Summary

The Los Angeles City Charter Section 508 requires that the amount of compensation for the General Manager be adjusted by the appointing commission within guidelines established by the City Council.

Discussion

The Los Angeles City Council took a series of actions in 2018 and 2021 involving compensation for non-represented employees of the City of Los Angeles ([City Council File 19-1164](#) and [19-1164-S2](#)) including the General Manager Los Angeles City Employees' Retirement System (M-9 range).

Traditionally, General Managers did not receive Cost of Living adjustments. The City Administrative Officer clarified recently that Mayor Garcetti proposed to confer non-represented Cost of Living Adjustments for the General Managers, which was adopted by the Council. The first of the COLA was in January 2020. LACERS' Board has the authority (Charter Section 508) to approve COLAs for LACERS General Manager by resolution.

Prepared By: Lin Lin, Departmental Personnel Director

LL

Attachments: 1. Resolution Cost of Living Adjustment for GM

SALARY COMPENSATION FOR
GENERAL MANAGER
NEIL M. GUGLIELMO

PROPOSED RESOLUTION

APPROVAL OF COST-OF-LIVING INCREASE FOR LACERS' GENERAL MANAGER EFFECTIVE JANUARY 19, 2020, JUNE 19, 2022, JANUARY 29, 2023, AND JUNE 18, 2023

WHEREAS, the Los Angeles City Council took a series of actions in 2018 and 2021 involving compensation for non-represented employees of the City of Los Angeles (City Council File 19-1164 and 19-1164-S2) including LACERS' General Manager;

WHEREAS, these actions provided for the following cost of living adjustments: 2.75% effective January 19, 2020, 2% effective June 19, 2022, 2% effective January 29, 2023, and 1.5% effective June 18, 2023;

WHEREAS, Los Angeles City Charter Section 508 requires that the amount of compensation for the General Manager be adjusted by the appointing commission within guidelines established by the City Council; and

NOW, THEREFORE, BE IT RESOLVED, that the Board of Administration approves cost-of-living adjustments of 2.75% effective January 19, 2020, 2% effective June 19, 2022, 2% effective January 29, 2023, and 1.5% effective June 18, 2023, for the General Manager Los Angeles City Employees' Retirement System

July 26, 2022

Private Equity Fund Valuation

July 2022





Private Equity Fund Valuation

- Private Equity Valuation Methodology has been an ongoing Board discussion
- Private Equity Fund valuation methodology is subject to accounting rules (Generally Accepted Accounting Principles (GAAP), International Financial Reporting Standards (IFRS) and regulatory (Securities and Exchange Commission (SEC) guidelines
- Nearly all fund managers in the LACERS portfolio are Registered Investment Advisors (RIA), which require certain valuation standards and requirements
- LPs often insist non-registered advisors have stated valuation policies that are consistent with those of RIAs (examples of funds managed by non-RIAs – VC firms, small PE funds)

Most Private Equity Fund Managers are RIAs – complying with the Investment Advisers Act of 1940

Requirements of RIAs:

- Valuation policy
- Third party auditors' audit valuations as a part of Fund's annual financial audit
- SEC reviews valuation methodologies as a part of their examinations of the RIA

Market best practices:

- Valuations reviewed/approved by Limited Partner Advisory Committee (LPAC) or outside board members quarterly

Examples of Private Company Valuation Methods and Processes

Valuation process is based on the accounting guidance in ASC 820 as well the American Institute of Certified Public Accountants (AICPA) Valuation Guide for Private Equity and Venture Funds:

- Present Value, Discounted cash flow methods
- Comparable transaction analysis
- Market multiples analysis – Enterprise Value to Cash Flow (EBITDA) analysis, Revenue Multiples, Price to Earnings (P-E) Multiples, Net Income
- Comparable market transactions
- Liquidation value analysis

Typical Elements of PE Fund Valuation Policies

Regulations (and fund counsel advise) guide PE managers to value companies using methods commonly used by other market participants that have been demonstrated to provide reliable estimates of value:

- Portfolio companies operate as intended
- There are no flaws in design of valuation methodology
- Valuations are objectively validated
- Valuations consider the risks inherent in the investment
- Valuations are sensitive to changes in variables and market conditions

AICPA guidelines - Calibrate the inputs/assumptions to the most recent transaction price which is one of the best indicators of fair value

Most PE funds use Big 4 accounting firms to audit their financial statements

The independent auditor's role in auditing PE Funds is focused on, but not limited to:

- Statement of investments
- Company valuations
- Financial statements
- Capital Accounts
 - With use of specialists

Regulatory Oversight – Role of the SEC

- SEC periodically examines Registered Investment Advisors
- SEC has indicated that its enforcement priorities include the **Valuation of Illiquid Securities** (July 2017)
- Failure to follow written valuation policies that were previously disclosed to investors

Consequences of Valuation Misstatement

Private equity valuations are not perfectly correlated to public markets due to a combination of PE managers integrating more information in determining valuations and 90-120 day reporting lags

Deliberate valuation misstatement can lead to a violation of the Investment Advisers Act of 1940

Securities fraud can result in:

- Criminal prosecution, penalties, fines, prison etc.
- Banned from the industry
- Investor lawsuits
- Damaged reputations
- Inability to raise another investment fund

Examples of Bad Actors

Premium Point



(2018; Anilesh "Neil" Ahuja; US) –
structured credit hedge fund;
valuation fraud

Abraaj

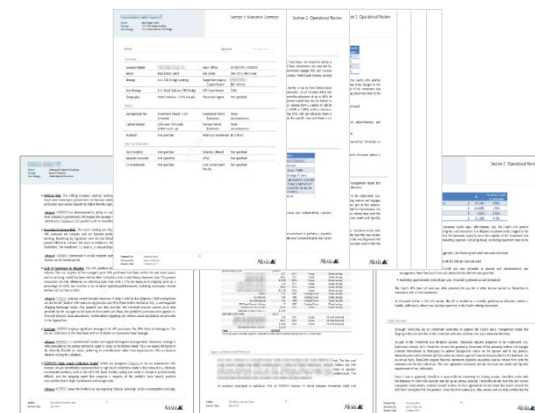


(2018; Arif Naqvi; Dubai) –
private equity firm; fraud / theft

¹Graphics shown are for illustrative purposes only.

Our process not only seeks to identify operational risks within the fund but aims to help our clients better understand the significance and meaning of such risks

- Back-office Infrastructure
- Conflicts of Interest
- Reliance on Third-Party Providers (e.g., servicers) and Secondary Due Diligence
- Valuation and NAV Calculation
- Fund Legal Terms
- Expenses Charged and Calculation of Fees
- Co-investment and Investment Allocation Procedures
- Background Check and Biography Verification
- Advisory Board and Power of Limited Partners
- Compliance Culture





REPORT TO BOARD OF ADMINISTRATION

From: Investment Committee
Sung Won Sohn, Chair
Elizabeth Lee
Nilza R. Serrano

MEETING: JULY 26, 2022
ITEM: X - C

SUBJECT: FINALIST FIRMS OF THE PASSIVE U.S., NON-U.S., AND GLOBAL INDEX STRATEGIES INVESTMENT MANAGER SEARCH AND POSSIBLE BOARD ACTION

ACTION: CLOSED: CONSENT: RECEIVE & FILE:

Recommendation

That the Board:

1. Award contracts for five-year terms to the following three firms for Passive U.S., Non-U.S., and Global Index Strategies mandates: BlackRock Institutional Trust Company, N.A.; RhumbLine Advisers Limited Partnership; and State Street Global Advisors Trust Company.
2. Authorize the General Manager to approve and execute the necessary documents, subject to satisfactory business and legal terms.

Executive Summary

At a special meeting held on July 14, 2022, the Investment Committee (Committee) interviewed three firms as the qualified semi-finalists for the Passive U.S., Non-U.S., and Global Index Strategies investment manager search: BlackRock Institutional Trust Company, N.A. (BlackRock); RhumbLine Advisers Limited Partnership (RhumbLine); and State Street Global Advisors Trust Company (State Street). In concurrence with staff and NEPC, LLC (NEPC), LACERS' General Fund Consultant, the Committee advanced all three firms as finalists and recommends that the Board award five-year contracts to each of the three firms.

Discussion

The Board-approved request for proposal (RFP) for passive U.S., non-U.S., and global index strategies investment managers opened on September 9, 2021, and closed on November 9, 2021. A total of six proposals were received. Five firms met the minimum qualifications (MQs) required to participate in the search. On February 8, 2022, the Committee reviewed NEPC's candidate evaluation report and concurred with the staff recommendation to advance five firms as semi-finalists in the search for further

due diligence: BlackRock (incumbent firm); Mellon Investments Corporation; Northern Trust Investments, Inc.; RhumbLine (incumbent firm); and State Street (incumbent firm).

Staff and NEPC conducted on-site due diligence meetings with all five firms to assess passive management capabilities and potential investment and organizational risks. Staff also conducted reference checks. Based upon the findings of these due diligence activities, staff and NEPC designated BlackRock, RhumbLine and State Street as qualified semi-finalists; each firm was interviewed by the Committee at a special meeting on July 14, 2022.

The Committee engaged each firm on subjects relevant to passive management, including tracking error management, index rebalancing and reconstitution, risk management, and securities lending programs of commingled fund vehicle offerings. Following the completion of the interviews, the Committee conferred with staff regarding the various investment vehicles, fee structures, and securities lending options proposed by the managers. Staff explained that maintaining LACERS' current passive allocations in the current investment vehicles managed by RhumbLine and State Street would result in slight fee reductions given the lower proposed fees in the relevant strategies. Nonetheless, staff seeks the flexibility to contract for all available investment vehicles across the multiple strategies proposed by all three finalist firms as this would expand LACERS' passive strategy options for future potential needs of the portfolio. The Committee also requested staff to negotiate lower fees from BlackRock and State Street including potential fee caps. In concurrence with staff and NEPC, the Committee recommends that the Board award five-year contracts to each of the three firms for all proposed strategies and investment vehicles as identified in Attachments 1 and 2 of the attached staff report to the Committee.

Strategic Plan Impact Statement

The Request for Proposal (RFP) for investment management services will allow the fund to maintain investment options in passive strategies which is expected to optimize long-term risk adjusted investment returns (Goal IV). Implementing a competitive bidding process by issuing an RFP is in line with Goal V (uphold good governance practices which affirm transparency, accountability, and fiduciary duty).

Prepared By: Jeremiah Paras, Investment Officer I, Investment Division

NMG/RJ/BF/JP:rm

Attachments: 1. Report to Investment Committee dated July 14, 2022
 2. Proposed Resolutions



LACERS
LA CITY EMPLOYEES'
RETIREMENT SYSTEM



REPORT TO INVESTMENT COMMITTEE
From: Neil M. Guglielmo, General Manager

MEETING: JULY 14, 2022
ITEM: II

Neil M. Guglielmo

SUBJECT: PASSIVE U.S., NON-U.S., AND GLOBAL INDEX STRATEGIES SEMI-FINALIST INTERVIEWS AND POSSIBLE COMMITTEE ACTION

ACTION: CLOSED: CONSENT: RECEIVE & FILE:

Recommendation

That the Committee:

1. Interview three firms as the qualified semi-finalists for the Passive U.S., Non-U.S., and Global Index Strategies investment manager search: BlackRock Institutional Trust Company, N.A.; RhumbLine Advisers Limited Partnership; and State Street Global Advisors Trust Company.
2. Recommend all three firms as finalists to the Board for five-year contract awards.

Executive Summary

The Board-approved request for proposal (RFP) for the Passive U.S., Non-U.S., and Global Index Strategies investment manager search opened on September 9, 2021, and closed on November 9, 2021. A total of six proposals were received; no proposals were received from emerging investment manager firms. Following review, five firms met the minimum qualifications and were evaluated by staff and NEPC, LLC (NEPC), LACERS' General Fund Consultant; all five firms were recommended to proceed as semi-finalists. Staff and NEPC conducted further due diligence on each semi-finalist and have advanced the following three firms as the qualified semi-finalists for interviews by the Investment Committee: BlackRock Institutional Trust Company, N.A. (incumbent manager), RhumbLine Advisers Limited Partnership (incumbent manager), and State Street Global Advisors Trust Company (incumbent manager).

Background

The Board approved a request for proposal (RFP) process to evaluate the current marketplace for passive U.S., non-U.S., and global index strategies investment managers on August 24, 2021. LACERS is seeking one or more investment managers to manage LACERS' current portfolio of passive strategies and provide additional passive strategy options on an as-needed basis for potential portfolio restructurings.

The search opened on September 9, 2021, and closed on November 9, 2021. The RFP was published on LACERS' website and NEPC's website. The RFP was advertised in the Pensions and Investments and Emerging Manager Monthly publications and was also advertised online through the following organizations: Association of Asian American Investment Managers, Accelerate Investors, National Association of Securities Professionals, and the New America Alliance. Further, the RFP was emailed to all contacts within the LACERS Investment RFP/RFI Subscription Service database.

Search Results

LACERS received a total of six proposals, each of which included multiple proposed passive strategies. None of the firms that submitted proposals qualified as an emerging investment manager pursuant to the LACERS Emerging Investment Manager Policy. Following a review of the minimum qualifications (MQs) required to participate in the search, five firms met the MQs and were further evaluated by NEPC with input from staff.

On February 8, 2022, the Committee reviewed NEPC's candidate evaluation report and concurred with the staff recommendation to advance five firms as semi-finalists in the search for further due diligence: BlackRock Institutional Trust Company, N.A. (BlackRock); Mellon Investments Corporation; Northern Trust Investments, Inc.; RhumbLine Advisers Limited Partnership (RhumbLine); and State Street Global Advisors Trust Company (State Street).

Additional Due Diligence Activities

Staff and NEPC conducted on-site due diligence meetings with all five firms to assess passive management capabilities and potential investment and organizational risks. Staff and NEPC interviewed the key professionals on topics including, but not limited to, overall business strategy and growth, organization and reporting structure, staffing and compensation, investment approach and process, trading, risk management, compliance and controls, and technology. Staff also conducted reference checks.

Based upon these due diligence activities, staff and NEPC recommend the following three firms as the qualified semi-finalists for interviews by the Investment Committee:

- BlackRock (incumbent manager)
- RhumbLine (incumbent manager)
- State Street (incumbent manager)

Each proposed semi-finalist demonstrates a strong organization and management team, breadth of passive strategies to meet LACERS' needs, and well-defined risk management and compliance practices. Staff also received positive feedback from references for these firms. Staff and NEPC recommend advancing all three firms as finalists for five-year contract awards by the Board and contracting for all strategies listed in Table 1 to provide a comprehensive array of passive investment options for potential portfolio needs in the future.

Table 1. Proposed Passive Strategies Evaluated During Semi-finalist Due Diligence

BlackRock	RhumbLine	State Street
<ul style="list-style-type: none"> • <u>Domestic Equity</u> • S&P 500 • Russell 1000 • Russell 1000 Growth • Russell 1000 Value • Russell 2000 • Russell 2000 Growth • Russell 2000 Value • <u>Non-US Equity</u> • MSCI World ex-U.S. IMI • MSCI EAFE • MSCI EAFE Growth • MSCI EAFE Value • MSCI EAFE Small Cap • MSCI Emerging Markets • MSCI Emerging Markets Small Cap • <u>Fixed Income</u> • Bloomberg U.S. Aggregate Bond • <u>Real Assets</u> • Bloomberg U.S. TIPS 	<ul style="list-style-type: none"> • <u>Domestic Equity</u> • S&P 500 • Russell 1000 • Russell 1000 Growth • Russell 1000 Value • Russell MidCap • Russell MidCap Growth • Russell MidCap Value • S&P Mid Cap 400 • S&P Mid Cap 400 Growth • Russell 2000 • Russell 2000 Growth • Russell 2000 Value • <u>Non-US Equity</u> • MSCI EAFE • MSCI Emerging Markets • <u>Fixed Income</u> • Bloomberg U.S. Aggregate Bond 	<ul style="list-style-type: none"> • <u>Domestic Equity</u> • S&P 500 • Russell 1000 • Russell 1000 Growth • Russell 1000 Value • Russell MidCap • S&P MidCap 400 • Russell 2000 • Russell 2000 Growth • Russell 2000 Value • <u>Non-US Equity</u> • MSCI World ex-U.S. IMI • MSCI EAFE • MSCI EAFE Small Cap • MSCI Emerging Markets • MSCI Emerging Markets Small Cap • <u>Fixed Income</u> • Bloomberg U.S. Aggregate Bond • <u>Real Assets</u> • Bloomberg U.S. TIPS

Note: Strategies in bolded black font indicate strategies LACERS is currently invested in. Strategies in bolded, italicized, and green font indicate new strategies that LACERS currently does not have access to via existing contracts.

Proposed Investment Vehicles and Fee Structures

The proposed fee structures for each strategy listed in Table 1 vary based upon the investment vehicle used to manage the strategy. As presented in Attachment 2, BlackRock has proposed managing its strategies via commingled fund vehicles only; RhumbLine has proposed managing its strategies via separately managed accounts only; and State Street has proposed managing its strategies via commingled fund vehicles or separate accounts, depending on unique circumstances of the specific investment assignment. For most of their proposed strategies, BlackRock and State Street have also provided options to invest in commingled fund vehicles that engage in securities lending, the revenue from which would partially offset fund fees, and non-lending commingled fund vehicles.

Based upon the analysis presented in Attachment 3, the proposed fees from the three firms provide equivalent or more favorable fee structures compared with existing contract terms for the strategies that LACERS is currently invested in. Staff and NEPC recommend maintaining LACERS' current passive allocations in the current investment vehicles managed by RhumbLine and State Street; this would result in slight fee reductions across all strategies, as highlighted in Attachment 3. While fees could be further reduced by investing in State Street's securities lending commingled fund vehicles for the MSCI EAFE Small Cap Equities, MSCI Emerging Markets Equities, and Bloomberg U.S. Aggregate Bond strategies, staff and NEPC recommend not moving assets to these vehicles to avoid potential transaction costs of a transition (which may more than offset the benefit of slightly lower fees) and to limit securities lending risk as LACERS would have no control over these funds' securities lending programs. However, staff is seeking the flexibility to contract for all proposed investment vehicles as some of the proposed strategies are only offered via securities lending commingled fund vehicles.

Strategic Plan Impact Statement

The Request for Proposal (RFP) for investment management services will allow the fund to maintain investment options in passive strategies which is expected to optimize long-term risk adjusted investment returns (Goal IV). Implementing a competitive bidding process by issuing an RFP is in line with Goal V (uphold good governance practices which affirm transparency, accountability, and fiduciary duty).

Prepared By: Bryan Fujita, Chief Investment Officer, Investment Division
Barbara Sandoval, Investment Officer II, Investment Division
Ellen Chen, Investment Officer II, Investment Division
Jeremiah Paras, Investment Officer I, Investment Division
Clark Hoover, Investment Officer I, Investment Division

NMG/RJ/BF/BS/EC/JP/CH:rm

- Attachments:
1. Qualified Semi-finalist Information Matrix
 2. Proposed Investment Vehicles and Fee Structures
 3. Contracted Versus Proposed Effective Fees for Current Passive Investments
 4. Presentation by BlackRock Institutional Trust Company, N.A.
 5. Presentation by RhumbLine Advisers Limited Partnership
 6. Presentation by State Street Global Advisors Trust Company

SEMI-FINALISTS OF THE PASSIVE U.S., NON-U.S., AND GLOBAL INDEX STRATEGIES INVESTMENT MANAGER SEARCH
SEMI- FINALIST INFORMATION MATRIX AS OF MAY 31, 2022

Firm Name	BlackRock	RhumbLine Advisers	State Street Global Advisors
Main Office	New York City, New York	Boston, MA	Boston, MA
Ownership Structure	Publicly traded on the New York Stock Exchange	100% employee-owned	Subsidiary of State Street Bank and Trust Company, a publicly traded firm on the New York Stock Exchange
Year Founded	1988	1990	1978
Emerging Manager	No	No	No
Firm Assets	\$9,569,512 million (as of 3/31/2022)	\$86,350,905,242 (as of 5/31/22)	\$4,021,919.95 million (as of 3/31/22)
Number of Firm Employees	18,682 (as of 3/31/22)	27 (as of 5/31/22)	2,322 (as of 3/31/22)
Number of Professionals on Index Strategies	183	5	250
Proposed Strategies for Consideration (bold and italic font indicate managers/strategies LACERS is currently invested in)	<u>Domestic Equity</u> S&P 500 Russell 1000 Russell 1000 Growth Russell 1000 Value Russell 2000 Russell 2000 Growth Russell 2000 Value	<u>Domestic Equity</u> <i>S&P 500</i> Russell 1000 Russell 1000 Growth Russell 1000 Value Russell MidCap Russell MidCap Growth Russell MidCap Value S&P Mid Cap 400 S&P Mid Cap 400 Growth <i>Russell 2000</i> Russell 2000 Growth <i>Russell 2000 Value</i>	<u>Domestic Equity</u> S&P 500 Russell 1000 Russell 1000 Growth Russell 1000 Value Russell MidCap S&P MidCap 400 Russell 2000 Russell 2000 Growth Russell 2000 Value
	<u>Non-US Equity</u> MSCI World ex-U.S. IMI MSCI EAFE MSCI EAFE Growth MSCI EAFE Value MSCI EAFE Small Cap MSCI Emerging Markets MSCI Emerging Markets Small Cap	<u>Non-US Equity</u> MSCI EAFE MSCI Emerging Markets	<u>Non-US Equity</u> <i>MSCI World ex-U.S. IMI</i> MSCI EAFE <i>MSCI EAFE Small Cap</i> <i>MSCI Emerging Markets</i> MSCI Emerging Markets Small Cap
	<u>Fixed Income</u> Bloomberg U.S. Aggregate Bond	<u>Fixed Income</u> Bloomberg U.S. Aggregate Bond	<u>Fixed Income</u> <i>Bloomberg U.S. Aggregate Bond</i>
	<u>Real Assets</u> Bloomberg U.S. TIPS	<u>Real Assets</u> N/A	<u>Real Assets</u> Bloomberg U.S. TIPS
Investment Vehicles Offered	Commingled Fund - Lendable (engages in securities lending) Commingled Fund - Non-lendable (no securities lending)	Separately Managed Accounts	Separately Managed Accounts Commingled Fund - Lendable (engages in securities lending) Commingled Fund - Non-lendable (no securities lending)

State Street notes: * This figure is presented as of March 31, 2022 and includes approximately \$73,351.22 million USD of assets with respect to SPDR products for which State Street Global Advisors Funds Distributors, LLC (SSGA FD) acts solely as the marketing agent. SSGA FD and State Street Global Advisors are affiliated.

**SEMI-FINALISTS OF THE PASSIVE U.S., NON-U.S., AND GLOBAL INDEX STRATEGIES INVESTMENT MANAGER SEARCH
PROPOSED INVESTMENT VEHICLES AND FEE STRUCTURES**

LACERS Current Passive Strategies	
Index	
S&P 500	
Russell 2000	
Russell 2000 Value	
MSCI World ex US IMI	
MSCI EAFE Small Cap	
MSCI Emerging Markets	
Bloomberg US Aggregate Bond	

Proposed Fees						
BlackRock		RhumbLine Advisers	State Street Global Advisors			
CIT Non-Lending	CIT Lending		SMA	SMA	CIT Non-Lending	CIT Lending
1.75	1.50	0.50	1.00	0.75	0.50	
6.00	3.00	0.50	First \$50mm - 7.00; Next \$50mm - 5.00; Balance - 3.50	1.00	0.75	
N/A	3.00	0.50	First \$50mm - 7.00; Next \$50mm - 5.00; Balance - 3.50	1.00	0.75	
5.00	4.00	N/A	First \$500mm - 3.00; Balance - 2.00	2.00	1.75	
10.00	7.00	N/A	First \$50mm - 12.00; Next \$50mm - 10.00; Balance - 9.00	4.00	3.75	
11.00	9.00	4.00	First \$50mm - 20.00; Next \$50mm - 18.00; Balance - 10.00	4.00	3.75	
First \$100mm - 3.75; Next \$400mm - 3.00; Balance - 2.25	First \$100mm - 3.00; Next \$400mm - 2.25; Balance - 1.50	1.00	First \$50mm - 7.00; Next \$50mm - 5.00; Balance - 3.50	2.00	1.75	

Additional Proposed Passive Strategies	
Index	
Russell 1000	
Russell 1000 Growth	
Russell 1000 Value	
Russell Mid Cap	
Russell Mid Cap Growth	
Russell Mid Cap Value	
S&P Mid Cap 400	
S&P Mid Cap 400 Growth	
Russell 2000 Growth	
MSCI EAFE	
MSCI EAFE Growth	
MSCI EAFE Value	
MSCI Emerging Markets Small Cap	
Bloomberg U.S. TIPS	

Proposed Fees						
BlackRock		RhumbLine Advisers	State Street Global Advisors			
CIT Non-Lending	CIT Lending		SMA	SMA	CIT Non-Lending	CIT Lending
2.25	2.00	0.50	First \$50mm - 6.00; Next \$50mm - 4.00; Balance - 3.00	First \$50mm - 4.00; Balance - 3.00		
2.25	2.00	0.50	First \$50mm - 6.00; Next \$50mm - 4.00; Balance - 3.00	First \$50mm - 4.00; Balance - 3.00		
2.25	2.00	0.50	First \$50mm - 6.00; Next \$50mm - 4.00; Balance - 3.00	First \$50mm - 4.00; Balance - 3.00		
N/A	2.50	0.50	First \$50mm - 7.00; Next \$50mm - 5.00; Balance - 3.50	N/A	N/A	
N/A	N/A	0.50	First \$50mm - 7.00; Next \$50mm - 5.00; Balance - 3.50	N/A	N/A	
N/A	N/A	0.50	First \$50mm - 7.00; Next \$50mm - 5.00; Balance - 3.50	N/A	N/A	
4.00	2.50	0.50	First \$50mm - 7.00; Next \$50mm - 5.00; Balance - 3.50	First \$50mm - 5.00; Next \$50mm - 4.00; Balance - 3.50		
N/A	N/A	0.50	First \$50mm - 7.00; Next \$50mm - 5.00; Balance - 3.50	N/A	N/A	
N/A	3.00	0.50	First \$50mm - 7.00; Next \$50mm - 5.00; Balance - 3.50	First \$50mm - 5.00; Next \$50mm - 4.00; Balance - 3.50		
5.00	4.00	4.00	First \$50mm - 8.00; Next \$50mm - 6.00; Balance - 5.00	First \$50mm - 6.00; Next \$50mm - 5.00; Balance - 4.00		
N/A	5.00	N/A	First \$50mm - 8.00; Next \$50mm - 6.00; Balance - 5.00	N/A	N/A	
N/A	5.00	N/A	First \$50mm - 8.00; Next \$50mm - 6.00; Balance - 5.00	N/A	N/A	
16.00	12.50	N/A	First \$50mm - 23.00; Next \$50mm - 21.00; Balance - 13.00	First \$50mm - 20.00; Next \$50mm - 18.00; Balance - 12.00		
First \$100mm - 3.75; Next \$400mm - 3.00; Balance - 2.25	First \$100mm - 2.25; Next \$400mm - 1.50; Balance - 0.75	1.00	First \$50mm - 5.00; Next \$50mm - 4.00; Balance - 2.50	First \$50mm - 4.00; Next \$50mm - 3.00; Balance - 2.5		

Note: N/A indicates that (1) a strategy was not proposed by the firm; or (2) the strategy was proposed but not advanced for further due diligence.

SMA = Separately Managed Account
CIT Non-Lending = Collective Investment Trust (no securities lending)
CIT Lending = Collective Investment Trust (engages in securities lending)

**SEMI-FINALISTS OF THE PASSIVE U.S., NON-U.S., AND GLOBAL INDEX STRATEGIES INVESTMENT MANAGER SEARCH
 CONTRACTED VERSUS PROPOSED EFFECTIVE FEES**

Contracted Effective Fees for LACERS Current Passive Strategies					Proposed Effective Fees for Proposed Investment Vehicles					
Manager	Index	Vehicle	Market Value as of 6/30/2022	Current Fees	BlackRock		RhumbLine Advisers	State Street Global Advisors		
					CIT Non- Lending	CIT Lending	SMA	SMA	CIT Non- Lending	CIT Lending
RhumbLine Advisers	S&P 500	SMA	\$ 3,146,092,263	0.57	1.75	1.50	0.50	1.00	0.75	0.50
	Russell 2000	SMA	\$ 274,871,257	0.57	6.00	3.00	0.50	4.30	1.00	0.75
	Russell 2000 Value	SMA	\$ 131,863,949	0.57	N/A	3.00	0.50	5.20	1.00	0.75
State Street Global Advisors	MSCI World ex US IMI	SMA	\$ 1,737,704,882	2.29	5.00	4.00	N/A	2.29	2.00	1.75
	MSCI EAFE Small Cap	CIT Non-Lending	\$ 291,236,507	4.00	10.00	7.00	N/A	9.70	4.00	3.75
	MSCI Emerging Markets	CIT Non-Lending	\$ 324,255,282	4.00	11.00	9.00	4.00	12.80	4.00	3.75
	Bloomberg US Aggregate Bond	CIT Non-Lending	\$ 796,359,814	2.63	2.82	2.07	1.00	3.80	2.00	1.75

Notes: The proposed fees for CITs exclude administrative fees charged directly to the fund and securities lending revenue if the CIT engages in securities lending.
 Highlighted cells indicate new effective fees should LACERS maintain the current allocations to managers and investment vehicles.

SMA = Separately Managed Account
 CIT Non-Lending = Collective Investment Trust (no securities lending)
 CIT Lending = Collective Investment Trust (engages in securities lending)

14 July 2022

BlackRock®

Los Angeles City Employees' Retirement System

Equity and Fixed Income Index Semi Finals

Presenter Biographies *(in alphabetical order)*



Victoria Choi, Director, is a member of the US and Canada Institutional team within BlackRock's Institutional Client Business. She is responsible for developing and maintaining relationships with institutional investors, specifically public and private pension plans.

In her previous role, Victoria was a Relationship Manager within BlackRock's Retirement Insurance Group where she was responsible for business development and building relationships with Life and Annuity Insurance companies. She also held a similar role within the iShares Institutional Sales team. Prior to joining BlackRock in 2014, Victoria worked at Dimensional Fund Advisors within the Institutional Sales and Client Service team covering Life and Annuity Insurance companies.

Victoria graduated from the University of California, Irvine with BA degree in Economics and minor in Business Management.



Scott Dohemann, CFA, Managing Director, is Head of US Index Strategy within BlackRock's ETF & Index Investments Group.

Mr. Dohemann's service with the firm dates back to 1998, including his years with Barclays Global Investors (BGI), which merged with BlackRock in 2009. Prior to his current Beta Strategy role, he was part of the Transition Management team where he was responsible for advising clients on transition activity as well as further developing the transition product. At BGI, Mr. Dohemann fulfilled a similar transition management role as a senior transition manager in the group both in advising clients and in undertaking responsibilities for a team of portfolio managers and operational specialists. Prior to joining BGI, he worked for Merrill Lynch as a financial consultant in the Private Client Group.

Mr. Dohemann earned a BSc in finance from San Diego State University in 1992.

Presenter Biographies *(cont'd)*



Laura May, CFA, Director, is a member of the Systematic Fixed Income Product Strategy Team within BlackRock's Global Fixed Income Group.

Ms. May's service with the firm dates back to 2012. Prior to joining the team in San Francisco in 2015, Ms. May was based in Toronto and focused on the Product Strategy effort in Canada for both the Institutional and iShares business. She began her career at CIBC Mellon in 2010.

Ms. May earned a BComm degree in Finance from McGill University and is a CFA charterholder.



Gene Meshechek, CFA, Director, is the Head of North American Institutional Product Strategy for BlackRock's Securities Lending business within the Portfolio Management Group.

Prior to moving to his current role in 2018, Mr. Meshechek was the Global Head of Fixed Income Securities Lending Trading from 2016 to 2018 and led the Fixed Income Securities Lending Trading team in the Americas from 2013 to 2016, both in New York. Previously, Mr. Meshechek was a portfolio manager in BlackRock's Global Cash Management business, primarily responsible for managing securities lending reinvestment portfolios, as well as the primary trader for short duration fixed income instruments. Mr. Meshechek's service with the firm dates back to 2007, including his years with Barclays Global Investors (BGI), which merged with BlackRock in 2009. Prior to joining BGI, he worked in corporate finance. Mr. Meshechek is a member of the CFA Institute and the CFA Society of San Francisco, and is an advisory board member for the Master of Science in Finance program at St. Mary's College of California.

Mr. Meshechek earned a BS degree in Finance from Arizona State University and a Master's of Finance degree from St. Mary's College of California.

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- IV. Fund Performance**
 - A. U.S. Equities
 - B. Non-U.S. Equities
 - C. Fixed Income
- V. Appendix**

I. Firm Overview

We have a history of innovating to continually address clients' needs.

30+ years ago

Founded as a fixed income manager and **introduced the first risk-managed fixed income solutions.**

Pioneered index and quantitative investing to help simplify investing.

Developed our risk and portfolio construction technology, Aladdin[®], making investing more transparent.

20 years ago

Created the industry's first target date fund, helping millions of people prepare for their retirement.

Introduced iShares[®] ETFs, democratizing investing.

10 years ago

Expanded our product offerings to provide clients more choice through landmark acquisitions of MLIM and BGI*.

Launched Financial Markets Advisory business to help solve the complex financial challenges of governments, central banks, and financial institutions.

Last 5 years

Enhanced our capabilities around whole portfolio solutions by launching an OCIO platform and expanding our portfolio construction advisory services.

Introduced sustainability as a central part of how we invest, integrating ESG throughout our active investment platform.

Set a new standard in transparency for alternatives through eFront acquisition, extending Aladdin's[®] capabilities to provide whole portfolio analysis.

Today

Entrusted to manage more assets than any other asset manager in the world.

\$9.57tn
AUM

18,000+
Employees

100
Countries with BlackRock clients

35
Countries with BlackRock offices

Data as of 31 March 2022. All figures are represented in USD.

Timeline includes history from predecessor entities.

*Merrill Lynch Investment Managers and Barclays Global Investors.

We are designed to deliver: our investment platform seeks to enhance outcomes, returns, convenience, value and transparency for clients.

Investment solutions designed to meet every client need

Active Equities
\$472bn

Active Fixed Income
\$1,037bn

Cash Management
\$724bn

Multi-Asset
\$785bn

Alternatives
\$330bn¹

iShares® & Index
\$6,254bn

Financial Markets Advisory
\$9bn

Investment teams directly benefit from firm-wide resources

BlackRock Capital Markets

BlackRock Investment Institute

BlackRock Investment Stewardship

BlackRock Sustainable Investing

Data & Technology

Global Trading

Public Policy

Risk & Quantitative Analysis

Securities Lending

Transition Management

Source: BlackRock. Assets under management as of 31 March 2022. All figures are represented in USD.
¹ Alternatives AUM may include committed capital, in addition to invested capital, which remains subject to drawdown.

BlackRock organization

Investment Departments

Portfolio Management Group (Fundamental Fixed Income • Municipals & Financial Institutions • Index Fixed Income & LDI • Fundamental Equities • Systematic • Multi-Asset Strategies & Solutions • Global Lending, Liquidity & Private Investors) • ETF & Index Investments • BlackRock Alternative Investors • Global Trading • BlackRock Investment Institute & BlackRock Sustainable Investing

Investment Platform

Risk and Quantitative Analysis (RQA) • BlackRock Investment Stewardship (BIS)

Client Departments

Regions

US & Canada • Europe, Middle East & Africa (EMEA) • Asia Pacific (APAC) • Latin America

Global Segments

Official Institutions • Financial Institutions Group • Global Consultant Relations • Strategic Partner Program

Specialized Departments

BlackRock Solutions • Financial Markets Advisory (FMA)

Operating Platform

Aladdin Product Group • Technology and Operations • Global Product Group

Corporate Platform

Corporate Strategy • Global Marketing • Human Resources • External Affairs • BlackRock Platform Innovation • Finance • Corporate Communications • Legal & Compliance • Internal Audit

Firmwide AUM by Client Type

Client Type	Assets (in \$millions)
Commingled Funds	3,799,171
Corporation	1,691,882
Foundation/Endowment	34,850
Government Agency	356,018
Health Care	35,561
High Net Worth	120,497
Official Institutions	240,531
Pensions	1,939,045
Public Fund	28,092
Subadvisory	240,391
Union/Industry	26,932
Other	1,056,538
Total	9,569,512

Source: BlackRock. As of 31 March 2022

II. Diversity, Equity & Inclusion (DEI) and Sustainability Overview

DEI at BlackRock

Our Global Strategic Framework: To Advance Diversity, Equity and Inclusion Holistically

Our intent is to embed a DEI-mindset into everything we do – including how we develop our people, evolve our culture, operate our business, and engage with clients and broader communities.

Demonstrate leadership commitment and accountability

1

Our own talent & culture across the globe

Build, develop and retain a diverse talent pipeline

Foster a connected culture

2

Our role as a fiduciary on behalf of our clients

Respond to our clients' needs around DEI

Develop products that focus on the "S" in ESG

3

Policy and social impact in underserved communities

Invest in the long-term success and sustainability of underserved communities

Key enablers

DEI expertise and DEI champions & resources

Data analytics, insights and thought leadership

Strategic communication (internal and external)

Global DEI Governance and Infrastructure Model

Global DEI Steering Committee (GDSC): Accelerates the pace of progress against BlackRock's multi-year, global DEI strategy



Collectively, the 425 plus leaders of the Global DEI Teams propel the DEI strategy and initiatives through firm's businesses by way of Drivers, Enablers & Advocates

Drivers: accountable to driving the strategic vision into the business

- **Global DEI Team:** Twelve-person team at the heart of DEI lead by Michelle Gadsden-Williams, Global Head of DEI ~ **12**
- **GDSC & Regional Working Groups:** Aside from meeting bi-monthly, new in 2022 are regional GDSC working groups to successfully drive local priorities given country-specific diversity complexities and nuances ~ **26**
- **GEC DEI Sub-committee:** Composite of GDSC & GEC members that meet more regularly to initiate actions of the larger GDSC group ~ **8**
- **GEC Talent Sub-committee:** Make decisions related to firmwide people processes, focus on talent practices, manager and employee development, Future of Work, DEI, and well-being ~ **13**
- **DEI ExCo leads:** ExCo decision makers who develop, drive and are accountable to the DEI action plan for their business (with COO & HR) ~ **40**
- **DEI Business leads:** MD or Director within in the business that drives engagement focused on building the culture through DEI programs ~ **80**
- **DEI Business Sub-committees:** Organically formed groups that help to execute DEI initiatives within their business function ~ **100+**

Enablers: support the DEI strategy and action plans with drivers

- **Human Capital Committee:** Helps to shape the firm's talent, culture and employee experience while cascading key DEI messages and actions through the business ~ **33**
- **COO's or C20:** Help to scale operational execution of the action plans ~ **20**
- **HR Senior Leaders:** Ensures equitable talent practices and partners with ExCo & COO to drive DEI action plans within a business ~ **90+**

Advocates: represent the DEI strategy with employees and clients

- **Employee Networks:** Provide feedback loop on DEI on plans and actions
- **DEI Client Ambassadors:** Help scale the DEI strategy to employees & clients

2022 DEI Priorities

Representation & Advancement

- Increase representation of women, Black and Latinx professionals with equal emphasis on attraction, development, advancement and retention
- Increase focus on global dimensions of diversity by using our self-id campaign (e.g., Disability, LGBTQ+, Socio-economic status, etc.)

Inclusive & Equitable Experience

- Support an inclusive environment and reduce employee experience gaps in the context of geopolitical uncertainty, a return to office through our Future of Work pilot, and continued pandemic restrictions in some locations
- Cultivate a more inclusive and equitable work environment with a focus on people manager training and scaling tEquitable
- Continue delivering leadership development programs (BLF, LLF, PROPEL, WIN MD Summit and Sponsorship)

Accountability

- Achieve representation goals through hiring, promotion & retention
- Continue business-level DEI accountability and increase focus on people manager accountability through the performance management process

Partnerships across BlackRock

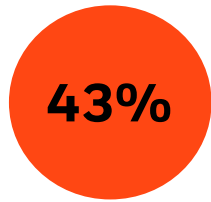
- Continue to support the growth of the Diverse Manager and Diverse Broker Programs
- Partner with client teams to respond to client requests and needs around DEI
- Conduct DEI/Racial Equity Assessment
- Increase our focus with diverse suppliers and vendors

DEI Governance Models

- Leverage the existing governance model (specifically the Global Diversity, Equity, & Inclusion Steering Committee) as a means to push more firm-wide progress and collective ownership across the firm
- Continue to invest in our employee, professional and social impact networks



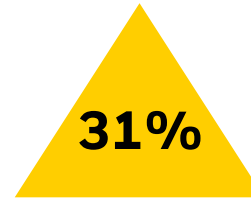
Diversity in Action at BlackRock



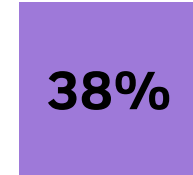
**Female
Employees**



**Female
New Hires
2021**



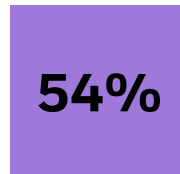
**Female
Senior
Leaders**



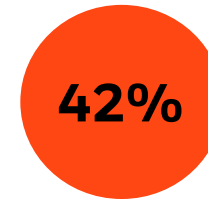
**Female
Senior Leader
New Hires 2021**



**Female
Board of
Directors**



**Ethnic Minority
New Hires
2021 US**



**Ethnic
Minority
Employees
US**

Source: BlackRock as of January 10, 2022.

Sustainability at BlackRock

Sustainable investing at BlackRock

Investment Management

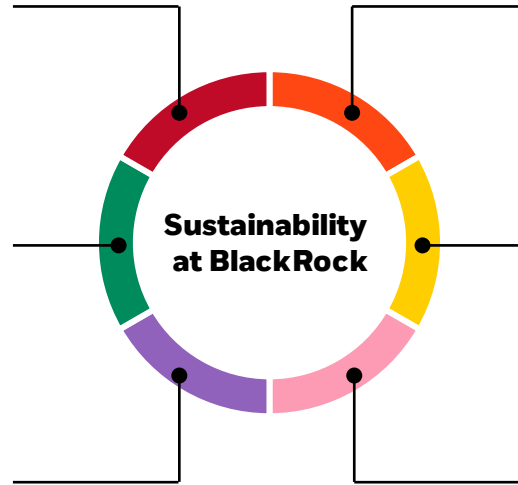
Integration of ESG insights and data into our active and advisory investment processes and portfolio construction.

Data & Technology

Aladdin® allows investors and clients to understand and manage portfolio risk.

Company Engagement

Fundamental investors and Investment Stewardship team engage with companies we invest in on behalf of our clients on sustainability-related issues that impact long-term financial performance.



Sustainable Investment Solutions

Extensive platform encompassing index and active funds across all asset classes, designed to help clients meet their sustainability and financial objectives.

ESG Research

Dedicated sustainable research team focuses on the link between ESG and financial materiality, producing insights that drive investment processes.

Transparency & Reporting

We want clients and investors to clearly see the sustainability risks of their investments. We provide this information for all of our funds, where data is available, whether or not it is a sustainable strategy.

BlackRock by the numbers

\$486 billion

Assets under management in dedicated sustainable strategies*

\$3.21 trillion

Assets incorporate ESG insights

300+

Sustainable ETF, Index Mutual Funds & Active funds

3,500+

Annual stewardship engagements

Source: BlackRock Sustainable Investing, global statistics as of March. 31, 2022. All values in \$USD. * Comprised of ESG Broad, ESG Thematic, Impact strategies and selected priority screened products.

Our sustainability leaders



Paul Bodnar,
Global Head



Stephane Lapiquonne,
EMEA



Emily Woodland & Geir Espeskog, APAC



Chris Weber & Eric van Nostrand,
Research



Jessica Huang,
Americas Solutions



Meaghan Muldoon,
Sustainable Investment Innovation



Beatriz Da Cunha,
COO

BlackRock seeks to provide ease of access and choice for every kind of sustainable portfolio

Investors now have a comprehensive range of solutions to transition their entire portfolio into sustainable investments, irrespective of a client’s sustainable and financial goals.

Motivation	Avoid	Advance		
Approach	Screened	ESG		Impact
		Broad	Thematic	
Criteria	Exclude controversial activities and companies that benefit from them, as defined by BlackRock’s Baseline Screens	Strategies with an explicit ESG objective which may include a targeted quantifiable ESG outcome. Broad strategies do not choose between E, S, or G, but rather target outcomes across all three.	Strategies that capitalize on long-term transformative industry or societal trends through pursuit of specific Environmental, Social, or Governance themes. Thematic strategies target outcomes in E, S, or G.	Strategies where investments are made with the intention to generate positive, measurable social and environmental impact alongside a financial return. Investment process must adhere to the Operating Principles for Impact Management ¹
Additional Detail	<p>Baseline screens adopted to address majority of client requests:</p> <ul style="list-style-type: none"> Controversial weapons Thermal coal and tar sands Civilian firearms Tobacco <p>Further exclusionary screens may be applied on a tactical basis.</p>	<p>Examples of Potential outcomes:</p> <ul style="list-style-type: none"> Improved ESG score² versus a benchmark Invest in issuers in the top % of ESG scores % of portfolio revenues aligned to Sustainable Development Goals (SDGs) (across E, S and G issues) Targeted E, S and G metrics/outcomes at the issuer level 	<p>Examples of Environmental focus:</p> <ul style="list-style-type: none"> Climate Transition Circular Economy Sustainable/Clean Energy <p>Examples of Social focus:</p> <ul style="list-style-type: none"> Diversity & Inclusion Human Capital 	<p>Strategy must demonstrate the investor’s contribution to the achievement impact.</p> <p>Examples of investor contribution:</p> <ul style="list-style-type: none"> Capital directly invested in capital-constrained, minority-owned enterprises Strategic engagement leading to portfolio companies’ increased impact <p>Investment strategy not only aligns with the SDGs but also seeks to <i>advance</i> the SDGs.</p>

¹The Impact Principles is a framework for portfolio managers to ensure that impact considerations are purposefully integrated throughout the investment life cycle. Source: <https://www.impactprinciples.org/9-principles>. ²Based on data provider or in-house ESG scoring methodology. Source: BlackRock Sustainable Investing, December 2021. There is no guarantee that a positive investment outcome will be achieved. The above information is for illustrative purposes only and should not be interpreted as investment advice or recommendation.

Sustainability is integrated throughout our organization

BlackRock Leadership

BlackRock Board of Directors

BlackRock Global Executive Committee (GEC)

Dedicated expertise on Sustainability

BlackRock Sustainable Investing	BlackRock Investment Stewardship	Corporate Sustainability	Sustainable Portfolio Management
Global team responsible for firmwide ESG integration, sustainable solutions, research and analytics	Fundamental investors and Investment Stewardship team engage with companies we invest in on sustainability-related issues that impact long-term financial performance	Partners with business units to integrate sustainability into our own business practices and communicate progress	Portfolio managers and researchers focused on sustainable investing within their asset class

ESG operational leads and content experts sit within each division to establish specific processes and strategies

Alternatives	Cash Management	Equities	Fixed Income	Multi-Asset	ETF & Index Investments	Advisory
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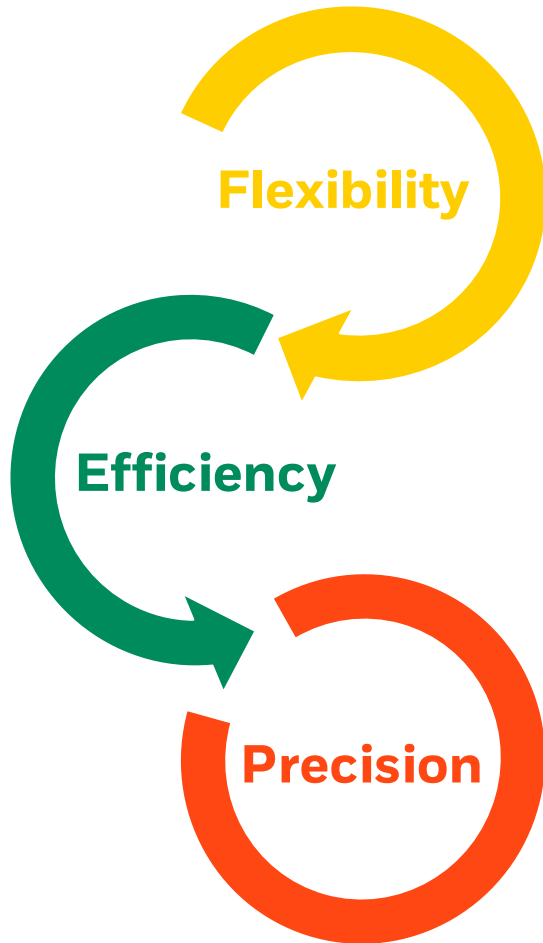


Investment teams directly benefit from firm-wide resources

Data & Technology	Risk & Quantitative Analysis	Aladdin	BlackRock Investment Institute	Trading and Liquidity Strategies	Public Policy
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Source: BlackRock Sustainable Investing, December 2021. For illustrative purposes only.

III. Index Investing Overview



- ▶ Provide you with a broad range of market exposures together with a flexible range of product features
- ▶ An evolving range of products and strategies designed to help meet your needs today and in the future
- ▶ Partner with you to address your unique investment challenges through our customisation and solutions capabilities
- ▶ Disciplined investment approach focused on delivering optimal tracking, consistent returns and lowering the total cost of ownership
- ▶ Scale, breadth and diversity of our clients and strategies helps us to minimize transaction costs and seek to preserve the value of your investments
- ▶ Design products and strategies that consider the factors that impact your investment results from tax-efficiency to access and liquidity
- ▶ Our investment professionals are focused on delivering performance and efficient outcomes
- ▶ Extensive trading, risk and operational platform positioned to seek efficient tracking as well as enhanced returns
- ▶ Investment track record spanning four decades that has seen investors entrust us with \$6.37 trillion of assets under management as of 31 March 2022

Seeking to deliver high quality, cost-effective access to a broad range of market opportunities

BlackRock's Index Platform: Global leader in Index assets¹

Focus on consistent performance with efficient outcomes for clients

- Thousands of skillful and thoughtful decisions made annually in each portfolio in seeking to achieve the precise performance clients demand

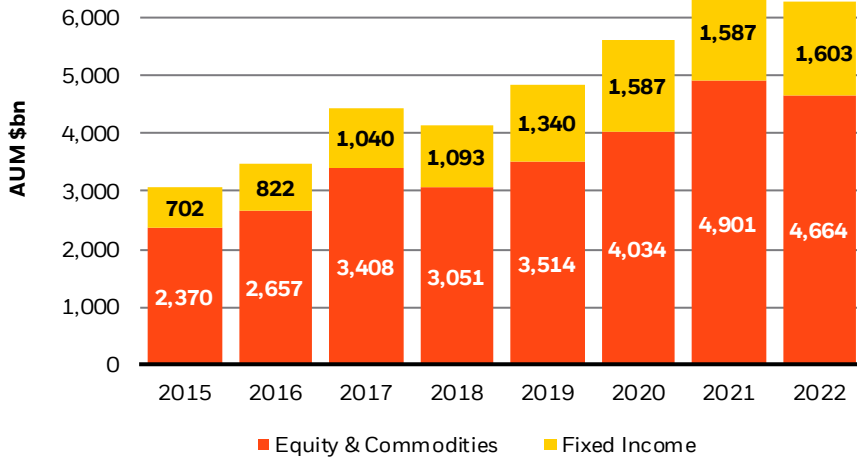
Extensive and flexible platform for index strategies

- Over 2,500 funds managed against 900+ benchmarks, including: factors, ESG, liquidity strategies and index plus

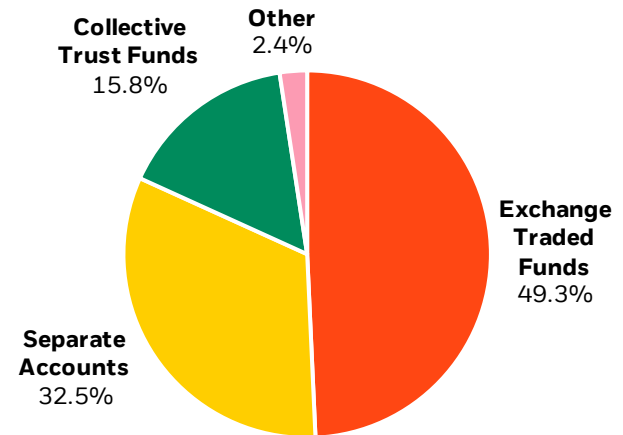
Sophisticated technology and risk management

- The Aladdin® platform seamlessly integrates the capabilities of our dedicated portfolio management, research, trading and risk management teams

**Total indexed assets of
\$6.37 trillion 2022**



**Distribution of assets by
vehicle type as of 2022**



Source: BlackRock as of 31 March 2022
1 In terms of AUM. Source: Pensions & Investments
All dollar amounts referenced in this presentation are in USD

Why BlackRock for indexing?

As a BlackRock index client, you receive an excellent indexing experience with the following:

1	Index Research Expertise	Detailed knowledge of index methodologies and experience with projecting index changes
2	Skilled Portfolio Management	Dedicated portfolio managers with deep local market and index expertise
3	Extensive Trading Capabilities & Research	Scale and breadth of our global trading platform helps minimize transaction costs
4	Sophisticated Operating Platform	Proprietary end-to-end Aladdin® platform integrates portfolio management, risk analytics, trading and operations
5	Robust Securities Lending Benefit	Global focus on extracting premiums and negotiating stock loans in order to add value to index portfolios

Leveraging the Power of the BlackRock Platform

<p>Risk & Quantitative Analysis</p> <p>Specialized Risk & Quantitative Analysis Team (RQA) monitors risk factors globally on a continuous basis</p>	<p>Fiduciary</p> <p>With no cross subsidization between business units or affiliate broker-dealers acting as principal, we have an investment-only focus</p>	<p>Proxy Voting Choice</p> <p>Eligible institutional index commingled trust fund and separate account clients can leverage BlackRock Investment Stewardship for proxy voting or choose to own their proxy voting</p>	<p>BlackRock Investment Institute</p> <p>Internal forum facilitates idea sharing, debates economic implications and publishes firm wide thought leadership</p>	<p>Index Provider Relationships</p> <p>Allows for access to a broad index data set, with the ability to customize indices as needed. BlackRock acts as a steward of the indexing ecosystem</p>
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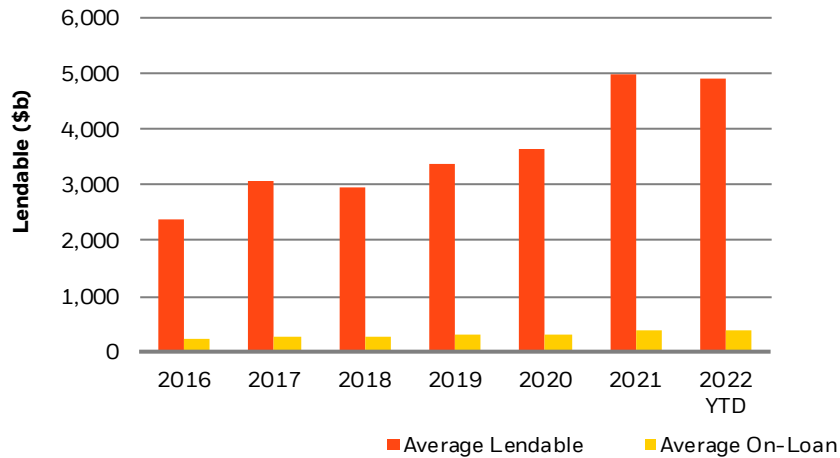
As of 31 December 2021

BlackRock's Securities Lending program

BlackRock's approach

- BlackRock brings an investment management approach to securities lending, applying risk management, proprietary technology, and the benefits of integration across BlackRock's trading and liquidity functions and affiliation with portfolio management teams

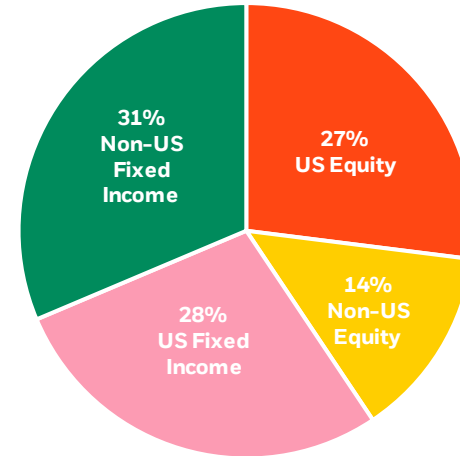
BlackRock lendable and on-loan – 7 year history



BlackRock's scale

- Lendable securities: \$4.9 trillion*
- Securities on-loan: \$389 billion or ~8% of lendable securities*
- Active in 33 lending markets around the globe*

On loan balances by asset type*



BlackRock's Securities Lending program has produced positive monthly lending income for every eligible fund and client since the inception of our lending program in 1981**

Source: BlackRock.

*Data from 1/1/2022 – 3/31/2022

** Please note, inception of our program in 1981 reflects that of our predecessor firm, Barclays Global Investors. Historical performance may be provided upon request

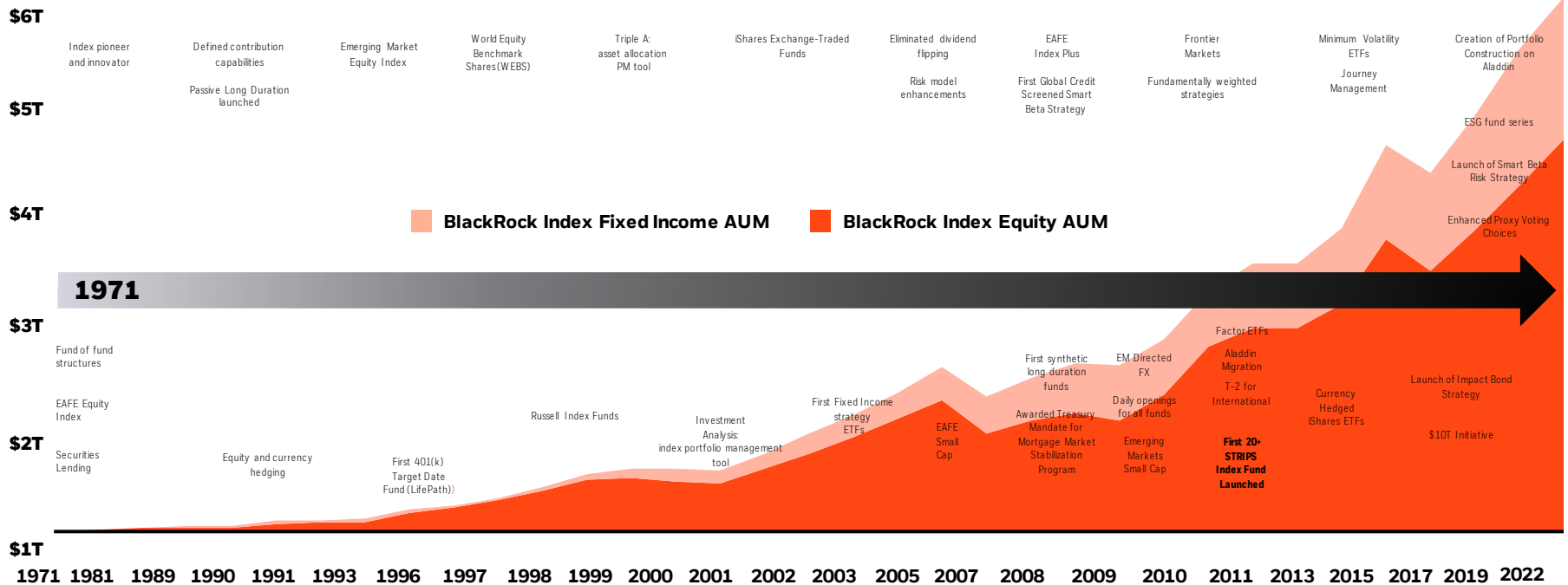
Past performance is no guarantee of future results.

50 years of experience driving index forward

Creating solutions so our clients have access to high quality index exposures

- Drive the industry forward through our ability to create specialized, innovative investments afforded by our scale & depth of expertise
- Forge new ground for clients — a history of being first to market with new investment ideas
- Evolve capabilities to continuously deliver on emerging trends — smart beta, global benchmarking, overlay strategies
- Serve as an index advocate on behalf of asset owners and act a key partner to index providers seeking our practitioner knowledge

50 years of Index Equity – Continual evolution of products, technology and capabilities



AUM as of 31 March 2022

ETFs and Index Investments (EII) Investments Pillar

Salim Ramji
 Global Head of ETFs and Index Investments

Investments Pillar

Samara Cohen
 Chief Investment Officer of ETF and Index Investments

Index Equity

Jennifer Hsui, CFA, Global CIO and Co-Head of Index Equity

Paul Whitehead, Global Co-Head of Index Equity

Global Research

Nogie Udebulu
 Global Head of
 EII Research

**Index & Quantitative
 Research**

+ 15 Researchers

Analytics Research

+ 39 Research Officers

Strategy

Scott Dohemann, CFA

Head of
 U.S. Product Strategy
 + 7 Strategists

Office of the CIO

Tim Parsons, CFA
 Deputy CIO

+ 4 Portfolio Engineers

Jonathan Van Ginneken
 Head of Investment
 Innovation &
 Global Index Plus

+ 5 Portfolio Engineers

Steven White

Head of Performance,
 Risk & Index Advocacy

Portfolio Engineering

Americas

Amy Whitelaw
 Head of Americas
 Portfolio Engineering

Suzanne Henige, CFA*
 Head of US-listed ETF
 PE
 (US, Developed,
 Emerging)

+ 17 Portfolio Engineers

Matthew Waldron, CFA
 Head of Developed &
 Emerging Markets
 Institutional PE

+ 10 Portfolio Engineers

Peter Sietsema, CFA
 Head of Sub-Advised, US
 Institutional, and
 Canada/LatAm ETF PE

+ 17 Portfolio Engineers

Index Asset Allocation, Commodities, Synthetics

Greg Savage, CFA
 Head of Global IAA,
 Commodities & Synthetics

Peter Tsang
 Head of Americas IAA
 + 5 Portfolio Engineers

Steve Walker
 Head of EMEA IAA
 + 6 Portfolio Engineers

Elliott Char, CFA
 Head of Commodities &
 Synthetic Indexing
 + 1 Portfolio Engineers

Orlando Montalvo
 Head of FX & Synthetics
 + 3 Portfolio Engineers

Platform

Rajesh Nagella
 Global Head of EII
 Investment Process & Platform
 + 5 Platform Engineers

Transition Management

Jessica Irschick
 Global Head of
 Transition Management
 + 58 Transition Specialists

As of 31 March 2022. *Asterix indicates location in Atlanta (total EII team of sixteen investment professionals stationed in Atlanta).

Americas Fixed Income Index Team

Americas Fixed Income

Portfolio Management

Jay Mauro
Head of San Francisco PM

Karen Uyehara
Deputy Head of San Francisco PM

Multi-Sector/Rates/MBS

Jasmita Mohan
Portfolio Manager
Multi-Sector

Marcus Tom
Portfolio Manager
Multi-Sector/MBS

Joseph Maciunas
Portfolio Manager
Multi-Sector

Wes George
Portfolio Manager
Multi-Sector/MBS

Chandler Grinnell
Portfolio Manager
Multi-Sector/Rates

Yang He
Portfolio Manager
Multi-Sector/MBS

William Chen
Portfolio Manager
Multi-Sector/Rates

Htet Htet Win Pyone
Portfolio Manager
Multi-Sector/MBS

Clay Armistead
Portfolio Manager
Securitized Credit

Kent Yamane
Portfolio Manager
Securitized Credit

Mark Buell
Portfolio Manager
US Govt Bonds

Credit/Emerging Markets

Jonathan Graves
Sr. Portfolio
Manager
Corporate Credit

David Dulski
Portfolio Manager
High Yield Credit

Allen Kwong
Portfolio Manager
Corporate Credit

Aaron Aguiar
Portfolio Manager
High Yield Credit

Cole Bushman
Portfolio Manager
Corporate Credit

Ryan Connors
Portfolio Manager
High Yield Credit

Danny Ng
Portfolio Manager
Corporate Credit

Meher Habib
Portfolio Manager
High Yield Credit

Sherrie Deng
Portfolio Manager
Corporate Credit

Fan Xu
Portfolio Manager
Corporate Credit

Spencer Sheff
Portfolio Manager
Corporate Credit

Jesse Kang
Portfolio Manager
Corporate Credit

Cynthia Fan
Portfolio Manager
Corporate Credit

Guillermo Perez
Portfolio Manager
Corporate Credit

Gabe Shipley
Portfolio Manager
Emerging Markets

Emily Freeman
Portfolio Manager
Emerging Markets

Dandi Li
Portfolio Manager
Emerging Markets

Muni/Canada/ESG

Joel Silva
Sr. Portfolio
Manager
Muni/Canada/ESG

Rena Patel
Portfolio Manager
Municipals

Jermaine Pierre
Portfolio Manager
Canada

Lip Tong
Portfolio Manager
Canada

Tao Chen
Portfolio Manager
Municipals

Brian Chi
Portfolio Manager
Municipals

Brian Venter
Portfolio Manager
ESG

Jimmy Wang
Portfolio Manager
ESG

Technology

PM Architecture

Will Flanagan
Global Head of PM
Architecture

Justin Graham
Head of Bond ETF
Architecture

Technology

+ 11 Engineers

Research

Global Research

Ignacio Blanch
Head of Systematic
Fixed Income Research

Research

+ 5 Research Analysts

Strategy

Americas

Matt Tucker

Kathryn Donovan

Alli Leiva

Gordon Readey

Laura May

Chloe Yeh

As of 31 March 2022. Subject to change.

Process and Philosophy

Focus on efficient performance outcomes

Supported by proprietary Aladdin® technology

- BlackRock's disciplined index portfolio management is focused on optimally balancing return, risk and cost in seeking to deliver effective outcomes to clients
- Our portfolio managers specialize in financial markets, supported by BlackRock's extensive global trading platform and market leading analytics, to provide a high-quality index experience



What is Aladdin®?

- A sophisticated operating system that connects information, people and technology to support the entire investment lifecycle

Aladdin® helps solve investing challenges:

- Technology does the 'heavy-lifting', enabling portfolio managers to focus on key drivers affecting portfolio return
- Offers process scalability and efficiency
- Includes consistency across product types and functions

Index Investment Management Cycle – dedicated expertise and resources

Performance & Oversight

- Review cumulative effect of investment decisions to help identify factors contributing to/detracting from portfolio performance
- Risk & Quantitative Analysis Team (RQA) monitors dozens of risk factors globally on a continuous basis
- **Aladdin Advantage:** Portfolio Management tools are integrated on the same platform as risk monitoring tools, making it easy for RQA to provide a third-party risk assessment on portfolios

Efficient Trading

- Global trading infrastructure allows for real time oversight of all trades in all regions
- Smart trading strategies are designed to access optimal liquidity
- Industry's largest internal marketplace for potential netting of client flows
- Focused trading research and systems
- **Aladdin Advantage:** Extensive global trading platform helps ensure low costs and optimal access to liquidity

Benchmark Knowledge

- Detailed knowledge of index methodologies
- Experience with predicting and projecting index changes
- Focused on optimal treatment of corporate actions
- Continual research into index events
- **Aladdin Advantage:** Proprietary Aladdin 'Index Pro' application makes analyzing benchmark changes a clean and efficient process

Portfolio Construction

- Significant investment in technology
- Market leading portfolio and risk tools provided by our Aladdin® platform
- Integrated cost, risk, and liquidity analysis
- Access to sophisticated optimization tools
- **Aladdin Advantage:** Custom 'Portfolio Construction' application built by our Portfolio Management Team designed specially for index management



Index Investment Management Cycle

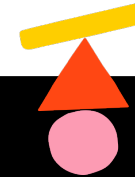
Benchmark knowledge

Our index platform has a dedicated internal global index research team unique to BlackRock; they are essential to the portfolio management process



Day-to-Day Benchmark Focus

- **Team works directly with all our index vendors to:**
 - Perform the data-intensive process of combing daily index loads to provide clean fund snapshots
 - Project daily changes and rebalances
 - Field all index data requests across the firm



Long-Term Rebalance Projections

- **All index families have a different cadence of rebalance**
- **Team works to predict what will be added or deleted from various indices in advance of a rebalance**
 - This helps portfolio managers to have a thoughtful opinion about what will happen on index effective date
 - Enables portfolio managers to monitor the applicable assets and their liquidity profiles. This influences our ultimate trade strategy

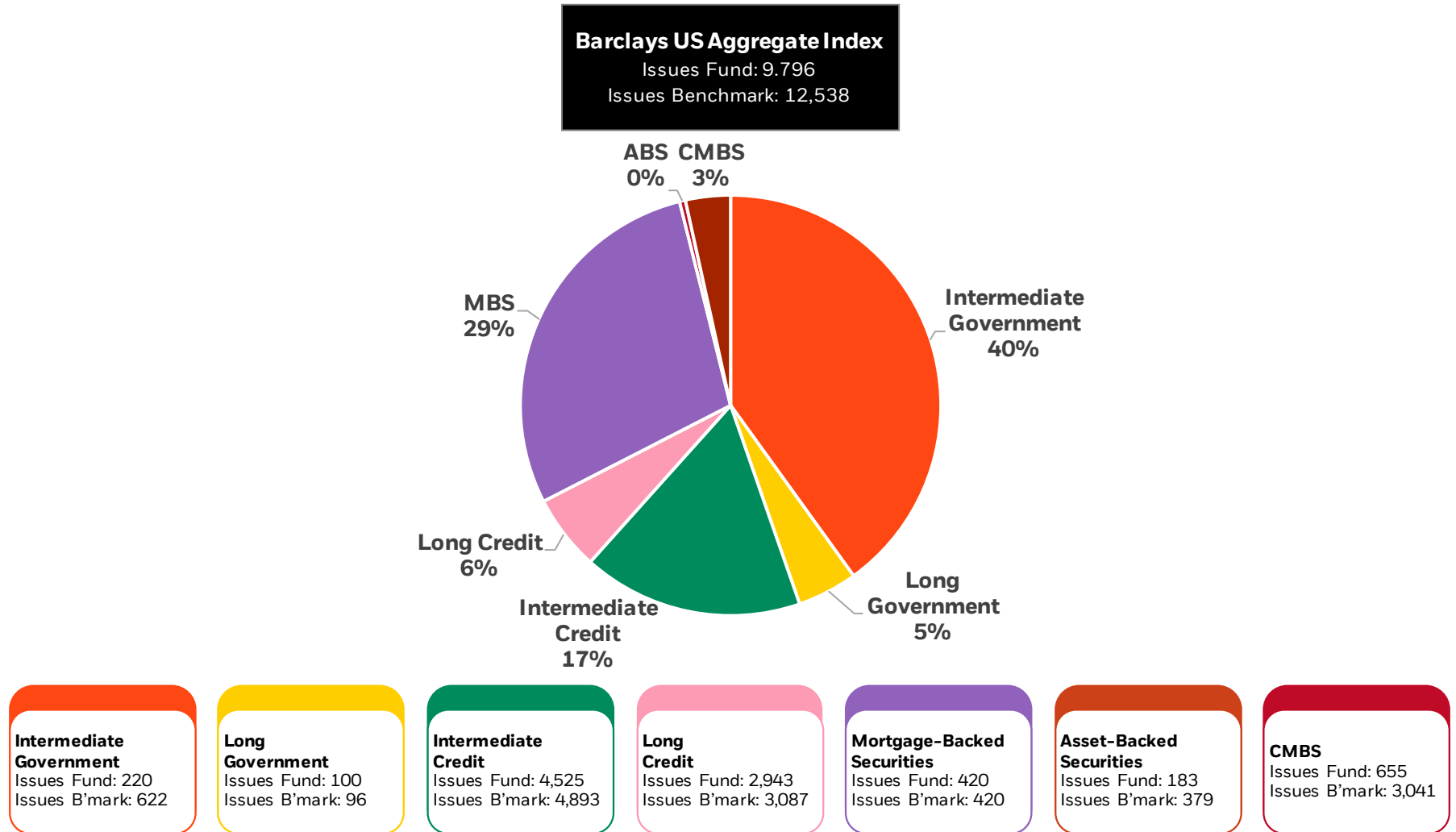
Index Methodology Recommendations

The index research team coordinates across BlackRock and works closely with index providers to drive methodology improvements to the indices we utilize in our strategies

ALADDIN Tools: Index Pro

Modular Fund Design

BlackRock's modular fund design leverages scale and facilitates crossing opportunities



Source: Barclays and BlackRock as of March 31, 2022
Funds are BlackRock CTFs. For illustrative purposes only.

'Portfolio Construction' using the power of Aladdin® technology

Our Portfolio Construction application was built for managing risk in index funds:

- Brings together all index data, portfolio attributes, risk and transaction cost models and optimization tools
- By leveraging a tolerance and exceptions-based framework, portfolio managers are able to focus on the items that most influence portfolio returns
- Portal for trade approval and delivery of orders to our global trading teams

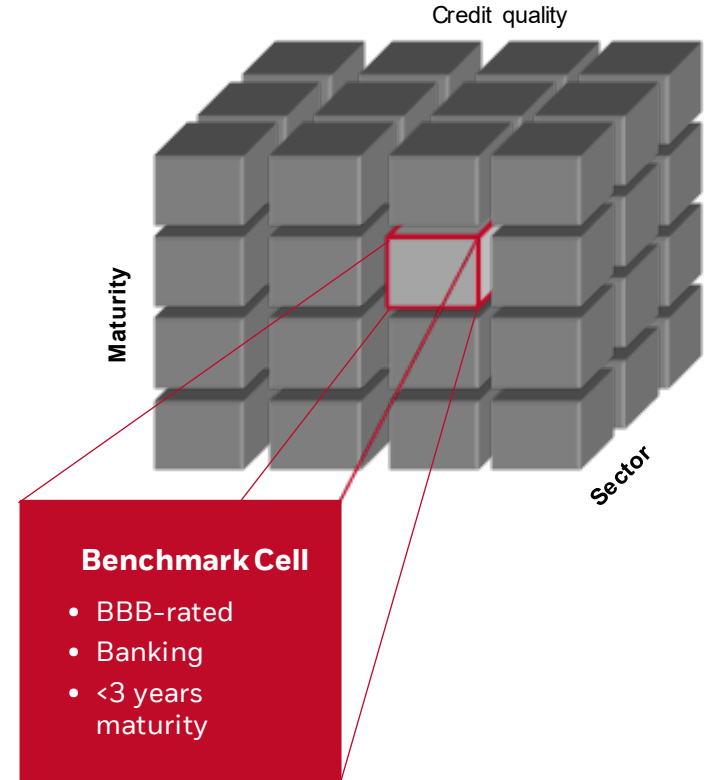
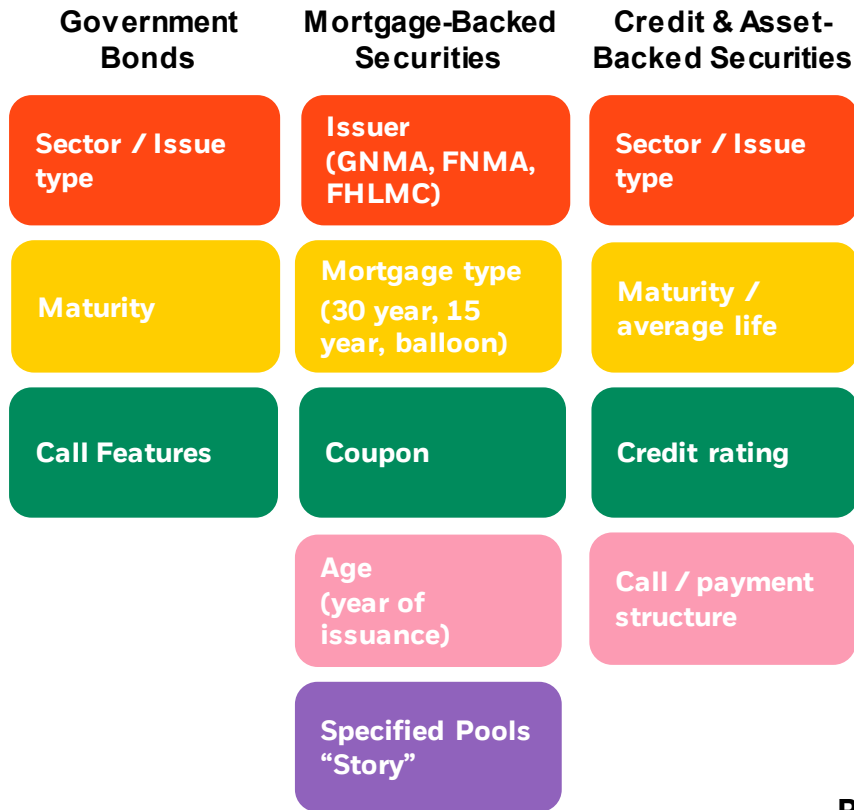
A look inside: 'Portfolio Construction'

The screenshot displays the Aladdin Portfolio Construction interface. The top section, 'Portfolio Summary View', provides a high-level overview of the portfolio's performance and risk metrics. It includes columns for various risk measures such as Incremental Risk, Sub risks, and Mod risk, along with their respective values and trends. The bottom section, 'Detailed Holdings View', lists individual securities held within the portfolio, including their ticker symbols, names, and key attributes like maturity and coupon rates.

Screenshots are for illustrative purposes only. References to specific companies are included solely to help illustrate the portfolio construction process and should not be construed as a recommendation to buy or sell any securities. Actual BlackRock portfolios may or may not currently hold positions in the securities mentioned

Portfolio Construction

Stratified sampling: Dividing the various indexes into subsets (cells) based upon relative parameters



Portfolios are constructed by sampling bonds from each index cell

Source: BlackRock. For illustrative purpose only and subject to change.

Portfolio Construction

Building a corporate bond index portfolio

Construction process

Part 1

Stratify Universe by Risk Cells

- Sector
- Industry / sub-sector
- Maturity
- Credit
- Structure

Part 2

Optimize by Risk Factors

- Key Rate Duration
- Convexity
- Duration Times Spread
- T-Cost

Example: US Intermediate Investment Grade Corporate Bond Index Fund (illustrative)

Index (*Barclays Intermediate Credit Index*)

Index (4,893 bonds)

BLK(4,525 bonds)

Sector (example: *Industrials*)

Index (2,414 bonds)

BLK(2,249 bonds)

Sub-Sector (example: *Energy*)

Index (305 bonds)

BLK(280 bonds)

Maturity (example: *7-10 years*)

Index (74 bonds)

BLK(64 bonds)

Credit Rating (example: *BBB*)

Index (53 bonds)

BLK(45 bonds)

Structure (example: *Make Whole Call*)

Index (15 bonds)

BLK(7 bonds)

Source: BlackRock; data as of 31 March 2022. Example for illustrative purposes only. And does not depict actual Collective Trust Fund data. It is shown to demonstrate the investment process.

Efficient Trading:

Adding value through core activities

An Industry Leader

Tier 1 client to all major counterparties, giving us deep access to liquidity
Trader expertise across all major asset classes with ~\$99.4T of annual volume (\$3.4T equity notional)

A Focus on Costs

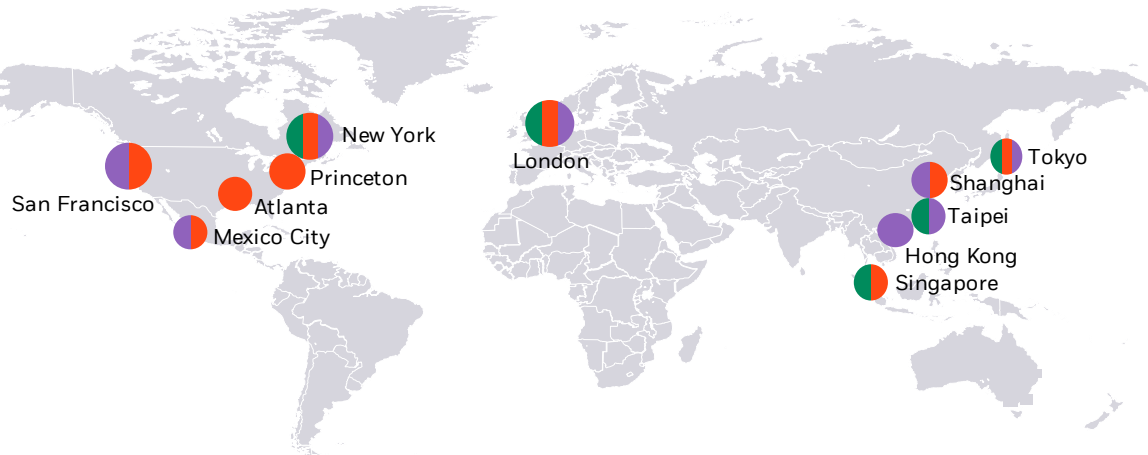
Large and diverse client base results in a robust marketplace for potential netting of client flows
Trading footprint allows us to negotiate extremely competitive commission rates

Research Driven

Comprehensive database of metrics, including a tick database and >\$185tn USD of trading history across >180mn transaction records

BlackRock's Global Coverage

24 hour a day, 5.5 days per week coverage



Color key
Fixed Income
Equities
Foreign Exchange

One Order Management System platform: Aladdin Dashboard
Regional hubs for each asset class with local market knowledge and sector expertise
Common technology enables us to pass the book with embedded business continuity plan

All data as of September 30, 2021; Figures show in USD; Source: BlackRock. Inclusive of internal crossing opportunities. BlackRock Execution Cost is the average difference between: the actual price achieved on the trade and the benchmark price. For Equity, BlackRock calculates Market Expected Cost using an average of multiple independent broker models. There is no guarantee that a positive investment outcome will be achieved. Subject to Change.

Scalable Trading Platform

Fully-integrated trading platform and risk analytics

- Collaboration between portfolio managers and traders on execution strategy
- Straight-through processing of investments, from order entry to trade execution to settlement



Screenshots are for illustrative purposes only

RQA Tools & Process

1

Ex-Ante Risk Measurement

Risk measurement tools

RQA seeks to provide accurate and appropriate risk measures for investment, liquidity and redemption risk

2

Risk Management

Appropriate levels of risk

RQA works with portfolio managers to achieve buy-in for risk and performance target and ensure risk taking is consistent with targets

3

Portfolio Name	As Of Date	Benchmark	NAV US\$ (000)
Portfolio A	30-Mar-2017	JACIGNIG	79,098.00
Portfolio B	30-Mar-2017	NOBENHTWD	49,868.00
Portfolio C	30-Mar-2017	IBALCXMUS	18,123.00
Portfolio D	30-Mar-2017	JACL_XM	2,750,499.00
Portfolio E	30-Mar-2017	LEH_AGG	175,788.00
Portfolio F	30-Mar-2017	LEH_AGG	2,062,868.00
Portfolio G	30-Mar-2017	3MSTLLIBOR	1,202,910.00

Risk/Return Awareness

Enhancing and assessing

Regular meetings between portfolio managers & RQA to ensure positioning is deliberate, diversified and scaled

4

Performance Attribution

Consistency and accuracy

RQA determines the degree of consistency between pre-trade analysis and actual performance

5

Performance Analysis

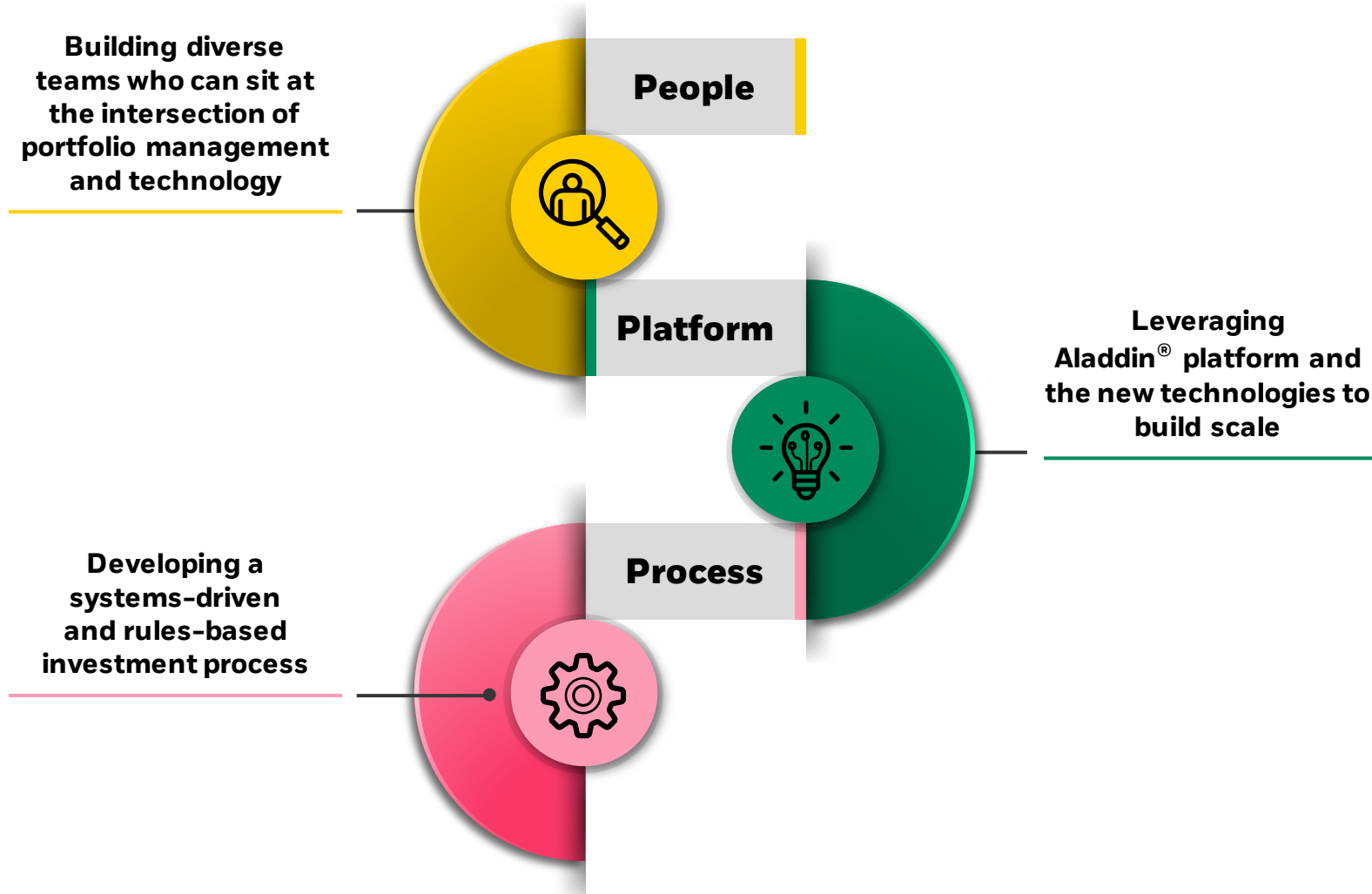
Measure of success

RQA, portfolio managers and senior leaders review performance relative to the benchmark, peers and comparable accounts in formal Investment Review Committee Meeting

Screenshots are for illustrative purposes only. Subject to change without notice

BlackRock's vision for the future of indexing

We continue to invest in a scalable investment engine through a focus on:

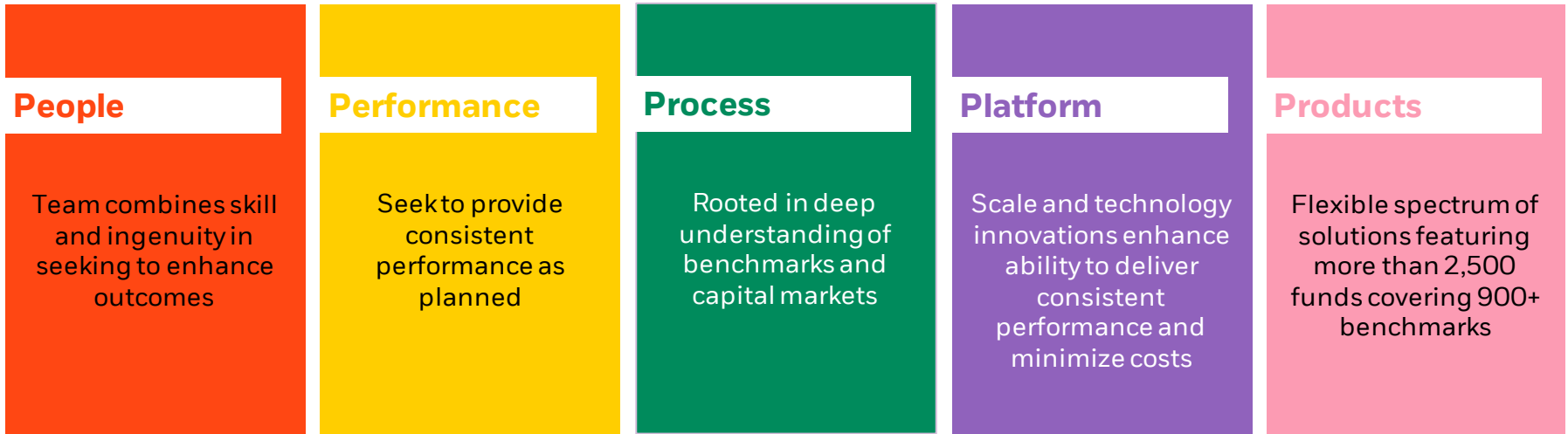


Key takeaway

Our approach to Index: anything but passive

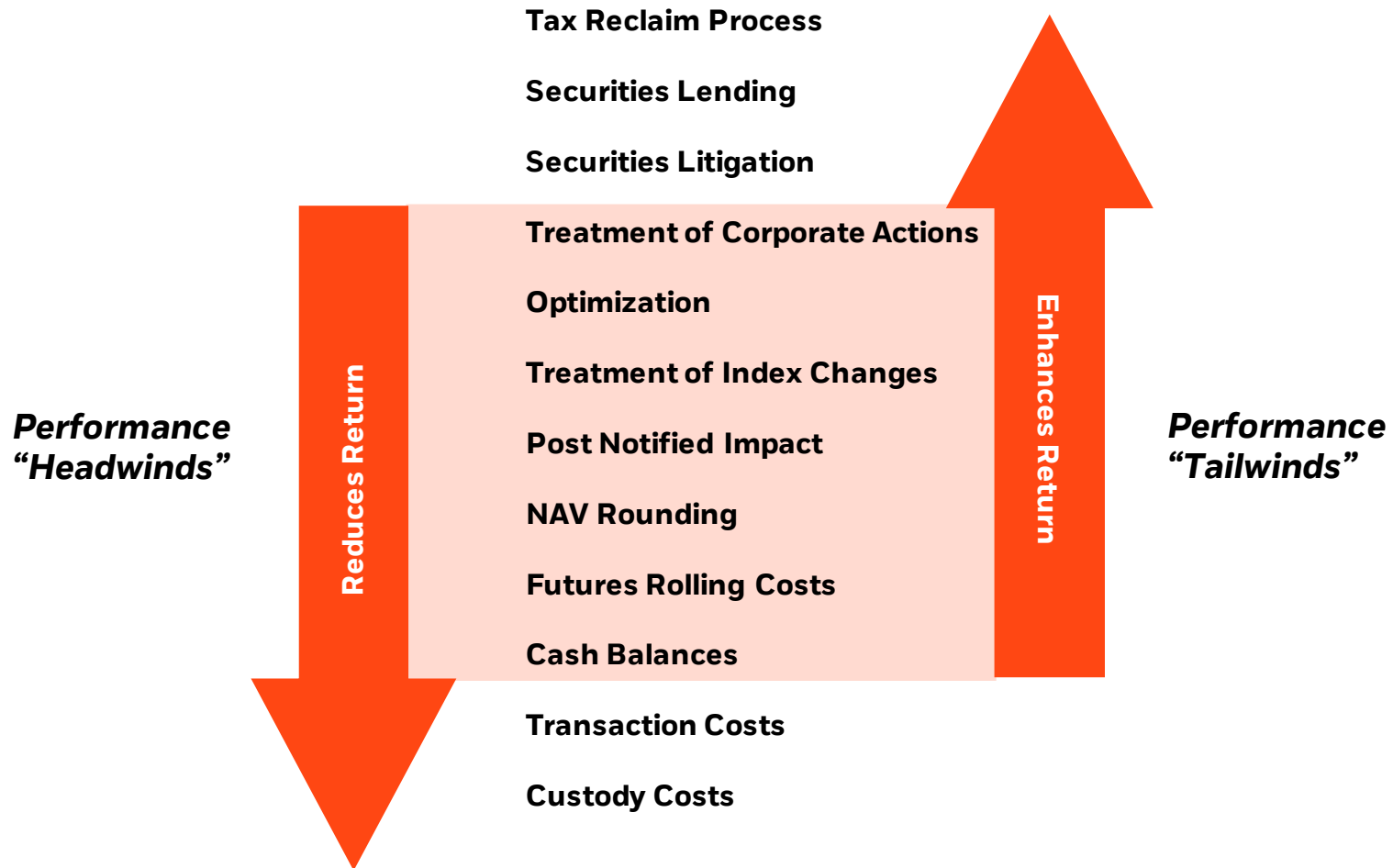
Investors today demand more efficient returns and innovative ways to use index products

BlackRock's Index approach is focused on:



IV. Fund Characteristics and Performance

Major sources of tracking error: Global & domestic index funds



U.S. Equities

Equity Index Fund

Equity Index Non-Lendable Fund

Russell 1000[®] Index Fund

Russell 1000[®] Index Non-Lendable Fund

Russell 1000[®] Growth Fund

Russell 1000[®] Growth Non-Lendable Fund

Russell 1000[®] Value Fund

Russell 1000[®] Value Non-Lendable Fund

Russell 2000[®] Fund

Russell 2000[®] Non-Lendable Fund

Russell 2000[®] Growth Fund

Russell 2000[®] Value Fund

Equity Index Fund Characteristics

Fund information

Benchmark	S&P 500® Index
Total fund assets	\$121.79B
Number of issues in fund	505
Number of issues in benchmark	504

Top 10 holdings

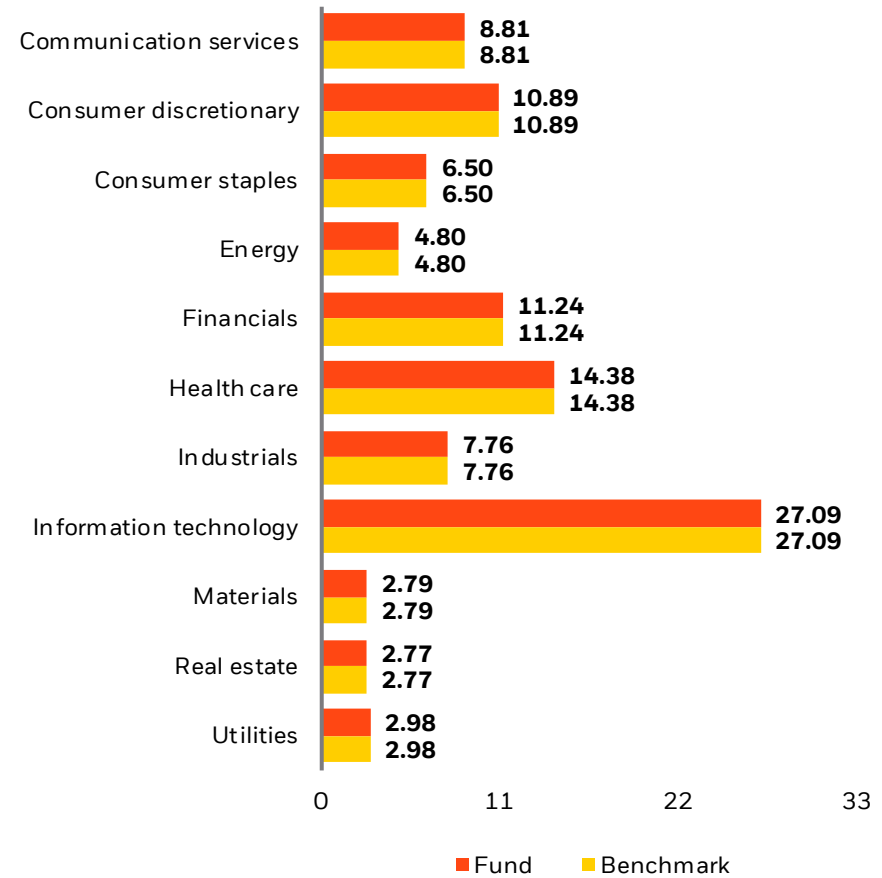
	Fund %	Index %
Apple Inc.	6.60	6.60
Microsoft Corporation	5.83	5.83
Amazon.com, Inc.	3.01	3.01
Alphabet Inc. Class A	1.96	1.96
Tesla Inc	1.82	1.82
Alphabet Inc. Class C	1.81	1.81
Berkshire Hathaway Inc. Class B	1.66	1.66
Johnson & Johnson	1.35	1.35
NVIDIA Corporation	1.34	1.34
UnitedHealth Group Incorporated	1.34	1.34

Fund inception date 31 December 1977

Data is used for analytical purposes only. Index data may differ to those published by the Index due to calculation methods. Breakdowns may not sum to 100 percent due to rounding, exclusion of cash, STIF and statistically immaterial factors. Portfolio holdings are subject to change and are not intended as a recommendation of individual securities.

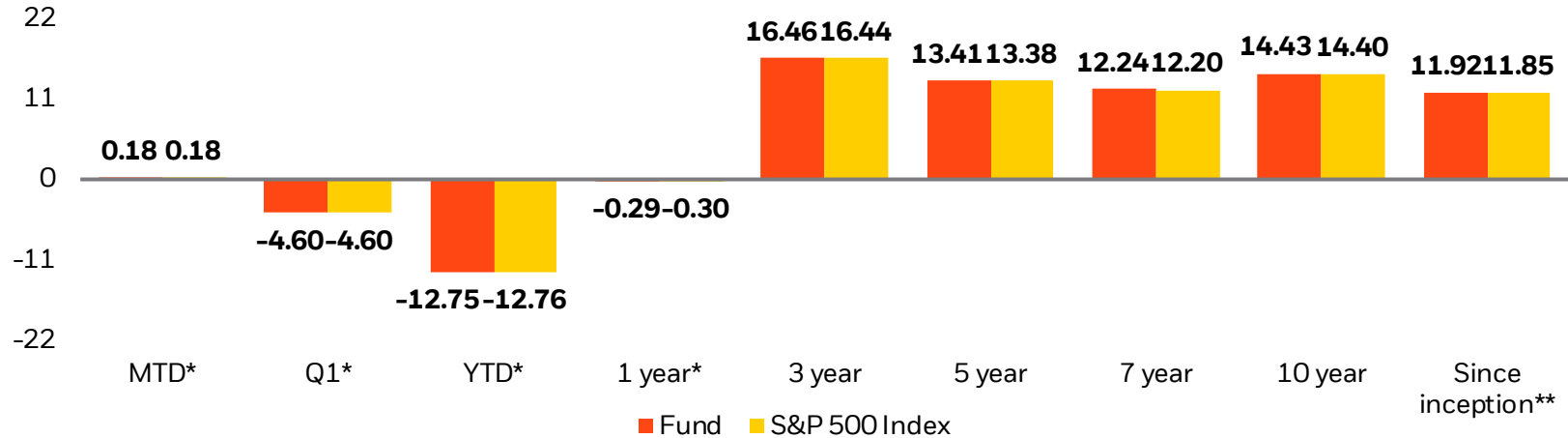
Sources: BlackRock, S&P Dow Jones Indices LLC

Sector diversification



Equity Index Fund Performance

Gross total return in USD (annualized* %)



	MTD* %	Q1* %	YTD* %	1-yr* %	3-yr %	5-yr %	7-yr %	10-yr %	Since incept %
Tracking Error***				0.00	0.02	0.02	0.03	0.02	0.07

* Period returns for less than a year are cumulative

** Fund inception date 31 December 1977

*** Value is based on trailing monthly observations

This information is unaudited, subject to change and intended for analytical purposes only. The Fund's net asset value does not include an accrual for the investment management fee but does include an accrual for fund level administrative costs and, if applicable, certain third party acquired fund fees and expenses. If the Fund's net asset value did include an accrual for the investment management fee, the Fund's returns would be lower. **Past performance is not necessarily an indicator of future performance.** Indexes are unmanaged. It is not possible to invest directly in an index.

Sources: BlackRock, S&P Dow Jones Indices LLC

Equity Index Non-Lendable Fund Characteristics

Fund information

Benchmark	S&P 500® Index
Total fund assets	\$29.84B
Number of issues in fund	504
Number of issues in benchmark	504

Top 10 holdings

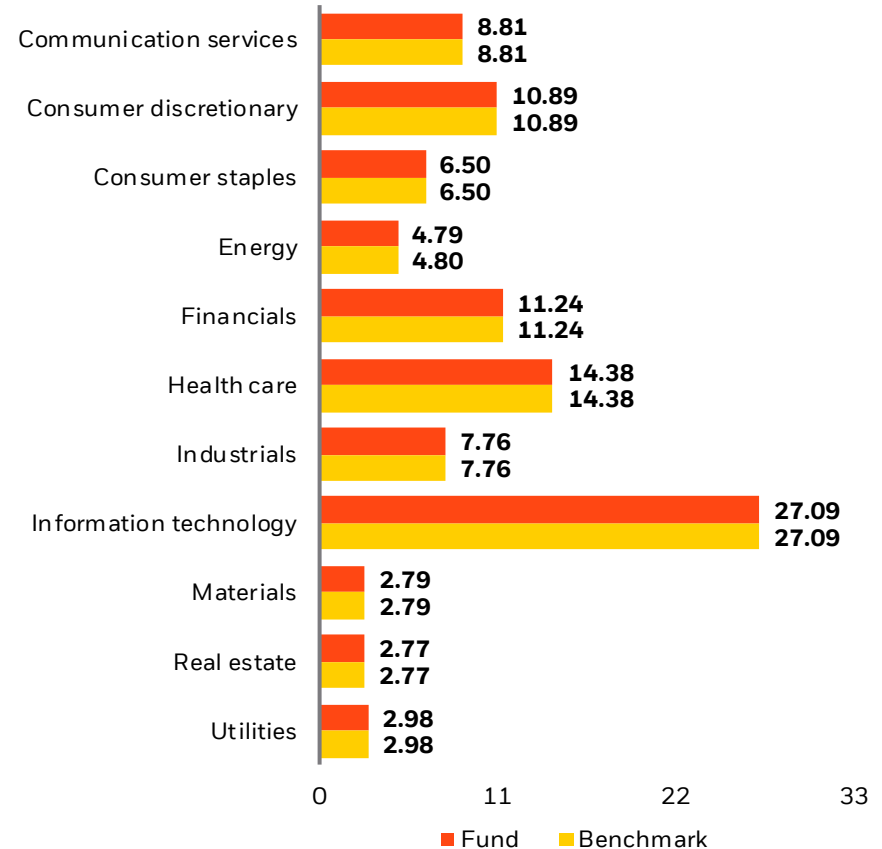
	Fund %	Index %
Apple Inc.	6.60	6.60
Microsoft Corporation	5.83	5.83
Amazon.com, Inc.	3.01	3.01
Alphabet Inc. Class A	1.96	1.96
Tesla Inc	1.82	1.82
Alphabet Inc. Class C	1.81	1.81
Berkshire Hathaway Inc. Class B	1.66	1.66
Johnson & Johnson	1.35	1.35
NVIDIA Corporation	1.34	1.34
UnitedHealth Group Incorporated	1.34	1.34

Fund inception date 23 February 2009

Data is used for analytical purposes only. Index data may differ to those published by the Index due to calculation methods. Breakdowns may not sum to 100 percent due to rounding, exclusion of cash, STIF and statistically immaterial factors. Portfolio holdings are subject to change and are not intended as a recommendation of individual securities.

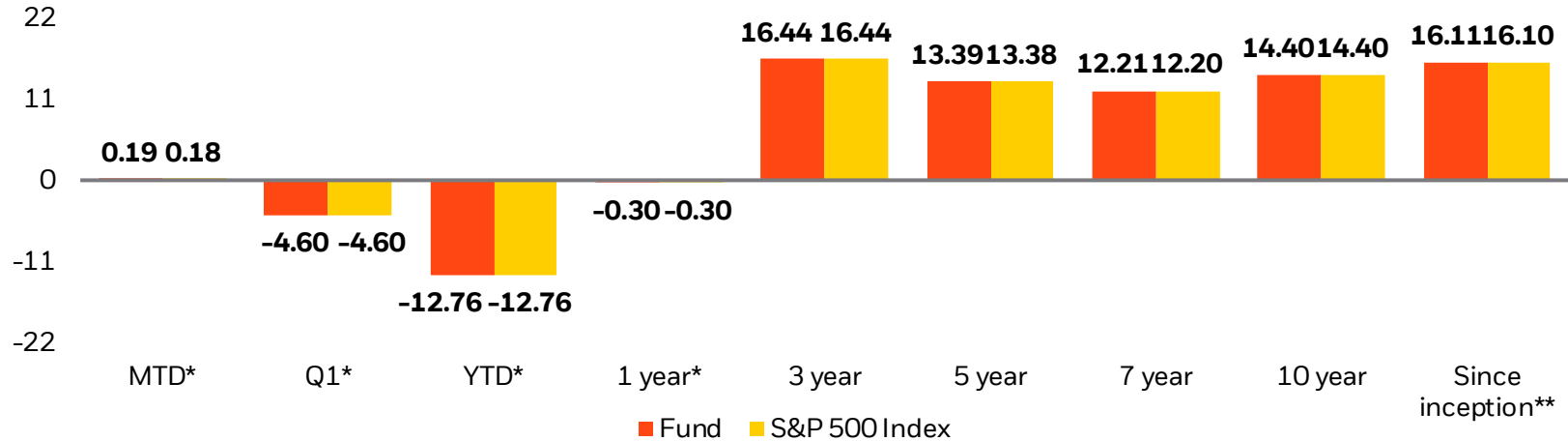
Sources: BlackRock, S&P Dow Jones Indices LLC

Sector diversification



Equity Index Non-Lendable Fund Performance

Gross total return in USD (annualized* %)



	MTD* %	Q1* %	YTD* %	1-yr* %	3-yr %	5-yr %	7-yr %	10-yr %	Since incept %
Tracking Error***				0.00	0.01	0.01	0.01	0.01	0.01

* Period returns for less than a year are cumulative

** Fund inception date 23 February 2009

*** Value is based on trailing monthly observations

This information is unaudited, subject to change and intended for analytical purposes only. The Fund's net asset value does not include an accrual for the investment management fee but does include an accrual for fund level administrative costs and, if applicable, certain third party acquired fund fees and expenses. If the Fund's net asset value did include an accrual for the investment management fee, the Fund's returns would be lower. **Past performance is not necessarily an indicator of future performance.** Indexes are unmanaged. It is not possible to invest directly in an index.

Sources: BlackRock, S&P Dow Jones Indices LLC

Russell 1000® Index Fund Characteristics

Fund information

Benchmark	Russell 1000® Index
Total fund assets	\$112.73B
Number of issues in fund	1,022
Number of issues in benchmark	1,022

Top 10 holdings

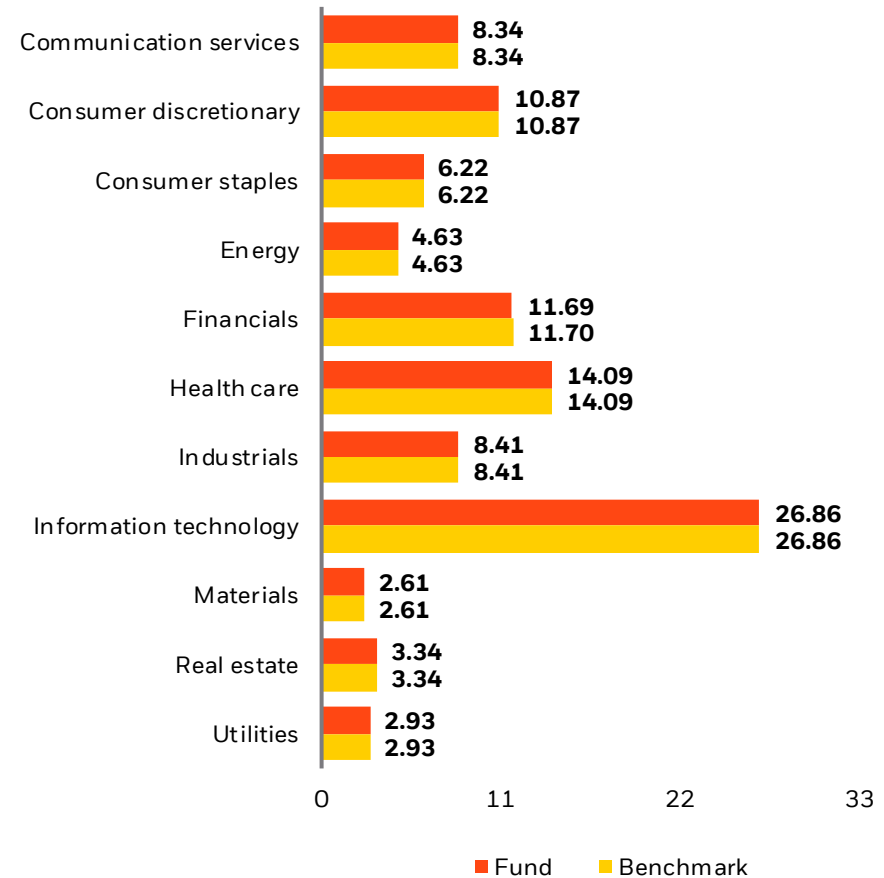
	Fund %	Index %
Apple Inc.	5.99	5.99
Microsoft Corporation	5.34	5.34
Amazon.com, Inc.	2.72	2.72
Alphabet Inc. Class A	1.78	1.78
Alphabet Inc. Class C	1.65	1.65
Tesla Inc	1.65	1.65
Berkshire Hathaway Inc. Class B	1.51	1.51
Johnson & Johnson	1.23	1.23
UnitedHealth Group Incorporated	1.22	1.22
Meta Platforms Inc. Class A	1.16	1.16

Fund inception date 31 January 1987

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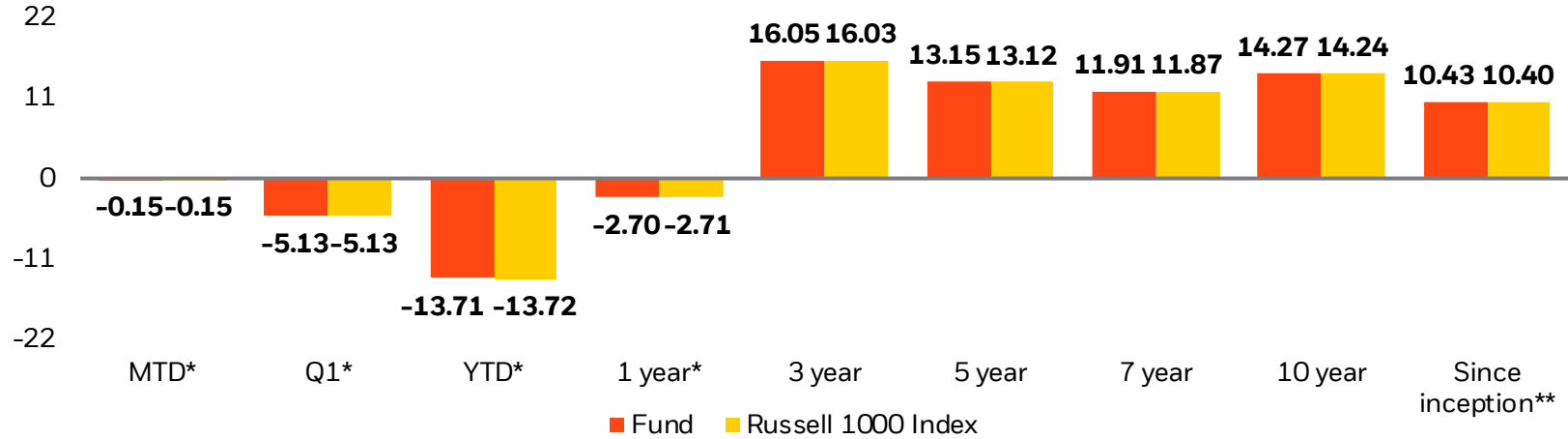
Sources: BlackRock, FTSE Russell

Sector diversification



Russell 1000® Index Fund Performance

Gross total return in USD (annualized* %)



	MTD* %	Q1* %	YTD* %	1-yr* %	3-yr %	5-yr %	7-yr %	10-yr %	Since incept %
Tracking Error***				0.01	0.01	0.02	0.02	0.02	0.10

* Period returns for less than a year are cumulative

** Fund inception date 31 January 1987

*** Value is based on trailing monthly observations

This information is unaudited, subject to change and intended for analytical purposes only. The Fund's net asset value does not include an accrual for the investment management fee but does include an accrual for fund level administrative costs and, if applicable, certain third party acquired fund fees and expenses. If the Fund's net asset value did include an accrual for the investment management fee, the Fund's returns would be lower. **Past performance is not necessarily an indicator of future performance.** Indexes are unmanaged. It is not possible to invest directly in an index.

Sources: BlackRock, FTSE Russell

Russell 1000® Index Non-Lendable Fund Characteristics

Fund information

Benchmark	Russell 1000® Index
Total fund assets	\$53.83B
Number of issues in fund	1,022
Number of issues in benchmark	1,022

Top 10 holdings

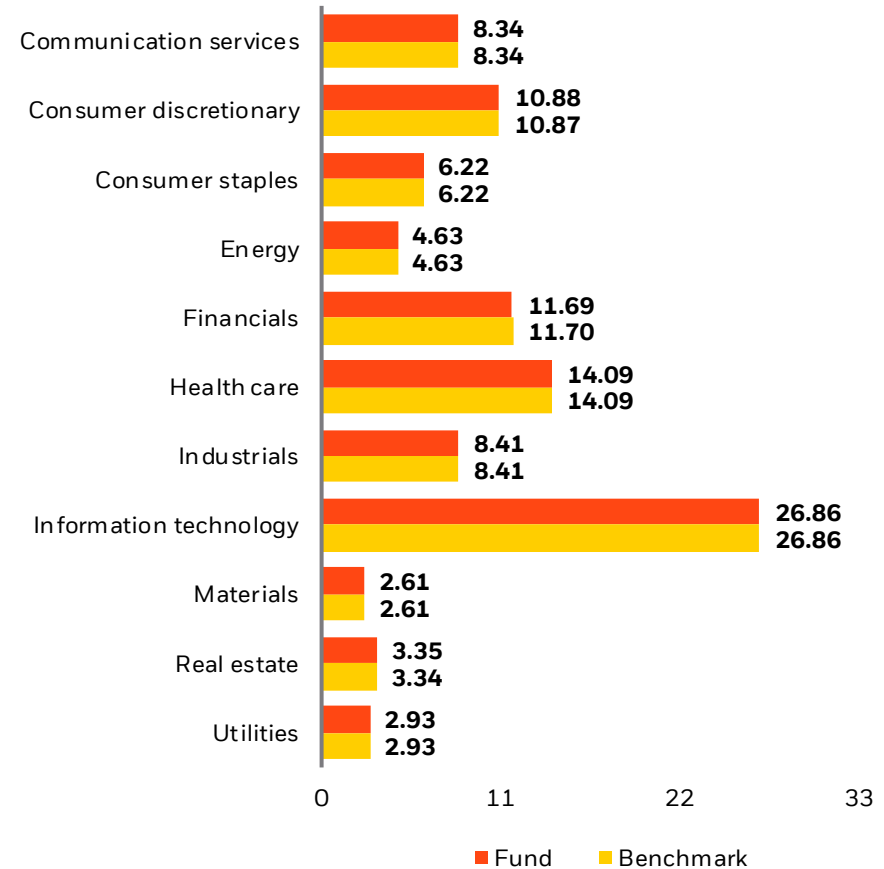
	Fund %	Index %
Apple Inc.	5.99	5.99
Microsoft Corporation	5.34	5.34
Amazon.com, Inc.	2.72	2.72
Alphabet Inc. Class A	1.78	1.78
Alphabet Inc. Class C	1.65	1.65
Tesla Inc	1.65	1.65
Berkshire Hathaway Inc. Class B	1.51	1.51
Johnson & Johnson	1.23	1.23
UnitedHealth Group Incorporated	1.22	1.22
Meta Platforms Inc. Class A	1.16	1.16

Fund inception date 23 January 2009

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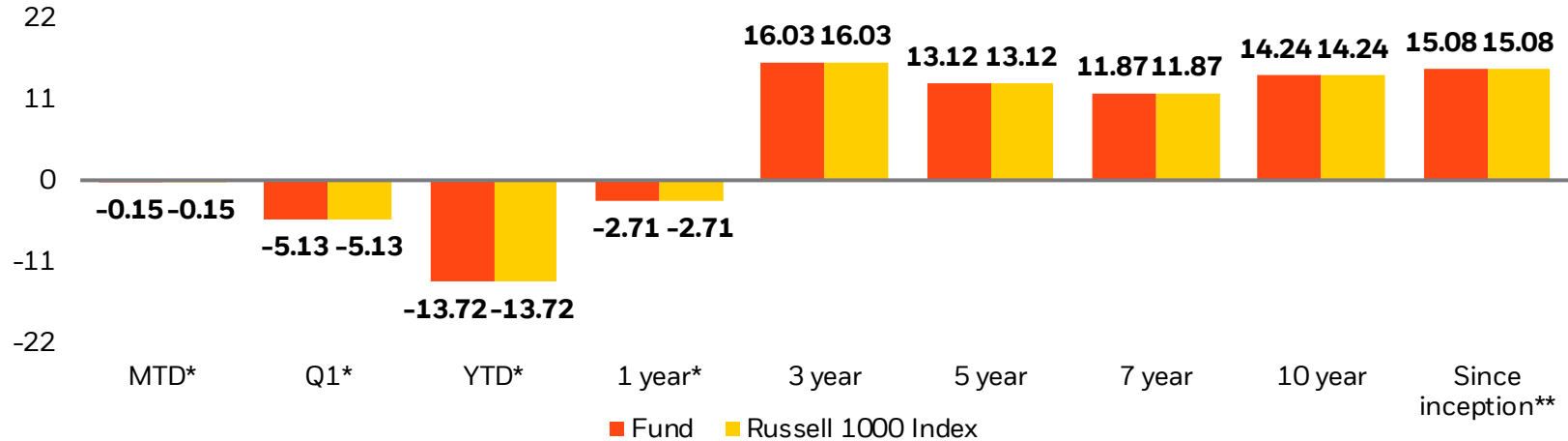
Sources: BlackRock, FTSE Russell

Sector diversification



Russell 1000® Index Non-Lendable Fund Performance

Gross total return in USD (annualized* %)



	MTD* %	Q1* %	YTD* %	1-yr* %	3-yr %	5-yr %	7-yr %	10-yr %	Since incept %
Tracking Error***				0.01	0.01	0.01	0.02	0.01	0.01

* Period returns for less than a year are cumulative

** Fund inception date 23 January 2009

*** Value is based on trailing monthly observations

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Sources: BlackRock, FTSE Russell

Russell 1000® Growth Fund Characteristics

Fund information

Benchmark	Russell 1000® Growth Index
Total fund assets	\$8.17B
Number of issues in fund	500
Number of issues in benchmark	499

Top 10 holdings

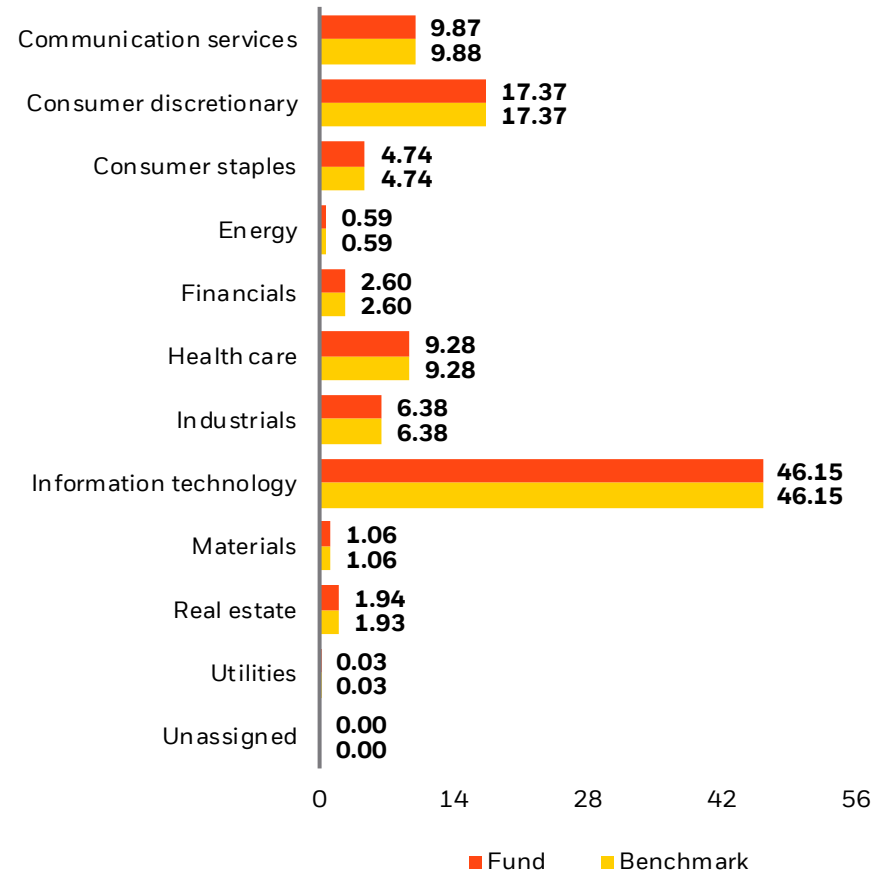
	Fund %	Index %
Apple Inc.	12.47	12.47
Microsoft Corporation	11.12	11.12
Amazon.com, Inc.	5.66	5.66
Tesla Inc	3.42	3.42
Alphabet Inc. Class A	3.20	3.20
Alphabet Inc. Class C	2.95	2.95
Meta Platforms Inc. Class A	2.42	2.42
NVIDIA Corporation	2.42	2.42
Visa Inc. Class A	1.91	1.91
Home Depot, Inc.	1.72	1.72

Fund inception date 22 July 1998

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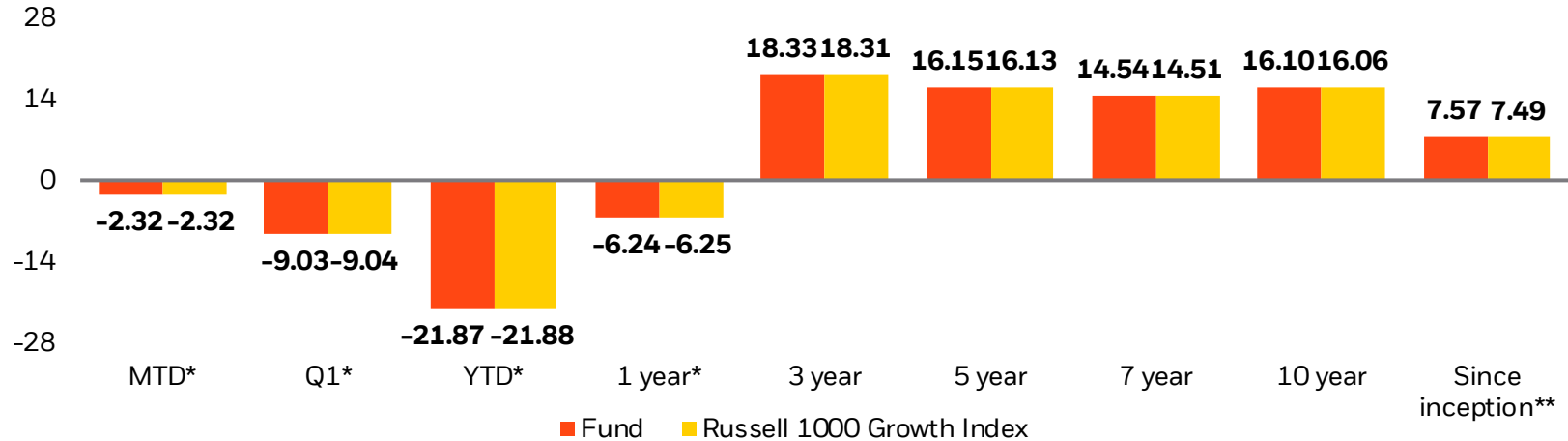
Sources: BlackRock, FTSE Russell

Sector diversification



Russell 1000® Growth Fund Performance

Gross total return in USD (annualized* %)



	MTD* %	Q1* %	YTD* %	1-yr* %	3-yr %	5-yr %	7-yr %	10-yr %	Since incept %
Tracking Error***				0.01	0.02	0.03	0.03	0.04	0.12

* Period returns for less than a year are cumulative

** Fund inception date 22 July 1998

*** Value is based on trailing monthly observations

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Sources: BlackRock, FTSE Russell

Russell 1000® Growth Non-Lendable Fund Characteristics

Fund information

Benchmark	Russell 1000® Growth Index
Total fund assets	\$0.63B
Number of issues in fund	497
Number of issues in benchmark	499

Top 10 holdings

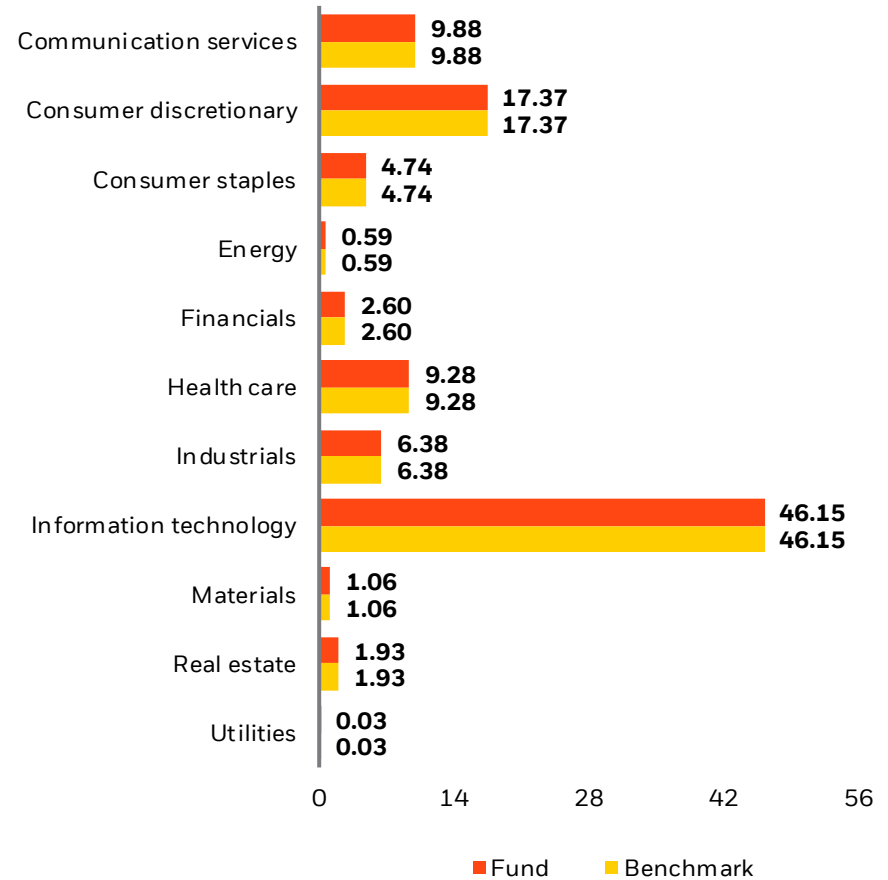
	Fund %	Index %
Apple Inc.	12.47	12.47
Microsoft Corporation	11.12	11.12
Amazon.com, Inc.	5.66	5.66
Tesla Inc	3.42	3.42
Alphabet Inc. Class A	3.20	3.20
Alphabet Inc. Class C	2.95	2.95
Meta Platforms Inc. Class A	2.42	2.42
NVIDIA Corporation	2.42	2.42
Visa Inc. Class A	1.91	1.91
Home Depot, Inc.	1.72	1.72

Fund inception date 31 July 2009

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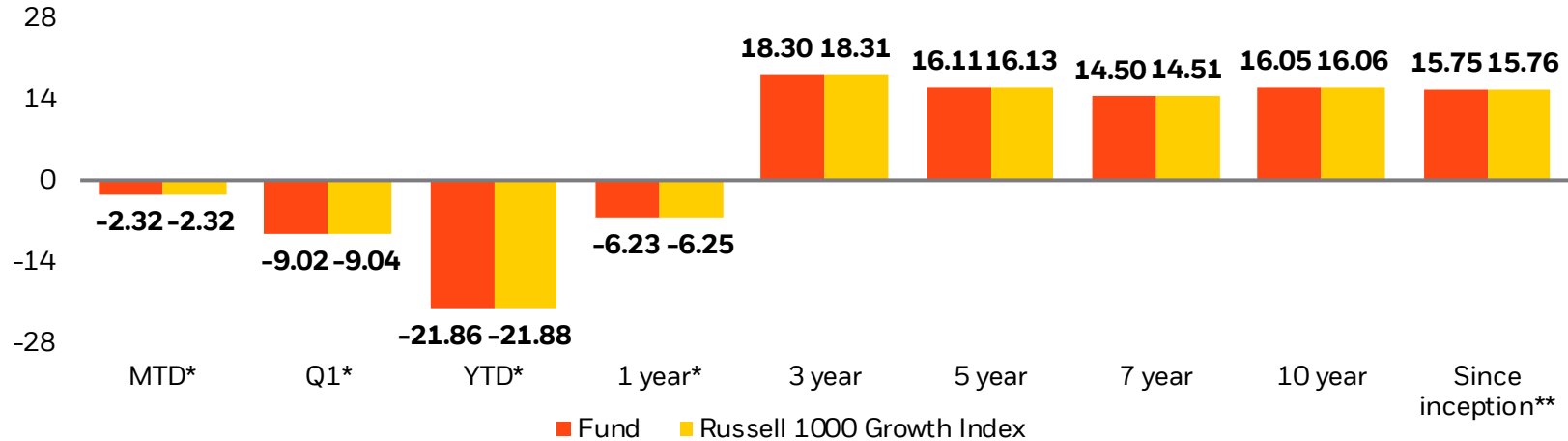
Sources: BlackRock, FTSE Russell

Sector diversification



Russell 1000[®] Growth Non-Lendable Fund Performance

Gross total return in USD (annualized* %)



	MTD* %	Q1* %	YTD* %	1-yr* %	3-yr %	5-yr %	7-yr %	10-yr %	Since incept %
Tracking Error***				0.02	0.03	0.03	0.03	0.03	0.03

* Period returns for less than a year are cumulative

** Fund inception date 31 July 2009

*** Value is based on trailing monthly observations

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Sources: BlackRock, FTSE Russell

Russell 1000[®] Value Fund Characteristics

Fund information

Benchmark	Russell 1000 [®] Value Index
Total fund assets	\$6.02B
Number of issues in fund	847
Number of issues in benchmark	847

Top 10 holdings

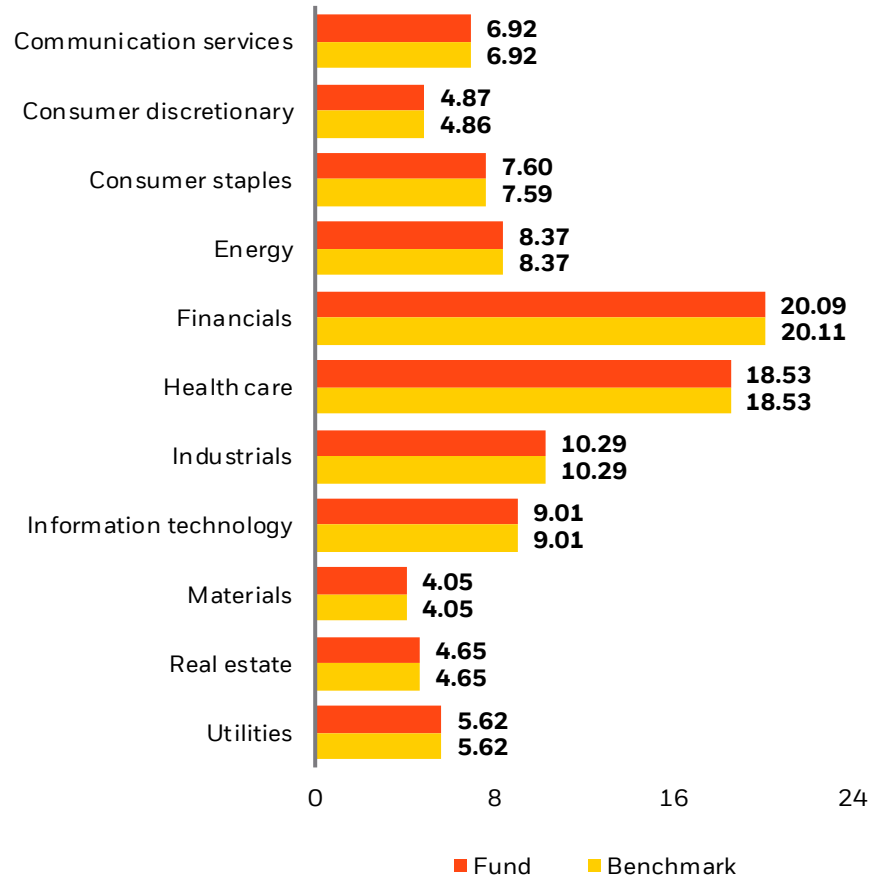
	Fund %	Index %
Berkshire Hathaway Inc. Class B	2.91	2.91
Johnson & Johnson	2.37	2.37
UnitedHealth Group Incorporated	2.18	2.18
Exxon Mobil Corporation	2.04	2.04
JPMorgan Chase & Co.	1.95	1.95
Procter & Gamble Company	1.79	1.79
Chevron Corporation	1.70	1.70
Pfizer Inc.	1.49	1.49
Bank of America Corp	1.33	1.33
Merck & Co., Inc.	1.17	1.17

Fund inception date 31 October 1991

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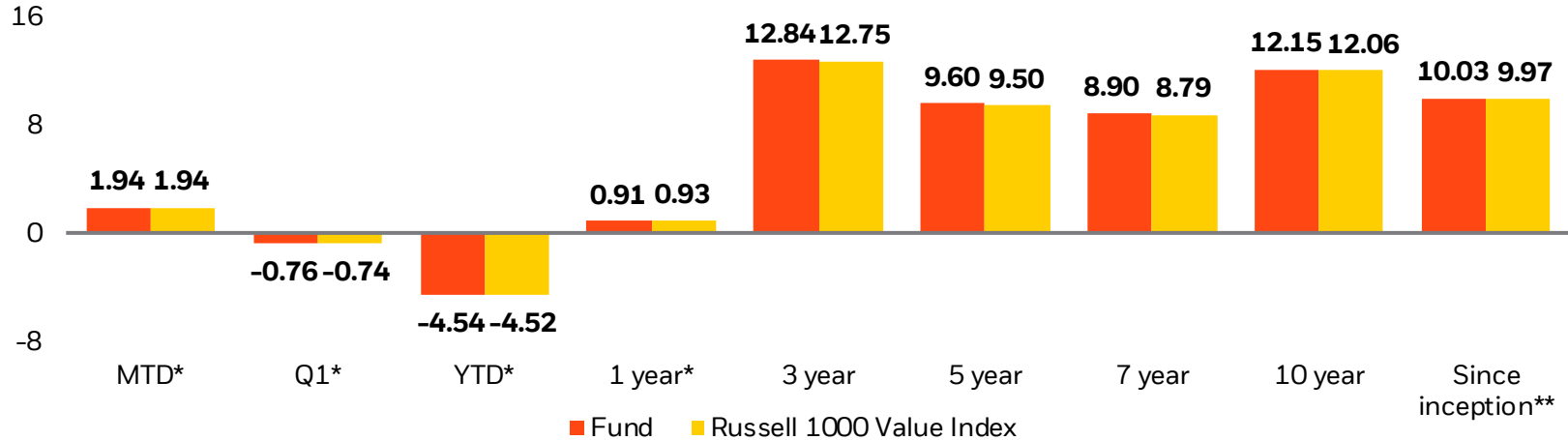
Sources: BlackRock, FTSE Russell

Sector diversification



Russell 1000® Value Fund Performance

Gross total return in USD (annualized* %)



	MTD* %	Q1* %	YTD* %	1-yr* %	3-yr %	5-yr %	7-yr %	10-yr %	Since incept %
Tracking Error***				0.02	0.06	0.05	0.06	0.06	0.13

* Period returns for less than a year are cumulative

** Fund inception date 31 October 1991

*** Value is based on trailing monthly observations

This information is unaudited, subject to change and intended for analytical purposes only. The Fund's net asset value does not include an accrual for the investment management fee but does include an accrual for fund level administrative costs and, if applicable, certain third party acquired fund fees and expenses. If the Fund's net asset value did include an accrual for the investment management fee, the Fund's returns would be lower. **Past performance is not necessarily an indicator of future performance.** Indexes are unmanaged. It is not possible to invest directly in an index.

Sources: BlackRock, FTSE Russell

Russell 1000® Value Non-Lendable Fund Characteristics

Fund information

Benchmark	Russell 1000® Value Index
Total fund assets	\$0.08B
Number of issues in fund	847
Number of issues in benchmark	847

Top 10 holdings

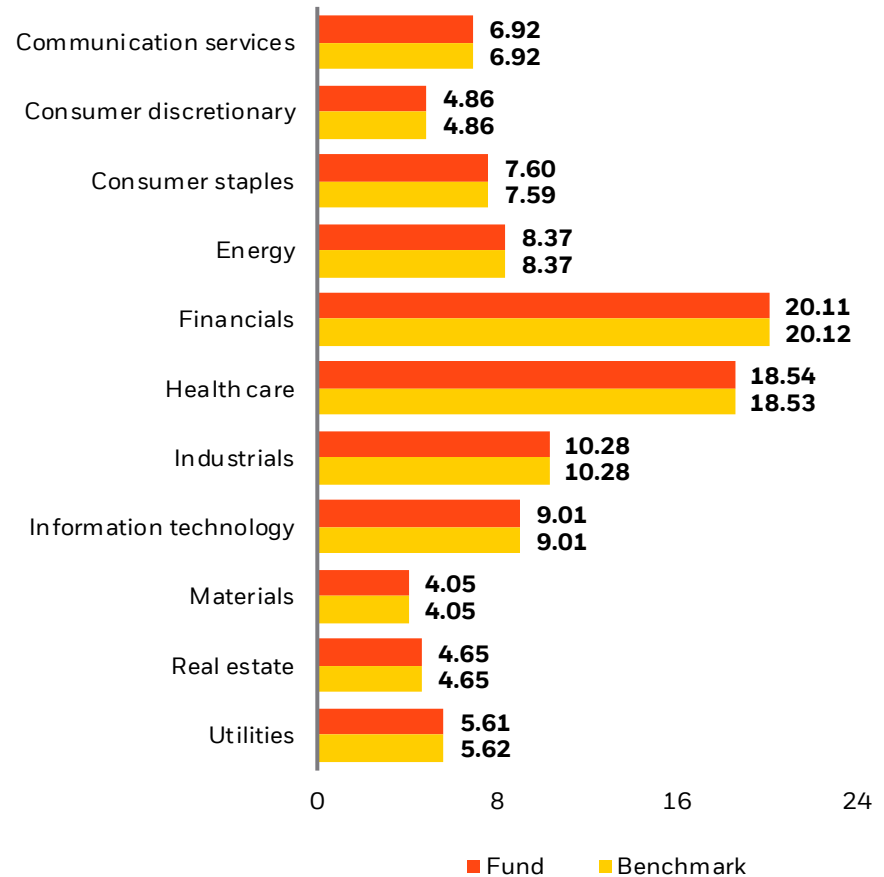
	Fund %	Index %
Berkshire Hathaway Inc Class B	2.91	2.91
Johnson & Johnson	2.37	2.37
UnitedHealth Group Inc	2.18	2.18
Exxon Mobil Corp	2.04	2.04
JPMorgan Chase & Co	1.95	1.95
Procter & Gamble	1.79	1.79
Chevron Corp	1.70	1.70
Pfizer Inc	1.49	1.49
Bank of America Corp	1.33	1.33
Merck & Co Inc	1.17	1.17

Fund inception date 31 July 2009

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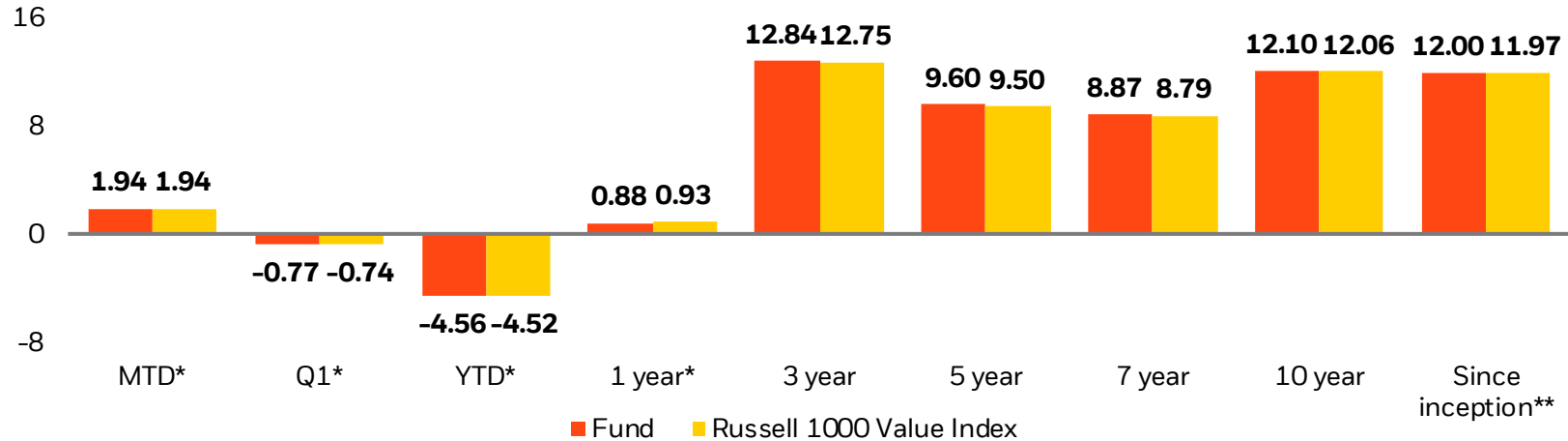
Sources: BlackRock, FTSE Russell

Sector diversification



Russell 1000® Value Non-Lendable Fund Performance

Gross total return in USD (annualized* %)



	MTD* %	Q1* %	YTD* %	1-yr* %	3-yr %	5-yr %	7-yr %	10-yr %	Since incept %
Tracking Error***				0.02	0.11	0.10	0.09	0.08	0.07

* Period returns for less than a year are cumulative

** Fund inception date 31 July 2009

*** Value is based on trailing monthly observations

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Sources: BlackRock, FTSE Russell

Russell 2000® Index Fund Characteristics

Fund information

Benchmark	Russell 2000® Index
Total fund assets	\$10.21B
Number of issues in fund	1,998
Number of issues in benchmark	2,002

Top 10 holdings

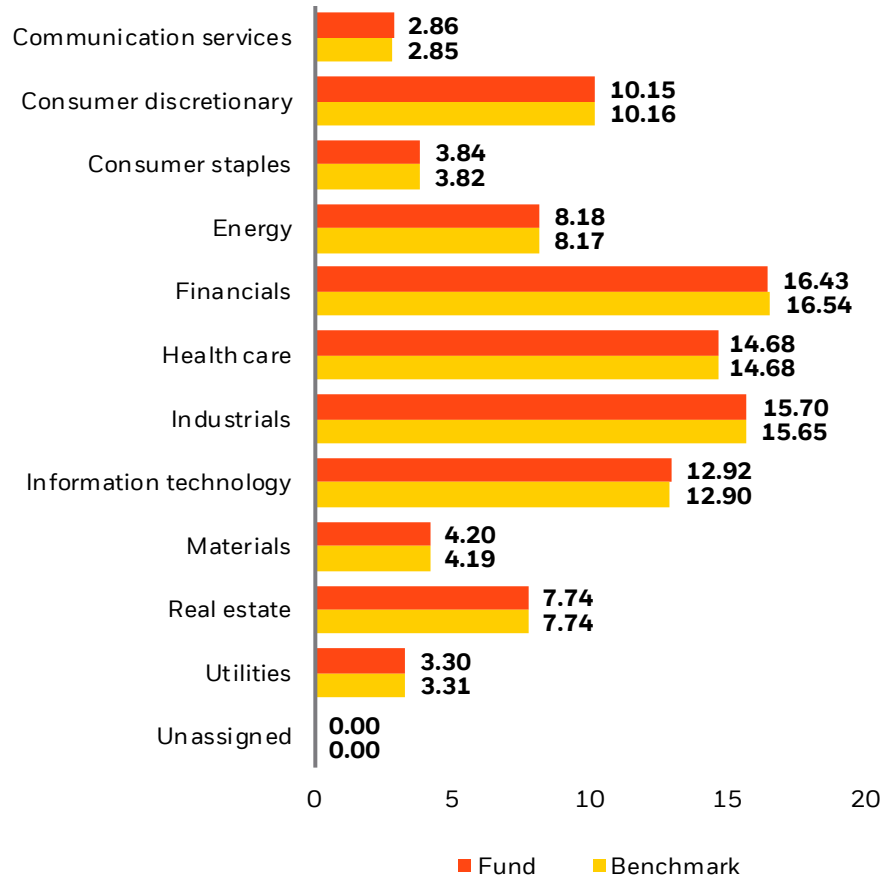
	Fund %	Index %
Ovintiv Inc	0.60	0.60
Antero Resources Corporation	0.50	0.50
Chesapeake Energy Corporation	0.42	0.42
Southwestern Energy Company	0.38	0.38
BioHaven Pharmaceutical Holding Company Ltd.	0.33	0.33
Range Resources Corporation	0.33	0.33
Avis Budget Group, Inc.	0.32	0.32
BJ's Wholesale Club Holdings, Inc.	0.32	0.33
PDC Energy, Inc.	0.32	0.32
WillScot Mobile Mini Holdings Corp. Class A	0.31	0.31

Fund inception date 30 June 1997

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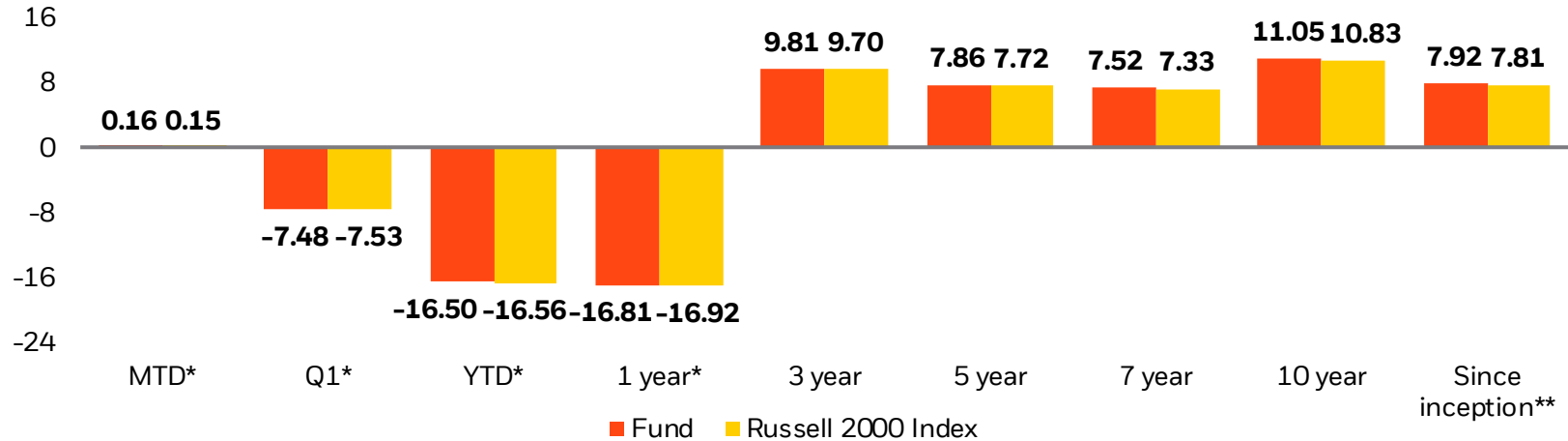
Sources: BlackRock, FTSE Russell

Sector diversification



Russell 2000® Index Fund Performance

Gross total return in USD (annualized* %)



	MTD* %	Q1* %	YTD* %	1-yr* %	3-yr %	5-yr %	7-yr %	10-yr %	Since incept %
Tracking Error***				0.03	0.06	0.05	0.05	0.05	0.16

* Period returns for less than a year are cumulative

** Fund inception date 30 June 1997

*** Value is based on trailing monthly observations

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Sources: BlackRock, FTSE Russell

Russell 2000® Index Non-Lendable Fund Characteristics

Fund information

Benchmark	Russell 2000® Index
Total fund assets	\$4.14B
Number of issues in fund	2,007
Number of issues in benchmark	2,002

Top 10 holdings

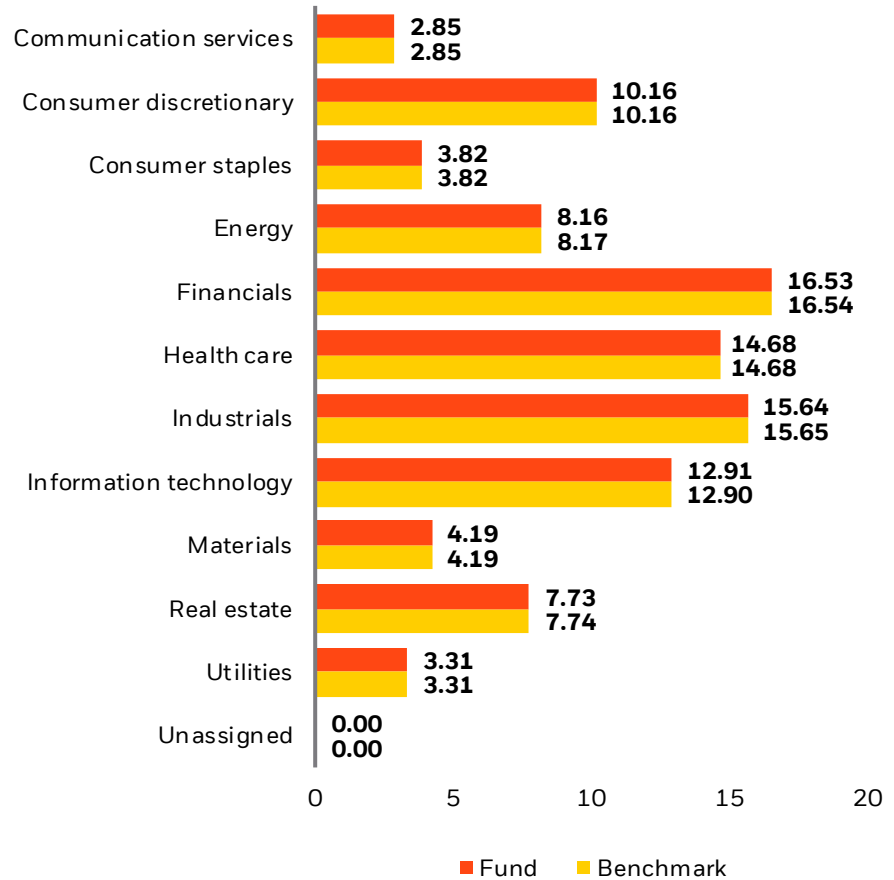
	Fund %	Index %
Ovintiv Inc	0.60	0.60
Antero Resources Corporation	0.50	0.50
Chesapeake Energy Corporation	0.42	0.42
Southwestern Energy Company	0.38	0.38
BioHaven Pharmaceutical Holding Company Ltd.	0.33	0.33
BJ's Wholesale Club Holdings, Inc.	0.33	0.33
Range Resources Corporation	0.33	0.33
Avis Budget Group, Inc.	0.32	0.32
PDC Energy, Inc.	0.32	0.32
WillScot Mobile Mini Holdings Corp. Class A	0.31	0.31

Fund inception date 23 January 2009

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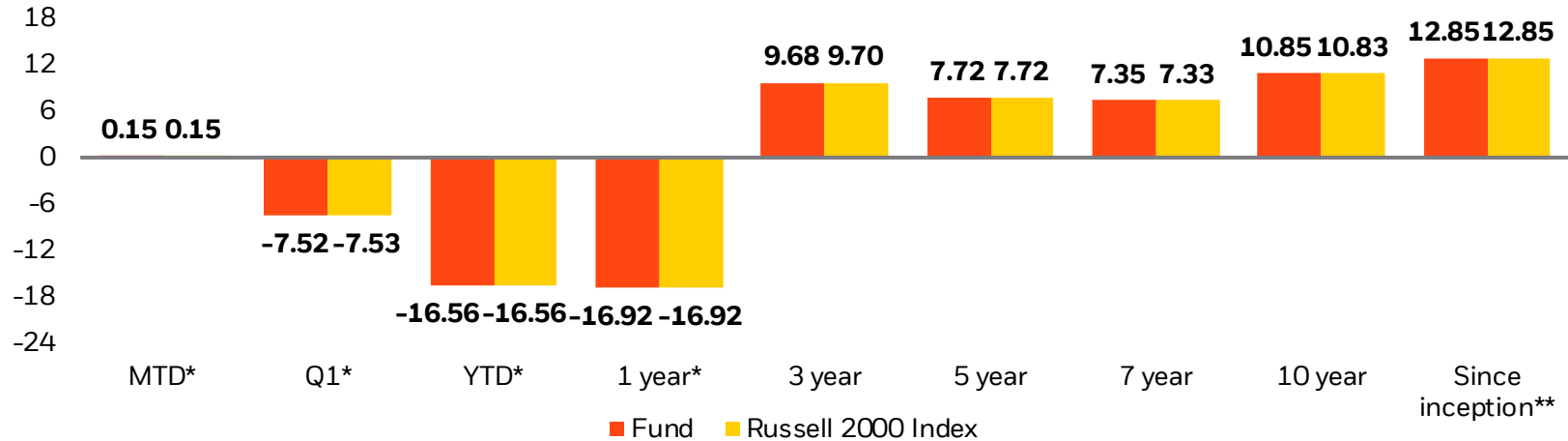
Sources: BlackRock, FTSE Russell

Sector diversification



Russell 2000® Index Non-Lendable Fund Performance

Gross total return in USD (annualized* %)



	MTD* %	Q1* %	YTD* %	1-yr* %	3-yr %	5-yr %	7-yr %	10-yr %	Since incept %
Tracking Error***				0.02	0.05	0.04	0.04	0.04	0.07

* Period returns for less than a year are cumulative

** Fund inception date 23 January 2009

*** Value is based on trailing monthly observations

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Sources: BlackRock, FTSE Russell

Russell 2000® Growth Fund Characteristics

Fund information

Benchmark	Russell 2000® Growth Index
Total fund assets	\$0.34B
Number of issues in fund	1,229
Number of issues in benchmark	1,231

Top 10 holdings

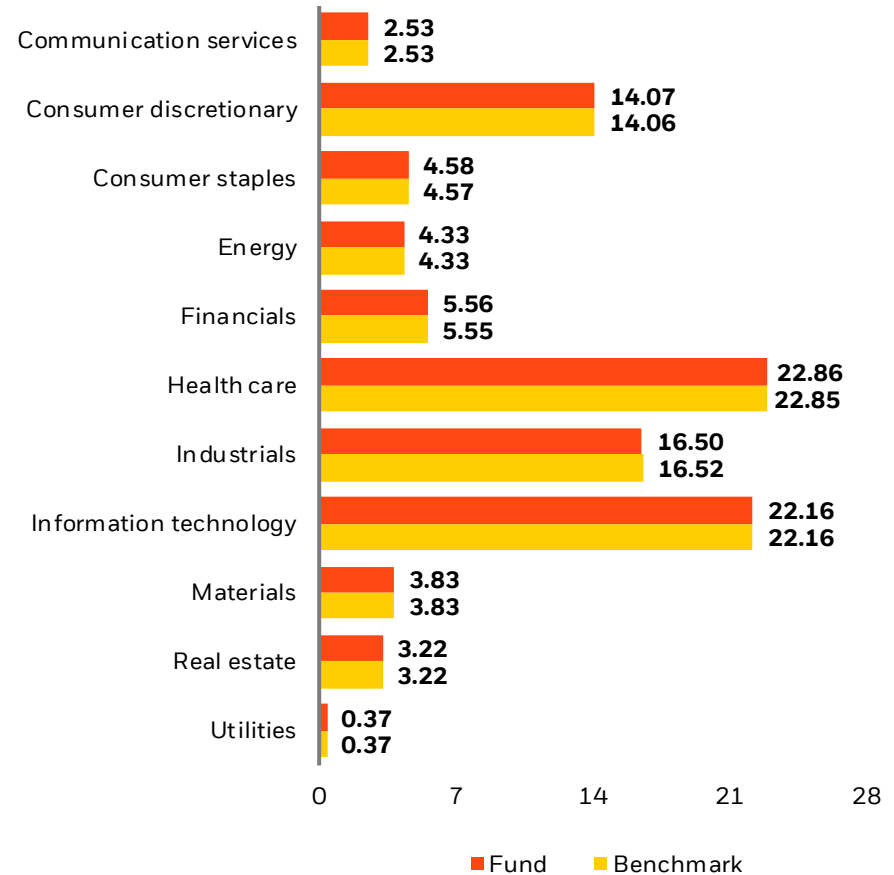
	Fund %	Index %
Southwestern Energy	0.84	0.84
WillScot Mobile Mini Holdings Corp	0.67	0.67
Tetra Tech Inc	0.66	0.66
Lattice Semiconductor Corp	0.64	0.64
Matador Resources	0.61	0.61
Eastgroup Properties REIT Inc	0.59	0.59
Halozyme Therapeutics Inc	0.58	0.58
KBR Inc	0.56	0.56
Il VI Inc	0.56	0.56
Performance Food Group	0.54	0.54

Fund inception date 31 October 1998

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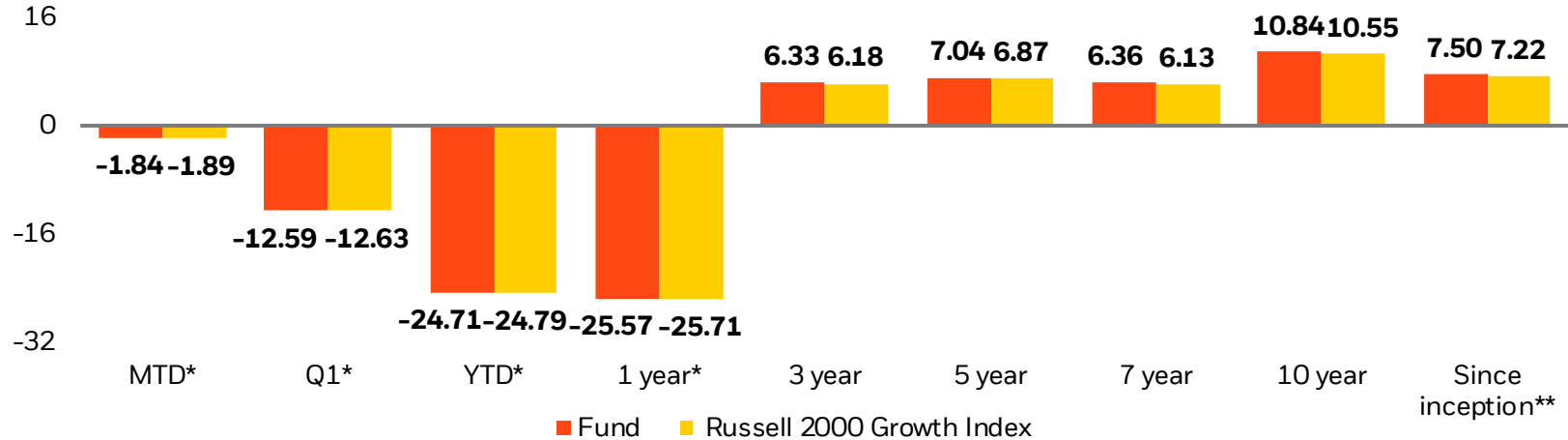
Sources: BlackRock, FTSE Russell

Sector diversification



Russell 2000® Growth Fund Performance

Gross total return in USD (annualized* %)



	MTD* %	Q1* %	YTD* %	1-yr* %	3-yr %	5-yr %	7-yr %	10-yr %	Since incept %
Tracking Error***				0.05	0.04	0.05	0.07	0.10	0.24

* Period returns for less than a year are cumulative

** Fund inception date 31 October 1998

*** Value is based on trailing monthly observations

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Sources: BlackRock, FTSE Russell

Russell 2000® Value Fund Characteristics

Fund information

Benchmark	Russell 2000® Value Index
Total fund assets	\$1.27B
Number of issues in fund	1,430
Number of issues in benchmark	1,425

Top 10 holdings

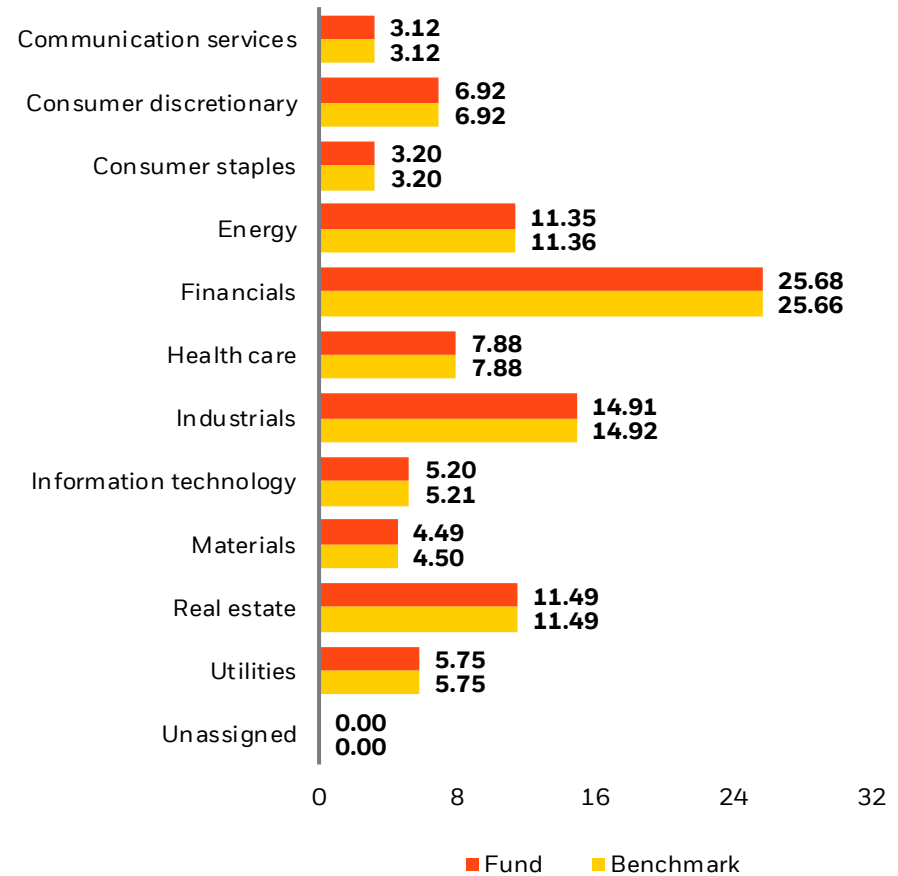
	Fund %	Index %
Ovintiv Inc	1.04	1.04
Antero Resources Corporation	0.81	0.81
Chesapeake Energy Corporation	0.72	0.72
Range Resources Corporation	0.61	0.61
Avis Budget Group, Inc.	0.59	0.59
PDC Energy, Inc.	0.58	0.58
AMC Entertainment Holdings, Inc. Class A	0.56	0.56
Macy's Inc	0.54	0.54
Murphy Oil Corporation	0.47	0.47
SouthState Corporation	0.47	0.47

Fund inception date 31 October 1998

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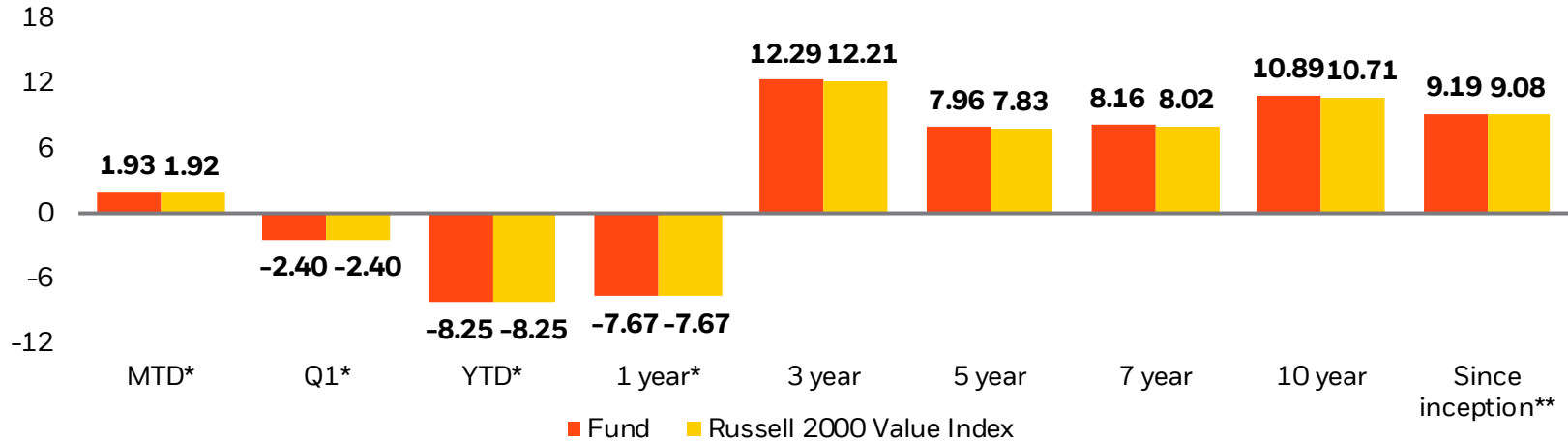
Sources: BlackRock, FTSE Russell

Sector diversification



Russell 2000® Value Fund Performance

Gross total return in USD (annualized* %)



	MTD* %	Q1* %	YTD* %	1-yr* %	3-yr %	5-yr %	7-yr %	10-yr %	Since incept %
Tracking Error***				0.04	0.09	0.08	0.08	0.09	0.15

* Period returns for less than a year are cumulative

** Fund inception date 31 October 1998

*** Value is based on trailing monthly observations

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Sources: BlackRock, FTSE Russell

Non-U.S. Equities

BlackRock MSCI World ex-U.S. IMI Index Fund

BlackRock MSCI World ex-U.S. IMI Index Non-Lendable Fund

EAFE Equity Index Fund

BlackRock MSCI EAFE Equity Index Non-Lendable Fund

EAFE Equity Growth Index Fund

EAFE Equity Value Index Fund

BlackRock MSCI EAFE Small Cap Equity Index Fund

BlackRock MSCI EAFE Small Cap Equity Index Non-Lendable Fund

MSCI Emerging Markets Free Fund

Emerging Markets Index Non-Lendable Fund

Emerging Markets Small Capitalization Equity Index Fund

Emerging Markets Small Capitalization Equity Index Non-Lendable Fund

BlackRock MSCI World ex-U.S. IMI Index Fund Characteristics

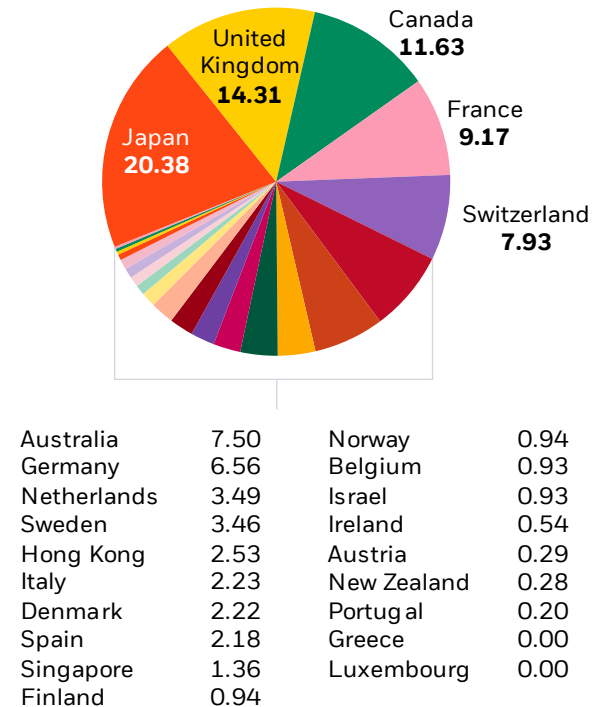
Fund information

Benchmark	MSCI World ex USA IMI Net Dividend Return Index
Total fund value	\$0.70B
Number of issues in fund	3,494
Number of issues in benchmark	3,483

Top 10 holdings

	Country	Weight (%)
Nestle SA	Switzerland	1.64
ASML Holding NV	Netherlands	1.19
Shell PLC	United Kingdom	1.16
Roche Holding Par AG	Switzerland	1.14
AstraZeneca PLC	United Kingdom	1.04
Novartis AG	Switzerland	0.95
Novo Nordisk Class B	Denmark	0.92
LVMH	France	0.90
Toyota Motor Corp	Japan	0.89
BHP Group Ltd	Australia	0.82

Country allocation (%)



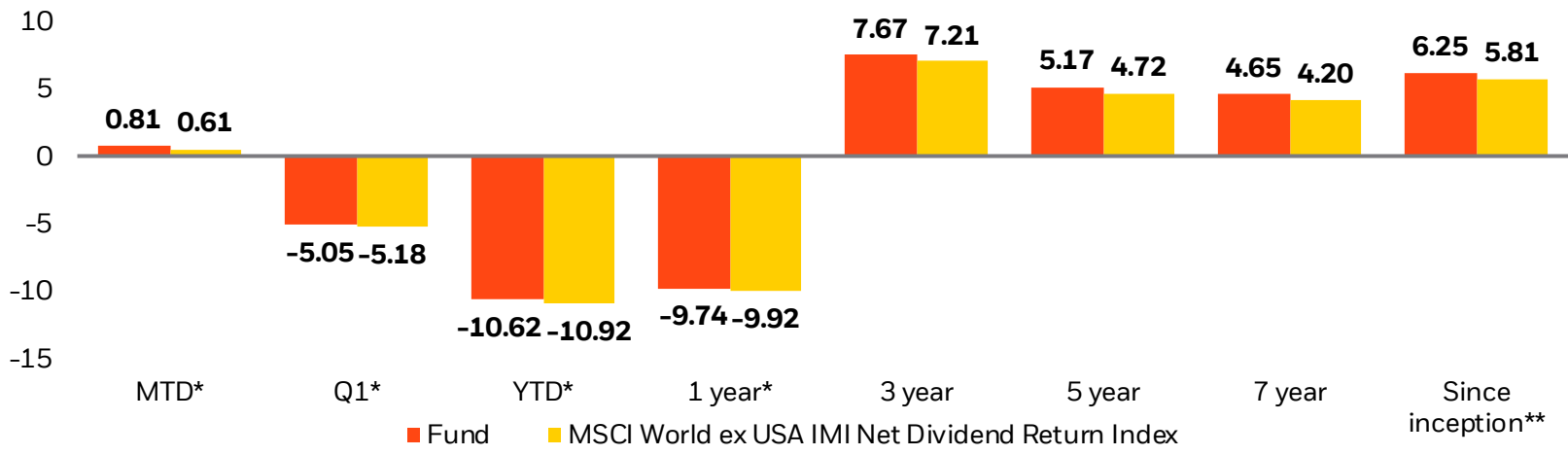
Fund inception date 25 September 2012

Data is used for analytical purposes only. Breakdowns may not sum to 100 percent due to rounding, exclusion of cash, STIF and statistically immaterial factors. Portfolio holdings are subject to change and are not intended as a recommendation of individual securities.

Sources: BlackRock, MSCI Inc.

BlackRock MSCI World ex-U.S. IMI Index Fund Performance

Gross total return in USD (annualized* %)



	MTD* %	Q1* %	YTD* %	1-yr* %	3-yr %	5-yr %	7-yr %	Since incept %
Tracking Error***				0.38	0.30	0.27	0.24	0.21

* Period returns for less than a year are cumulative
 ** Fund inception date 25 September 2012
 *** Value is based on trailing monthly observations

This information is unaudited, subject to change and intended for analytical purposes only. The Fund's net asset value does not include an accrual for the investment management fee but does include an accrual for fund level administrative costs and, if applicable, certain third party acquired fund fees and expenses. If the Fund's net asset value did include an accrual for the investment management fee, the Fund's returns would be lower. **Past performance is not necessarily an indicator of future performance.** Indexes are unmanaged. It is not possible to invest directly in an index.

Sources: BlackRock, MSCI Inc.

BlackRock MSCI World ex-U.S. IMI Index Non-Lendable Fund Characteristics

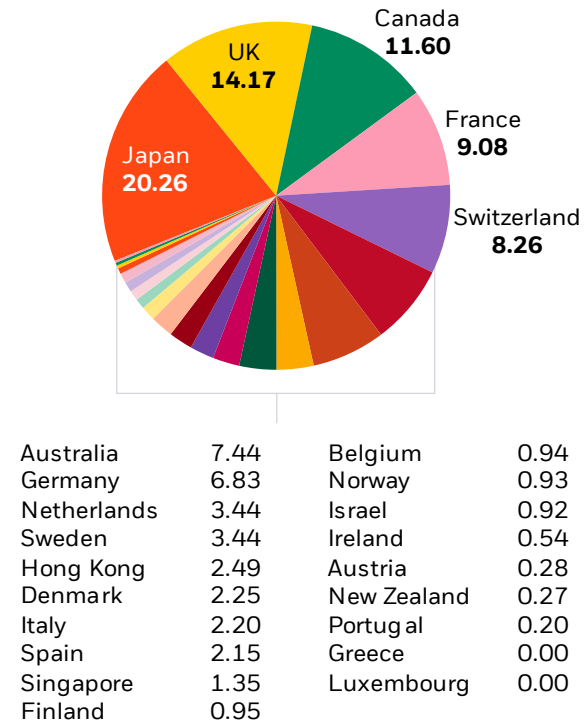
Fund information

Benchmark	MSCI World ex USA IMI Net Dividend Return Index
Total fund value	\$2.05B
Number of issues in fund	3,489
Number of issues in benchmark	3,483

Top 10 holdings

	Country	Weight (%)
Nestle SA	Switzerland	1.72
Roche Holding Par AG	Switzerland	1.20
ASML Holding NV	Netherlands	1.17
Shell PLC	United Kingdom	1.14
AstraZeneca PLC	United Kingdom	1.02
Novartis AG	Switzerland	0.99
Novo Nordisk Class B	Denmark	0.93
LVMH	France	0.89
Toyota Motor Corp	Japan	0.87
BHP Group Ltd	Australia	0.81

Country allocation (%)



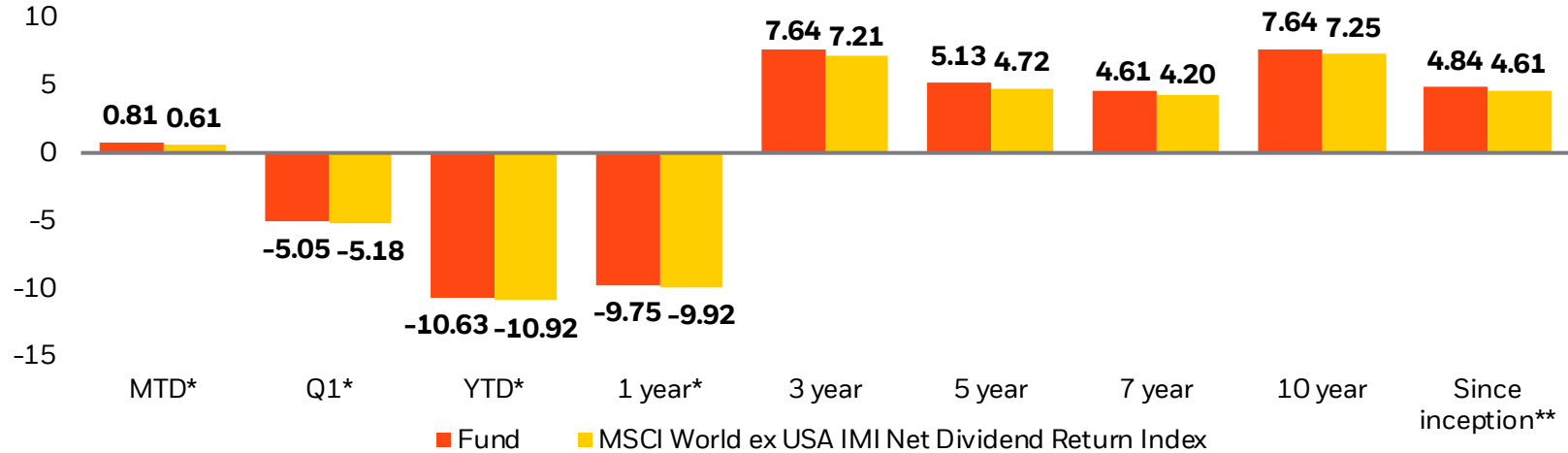
Fund inception date 01 February 2011.

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Sources: BlackRock, MSCI Inc.

BlackRock MSCI World ex-U.S. IMI Index Non-Lendable Fund Performance

Gross total return in USD (annualized* %)



	MTD* %	Q1* %	YTD* %	1-yr* %	3-yr %	5-yr %	7-yr %	10-yr %	Since incept %
Tracking Error***				0.36	0.30	0.27	0.23	0.20	0.19

* Period returns for less than a year are cumulative

** Fund inception date 01 February 2011

*** Value is based on trailing monthly observations

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Sources: BlackRock, MSCI Inc.

EAFE Equity Index Fund Characteristics

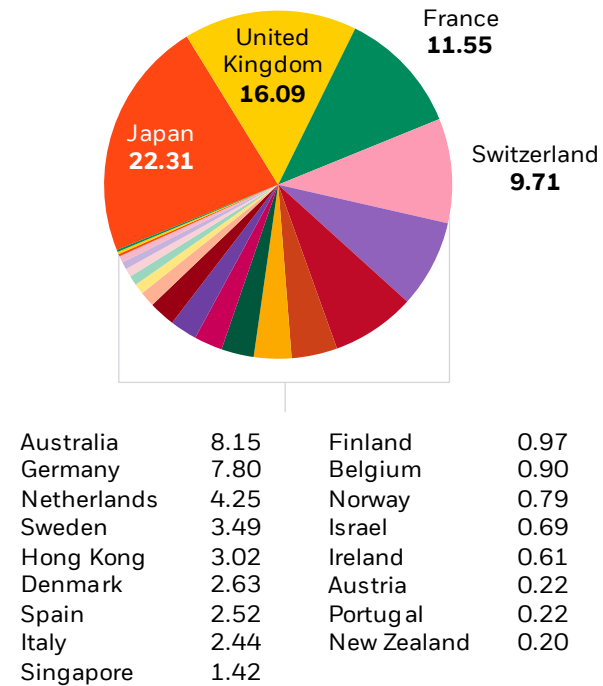
Fund information

Benchmark	MSCI EAFE Net Dividend Return Index
Total fund value	\$37.02B
Number of issues in fund	833
Number of issues in benchmark	826

Top 10 holdings

	Country	Weight (%)
Nestle SA	Switzerland	2.18
ASML Holding NV	Netherlands	1.58
Shell PLC	United Kingdom	1.54
Roche Holding Par AG	Switzerland	1.52
AstraZeneca PLC	United Kingdom	1.38
Novartis AG	Switzerland	1.26
Novo Nordisk Class B	Denmark	1.23
LVMH	France	1.20
Toyota Motor Corp	Japan	1.18
BHP Group Ltd	Australia	1.09

Country allocation (%)



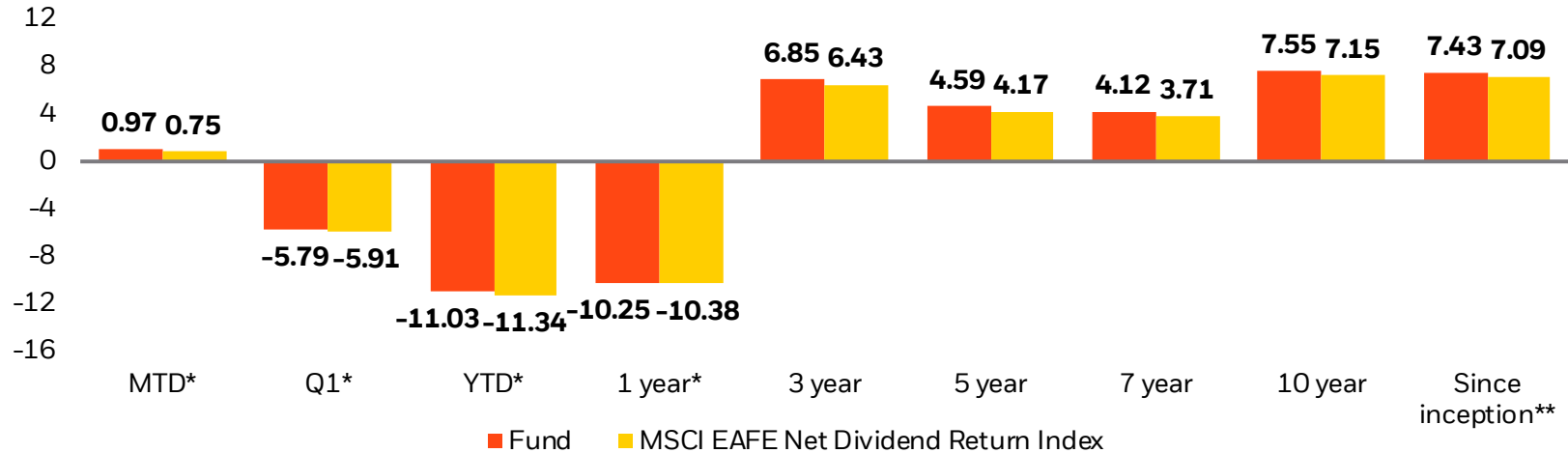
Fund inception date 31 December 1985

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Sources: BlackRock, MSCI Inc.

EAFE Equity Index Fund Performance

Gross total return in USD (annualized* %)



	MTD* %	Q1* %	YTD* %	1-yr* %	3-yr %	5-yr %	7-yr %	10-yr %	Since incept %
Tracking Error***				0.42	0.34	0.30	0.26	0.23	0.30

* Period returns for less than a year are cumulative

** Fund inception date 31 December 1985

*** Value is based on trailing monthly observations

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Sources: BlackRock, MSCI Inc.

BlackRock MSCI EAFE Equity Index Non-Lendable Fund Characteristics

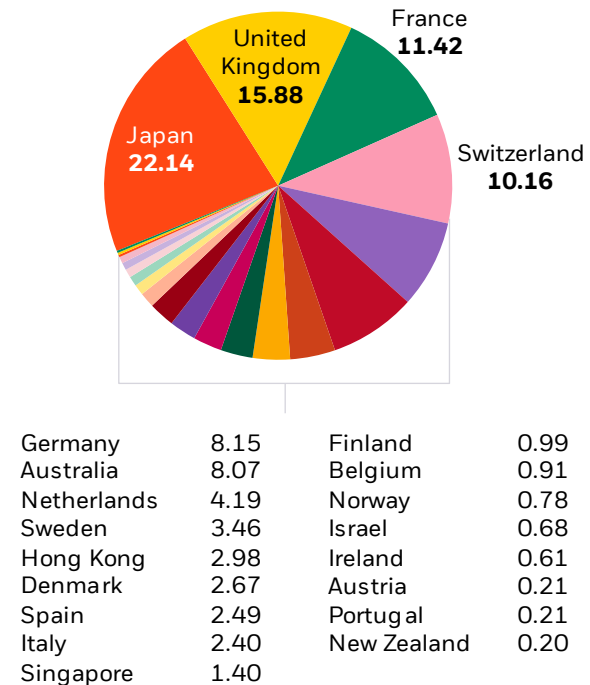
Fund information

Benchmark	MSCI EAFE Net Dividend Return Index
Total fund value	\$24.11B
Number of issues in fund	830
Number of issues in benchmark	826

Top 10 holdings

	Country	Weight (%)
Nestle SA	Switzerland	2.28
Roche Holding Par AG	Switzerland	1.59
ASML Holding NV	Netherlands	1.55
Shell PLC	United Kingdom	1.52
AstraZeneca PLC	United Kingdom	1.36
Novartis AG	Switzerland	1.32
Novo Nordisk Class B	Denmark	1.24
LVMH	France	1.18
Toyota Motor Corp	Japan	1.16
BHP Group Ltd	Australia	1.08

Country allocation (%)



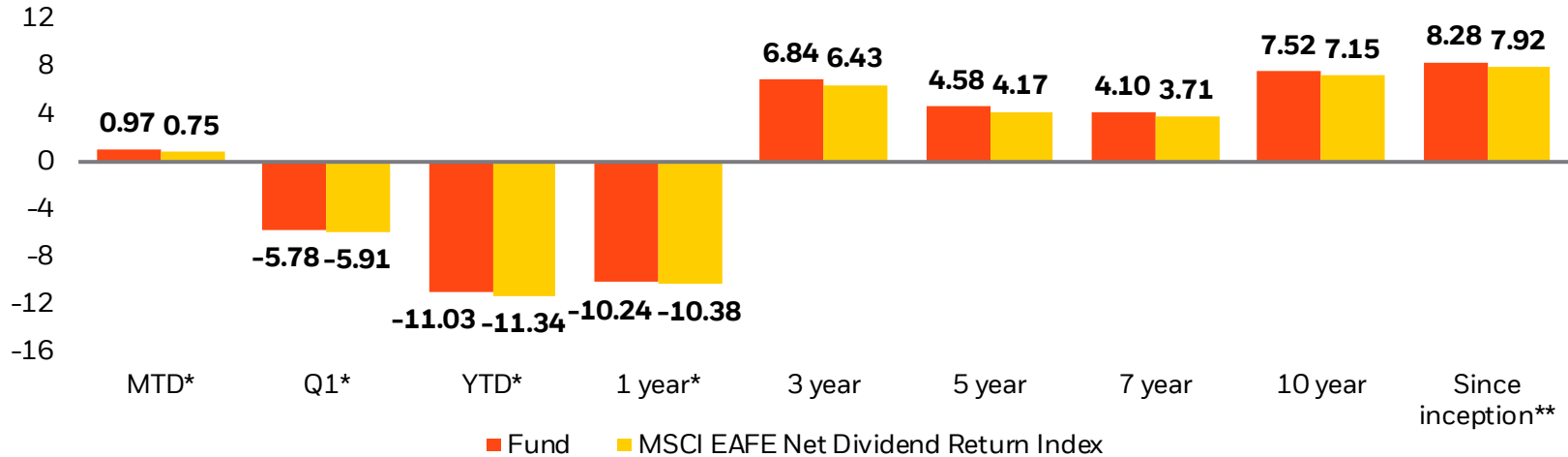
Fund inception date 23 January 2009

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Sources: BlackRock, MSCI Inc.

BlackRock MSCI EAFE Equity Index Non-Lendable Fund Performance

Gross total return in USD (annualized* %)



	MTD* %	Q1* %	YTD* %	1-yr* %	3-yr %	5-yr %	7-yr %	10-yr %	Since incept %
Tracking Error***				0.41	0.33	0.30	0.26	0.22	0.22

* Period returns for less than a year are cumulative

** Fund inception date 23 January 2009

*** Value is based on trailing monthly observations

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EAFE Equity Growth Index Fund Characteristics

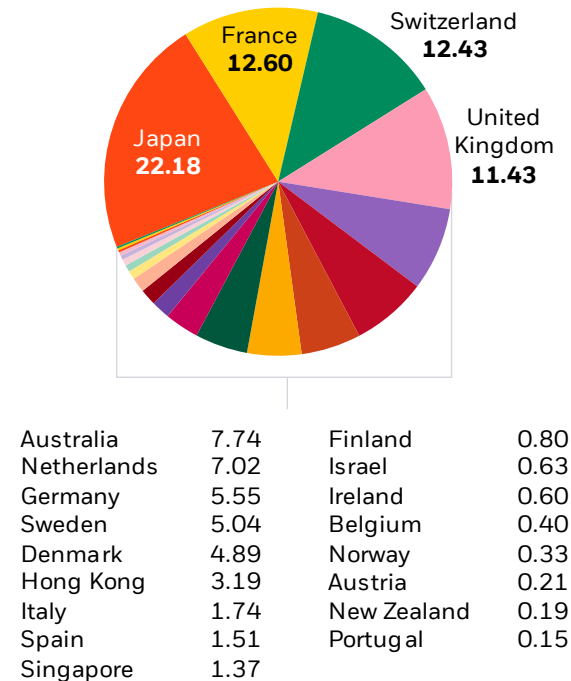
Fund information

Benchmark	MSCI EAFE Growth Net Dividend Return Index
Total fund value	\$0.24B
Number of issues in fund	442
Number of issues in benchmark	438

Top 10 holdings

	Country	Weight (%)
Nestle SA	Switzerland	4.64
Roche Holding Par AG	Switzerland	3.23
ASML Holding NV	Netherlands	3.15
Novo Nordisk Class B	Denmark	2.51
LVMH	France	2.40
AIA Group Ltd	Hong Kong	1.68
Sony Group Corp	Japan	1.60
Diageo PLC	United Kingdom	1.45
AstraZeneca PLC	United Kingdom	1.38
CSL Ltd	Australia	1.27

Country allocation (%)



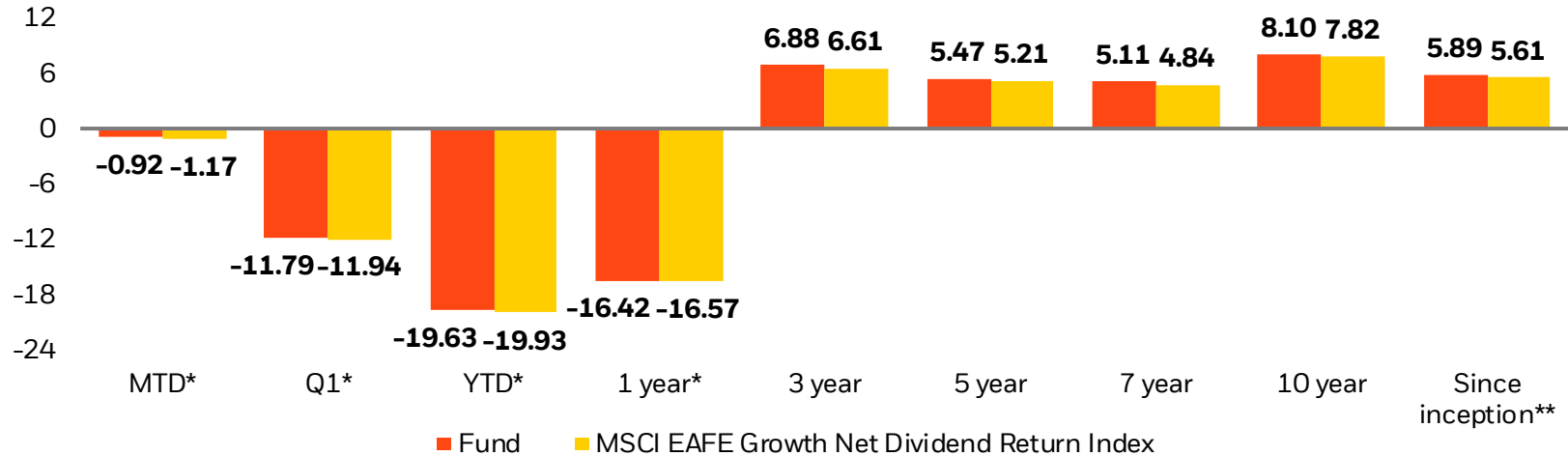
Fund inception date 31 May 2005

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Sources: BlackRock, MSCI Inc.

EAFE Equity Growth Index Fund Performance

Gross total return in USD (annualized* %)



	MTD* %	Q1* %	YTD* %	1-yr* %	3-yr %	5-yr %	7-yr %	10-yr %	Since incept %
Tracking Error***				0.39	0.29	0.29	0.25	0.23	0.19

* Period returns for less than a year are cumulative

** Fund inception date 31 May 2005

*** Value is based on trailing monthly observations

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EAFE Equity Value Index Fund Characteristics

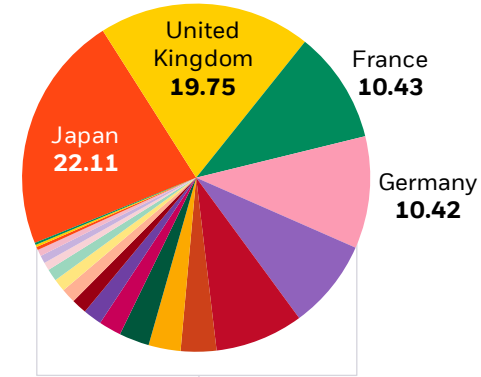
Fund information

Benchmark	MSCI EAFE Value Index
Total fund value	\$1.39B
Number of issues in fund	500
Number of issues in benchmark	498

Top 10 holdings

	Country	Weight (%)
Shell PLC	United Kingdom	3.00
Novartis AG	Switzerland	2.61
Toyota Motor Corp	Japan	2.30
BHP Group Ltd	Australia	2.13
TotalEnergies	France	1.94
HSBC Holdings PLC	United Kingdom	1.79
Unilever PLC	United Kingdom	1.62
Sanofi SA	France	1.59
GSK	United Kingdom	1.46
BP PLC	United Kingdom	1.40

Country allocation (%)



Australia	8.34	Norway	1.18
Switzerland	8.20	Finland	1.13
Spain	3.31	Denmark	0.74
Italy	2.98	Israel	0.72
Hong Kong	2.80	Ireland	0.61
Sweden	2.09	Portugal	0.29
Netherlands	1.74	Austria	0.21
Singapore	1.42	New Zealand	0.20
Belgium	1.35		

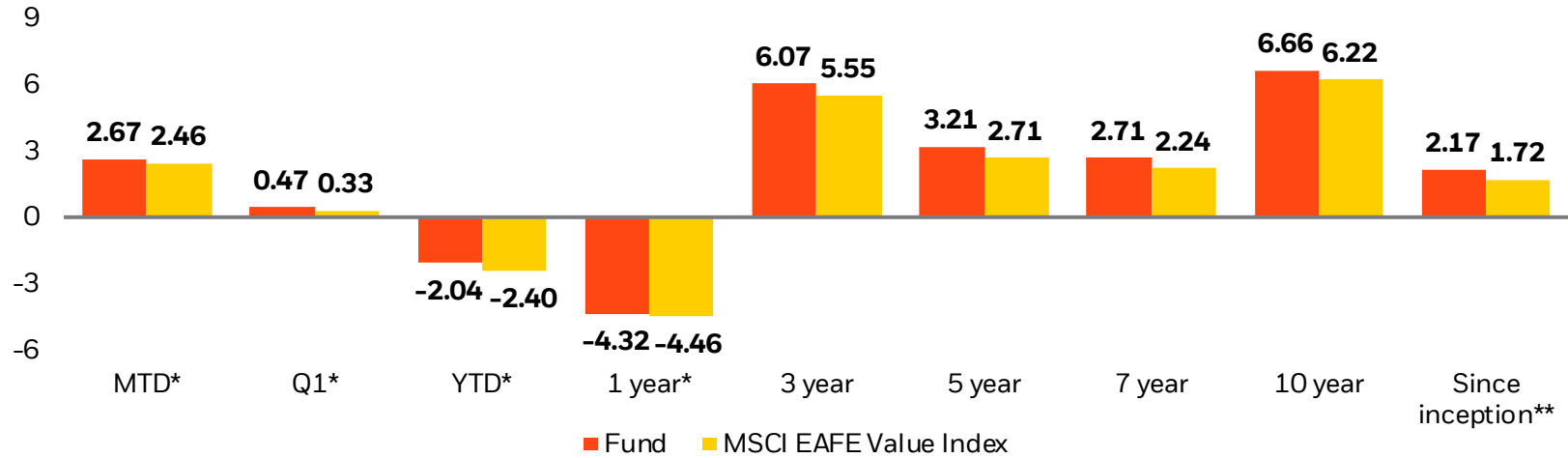
Fund inception date 08 November 2006

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Sources: BlackRock, MSCI Inc.

EAFE Equity Value Index Fund Performance

Gross total return in USD (annualized* %)



	MTD* %	Q1* %	YTD* %	1-yr* %	3-yr %	5-yr %	7-yr %	10-yr %	Since incept %
Tracking Error***				0.49	0.41	0.36	0.32	0.28	0.28

* Period returns for less than a year are cumulative

** Fund inception date 08 November 2006

*** Value is based on trailing monthly observations

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BlackRock MSCI EAFE Small Cap Equity Index Fund Characteristics

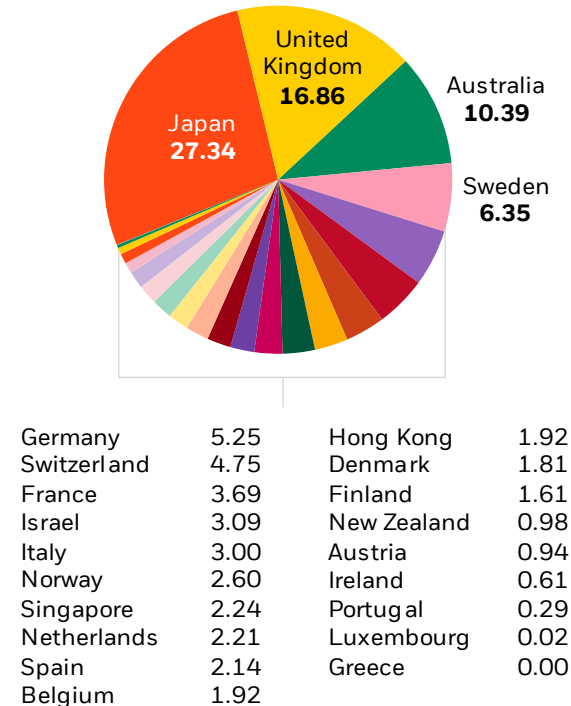
Fund information

Benchmark	MSCI EAFE Small Cap Net Dividend Return Index
Total fund value	\$10.19B
Number of issues in fund	2,363
Number of issues in benchmark	2,354

Top 10 holdings

	Country	Weight (%)
Meggitt PLC	United Kingdom	0.28
Bank of Ireland Group PLC	Ireland	0.25
Rightmove PLC	United Kingdom	0.24
Lynas Rare Earths Ltd	Australia	0.24
Sig Group N AG	Switzerland	0.24
IGO Ltd	Australia	0.23
Metso Outotec Corp	Finland	0.23
ASR Nederland NV	Netherlands	0.23
RS Group PLC	United Kingdom	0.22
Centrica PLC	United Kingdom	0.22

Country allocation (%)



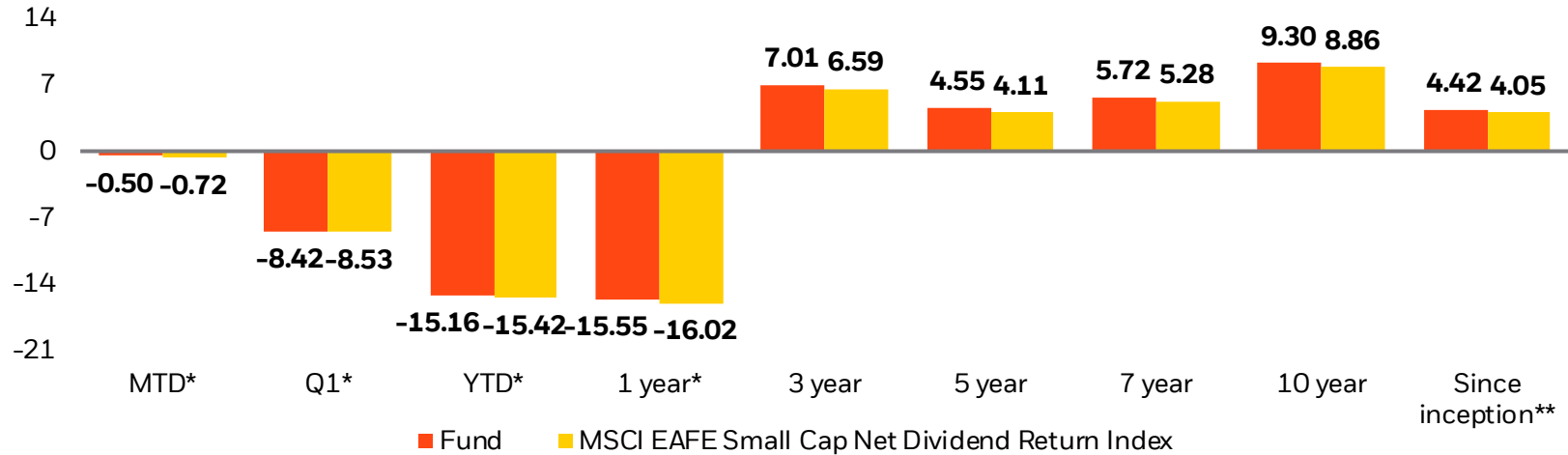
Fund inception date 30 September 2007

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Sources: BlackRock, MSCI Inc.

BlackRock MSCI EAFE Small Cap Equity Index Fund Performance

Gross total return in USD (annualized* %)



	MTD* %	Q1* %	YTD* %	1-yr* %	3-yr %	5-yr %	7-yr %	10-yr %	Since incept %
Tracking Error***				0.23	0.16	0.24	0.22	0.22	0.44

* Period returns for less than a year are cumulative

** Fund inception date 30 September 2007

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BlackRock MSCI EAFE Small Cap Equity Index Non-Lendable Fund Characteristics

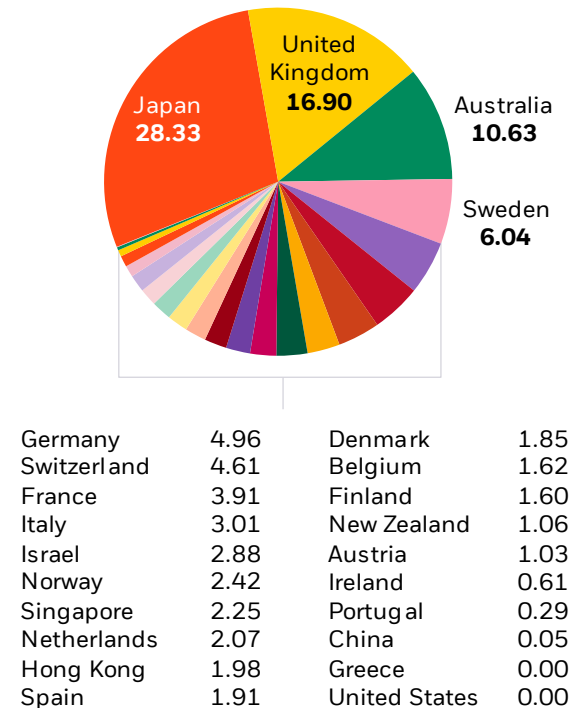
Fund information

Benchmark	MSCI EAFE Small Cap Net Return Index
Total fund value	\$3.10B
Number of issues in fund	2,358
Number of issues in benchmark	2,356

Top 10 holdings

	Fund (%)	Index (%)
Meggitt PLC	0.28	0.28
Bank of Ireland Group PLC	0.25	0.26
Rightmove PLC	0.25	0.24
Lynas Rare Earths Ltd	0.24	0.24
SIG Group N AG	0.23	0.23
ASR Nederland NV	0.23	0.23
IGO Ltd	0.23	0.23
Metso Outotec Corp	0.23	0.23
Centrica PLC	0.22	0.22
RS Group PLC	0.22	0.21

Country allocation (%)



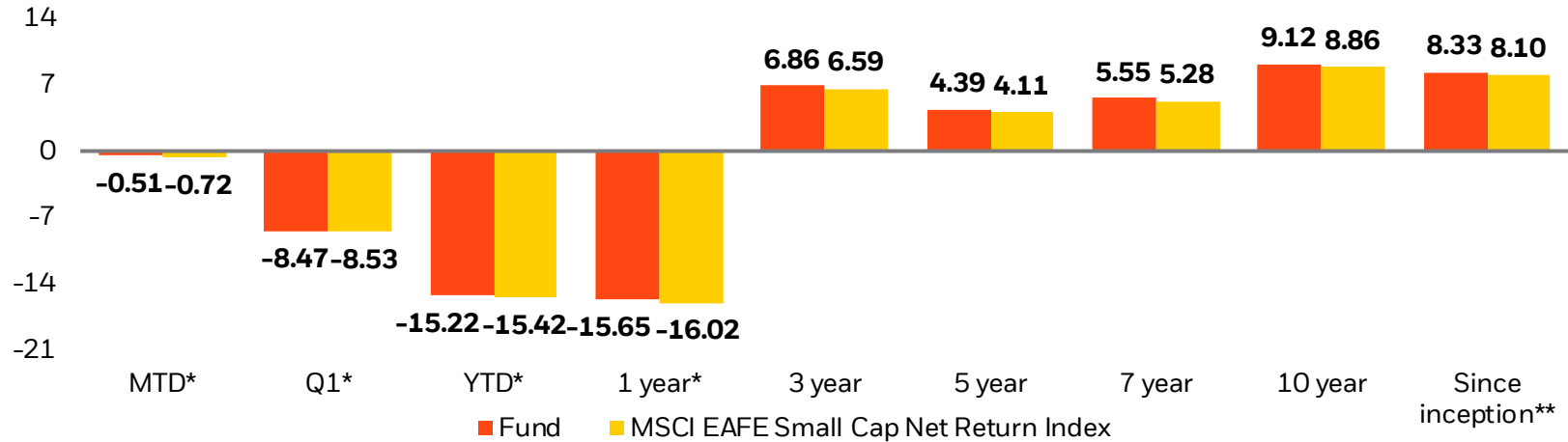
Fund inception date 31 July 2009

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Sources: BlackRock, MSCI Inc.

BlackRock MSCI EAFE Small Cap Equity Index Non-Lendable Fund Performance

Gross total return in USD (annualized* %)



	MTD* %	Q1* %	YTD* %	1-yr* %	3-yr %	5-yr %	7-yr %	10-yr %	Since incept %
Tracking Error***				0.24	0.18	0.24	0.21	0.22	0.22

* Period returns for less than a year are cumulative

** Fund inception date 31 July 2009

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MSCI Emerging Markets Free Fund Characteristics

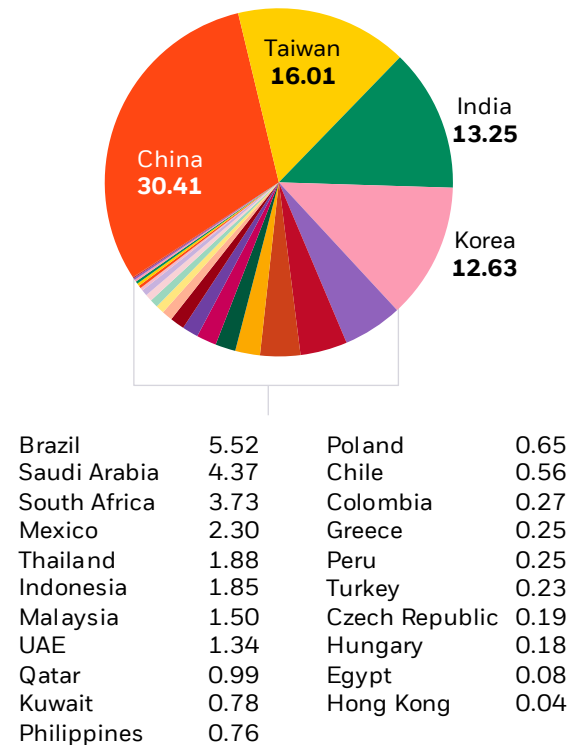
Fund information

Benchmark	MSCI Emerging Markets Net Dividend Return Index
Total fund value	\$16.72B
Number of issues in fund	1,382
Number of issues in benchmark	1,393

Top 10 holdings

	Country	Weight (%)
Taiwan Semiconductor Manufacturing	Taiwan Rep of China	6.83
Tencent Holdings Ltd	China	4.09
Samsung Electronics Ltd	South Korea	3.72
Alibaba Group Holding Ltd	China	2.64
Reliance Industries Ltd	India	1.49
Meituan	China	1.38
Cia Vale Do Rio Doce Sh	Brazil	1.04
China Construction Bank Corp H	China	1.02
Infosys Ltd	India	0.94
JD.com Class A Inc	China	0.82

Country allocation (%)



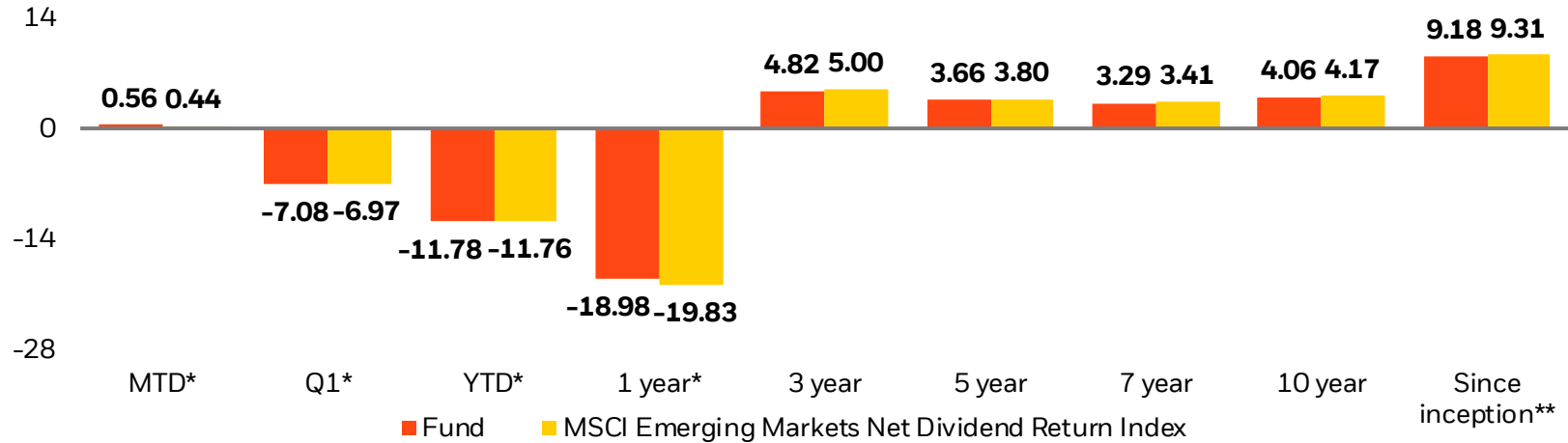
Fund inception date 30 November 2002

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Sources: BlackRock, MSCI Inc.

MSCI Emerging Markets Free Fund Performance

Gross total return in USD (annualized* %)



	MTD* %	Q1* %	YTD* %	1-yr* %	3-yr %	5-yr %	7-yr %	10-yr %	Since incept %
Tracking Error***				2.11	1.51	1.17	0.99	0.83	0.79

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** Fund inception date 30 November 2002

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Emerging Markets Index Non-Lendable Fund Characteristics

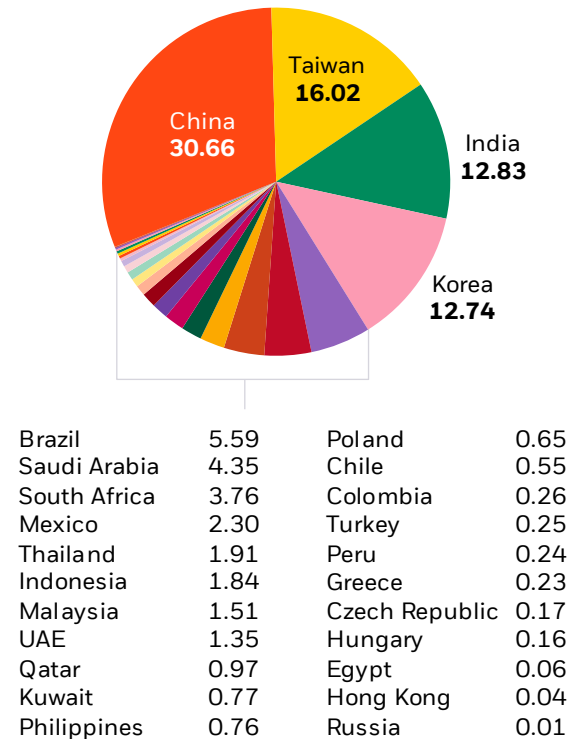
Fund information

Benchmark	MSCI Emerging Markets Net Dividend Return Index
Total fund value	\$11.72B
Number of issues in fund	1,381
Number of issues in benchmark	1,393

Top 10 holdings

	Country	Weight (%)
Taiwan Semiconductor Manufacturing	Taiwan Rep of China	6.79
Tencent Holdings Ltd	China	4.12
Samsung Electronics Ltd	South Korea	3.72
Alibaba Group Holding Ltd	China	2.66
Reliance Industries Ltd	India	1.47
Meituan	China	1.40
Cia Vale Do Rio Doce Sh	Brazil	1.04
China Construction Bank Corp H	China	1.02
Infosys Ltd	India	0.93
JD.com Class A Inc	China	0.83

Country allocation (%)



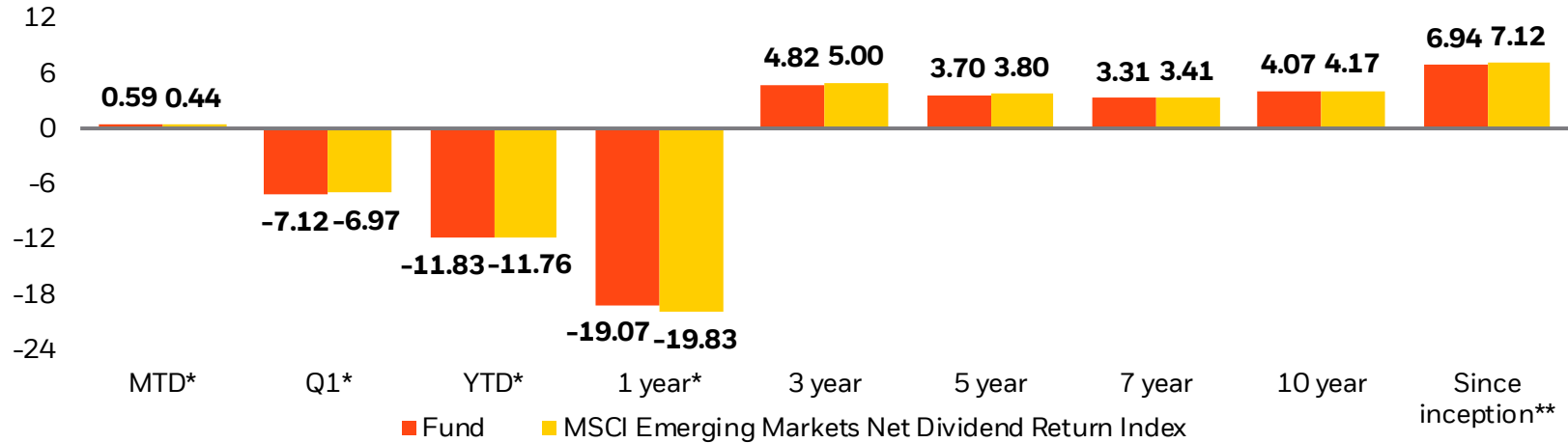
Fund inception date 17 December 2008

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Sources: BlackRock, MSCI Inc.

Emerging Markets Index Non-Lendable Fund Performance

Gross total return in USD (annualized* %)



	MTD* %	Q1* %	YTD* %	1-yr* %	3-yr %	5-yr %	7-yr %	10-yr %	Since incept %
Tracking Error***				2.13	1.50	1.16	0.98	0.83	0.96

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** Fund inception date 17 December 2008

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Emerging Markets Small Capitalization Equity Index Fund Characteristics

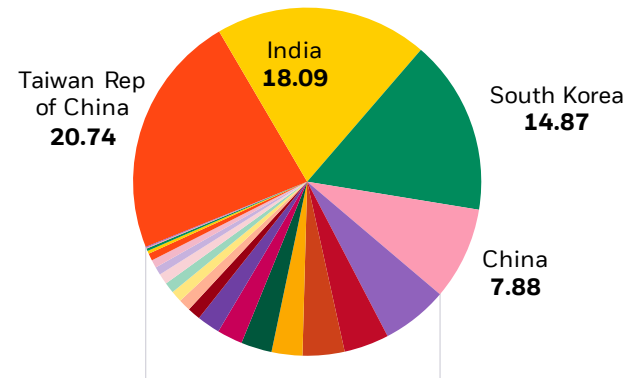
Fund information

Benchmark	MSCI Emerging Markets Small Cap Net Dividend Return Index
Total fund value	\$2.03B
Number of issues in fund	1,844
Number of issues in benchmark	1,830

Top 10 holdings

	Country	Weight (%)
Adani Power Ltd	India	0.31
Sino-American Silicon Products Inc	Taiwan Rep of China	0.28
Voltas Ltd	India	0.28
Zee Entertainment Enterprises Ltd	India	0.27
Sendas Distribuidora SA	Brazil	0.27
Ashok Leyland Ltd	India	0.26
Wistron Corp	Taiwan Rep of China	0.26
Crompton Greaves Consumer Electric	India	0.25
Taiwan Business Bank Ltd	Taiwan Rep of China	0.25
Macronix International Ltd	Taiwan Rep of China	0.25

Country allocation (%)



Brazil	5.64	Qatar	0.91
South Africa	3.82	Chile	0.68
Thailand	3.56	UAE	0.68
Malaysia	2.62	Greece	0.62
Saudi Arabia	2.62	Colombia	0.25
Indonesia	2.17	Egypt	0.21
Mexico	1.97	Hong Kong	0.09
Poland	1.11	Hungary	0.07
Kuwait	1.03	Russian Fed	0.00
Turkey	0.96	United States	0.00
Philippines	0.91	Czech Republic	0.00

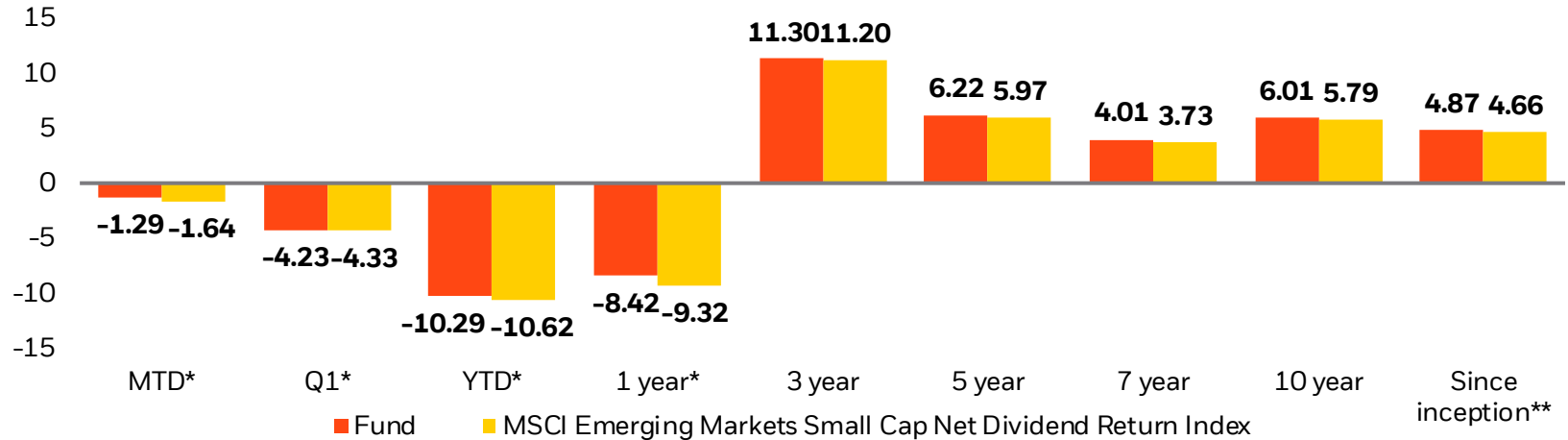
Fund inception date 02 February 2012

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Sources: BlackRock, MSCI Inc.

Emerging Markets Small Capitalization Equity Index Fund Performance

Gross total return in USD (annualized* %)



	MTD* %	Q1* %	YTD* %	1-yr* %	3-yr %	5-yr %	7-yr %	10-yr %	Since incept %
Tracking Error***				1.31	0.97	0.78	0.70	0.60	0.60

* Period returns for less than a year are cumulative

** Fund inception date 02 February 2012

*** Value is based on trailing monthly observations

This information is unaudited, subject to change and intended for analytical purposes only. The Fund's net asset value does not include an accrual for the investment management fee but does include an accrual for fund level administrative costs and, if applicable, certain third party acquired fund fees and expenses. If the Fund's net asset value did include an accrual for the investment management fee, the Fund's returns would be lower. **Past performance is not necessarily an indicator of future performance.** Indexes are unmanaged. It is not possible to invest directly in an index.

Sources: BlackRock, MSCI Inc.

Emerging Markets Small Capitalization Equity Index Non-Lendable Fund Characteristics

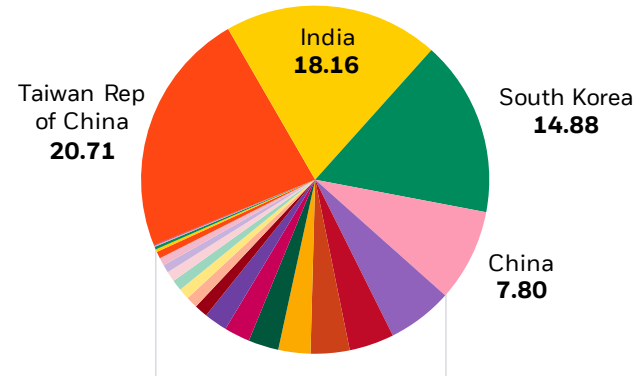
Fund information

Benchmark	MSCI Emerging Markets Small Cap Net Dividend Return Index
Total fund value	\$3.38B
Number of issues in fund	1,909
Number of issues in benchmark	1,830

Top 10 holdings

	Country	Weight (%)
Adani Power Ltd	India	0.31
Sino-American Silicon Products Inc	Taiwan Rep of China	0.29
Voltas Ltd	India	0.28
Zee Entertainment Enterprises Ltd	India	0.27
Sendas Distribuidora SA	Brazil	0.26
Ashok Leyland Ltd	India	0.26
Crompton Greaves Consumer Electric	India	0.25
Wistron Corp	Taiwan Rep of China	0.25
Laurus Labs Ltd	India	0.24
Macronix International Ltd	Taiwan Rep of China	0.24

Country allocation (%)



Brazil	5.51	Philippines	0.87
South Africa	3.79	UAE	0.67
Thailand	3.29	Chile	0.66
Malaysia	2.72	Greece	0.58
Saudi Arabia	2.55	Colombia	0.23
Indonesia	2.18	Egypt	0.23
Mexico	1.96	Hong Kong	0.09
Poland	1.12	Hungary	0.05
Kuwait	0.99	Czech Republic	0.04
Turkey	0.93	Russian Fed	0.00
Qatar	0.91	United States	0.00

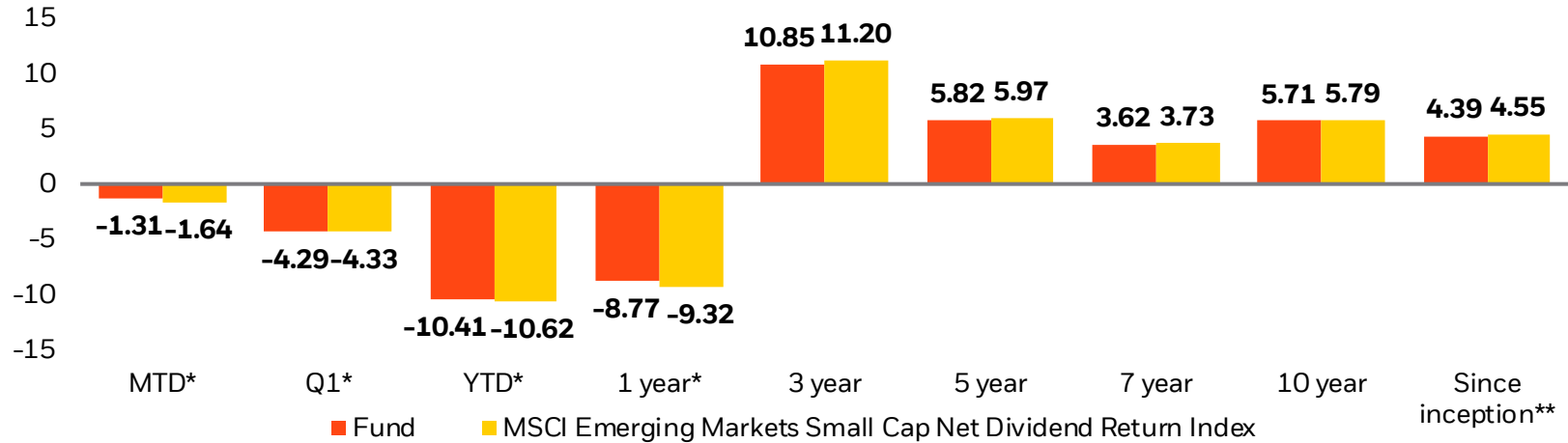
Fund inception date 11 December 2009

Data is used for analytical purposes only. Breakdowns may not sum to 100 percent due to rounding, exclusion of cash, STIF and statistically immaterial factors. Portfolio holdings are subject to change and are not intended as a recommendation of individual securities.

Sources: BlackRock, MSCI Inc.

Emerging Markets Small Capitalization Equity Index Non-Lendable Fund Performance

Gross total return in USD (annualized* %)



	MTD* %	Q1* %	YTD* %	1-yr* %	3-yr %	5-yr %	7-yr %	10-yr %	Since incept %
Tracking Error***				1.32	0.95	0.76	0.66	0.58	0.61

* Period returns for less than a year are cumulative

** Fund inception date 11 December 2009

*** Value is based on trailing monthly observations

This information is unaudited, subject to change and intended for analytical purposes only. The Fund's net asset value does not include an accrual for the investment management fee but does include an accrual for fund level administrative costs and, if applicable, certain third party acquired fund fees and expenses. If the Fund's net asset value did include an accrual for the investment management fee, the Fund's returns would be lower. **Past performance is not necessarily an indicator of future performance.** Indexes are unmanaged. It is not possible to invest directly in an index.

Sources: BlackRock, MSCI Inc.

Fixed Income

U.S. Debt Index Fund

U.S. Debt Index Non-Lendable Fund

U.S. Treasury Inflation Protected Securities Fund

U.S. Treasury Inflation Protected Securities Non-Lendable Fund

U.S. Debt Index Fund

Portfolio profile

	U.S. Debt Index Fund	Bloomberg U.S. Aggregate Bond Index
Market value (\$B)	8.52	25,167.35
# Issues	9,908	12,583
Characteristics		
Coupon (%)	2.62	2.47
Yield to maturity (YTM) (%)	3.34	3.36
Weighted avg life (yrs)	8.71	8.81
Effective duration (yrs)	6.52	6.59
Spread duration	4.11	4.11
Option adjusted spread (bps)	44	44
Convexity	0.61	0.62
Quality breakdown (mkt val %)		
AAA or above	73.82	73.23
AA	2.58	2.82
A	10.62	10.83
BBB	12.90	13.03
Bellow BBB	0.08	0.08
NR	0.00	0.02

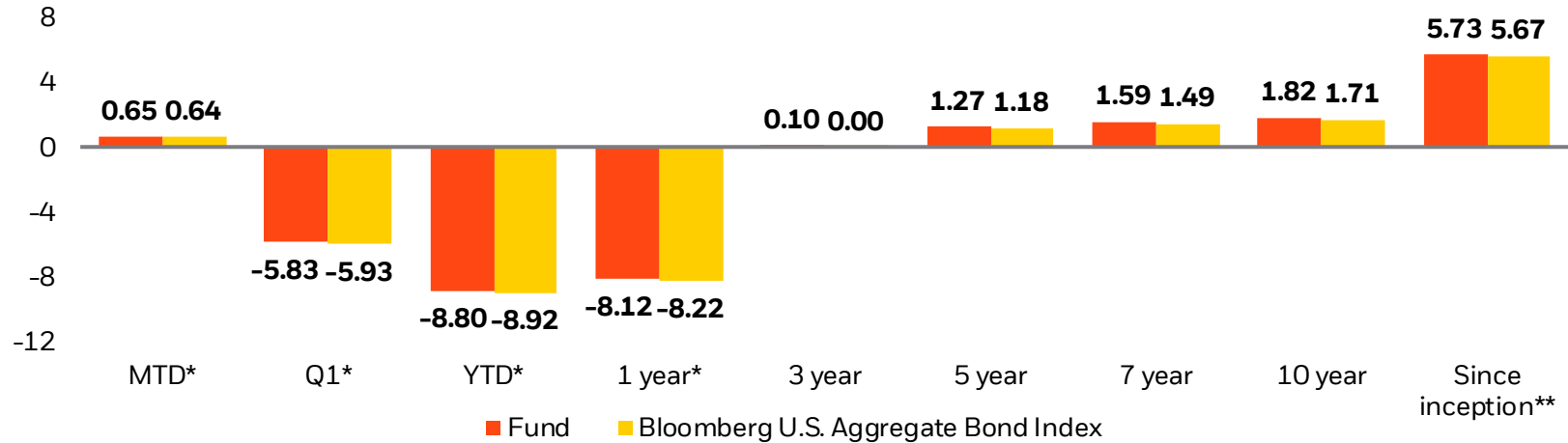
	U.S. Debt Index Fund	Bloomberg U.S. Aggregate Bond Index
Sector breakdown (mkt val %)		
Treasury	40.02	39.99
Agencies	1.01	1.32
Financials	7.99	8.04
Industrials	14.21	14.45
Utilities	1.93	2.01
Non-US credit	3.24	3.38
Taxable munis	0.60	0.66
ABS	0.31	0.32
Mortgages	27.65	27.86
Hybrid ARM	0.01	0.00
CMBS	1.96	1.96
Foreign Government	0.00	0.00
Other	0.00	0.01
Cash	1.07	0.00
Weighted avg life breakdown (mkt val %)		
0-1	2.63	0.17
1-2	8.87	10.59
2-3	7.27	10.12
3-5	19.44	15.88
5-7	15.39	15.69
7-10	21.86	25.39
10-20	12.71	10.60
20-30	10.97	10.71
30+	0.86	0.86

Fund inception date 30 June 1986

Data is for analytical purposes only. Index data points may differ to those published by the Index due to different calculation criteria. The credit quality of a particular security or group of securities may be based upon a rating from a nationally recognized statistical rating organization or, if unrated by a ratings organization, assigned an internal rating by BlackRock, neither of which ensures the stability or safety of an overall portfolio. Breakdowns may not sum to total due to rounding, exclusion of cash, STIF, and statistically immaterial factors. Sources: BlackRock, Bloomberg Finance L.P.

U.S. Debt Index Fund Performance

Gross total return in USD (annualized* %)



	MTD %*	Q1 %*	YTD %*	1-yr %*	3-yr %	5-yr %	7-yr %	10-yr %	Since incept %
Tracking Error***				0.11	0.07	0.06	0.06	0.09	0.15

* Period returns for less than a year are cumulative

** Fund inception date 30 June 1986

*** Value is based on trailing monthly observations

This information is unaudited, subject to change and intended for analytical purposes only. The Fund's net asset value does not include an accrual for the investment management fee but does include an accrual for fund level administrative costs and, if applicable, certain third party acquired fund fees and expenses. If the Fund's net asset value did include an accrual for the investment management fee, the Fund's returns would be lower. **Past performance is not necessarily an indicator of future performance.** Indexes are unmanaged. It is not possible to invest directly in an index.

Sources: BlackRock, Bloomberg Finance L.P.

U.S. Debt Index Fund Non-Lendable Fund

Portfolio profile

	U.S. Debt Index Fund Non-Lendable Fund	Bloomberg U.S. Aggregate Bond Index
Market value (\$B)	3.57	25,167.35
# Issues	9,548	12,583
Characteristics		
Coupon (%)	2.56	2.47
Yield to maturity (YTM) (%)	3.35	3.36
Weighted avg life (yrs)	8.73	8.81
Effective duration (yrs)	6.54	6.59
Spread duration	4.13	4.11
Option adjusted spread (bps)	44	44
Convexity	0.61	0.62
Weighted avg life breakdown (mkt val %)		
<0	0.00	0.00
0-1	9.44	11.31
1-2	8.63	10.27
2-3	11.18	8.29
3-4	9.82	10.47
4-5	15.46	13.77
5-6	10.94	13.17
6-7	12.47	11.69
7-8	2.73	3.74
8-9	1.10	0.75
9-10	7.48	7.26
10-15	6.82	7.44
15-20	1.78	1.58
20-25	0.00	0.00
25+	2.15	0.25

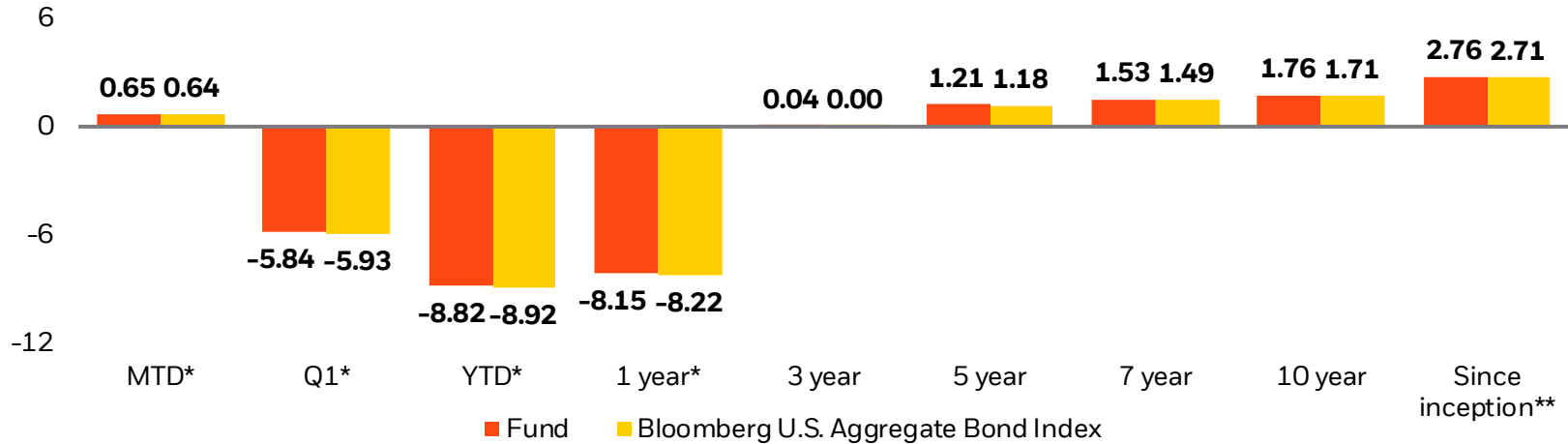
	U.S. Debt Index Fund Non-Lendable Fund	Bloomberg U.S. Aggregate Bond Index
Quality breakdown (mkt val %)		
AAA or above	73.58	73.23
AA	2.60	2.82
A	10.72	10.83
BBB	13.02	13.03
Below BBB	0.08	0.08
NR	0.00	0.02
Sector breakdown (mkt val %)		
Treasury	39.54	40.00
Agencies	1.42	1.32
Financials	8.06	8.04
Industrials	14.28	14.45
Utilities	1.96	2.01
Non-US credit	3.23	3.38
Taxable munis	0.59	0.66
ABS	0.31	0.32
Mortgages	27.65	27.86
GNMA 30 year	5.90	5.83
GNMA 15 year	0.00	0.03
FHLM gold 30 year	1.09	1.28
FHLM gold 15 year	0.23	0.24
FNMA 30	10.69	10.43
FNMA 15	1.76	1.81
Other	7.98	8.24
Hybrid ARM	0.01	0.00
CMBS	1.96	1.96
Foreign Government	0.00	0.00
Other	0.00	0.00
Cash	0.99	0.00

Fund inception date 18 September 2009

Data is for analytical purposes only. Index data points may differ to those published by the Index due to different calculation criteria. The credit quality of a particular security or group of securities may be based upon a rating from a nationally recognized statistical rating organization or, if unrated by a ratings organization, assigned an internal rating by BlackRock, neither of which ensures the stability or safety of an overall portfolio. Breakdowns may not sum to total due to rounding, exclusion of cash, STIF, and statistically immaterial factors. Sources: BlackRock, Bloomberg Finance LP.

U.S. Debt Index Non-Lendable Fund Performance

Gross total return in USD (annualized* %)



	MTD %*	Q1 %*	YTD %*	1-yr %*	3-yr %	5-yr %	7-yr %	10-yr %	Since incept %
Tracking Error***				0.10	0.07	0.05	0.06	0.09	0.09

* Period returns for less than a year are cumulative

** Fund inception date 18 September 2009

*** Value is based on trailing monthly observations

This information is unaudited, subject to change and intended for analytical purposes only. The Fund's net asset value does not include an accrual for the investment management fee but does include an accrual for fund level administrative costs and, if applicable, certain third party acquired fund fees and expenses. If the Fund's net asset value did include an accrual for the investment management fee, the Fund's returns would be lower. **Past performance is not necessarily an indicator of future performance.** Indexes are unmanaged. It is not possible to invest directly in an index.

Sources: BlackRock, Bloomberg Finance L.P.

U.S. Treasury Inflation Protected Securities Fund

Portfolio profile

	U.S. Treasury Inflation Protected Securities Fund	Bloomberg U.S. Treasury Inflation Protected Securities (TIPS) Index (Series L)
Market value (\$B)	3.46	1,217.33
# Issues	46	46
Characteristics		
Coupon (%)	0.63	0.64
Yield to maturity (YTM) (%)	2.77	2.78
Weighted avg life (yrs)	7.64	7.64
Effective duration (yrs)	7.14	7.14
Convexity	0.99	0.98

	U.S. Treasury Inflation Protected Securities Fund	Bloomberg U.S. Treasury Inflation Protected Securities (TIPS) Index (Series L)
Weighted avg life breakdown (mkt val %)		
0-1	0.53	0.00
1-2	9.77	9.76
2-3	11.78	14.15
3-5	27.88	24.74
5-7	14.88	16.68
7-10	19.99	19.61
10-20	3.79	3.60
20-30	11.38	11.46
30+	0.00	0.00

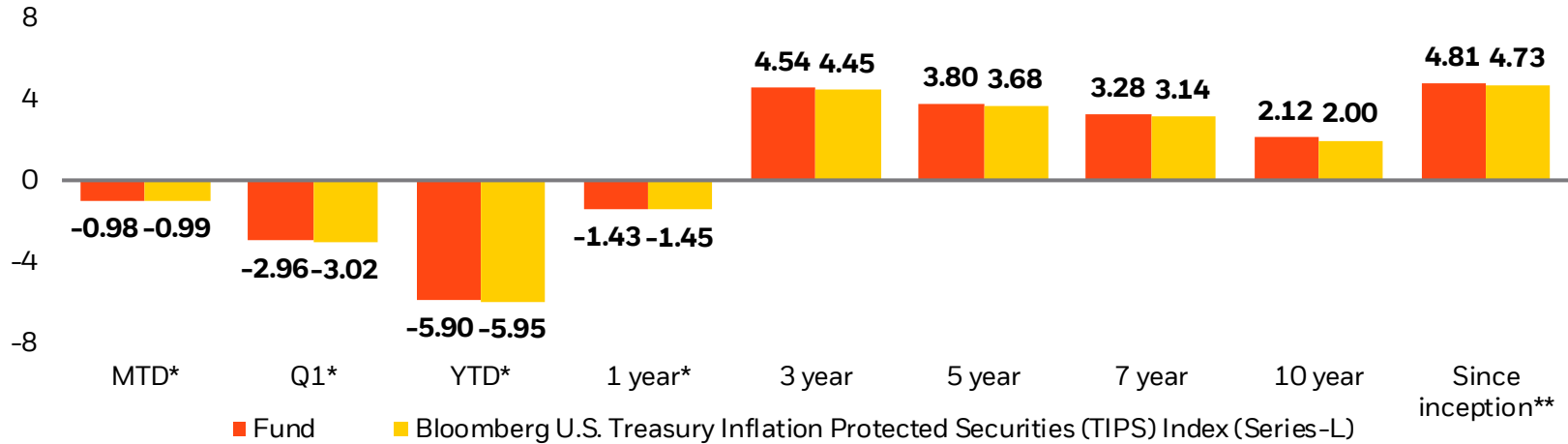
Fund inception date 15 November 2001

Data is for analytical purposes only. Index data points may differ to those published by the Index due to different calculation criteria. Breakdowns may not sum to total due to rounding, exclusion of cash, STIF, and statistically immaterial factors.

Sources: BlackRock, Bloomberg Finance L.P.

U.S. Treasury Inflation Protected Securities Fund Performance

Gross total return in USD (annualized* %)



	MTD %*	Q1 %*	YTD %*	1-yr %*	3-yr %	5-yr %	7-yr %	10-yr %	Since incept %
Tracking Error***				0.08	0.10	0.08	0.08	0.12	0.12

* Period returns for less than a year are cumulative

** Fund inception date 15 November 2001

*** Value is based on trailing monthly observations

This information is unaudited, subject to change and intended for analytical purposes only. The Fund's net asset value does not include an accrual for the investment management fee but does include an accrual for fund level administrative costs and, if applicable, certain third party acquired fund fees and expenses. If the Fund's net asset value did include an accrual for the investment management fee, the Fund's returns would be lower. **Past performance is not necessarily an indicator of future performance.** Indexes are unmanaged. It is not possible to invest directly in an index.

Sources: BlackRock, Bloomberg Finance L.P.

U.S. Treasury Inflation Protected Securities Non-Lendable Fund Portfolio profile

	U.S. Treasury Inflation Protected Securities NL Fund	Bloomberg U.S. Treasury Inflation Protected Securities (TIPS) Index (Series L)
Market value (\$B)	6.57	1,217.33
# Issues	46	46
Characteristics		
Coupon (%)	0.61	0.64
Yield to maturity (YTM) (%)	2.78	2.78
Weighted avg life (yrs)	7.62	7.64
Effective duration (yrs)	7.14	7.14
Convexity	0.98	0.98

	U.S. Treasury Inflation Protected Securities NL Fund	Bloomberg U.S. Treasury Inflation Protected Securities (TIPS) Index (Series L)
Weighted avg life breakdown (mkt val %)		
0-1	0.20	0.00
1-2	9.49	9.76
2-3	12.97	14.15
3-5	27.38	24.74
5-7	15.03	16.68
7-10	20.01	19.61
10-20	3.10	3.60
20-30	11.81	11.46
30+	0.00	0.00

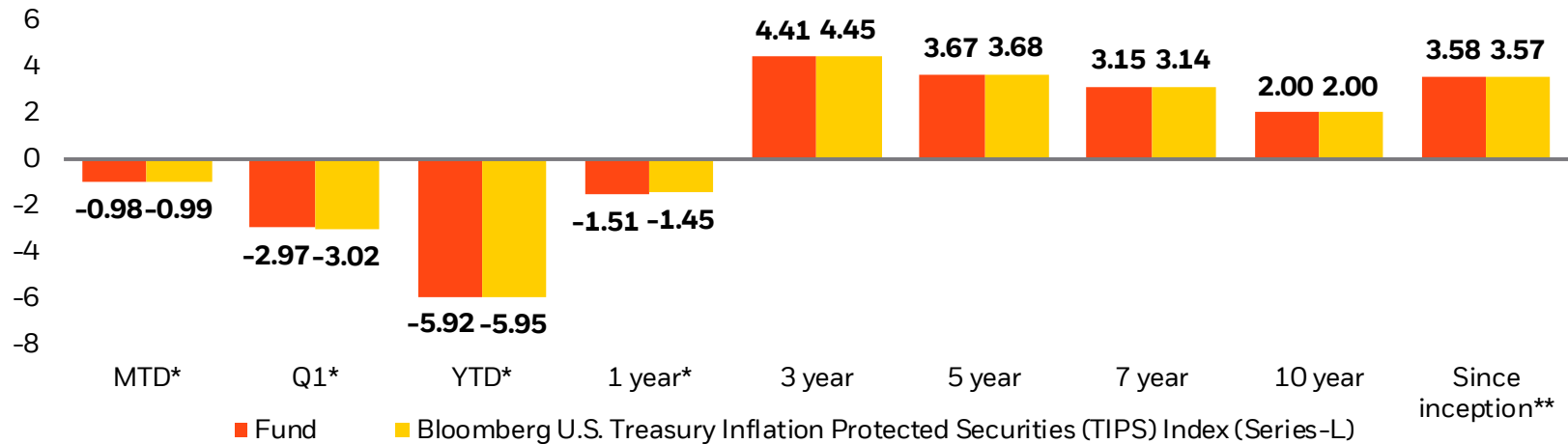
Fund inception date 01 October 2009

Data is for analytical purposes only. Index data points may differ to those published by the Index due to different calculation criteria. Breakdowns may not sum to total due to rounding, exclusion of cash, STIF, and statistically immaterial factors.

Sources: BlackRock, Bloomberg Finance L.P.

U.S. Treasury Inflation Protected Securities Non-Lendable Fund Performance

Gross total return in USD (annualized* %)



	MTD %*	Q1 %*	YTD %*	1-yr %*	3-yr %	5-yr %	7-yr %	10-yr %	Since incept %
Tracking Error***				0.09	0.09	0.07	0.08	0.12	0.11

* Period returns for less than a year are cumulative

** Fund inception date 01 October 2009

*** Value is based on trailing monthly observations

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Sources: BlackRock, Bloomberg Finance L.P.

V. Appendix

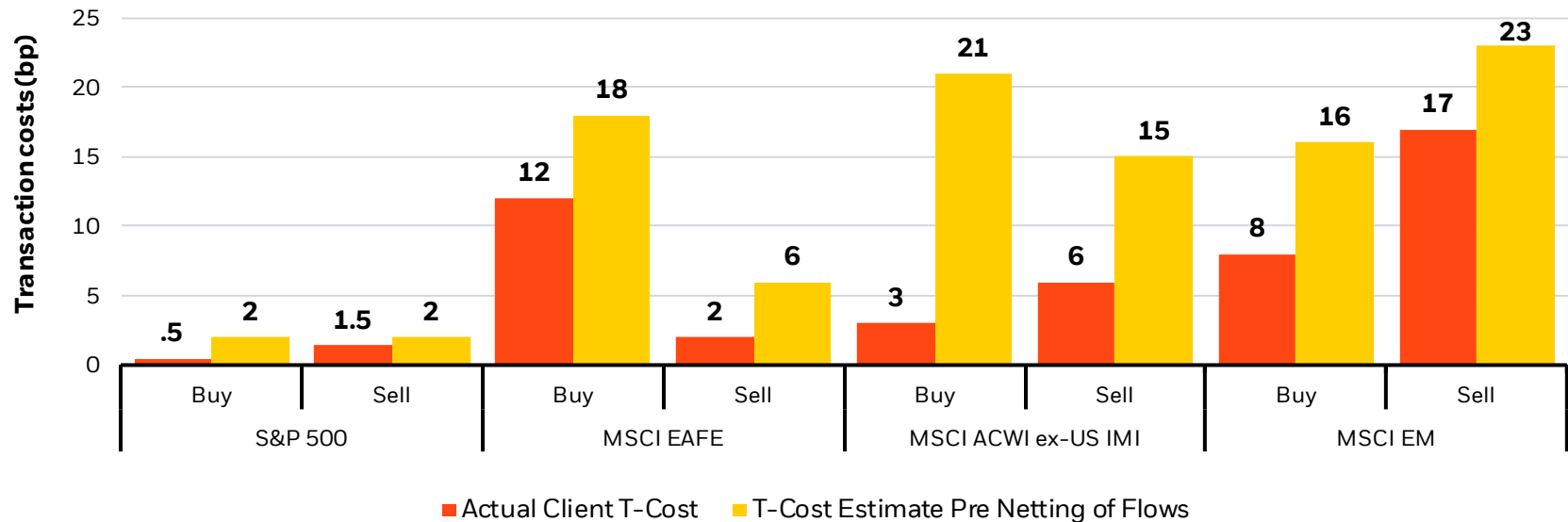
BlackRock's scale can help drive lower costs

The scale of BlackRock's index platform can help **lower transaction costs** in the following ways:

- The size of our trading footprint allows us to negotiate low commission rates
- The diversity of our client base, coupled with the range of indices we manage assets against, facilitates the industry's largest internal market place for potential netting of client flows
- Large seasoned funds may require less market trading for flows relative to small asset pools

BlackRock transaction costs vs. ex-ante estimates¹

Average client cost in 2021, as of Dec 31, 2021



¹ Estimated transaction costs includes commissions and taxes based on BlackRock's current standard negotiated rates
 Source: BlackRock. BlackRock Flagship Index Funds shown
 Historical transaction costs are not indicative of future results

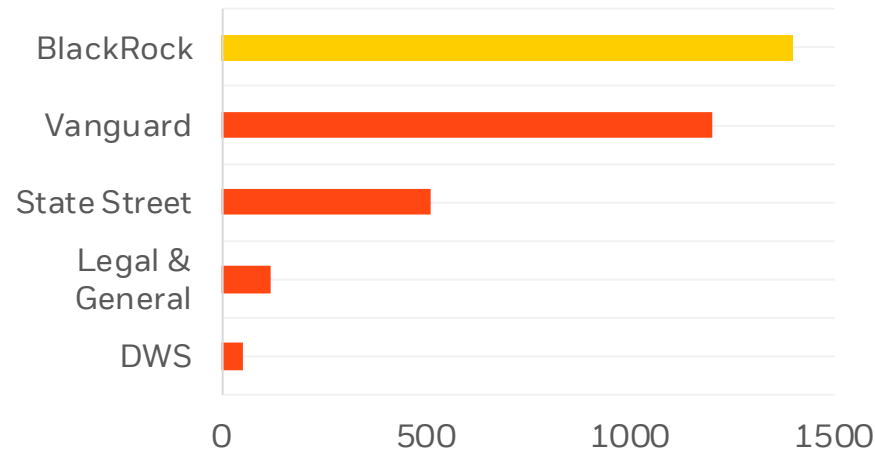
BlackRock's Fixed Income Indexing Platform

Global leader in Fixed Income Index assets

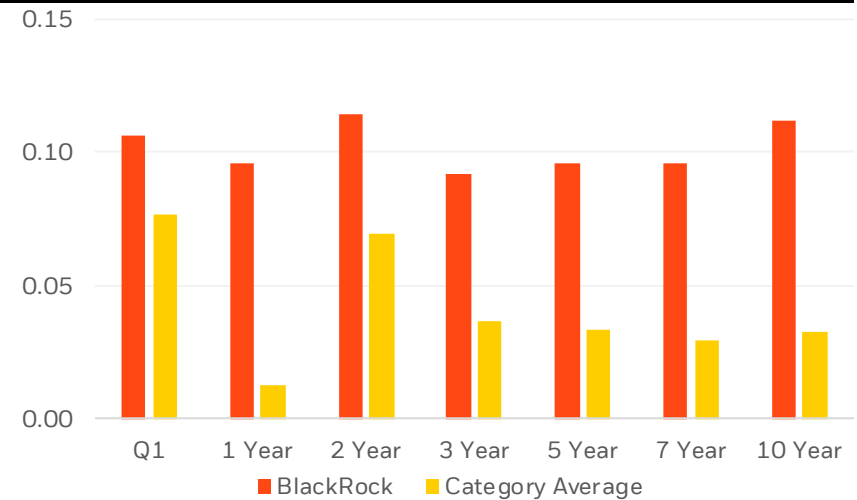
There are four key reasons to pick BlackRock over any other index provider:

- Low historical tracking error¹
- An experienced, stable team
- Potential for Low transaction costs from size and scale
- Transparent pricing and no cross subsidization as BlackRock has no custody business

Global Fixed Income Index Market AUM (\$B)²



Gross Tracking Difference vs. BBG Barclays US Aggregate Index³



1 Source: BlackRock. Realized 5-year gross tracking error as of 3/31/2022 is 6 bps for the BlackRock U.S. Debt Index Collective Trust Fund. Please see slide 20 for additional information on the Fund's tracking error.

2 Source: Pension & Investments. All dollar values are in gross \$ billions.; data as of 1 June 2021. Managers included based on largest global fixed income index market AUM per Pension & Investments.

3 Source: eVestment; data as of 31 March 2022. Periods less than a year are not annualized. Indexes are unmanaged and one cannot invest directly in an index. Managers on the right are different from those with the largest Index AUM due to product availability or missing data. The Category Average includes all index funds available on eVestment managed against the Bloomberg Barclays US Aggregate Index. Category Average depicts tracking difference, defined as risk in excess of the benchmark, vs. the Bloomberg Barclays US Aggregate Index. The Fund's net asset value does not include an accrual for the investment management fee but does include an accrual for fund level administrative costs and, if applicable, certain third party acquired fund fees and expenses. If the Fund's net asset value did include an accrual for the investment management fee, the Fund's returns would be lower. **Past performance is not necessarily an indicator of future performance.** All periods contain 8 managers in the universe except the 7-Year and 10-Year periods, which contain 7. BlackRock is included in the universe. Please see slide 20 for the Fund's full performance track record.

Equity Trends & Interests

Investors today are enhancing their passive allocations with the below strategies:

Return Enhancement Strategies

Index Plus

Enhanced index strategy designed to actively seek alpha, by tactically employing event driven trading that focus on IPOs, index changes, and other corporate events that might cause price dislocation

Securities Lending

Return enhancement strategy designed to capture scarcity premium by lending securities

Sector/Thematic Equities

Fundamental active strategies in sectors like technology and healthcare that are designed to take advantage of structural growth trends and increased dispersion. Often implemented as a growth/innovation satellite in equity portfolios in seeking to increase risk-adjusted returns

Factors

Factor-based strategy designed to provide incremental returns over capitalization-weighted indices through a focus on broad, persistent sources of return

Scientific Active Equity

Active quantitative strategies that pursue a persistent informational advantage in seeking to generate consistent and differentiated alpha with incremental risk above the benchmark. Leverages harder to access alpha sources using alternative data and next generation tools (e.g., machine learning)

Risk Reduction Strategies

Minimum Volatility

Factor-based strategies designed to reflect the characteristics of a minimum variance portfolio focused on returns as well as minimizing absolute risk

Currency Hedging

Risk reduction strategy designed to minimize or eliminate foreign exchange risk

Alternative Index Strategies

Environmental, Social, and Governance

Market cap weighted strategies designed to incorporate ESG factors while minimizing tracking error to traditional indices





Liquidity & Completion

Provides a liquidity management solution designed to maintain beta exposure and reduce tracking error yet still allow for flexibility




Fixed Income Trends & Interests

Factor-based strategies and other systematic solutions offer alternatives to traditional index returns

U.S. Aggregate Strategies

<p>Defensive Credit</p> 	<p>▶ Defensive, systematic strategy designed to avoid issuers that are at risk of experiencing credit deterioration</p>
<p>MBS Up In Coupon</p> 	<p>▶ Factor-based strategy designed to outperform traditional mortgage-backed securities (MBS) indices by capturing attractive risk-adjusted carry</p>
<p>Curve Steepener</p> 	<p>▶ Factor-based strategy designed to outperform traditional government indices by capturing term-premia and roll down</p>
<p>Short Carry</p> 	<p>▶ Systematic strategy designed to generate carry through use of US Treasury Futures and short-dated securitized holdings</p>

Broader Strategy Options

<p>Balanced Risk "FIBR"</p> 	<p>▶ Factor-based strategy designed to balance interest rate and spread risk to improve risk adjusted returns</p>
<p>Systematic CorePlus</p> 	<p>▶ Systematic strategy designed to outperform traditional indices by tilting into sectors traditionally utilized by active managers</p>
<p>Capital Efficiency</p> 	<p>▶ Systematic strategy designed to release capital through synthetic replication of traditional fixed income indices</p>
<p>Impact Investing</p> 	<p>▶ Systematic strategy designed to incorporate ESG factors while minimizing tracking error to traditional indices</p>

Source: BlackRock. The above information is shown for illustrative purposes only and not meant to be a recommendation to buy or sell any security. Derivatives may involve certain costs and risks such as liquidity, interest rate, market, credit, management and the risk that a position could not be closed when most advantageous. Investing in derivatives could lose more than the amount invested.

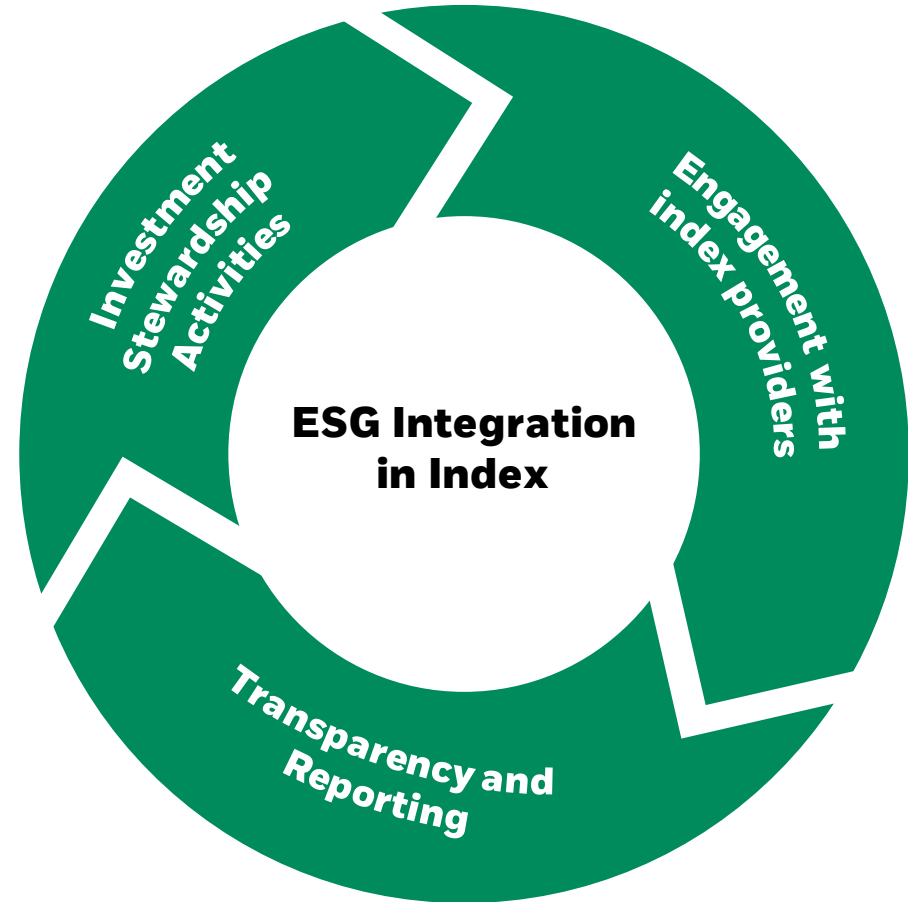
ESG integration in index strategies

ESG integration is relevant for all asset classes and styles of portfolio management, including index strategies.

Index portfolios differ from others in that they are managed with a focus on minimizing the performance tracking difference versus an underlying index.

The composition of the index is the responsibility of the index provider, and the portfolio manager seeks to provide investors with exposure to the constituents of that index.

We will continue to develop a sustainable alternative for all flagship index products where these alternatives do not already exist



Source: BlackRock Sustainable Investing, December 2021

Optimal Beta – Dynamic ETF/CTF Solution

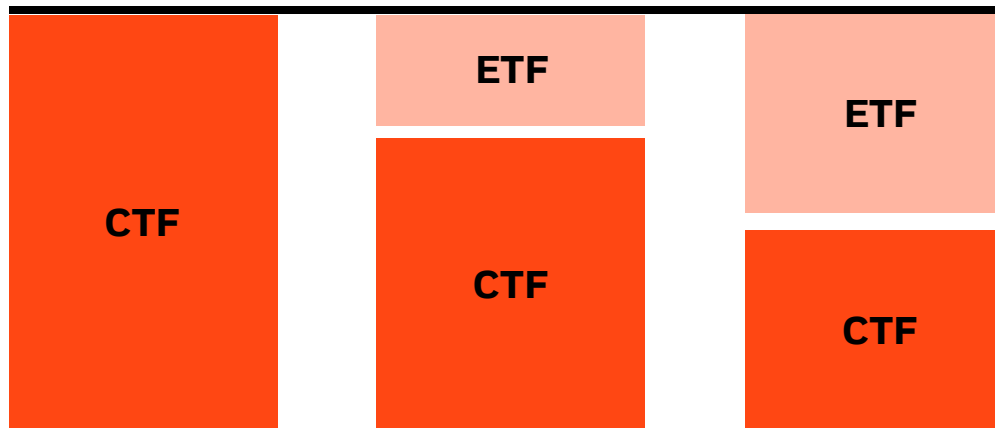
Strategy Overview

An optimized beta allocation that combines the cost-efficient access of a collective trust fund (CTF) with the trade flexibility of an exchange traded fund (ETF) within a single, unitized separately managed account

Objective

- 1) Offer a low-cost solution that can increase the liquidity profile of an index exposure
- 2) Facilitate efficient rebalance activity, capital calls, benefit payments, etc.
- 3) Reduce market entry timing risk through the option of same day trading

Dynamic ETF/CTF Solution



Shifting from a static CTF allocation to a dynamic CTF/ETF blend provides flexibility to choose the most optimal split between beta exposure vehicles, to be adjusted over time as client needs and market conditions evolve

This slide describes a proposed strategy that is subject to change. Shares of ETFs may be bought and sold at market price (not NAV) and are not individually redeemed from the strategy. There can be no assurance that an active trading market for shares of an ETF will develop or be maintained.

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The Fund is also subject to other key risks, as described in the Fund’s Collective Investment Fund Profile. Some or all of those risks may adversely affect the value of units in the Fund, yield, total return and the Fund’s ability to meet its investment objective. See the Collective Investment Fund Profile for additional information.

Past performance does not guarantee future results. Investment return and principal value of an investment will fluctuate so that an investor’s units, when redeemed, may be worth more or less than the original cost. Any opinions expressed in this publication reflect our judgment at this date and are subject to change. No part of this publication may be reproduced in any manner without the prior written permission of BTC. Fund performance assumes reinvestment of income and does not reflect management fees and certain transaction costs and expenses charged to the fund. Risk controls, asset allocation models and proprietary technology do not promise any level of performance or guarantee against loss of principal.

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Forward Looking Information

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Important Notes (cont'd)

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Index

It is not possible to directly invest in an unmanaged index.

Risk

Investing in the bond market is subject to certain risks including market, interest-rate, issuer, credit, and inflation risk. Equities may decline in value due to both real and perceived general market, economic, and industry conditions. Mortgage and asset-backed securities may be sensitive to changes in interest rates, subject to early repayment risk, and while generally backed by a government, government-agency or private guarantor there is no assurance that the guarantor will meet its obligations. High-yield, lower-rated, securities involve greater risk than higher-rated securities; portfolios that invest in them may be subject to greater levels of credit and liquidity risk than portfolios that do not. Investors will, at times, incur a tax liability. Income from municipal bonds may be subject to state and local taxes and at times the alternative minimum tax. Derivatives may involve certain costs and risks such as liquidity, interest rate, market, credit, management and the risk that a position could not be closed when most advantageous. Investing in derivatives could lose more than the amount invested.

There can be no assurance that the investment objectives of any strategy referred to herein will be achieved. An investment in any strategy referred to herein involves a high degree of risk, including the risk that the entire amount invested may be lost.

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Disclaimer

Capital at risk. The value of investments and the income from them can fall as well as rise and are not guaranteed. Investors may not get back the amount originally invested.

Past performance is not a reliable indicator of current or future results and should not be the sole factor of consideration when selecting a product or strategy.

Changes in the rates of exchange between currencies may cause the value of investments to diminish or increase. Fluctuation may be particularly marked in the case of a higher volatility fund and the value of an investment may fall suddenly and substantially. Levels and basis of taxation may change from time to time.

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Securities Lending Returns

BlackRock retains a portion of securities lending returns in exchange for managing the program. This fee reflects risk management, as well as the technology and personnel costs of maintaining the lending platform. In addition, BlackRock receives a fee for the management of cash collateral. Actual lending yields and fees for strategies represented may vary. Please note, other administrative costs, including but not limited to, accounting, custody and audit fees, may vary. Investors may receive 50% of securities lending returns and BlackRock retains 50%, except in cases where a client may negotiate a different compensation arrangement. BlackRock may negotiate different securities lending compensation arrangements with our clients depending on a variety of factors, including, but not limited to, the nature and size of the investment and the overall relationship with, and services delivered to, a particular client. Asset spread income is defined as the interest income earned in cash reinvestment funds on collateral balances less the Federal Funds Open Rate until September 14, 2016 and the Overnight Bank Funding Rate beginning September 15, 2016. Liability spread income is defined as the difference between the Federal Funds Open Rate until September 14, 2016 and the Overnight Bank Funding Rate beginning September 15, 2016, versus the rebate rate negotiated with the borrower.

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Hypothetical Example

Hypothetical example for illustrative purposes only. No representation is being made that any account, product, or strategy will or is likely to achieve profits, losses, or results similar to those shown. Hypothetical or simulated performance results have several inherent limitations. Unlike an actual performance record, simulated results do not represent actual performance and are generally prepared with the benefit of hindsight. There are frequently sharp differences between simulated performance results and the actual results subsequently achieved by any particular account, product, or strategy. In addition, since trades have not actually been executed, simulated results cannot account for the impact of certain market risks such as lack of liquidity. There are numerous other factors related to the markets in general or the implementation of any specific investment strategy, which cannot be fully accounted for in the preparation of simulated results and all of which can adversely affect actual results.

No Recommendation

These materials are neither an offer to sell nor a solicitation of any offer to buy shares in any fund. You may not rely upon these materials in evaluating the merits of investing in any fund that employs any of the strategies referred to herein. Any reference herein to any security and/or a particular issuer shall not constitute a recommendation to buy or sell, offer to buy, offer to sell, or a solicitation of an offer to buy or sell any such securities issued by such issuer.

Important notes (cont.)

Money Market Fund

Although a money market fund seeks to preserve the value of one's investment at \$1.00 per share, it is possible to lose money by investing in a money market fund. Investment in a money market fund is not similar to making a bank deposit. This investment is not insured or guaranteed by the Federal Deposit Insurance Corporation or by any bank or governmental agency.

Risk

Securities lending involves exposure to certain risks, including cash collateral investment risk (i.e., risk that cash collateral investments, whether in Cash Collateral Funds or otherwise, may not achieve their investment objective, including suffering realized or unrealized loss due to investment performance), "gap" risk (i.e., risk that the return on cash collateral investments is insufficient to pay the rebate fees the Lending Fund or Lending Account has committed to pay to borrowers), liquidity risk (i.e., risk that the cash collateral is invested, directly or through the Cash Collateral Funds, in securities and other instruments that are less liquid than the Lending Fund or Lending Account, which could limit the liquidity available to the Lending Fund or Lending Account for ordinary course transactions), operational risk (i.e., risk of losses resulting from problems in the settlement and accounting process), foreign exchange risk (i.e., risk of a shortfall at default when a cash collateral investment is denominated in a currency other than the currency of the assets being loaned due to movements in foreign exchange rates), and credit, legal, counterparty and market risks. At any particular point in time, investments in the Cash Collateral Funds could comprise a material portion of a Lending Fund's assets.

Investing involves risk, including possible loss of principal. Asset allocation and diversification strategies do not assure a profit and may not protect against loss or effects of market or other economic conditions on asset classes. Diversification among investment options and asset classes may help to reduce overall volatility.

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The Fund is also subject to other key risks, as described in the Fund’s Collective Investment Fund Profile. Some or all of those risks may adversely affect the value of units in the Fund, yield, total return and the Fund’s ability to meet its investment objective. See the Collective Investment Fund Profile for additional information.

Past performance does not guarantee future results. Investment return and principal value of an investment will fluctuate so that an investor’s units, when redeemed, may be worth more or less than the original cost. Any opinions expressed in this publication reflect our judgment at this date and are subject to change. No part of this publication may be reproduced in any manner without the prior written permission of BTC. Fund performance assumes reinvestment of income and does not reflect management fees and certain transaction costs and expenses charged to the fund. Risk controls, asset allocation models and proprietary technology do not promise any level of performance or guarantee against loss of principal.

The Fund, a collective investment trust maintained and managed by BTC, is available only to certain eligible investors and not offered or available to the general public. In the event of a conflict between this summary description of the Fund and the trust document under which the Fund was established, the trust document will govern. For more information related to the Fund, please see the Fund’s trust document, Collective Investment Fund Profile and most recent audited financial statements. BTC, a national banking association operating as a limited purpose trust company, manages the collective investment products and services discussed in this publication and provides fiduciary and custody services to various institutional investors. A collective investment fund is privately offered. Accordingly, prospectuses are not required and prices are not available in local publications. To obtain pricing information, please contact your local service representative.

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RhumbLine

Institutional Index Management

PRESENTATION TO THE TRUSTEES OF THE LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

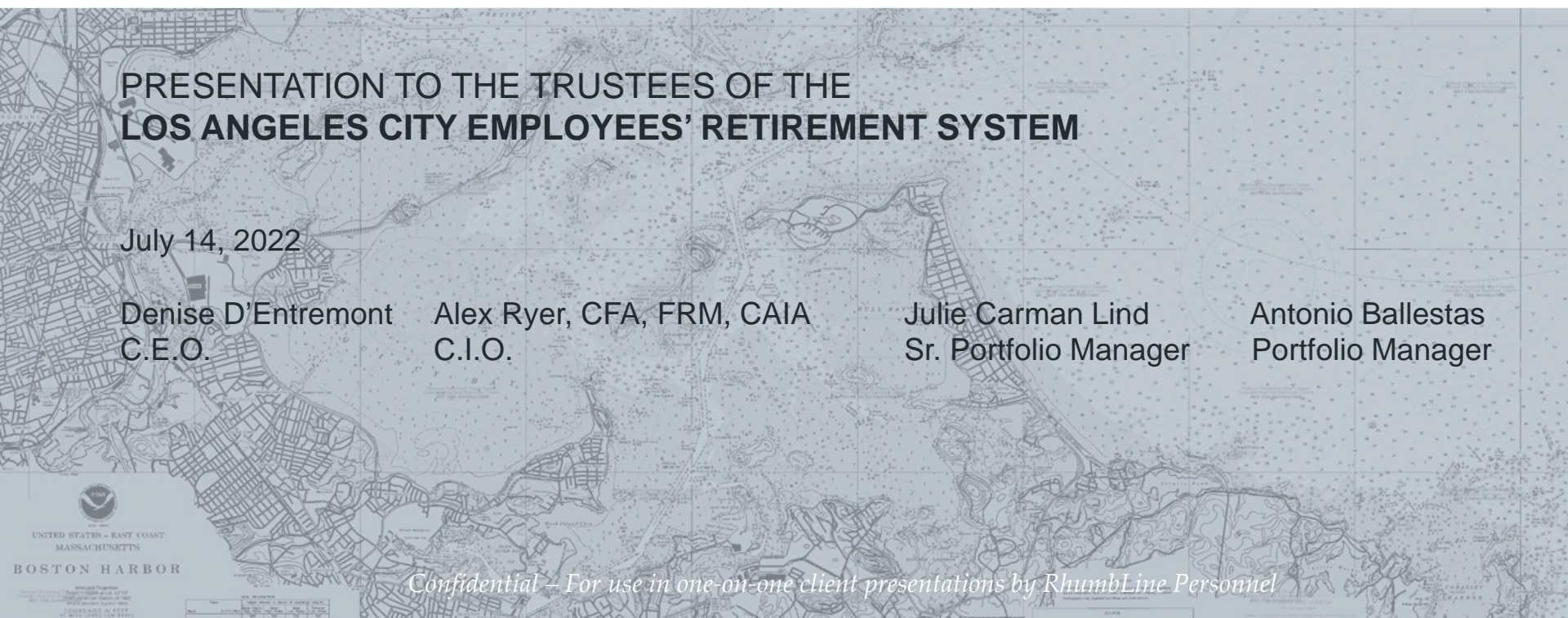
July 14, 2022

Denise D'Entremont
C.E.O.

Alex Ryer, CFA, FRM, CAIA
C.I.O.

Julie Carman Lind
Sr. Portfolio Manager

Antonio Ballestas
Portfolio Manager



Confidential – For use in one-on-one client presentations by RhumbLine Personnel

RhumbLine Presenters



Denise A. D'Entremont
Chief Executive Officer, General Partner

- Joined RhumbLine in 1994; promoted to C.E.O. in 2022.
- Total of 31 years of industry experience.
- Has full executive authority for all aspects of RhumbLine Advisers Limited Partnership.
- Member of the firm's Management Committee.
- Spent most of RhumbLine tenure primarily responsible for market strategy and distribution, new business and oversight of the firm's existing client and consultant relationships.
- Previously: President, Director of Marketing & Client Service, Portfolio Manager and Marketing & Client Service Associate at RhumbLine.
- Prior experience: Broker Sales & Services at Evergreen Funds.
- Member of the National Women in Pensions organization.
- B.A. from the University of Rhode Island.



Julie Carman Lind
Senior Portfolio Manager, Limited Partner

- Joined RhumbLine in 2000 and has served as Portfolio Manager since 2001. Promoted to Senior Portfolio Manager in 2022.
- Total of 25 years of industry experience.
- Member of the firm's Investment/Risk Committee.
- Responsible for managing and trading RhumbLine's client portfolios.
- Previously: Portfolio Analyst at RhumbLine.
- Prior experience: Senior Account Administrator at Investors Bank & Trust.
- Fixed Income Certificate from ICMA Executive Education.



Alex Ryer, CFA®, FRM®, CAIA®
Chief Investment Officer, Limited Partner

- Joined RhumbLine in 2016 as Director of Investments; promoted to Chief Investment Officer in 2017. Mr. Ryer was also a Senior Portfolio Manager at RhumbLine from 2003-2005.
- Total of 22 years of industry experience.
- Member of the firm's Investment/Risk and Management Committees.
- Oversees RhumbLine's investment team and all aspects of portfolio management and trading. Responsible for managing a range of investment portfolios and servicing clients, product development and thought leadership on industry issues and trends.
- Prior experience: Senior Equity Research Analyst (Fundamental Active - Quant Alpha Research) at BlackRock; Senior Portfolio Manager (Fundamental Active & Quant Active) at Northern Trust Global Investments; Senior Portfolio Manager at RhumbLine; and Principal/Senior Portfolio Manager (Global Structured Products - Emerging Markets) at State Street Global Advisors.
- CFA® charterholder, Certified FRM®, Chartered Alternative Investment Analyst.
- M.B.A. from University of New Hampshire and B.S. in Electrical Engineering from Bucknell University.



Antonio J. Ballestas
Portfolio Manager, Limited Partner

- Joined RhumbLine in 2012; promoted to Portfolio Manager in 2019.
- Total of 14 years of industry experience.
- Member of the firm's Investment/Risk Committee.
- Responsible for managing and trading RhumbLine's client portfolios.
- Previously: Assistant Portfolio Manager and Portfolio Analyst in Investment Operations at RhumbLine.
- Prior experience: Client Service Specialist and Hedge Fund Accountant at J.P. Morgan.
- CFA Exam Level II Candidate and B.S. in Business Administration from Bryant University.

LACERS/RhumbLine Relationship Highlights

❑ 29-Year Partnership

- Board hired RhumbLine on March 1, 1993
- Initial Account: \$175MM S&P 500 Index Strategy
- RhumbLine AUM at that time: \$624M; now more than \$86B (as of May 31, 2022)
- Managed multiple strategies over the years for LACERS.
- Currently manage \$3.9B for LACERS across three strategies (S&P 500, R2000, R2000 Value).
- Good synergies with Staff & Board over the years.
- Good relationship with Plan service providers

❑ Significant Client and Portfolio Growth

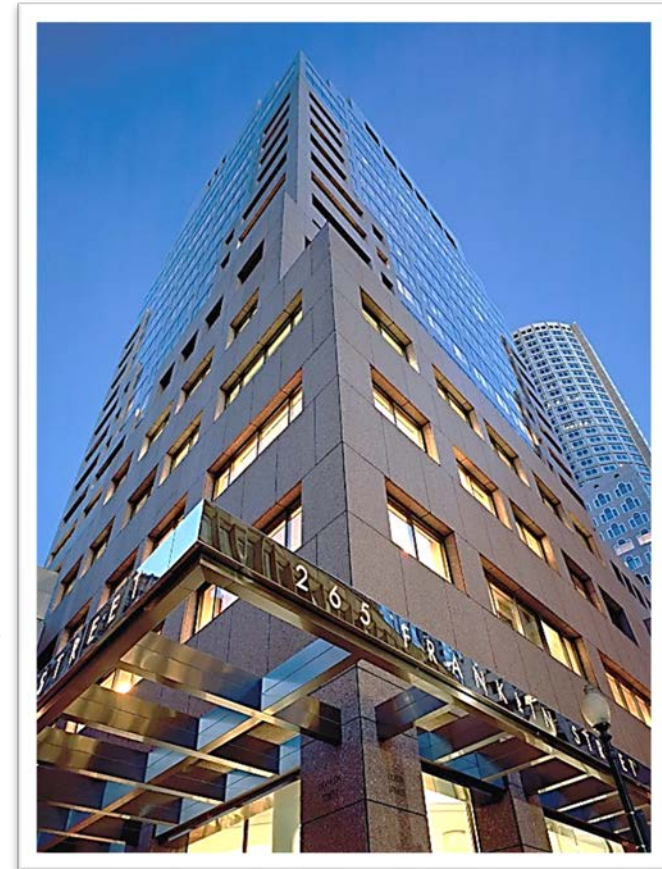
- 2nd California Public Fund Client to join RhumbLine; now 32 CA-based Clients
- Of RhumbLine's 308 clients, 146 have multiple products with us across a variety of asset classes.

❑ Advantages of a Dedicated Index Manager

- Unique Ownership – Employee Owned
- Loyal and Responsive Service
- Pooled Funds have daily liquidity, no securities lending
- Portfolios are monitored daily but rebalanced about once a month to keep costs low

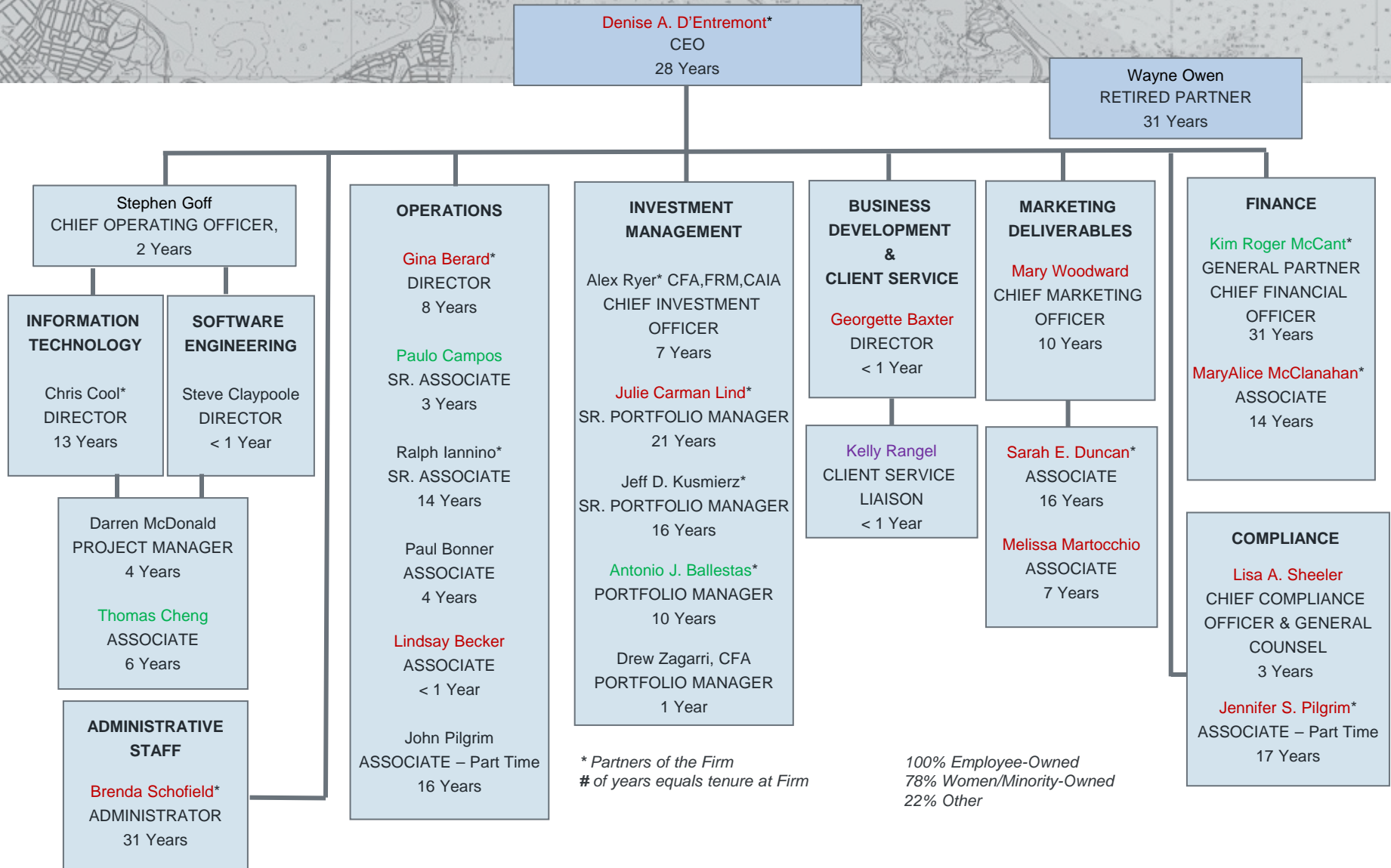
Current Profile

- Assets under management: \$86.3 Billion
- Asset classes include:
 - Domestic Equity
 - Domestic Fixed Income
 - International Equity
- Diversified client base:
 - 121 Public Funds: 282 Accounts/\$54.1 Billion
 - 54 Corporate/ERISA: 105 Accounts/\$16.3 Billion
 - 88 Endowments/Foundations: 192 Accounts/\$7.8 Billion
 - 44 Taft-Hartley: 74 Accounts/\$4.6 Billion
 - 1 Sub-Advisory: 5 Accounts/\$3.5 Billion





Organization Chart



* Partners of the Firm
of years equals tenure at Firm

100% Employee-Owned
78% Women/Minority-Owned
22% Other

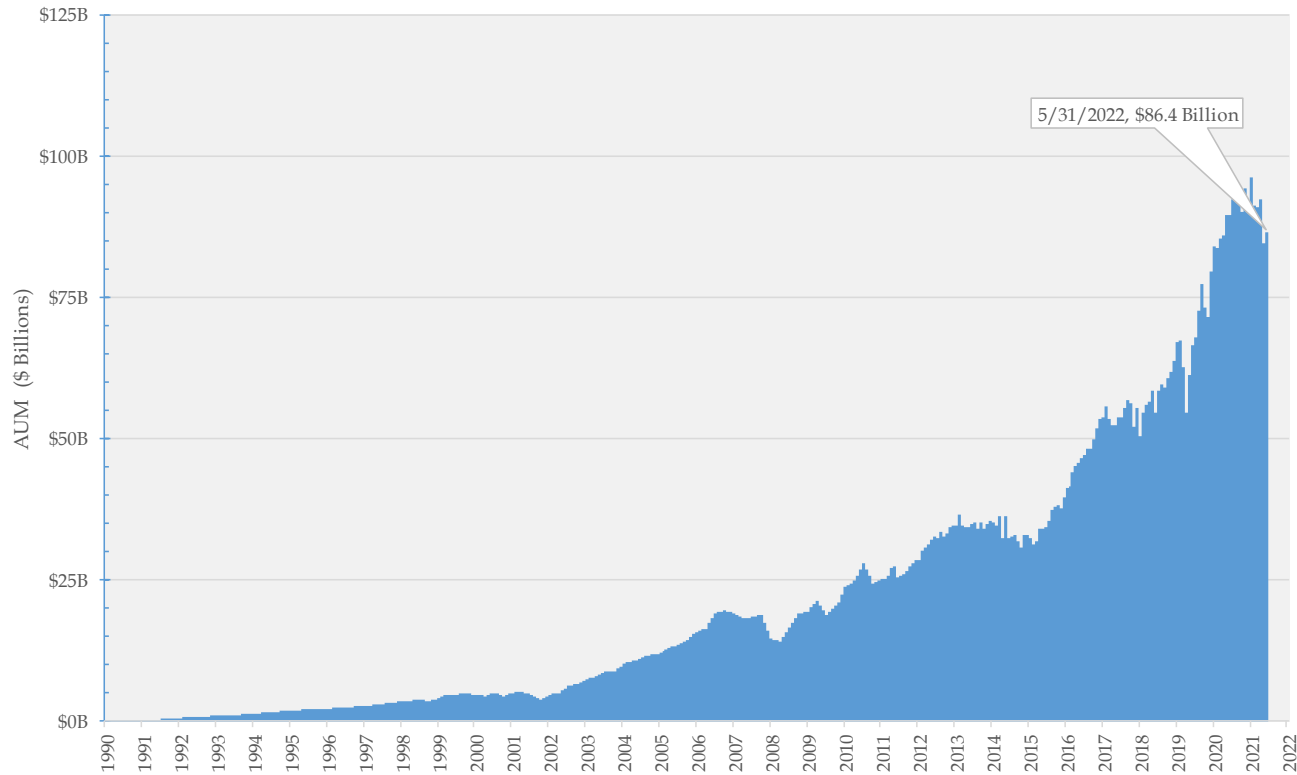
Diversity Initiatives

As a firm founded by a minority, supporting and promoting diversity is part of our corporate culture and has been since our inception in 1990.

- Ownership structure has always been 100% employee-owned with a majority ownership comprised of diverse individuals.
- Added three limited partners in December of 2021.
- Recent and pending promotions are almost all diverse personnel.
- Over the last 10 years, RhumbLine has hired 11 employees. Of those, 9 are diverse/female personnel.
- Total of 27 employees; 17 are diverse personnel.
- As of April 30, 2022, diverse/women ownership increased to more than 70%.
- As of April 30, 2022, senior leaders that are diverse/women increased from 40% to 75%.
- Mentorship opportunities for diverse/women candidates increased from 1 to 2 personnel.
- Mandatory diversity training for all employees on an annual basis. This has increased to twice a year for 2022.
- Approximately 40% of all trades are executed with diverse brokers.
- Use of other diverse-owned businesses - compliance, legal, stationery, and recruiter.

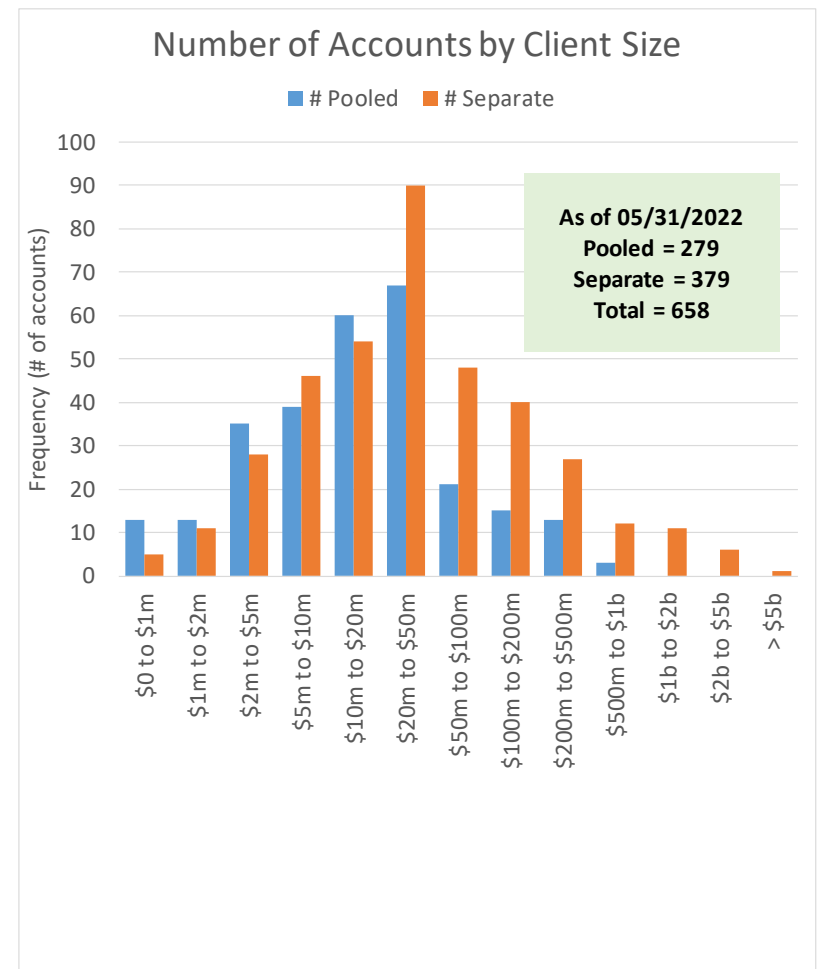
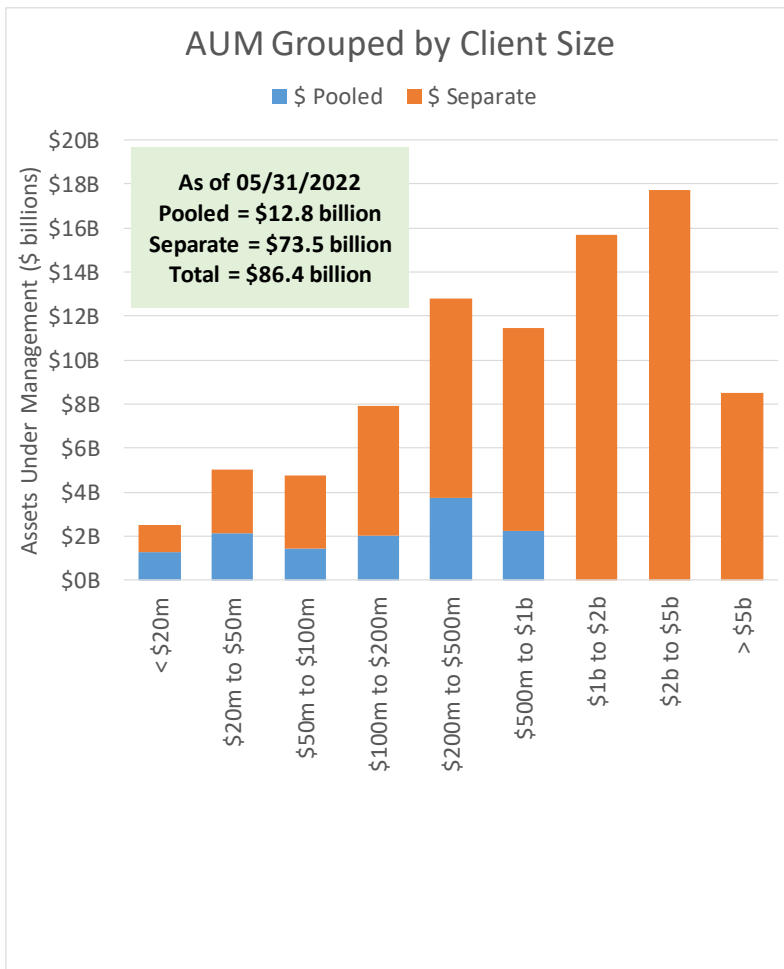
Assets Under Management

RhumbLine Advisers - Assets Under Management



Distribution of AUM

Sum and number of client accounts managed by RhumbLine, grouped into AUM bins.



Products

FIXED INCOME STRATEGIES

- Core Bond*
- ICE BofA US 3-Mo. Treasury Bill
- Intermediate Government/Credit
- Bloomberg Capital US 5-7 Yr. Treasury Bond
- Bloomberg Capital US 1-3 Yr. Government
- Bloomberg US TIPS*
- Bloomberg US Government Long
- Bloomberg US Long Term Treasury
- Bloomberg US Intermediate Treasury Bond

BROAD MARKET INDEX STRATEGIES

- S&P 1500
- S&P 1500 ex-Fossil Fuels
- Russell 3000
- Wilshire 5000
- MSCI Global Investible US

INTERNATIONAL INDEX STRATEGIES

- S&P ADR
- MSCI EAFE*
- MSCI ACWI
- MSCI ACWI ex-US
- MSCI ACWI ex-Fossil Fuels
- MSCI ACWI Minimum Volatility*
- MSCI ACWI ESG Leaders
- MSCI Emerging Markets
- MSCI Japan Broad
- MSCI World
- MSCI World ex-Fossil Fuels
- MSCI World ex-US
- DJ Brookfield Global Infrastructure
- DJ Brookfield Global Infrastructure Composite
- S&P Global Natural Resources
- S&P Global Low Volatility

ALTERNATIVE STRATEGIES

- Russell RAFI US
- Russell RAFI Global ex-US
- Russell 1000 HEDI Moderate TTE
- RhumbLine Multi-Factor
- Energy Select Sector
- FTSE Nareit All Equity REIT*
- S&P Global Low Volatility
- SciBeta US Multi-Beta Multi-Strategy 4-Factor EW
- SciBeta Dev ex-US Value Diversified Multi-Strategy
- TOBAM MaxDiv USA

SPECIALTY STRATEGIES

- Completeness
- Customized Screens
- Customized Tax-Efficient
- Equal Weighted
- Fossil Fuel-Free
- High Quality
- Minimum Volatility
- Sudan-Free
- Sustainable Investment
- Tobacco-Free

MID CAP INDEX STRATEGIES

- S&P 400*
- S&P 400 Growth
- Russell Mid Cap
- Russell Mid Cap Growth
- Russell Mid Cap Value

SMALL-MID CAP INDEX STRATEGIES

- S&P 1000
- S&P 1000 Value
- Russell 2500
- Russell 2500 Value
- Russell Small Cap Completeness

SMALL CAP INDEX STRATEGIES

- S&P 600*
- Russell 2000
- Russell 2000 Growth
- Russell 2000 Value

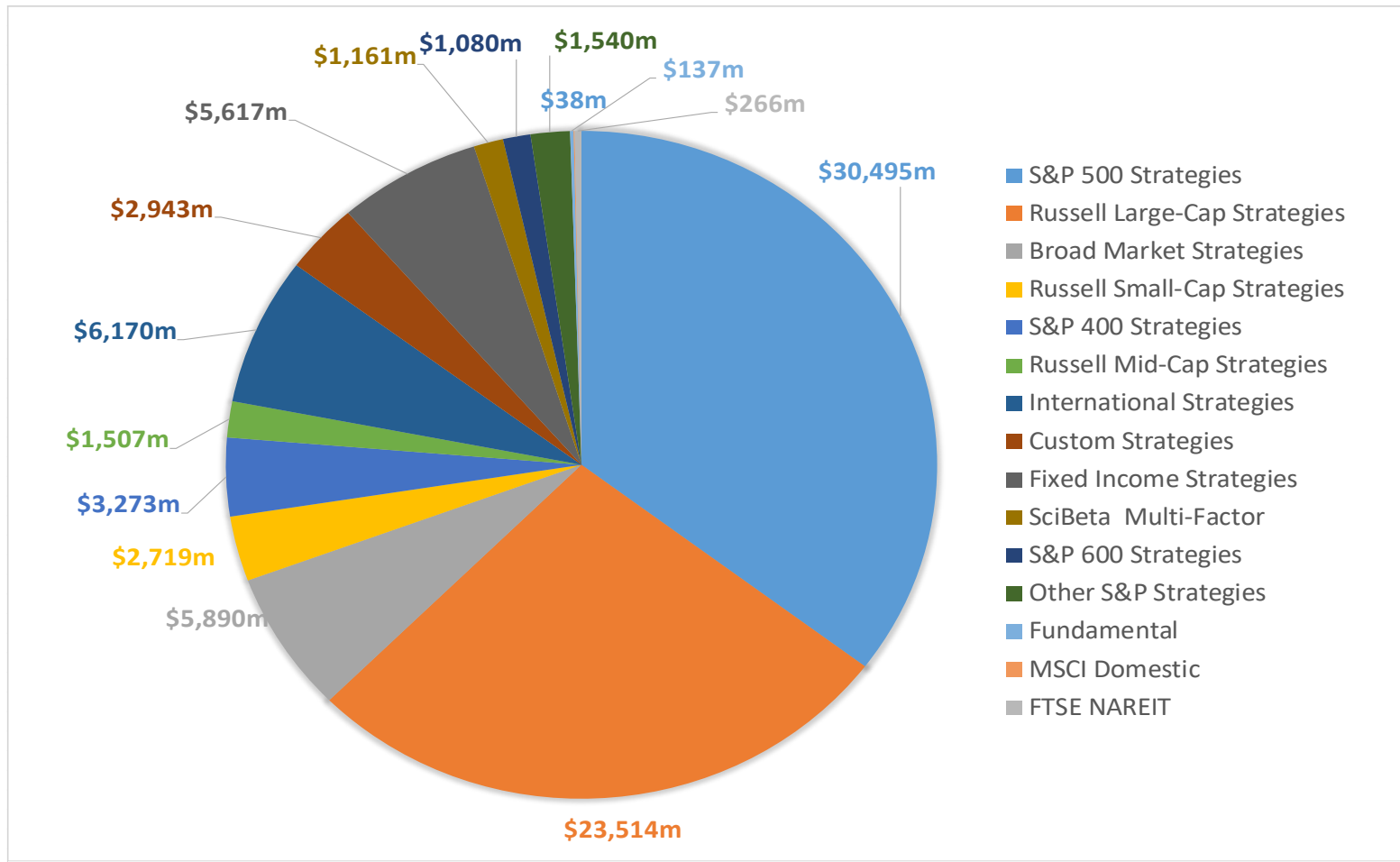
*Also available through a pooled investment fund to qualified investors with at least \$5 million in assets.

**Please contact us if interested in any index or strategy that is not listed.

Breakdown of Strategies

\$86,350.9 MILLION

as of May 31, 2022



RhumbLine Investment Process

Domestic Equity Index Strategies

- Use full replication, optimization or stratified sampling dependent on asset size and client requirements.
- Review portfolios daily, monitoring tracking and cash.
- Monitor index changes and consider impact in determining trading strategy.
- Trade when appropriate for client directed cash flows, cash balance maintenance, mergers/acquisitions, index changes.
 - Buy decisions are driven by the requirement to remain fully invested at all times
 - Stock selection is driven by risk management in the optimization
- Use agency trading desks.
- Provide daily liquidity for all pooled funds.

RhumbLine Investment Process

Domestic Fixed Income Index Strategies

- Use of Optimization for portfolio construction. Proven risk model with more than 20 years of bond indexing history.
- Utilize Bloomberg to communicate bid & offer lists to maximize trade inventory and best execution.
- Credit Risk induced by limiting size of each issuer and broadening number of holdings in the Credit Sector.
- Scenario analysis on proposed portfolio trades to understand risk/return trade-offs among term structure, sectors, qualities and yield ratios.
- Excellent relationship with five brokers including two W/M/DV-owned firms.
- Analyze performance daily to ensure tight tracking to benchmark.

RhumbLine's Investment Process

Global Index Strategies

- Use full replication, optimization or stratified sampling dependent on asset size, restrictions and client requirements.
- Review portfolios daily monitoring tracking and cash levels.
- Trade only with high-quality, agency-only brokerage firms.
- Utilize existing broker relationships to obtain low commission rates.
- Transaction cost estimate: 3-5 basis points on trade value.
- Do not generate soft dollars.

Portfolio Management Process

- Database management
 - Daily benchmark, holdings, and restrictions data loaded overnight.
- Portfolio monitoring daily in DataEase.
 - Cross-sectional and time series tracking error, cash and misweights.
 - Daily compliance checking vs. benchmark, restrictions, hold lists, etc.
- Periodic optimizations are run in rebalancing tool, and scenarios are evaluated for trade efficacy.
 - Replication / stratified sampling, incorporating trading costs.
 - Mean-variance optimization used for more complex scenarios.
 - Single-issue rebalance tool for index changes & cash equitization.
- Trade list run through RhumbLine's OMS, checked for compliance.
- Approved trade list is entered into EMS for execution.

RhumbLine Trading Approach

- Advanced rebalancing systems.
 - Fixed ticket charges incorporated into rebalance to minimize custody cost.
 - Market impact t-cost models incorporated into trade optimization.
- Low-cost trading techniques.
 - Pre-trade cost analysis to inform best execution strategy.
 - Quantitative algorithms, dark pools, ECNs, DMA, program trading desks.
- Best execution analysis of all trades.
 - Third party transaction cost analysis, reviewed by investment committee.
- Driven by low-cost, high-quality agency execution only.
 - No soft dollars or sell-side company research.
 - Average US commission rate \$0.0068/share 3-yr average 2019-2021.
 - Executed \$1.9 billion (42%) in trades with MWDVBE brokers YTD thru May.



Composite Returns (Gross of Management Fees) as of May 31, 2022

Annualized									
INDEX STRATEGIES	Inception Date	2022 – YTD thru May (%)	1-YR Trailing (%)	3-YR Trailing (%)	5-YR Trailing (%)	7-YR Trailing (%)	10-YR Trailing (%)	Since Inception (%)	Assets as of 05/31/22 (\$M)
LARGE CAP									
S&P 500*	12/90	-12.76	-0.32	16.41	13.36	12.17	14.36	10.18	\$30,227.5
S&P 500 Index		-12.76	-0.30	16.44	13.38	12.20	14.40	10.10	
Russell 1000*	12/96	-13.70	-2.69	15.99	13.08	11.84	14.21	9.12	\$12,161.5
Russell 1000 Index		-13.72	-2.71	16.03	13.12	11.87	14.24	9.09	
Russell 1000 Growth*	12/99	-21.84	-6.20	18.31	16.12	14.50	16.05	6.18	\$2,317.5
Russell 1000 Growth Index		-21.88	-6.25	18.31	16.13	14.51	16.06	6.12	
Russell 1000 Value*	05/96	-4.50	0.95	12.73	9.49	8.78	12.02	8.93	\$2,522.0
Russell 1000 Value Index		-4.52	0.93	12.75	9.50	8.79	12.06	8.86	
MID CAP									
S&P 400*	07/95	-10.96	-6.54	13.21	9.52	9.09	12.21	11.37	\$3,208.0
S&P 400 Index		-10.98	-6.52	13.28	9.56	9.12	12.24	11.28	
S&P 400 Growth	09/17	-16.61	-10.76	11.35	-	-	-	8.66	\$64.6
S&P 400 Growth Index		-16.60	-10.74	11.40	-	-	-	8.70	
Russell Mid Cap	12/05	-12.85	-6.74	12.87	10.47	9.35	12.79	9.35	\$1,086.2
Russell Mid Cap Index		-12.87	-6.77	12.87	10.48	9.35	12.78	9.33	
Russell Mid Cap Growth	04/99	-25.39	-18.64	9.48	10.67	9.32	12.59	7.82	\$282.4
Russell Mid Cap Growth Index		-25.43	-18.71	9.44	10.65	9.30	12.59	7.86	
Russell Mid Cap Value	08/07	-5.81	0.02	13.35	9.16	8.59	12.33	8.37	\$138.4
Russell Mid Cap Value Index		-5.88	-0.06	13.37	9.10	8.55	12.31	8.32	



Composite Returns (Gross of Management Fees)

as of May 31, 2022

INDEX STRATEGIES	Inception Date	2022 – YTD thru May (%)	1-YR Trailing (%)	3-YR Trailing (%)	5-YR Trailing (%)	Annualized			Assets as of 05/31/22 (\$M)
						7-YR Trailing (%)	10-YR Trailing (%)	Since Inception (%)	
SMALL CAP									
Russell 2000	12/04	-16.21	-16.26	10.00	7.90	7.47	10.91	7.73	\$2,247.5
Russell 2000 Index		-16.56	-16.92	9.70	7.72	7.33	10.83	7.64	
Russell 2000 Growth	03/05	-24.65	-25.50	6.21	6.89	6.12	10.52	8.35	\$41.0
Russell 2000 Growth Index		-24.79	-25.71	6.18	6.87	6.13	10.55	8.35	
Russell 2000 Value	04/04	-8.23	-7.62	12.23	7.86	8.03	10.67	8.06	\$309.4
Russell 2000 Value Index		-8.25	-7.67	12.21	7.83	8.02	10.71	8.04	
INTERNATIONAL									
MSCI EAFE*	05/14	-11.04	-10.27	6.66	4.39	3.92	-	3.59	\$915.4
MSCI EAFE Index		-11.34	-10.38	6.43	4.17	3.71	-	3.38	
MSCI Emerging Markets**	01/13	-12.20	-21.83	4.04	3.34	3.31	-	2.29	\$284.5
MSCI Emerging Markets Index		-11.76	-19.83	5.00	3.80	3.41	-	2.47	
FIXED INCOME									
Core Bond*	03/05	-8.96	-8.24	-0.09	1.16	1.49	1.68	3.42	\$1,240.9
Bloomberg US Aggregate Bond Index		-8.92	-8.22	0.00	1.18	1.49	1.71	3.43	



LACERS Returns (Net of Fees/Trading Costs*)

INDEX STRATEGIES	Inception Date	2022 – YTD thru May (%)	1-YR Trailing (%)	3-YR Trailing (%)	5-YR Trailing (%)	Annualized			Assets as of 05/31/22 (\$M)
						7-YR Trailing (%)	10-YR Trailing (%)	Since Inception (%)	
S&P 500 Index - Portfolio	2/28/1993	-12.75	-0.31	16.41	13.37	12.19	14.38	10.17	\$3,511.1
S&P 500 Index - Benchmark		-12.76	-0.30	16.44	13.38	12.20	14.40	10.06	
Russell 2000 Index - Portfolio	3/13/2015	-16.46	-16.79	9.74	7.75	7.35	-	7.30	\$299.8
Russell 2000 Index - Benchmark		-16.56	-16.92	9.70	7.72	7.33	-	7.32	
Russell 2000 Value Index - Portfolio	12/23/2020	-8.24	-7.64	-	-	-	-	11.86	\$146.5
Russell 2000 Value Index - Benchmark		-8.25	-7.67	-	-	-	-	11.86	

Expected Tracking

INDEX STRATEGIES	Expected Annualized Total Return Net of Fees Over the Short (1 Year) and Long-Term (3 – 5 Years) Investment Horizons
LARGE CAP	
S&P 500	+/- 5 basis points
Russell 1000	+/- 5 basis points
Russell 1000 Growth	+/- 5 basis points
Russell 1000 Value	+/- 5 basis points
MID CAP	
S&P 400	+/- 5 basis points
S&P 400 Growth	+/- 5 basis points
Russell Mid Cap	+/- 5 basis points
Russell Mid Cap Growth	+/- 5 basis points
Russell Mid Cap Value	+/- 5 basis points
SMALL CAP	
Russell 2000	+/- 10 basis points
Russell 2000 Growth	+/- 10 basis points
Russell 2000 Value	+/- 10 basis points
INTERNATIONAL	
MSCI EAFE	+/- 20 basis points
MSCI Emerging Markets*	+/- 25 basis points
FIXED INCOME	
Core Bond	+/- 30 basis points

*Projected tracking assumes that all countries will be opened for trading purposes.

Strategic Advantages

- **Dedicated Asset Manager:** Our Firm derives 100% of revenue from Investment Management; we offer and manage only index strategies.
- **Successfully Launched new index products for more than 30 years:** Created 60 new products with an initial investor for each fund – equities, fixed income, and international.
- **Low risk indexing strategy:** Index funds in general are a much lower-risk strategy to manage than active products. In addition, RhumbLine's commingled index funds have no securities lending exposure, allowing our portfolio management, operations and client service teams to remain focused on delivering consistent investment results and outstanding client service.
- **Simple Non-Hierarchical Organization Structure:** A flat management structure allows clients access to the entire management team, resulting in prompt responsiveness.
- **RhumbLine track record and reputation:** Since the firm's inception (1990) we have built an excellent reputation among our clients by delivering exactly what we have promised.
- **Existing Client Growth:** More than half of our clients utilize multiple index strategies with us.*
- **Private, Management-Owned Partnership:** Our ownership structure keeps our interest and focus closely aligned with our client's interest. This encourages efficient decision-making, client attention and avoids the pressures that public shareholders sometimes can place on large public firms.

*As of 5/31/2022

Important Disclosures & Disclaimers

General

All information contained herein is confidential and has been prepared for use in a one-on-one presentation with current or prospective qualified client's of RhumbLine Advisers Limited Partnership ("RhumbLine"). This material has been prepared for informational purposes only and should not be construed as investment advice or an offering of securities. RhumbLine permits consultants to share this presentation with prospects of RhumbLine provided they do so in a one-on-one presentation to qualified clients with the following disclosures provided. RhumbLine is an SEC registered investment adviser, providing investment advice to clients on a discretionary basis. Registration with the SEC does not imply any level of expertise or training. RhumbLine claims compliance with the Global Investment Performance Standards (GIPS®). RhumbLine has been independently verified for the periods 01/01/09 – 12/31/19. The verification report is available upon request. To receive a copy or a complete list and description of RhumbLine's composites and/or a presentation that adheres to the GIPS standards, please contact us at 617-345-0434 or info@indexmng.com.

Performance

The U.S. Dollar is the currency used to express performance. Returns are presented gross of management fees and include trading expenses and the reinvestment of all income. Actual returns will be reduced by investment advisory fees and other expenses that may be incurred in the management of the account. Performance returns of RhumbLine's Pooled Funds are also net professional fees including custody and audit expenses. The collection of fees produces a compounding effect on the total rate of return, net of management fees. As an example, the effect of investment management fees on the total value of a client's portfolio assuming (a) quarterly fee assessment, (b) \$10,000,000 investment, (c) portfolio return of 8% a year, and (d) 0.10% annual investment advisory fee would be \$10,416 in the first year, and cumulative effects of \$59,816 over five years and \$143,430 over ten years. Actual investment advisory fees will vary. More information on RhumbLine's investment advisory fees are available upon request and are described in Part 2A of RhumbLine's Form ADV. AS WITH ANY INVESTMENT, PAST PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS.

Index Disclosures

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Index returns are calculated in U.S. dollars. Indexes are unmanaged, statistical composites and their returns do not include payment of any sales charges or fees an investor would pay to purchase the securities they represent. Such costs would lower performance. The performance of an index is not an exact representation of any particular investment, as you cannot invest directly in an index. Index performance is proprietary data of the listed index provider(s) and has been licensed for use by RhumbLine Advisers. Please refer to the index provider's website for additional information.



*To the Trustees at the
Los Angeles City Employees' Retirement System:
Thank you for your business and continued support of
our firm! Thank you for inviting us to present today!*



Institutional Index Management



THE RHUMBLINE TEAM

State Street Global Advisors

A Presentation to LACERS

July 14, 2022

For Investment Professional Use Only.

Biographies



Sonya Park

Sonya is a Managing Director of State Street Global Advisors in the San Francisco Office. She is responsible for managing existing SSGA client relationships and driving new business development in the Western U.S. Prior to joining State Street Global Advisors in 2011, Sonya was a Vice President at Dimensional Fund Advisors in the Institutional Sales & Services Group. Prior to Dimensional Fund Advisors, Sonya was an Associate Director at Watson Pharmaceuticals. Sonya has also worked at Lehman Brothers as an Equity Research Analyst and began her career at SEI Corporation. Sonya earned a BA from the University of Pennsylvania and an MBA from the NYU Stern School of Business and has been working in the financial services industry since 1993. Sonya holds the FINRA 7 and 63 registrations. Sonya also holds the NFA Series 3 and 30 and is an Associated Person of SSGA Funds Management, Inc. ('SSGA FM') SSGA FM is a Commodity Trading Advisor registered with the Commodity Futures Trading Commission.



Matthew Steinaway, CFA

Matthew Steinaway is a Senior Managing Director of State Street Global Advisors and is the Chief Investment Officer of the firm's Global Fixed Income, Currency and Cash Group. In this role, he oversees a team of approximately 120 professionals managing more than US\$1.0TN of assets across active, smart beta and passive strategies for fixed income, cash and currency portfolios. Matt joined the company in 2003 and has more than 27 years of credit and investment experience. He is also a member of State Street Global Advisors' Executive Management Group and Investment Committee. Prior to his current role, Matt was the Chief Risk Officer for State Street Global Advisors where he was responsible for all investment, credit, and operational risks across State Street Global Advisors' global investment platform. He also previously was the Head of Global Cash Management, where he oversaw the global investment activities of short duration and money investment strategies and has served in leadership roles in the firm's Cash and Fixed Income research efforts. Matt has a BA in Philosophy from Saint Anselm College, graduated with an MBA from Bentley College and has earned the Chartered Financial Analyst designation.



John Tucker, CFA

John is a Senior Managing Director of State Street Global Advisors and CIO of Global Equity Beta Solutions. In this capacity, he oversees a team of approximately 80 portfolio managers and analysts globally, and more than 1,400 portfolios with assets in excess of \$22 trillion across all equity index and smart beta strategies. He also oversees State Street Global Advisors' Equity Trading teams, which transact over \$3 Trillion annually, and the Company Stock Group, which manages fiduciary transactions and company stock investments. In addition, John is a Director of the State Street Global Advisors Trust Company, a member of the State Street Global Advisors Investment Committee, and member of State Street Global Advisors' Executive Management Group. Prior to this, John was Chief Operating Officer for Investments where he had been deeply engaged in many of the firm's IT transformation efforts. In this role, John promoted operational efficiencies and worked towards implementing new technology for certain trading processes while streamlining the overall number of systems within our global platform. In addition to leading Global Trading and transforming the way the Investments team operates, John's team was responsible for portfolio oversight, model validation, and transaction cost analysis functions globally. Previously, John was Co-Head of Index Equity Strategies in North America and responsible for overseeing the management of all equity index strategies and Exchange Traded Funds managed in North America, and formerly head of the Equity Index group in SSGA's London office, where he was responsible for the management of all index strategies in our second largest investment center. John received a BA from Trinity College and an MS in Finance from Boston College. He has also earned the Chartered Financial Analyst designation and is a member of the Boston Security Analysts Society and the CFA Institute. He joined State Street in 1988. Outside of work, John is a Trustee at Shore Country Day School in Beverly, Massachusetts.

CFA® is a trademark of the CFA Institute.

LACERS and SSGA

Goals & Objectives

LACERS

- Seeking an investment manager for equity and fixed income index mandates.

How we aim to deliver

- Partner with LACERS as your preferred beta provider
- Produce low cost and predictable returns with minimal tracking error to the benchmark
- Provide access to broader SSGA Resources such as investment and research specialists.
- Tenured Experience: State Street Global Advisors has been managing Equity Index mandates since 1979 and Fixed Income Index mandates since 1995.

Firm Overview

A Leading Partner to Institutions and Intermediaries

#1	#2	#3	Top 10
government retirement plan provider globally	US Defined Benefit manager	largest global ETF provider	largest asset manager (4 th largest)
endowment & foundation asset manager globally	US Defined Contribution Investment Only (DCIO) manager ¹	largest global index manager (excluding ETFs)	Institutional Money Market provider ²
sovereign wealth fund asset manager worldwide	manager of index non-US equity and global equity assets	central bank asset manager	Outsourced Chief Investment Officer (OCIO) services
manager of index global/non-US bond assets		index US bond asset manager	manager of ESG mandates

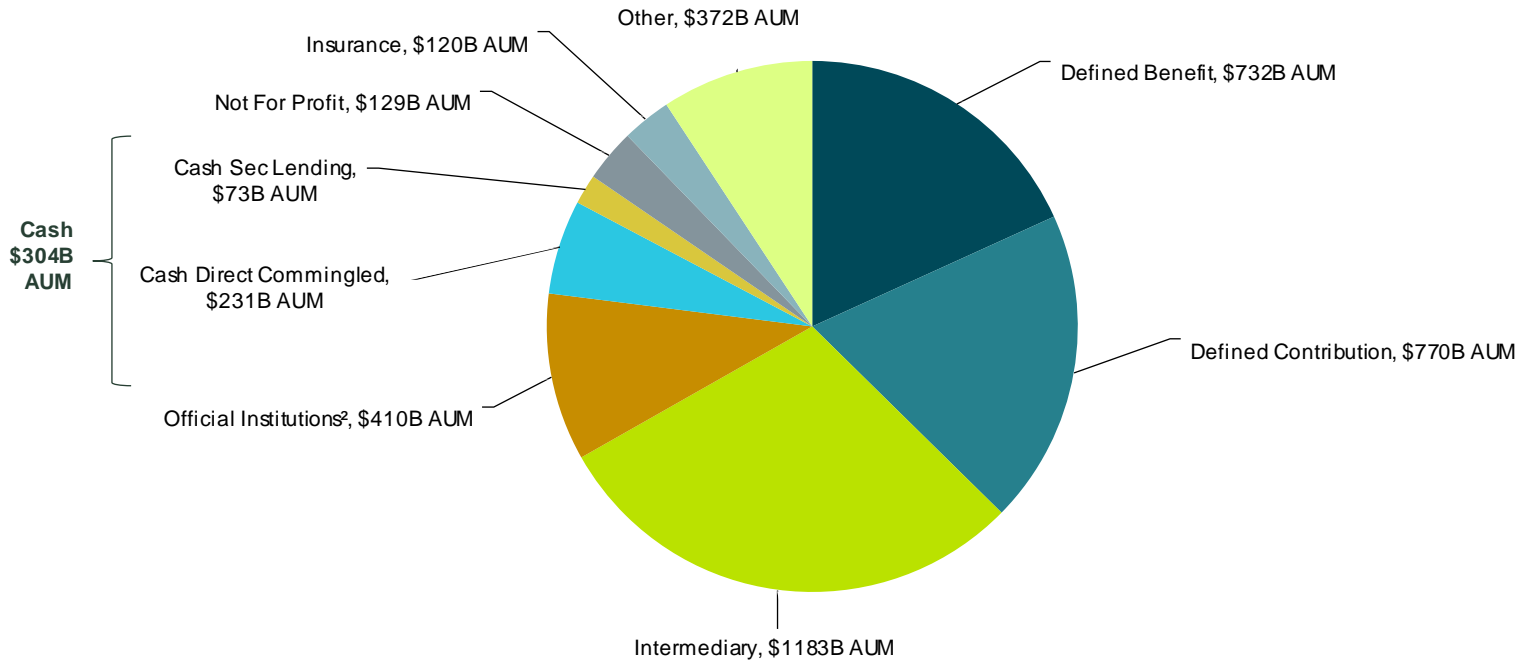
Source: Pensions & Investments Research Center, as of 12/31/2020.

¹ Managers of Defined Contribution Assets without recordkeeping services.

² iMoneyNet (Institutional Money Market Provider) as of 3/31/2022.

US \$4.02 Trillion in Assets Under Management¹

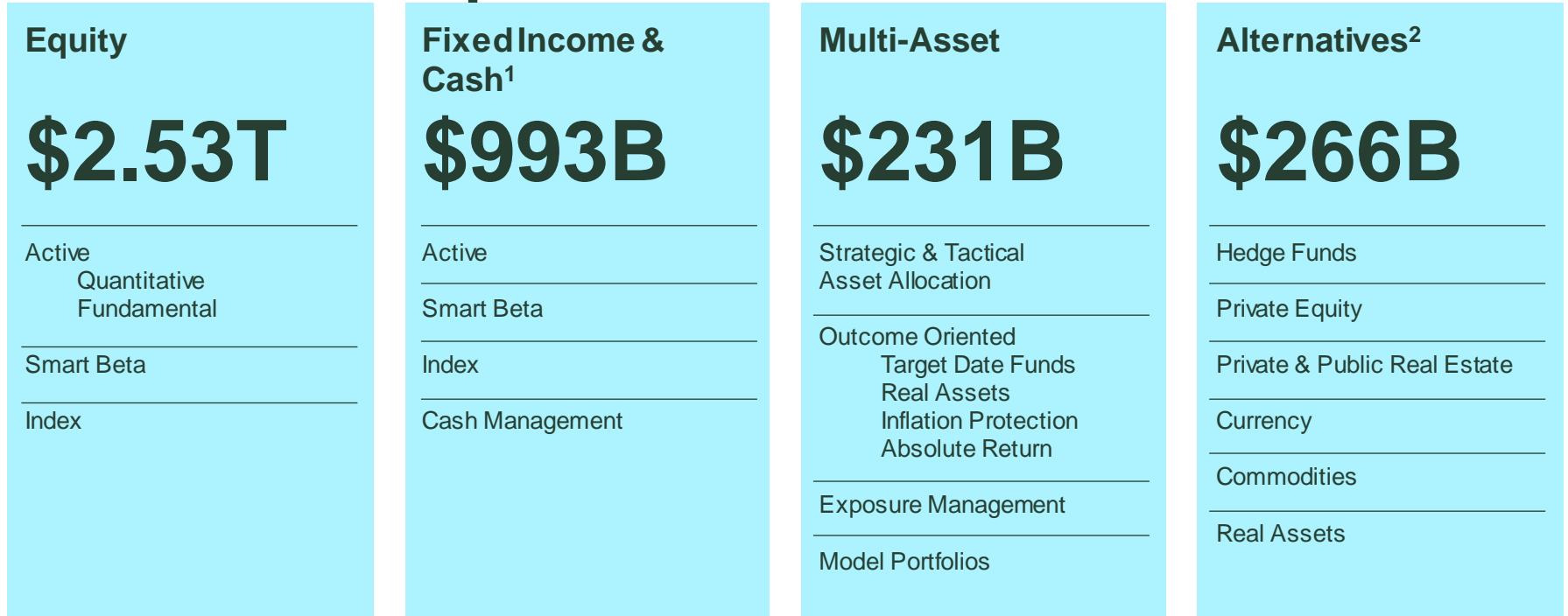
Clients by AUM



¹This figure is presented as March 31, 2022 and includes approximately \$73.35 billion of assets with respect to SPDR products for which State Street Global Advisors Funds Distributors, LLC (SSGA FD) acts solely as the marketing agent. SSGA FD and State Street Global Advisors are affiliated.

²Official Institutions is a client type that includes all plan type assets including DB and DC.

Our Index and Active Capabilities Cover the Risk/Reward Spectrum



Figures are in USD dollars; Period end as of March 31, 2022

¹Cash includes both floating- and constant-net-asset-value portfolios held in commingled structures or separate accounts.

²Alternatives includes real estate investment trusts, currency and commodities, including gold-backed ETFs for which SSGA only serves as marketing agent.

Business Leadership Team

Cyrus Taraporevala, President & CEO

Matteo Andretto
Head of SPDR EMEA

Kem Danner
Head of Human Resources

James MacNevin
Head of State Street Global Advisors APAC

John Brockelman
Chief Marketing Officer

Marie-Anne Heeren
Head of European Institutional Distribution

Sunita Naik
Head of State Street Global Advisors India

Marc Brown
Chief Administrative Officer

Kim Hochfeld
Head of Global Cash

Sean O'Malley
General Counsel

Gunjan Chauhan
Head of SPDR Capital Markets and Strategic Partners

David Ireland
Head of Institutional, Americas

Barry F.X. Smith
Chief Operating Officer,
Global Institutional Group

Jaclyn Collier
Chief Compliance Officer

Ann Prendergast
Head of State Global Advisors Europe Ltd

Sue Thompson
Head of SPDR® ETFs Americas Distribution

Tim Corbett
Chief Risk Officer

Susan Lasota
Chief Technology Officer and
Head of Transformation

Rory Tobin
Head of Global SPDR® ETFs and
Head of State Street Global Advisors EMEA

Lochiel Crafter
Head of Global Institutional Group

Steven Lipiner
Chief Financial Officer

As of May 2022.

Why State Street Global Advisors for Equity Indexing

Key Strength and Core Focus Area

- 40 years history of delivering high quality, broad based index solutions
- >99%¹ of equity index funds have historically tracked within their tolerance bands
- 150 dedicated individuals across investments, trading, risk and compliance

Industry Leader and Innovator

-
- ✓ Launched first US ETF
-
- ✓ In-house index creation
-
- ✓ Developing smart beta since 2006
-
- ✓ In-house proprietary ESG scoring framework (R-Factor) covering over **7,500** listed companies
-

Experienced and Reliable Team

- 20 years average portfolio manager tenure
- Utilize a globally consistent investment management platform and processes
- Strategic focus on implementation, cost reduction and risk management
- Deep research expertise in cap weighted, smart beta and ESG

¹ Based on cumulative quarterly gross-of-fees returns for all GEBS managed pooled, and separate account for both 3 years and 5 years period ending December 31, 2021. Tracking error based on the difference between portfolio and benchmark cumulative returns.

Why State Street Global Advisors for Fixed Income Indexing

Rich Heritage and History

- 27 year history of delivering a wide range of fixed income index products
- >99%¹ of fixed income index funds have historically tracked within their tolerance bands
- 140 dedicated individuals across investments, trading, risk and compliance

Solutions-Oriented Offerings

- ✓ Over 200 strategies and 100 commingled funds
- ✓ Building blocks structure allows for bespoke solutions to even the most complex client challenges
- ✓ Adding value through effective implementation
- ✓ Collaboration with Bloomberg and SASB to offer new ESG indices using proprietary R-Factor scores

Experienced and Reliable Team

- 38 portfolio managers and analysts averaging 18 years of experience
- Sector specialist teams provide deeper market insights
- Six investment centers: global footprint with local expertise
- Strategic focus on implementation, cost reduction and risk management

¹ Based on 1 year performance as of 4Q21. Tracking error based on the difference between portfolio and benchmark cumulative returns.

Equity Indexing

A Long History of Indexing Innovation

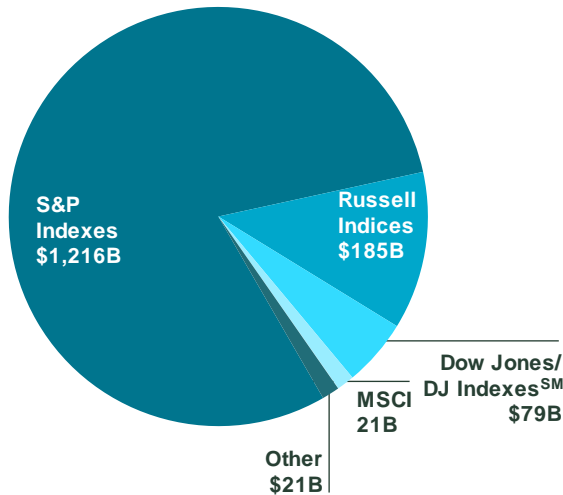
	1970s	1990s	2000s	2010-20
Standard Indices	Launched International Index and S&P Strategies (1979)	First equity index ESG mandate (1990) First US listed ETF launch (1993)	S&P HY Div Aristocrats (2005) FTSE RAFI US 1000 (2006)	FTSE EPRA Nareit Liquid (2007) Nikkei 225 (2008) FTSE RAFI ALL World 3000 MSCI Min Volatility (2010) MSCI World Equally-weighted (2011) RAFI Low Vol (2012)
Proprietary Indices and Strategies		SSGA S&P 500 Equal Weighted (1993)	SSGA US Valuation-Tilted (2005) SSGA Global Size & Global Valuation Tilted Strategies (2009)	SSGA Europe Managed Volatility (2010) SSGA Dividend Tilted (2012) SSGA Global & US Multi-factor (2015) Kensho New Economies Indices (2018) FTSE EDHEC Risk Efficient EM Russell 1000 Factors (2015) Gender Diversity Index (2015) Core Factors (2017) US Cap Weighted Self Indices (2017)
				BBG SASB Index Strategy (2019) ex Fossil Fuels Strategy (2020) International Cap Weighted Self Indices (2019) Sustainable Climate Strategy (2020)

Source: State Street Global Advisors, as of December 31, 2021. Inception date of select portfolios.

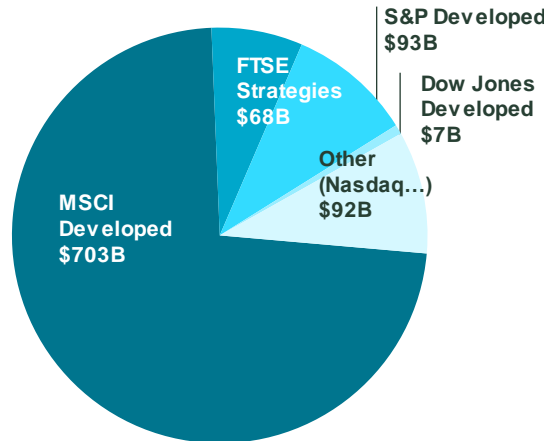
A Leading Manager of Global Indexed Assets

Total Global Equity Beta Solutions Assets Under Management: \$2.57 Trillion (USD) as of March 31, 2022

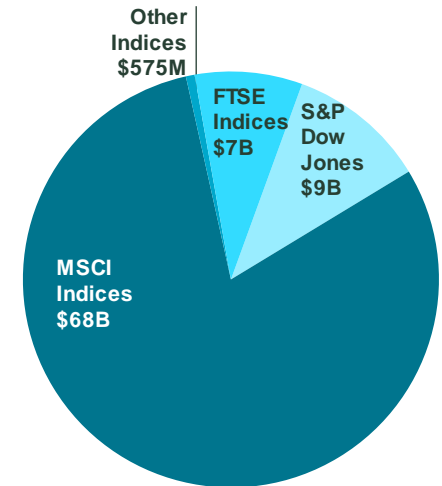
US Index AUM
 \$1,522B



International & Global Equity AUM \$964B



Emerging Markets Equity AUM \$85B



Source: State Street Global Advisors. As of March 31, 2022.

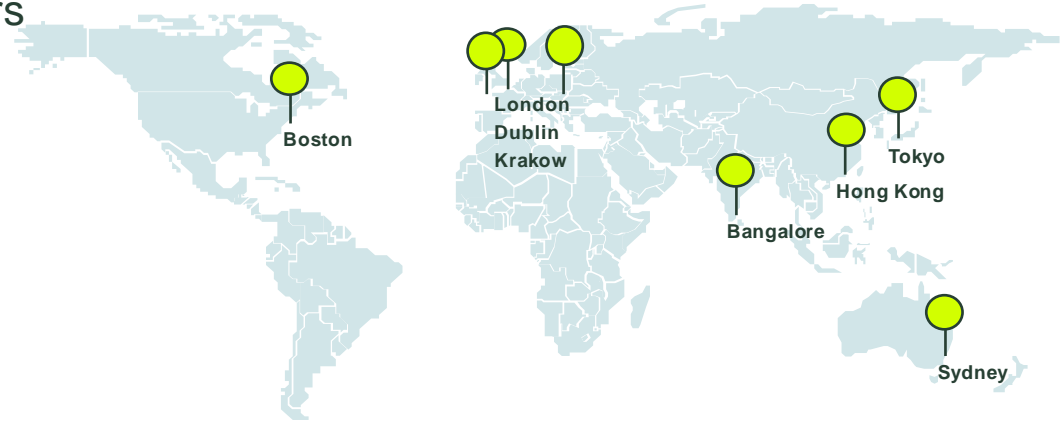
Exclusive of Emerging Markets Equities invested in other MSCI-benchmarked strategies such as MSCI ACWI and MSCI ACWI ex-US.

State Street Global Equity Beta Solutions

70+ Portfolio Managers & Researchers

30+ Traders & Analysts

10+ Equity Strategists & Specialists



CIO	Exp Yrs
John Tucker, CFA	33

Team Highlights

Investment Team Members ¹	71
Average Experience Years	21
Number of CFA Charter Holders	20

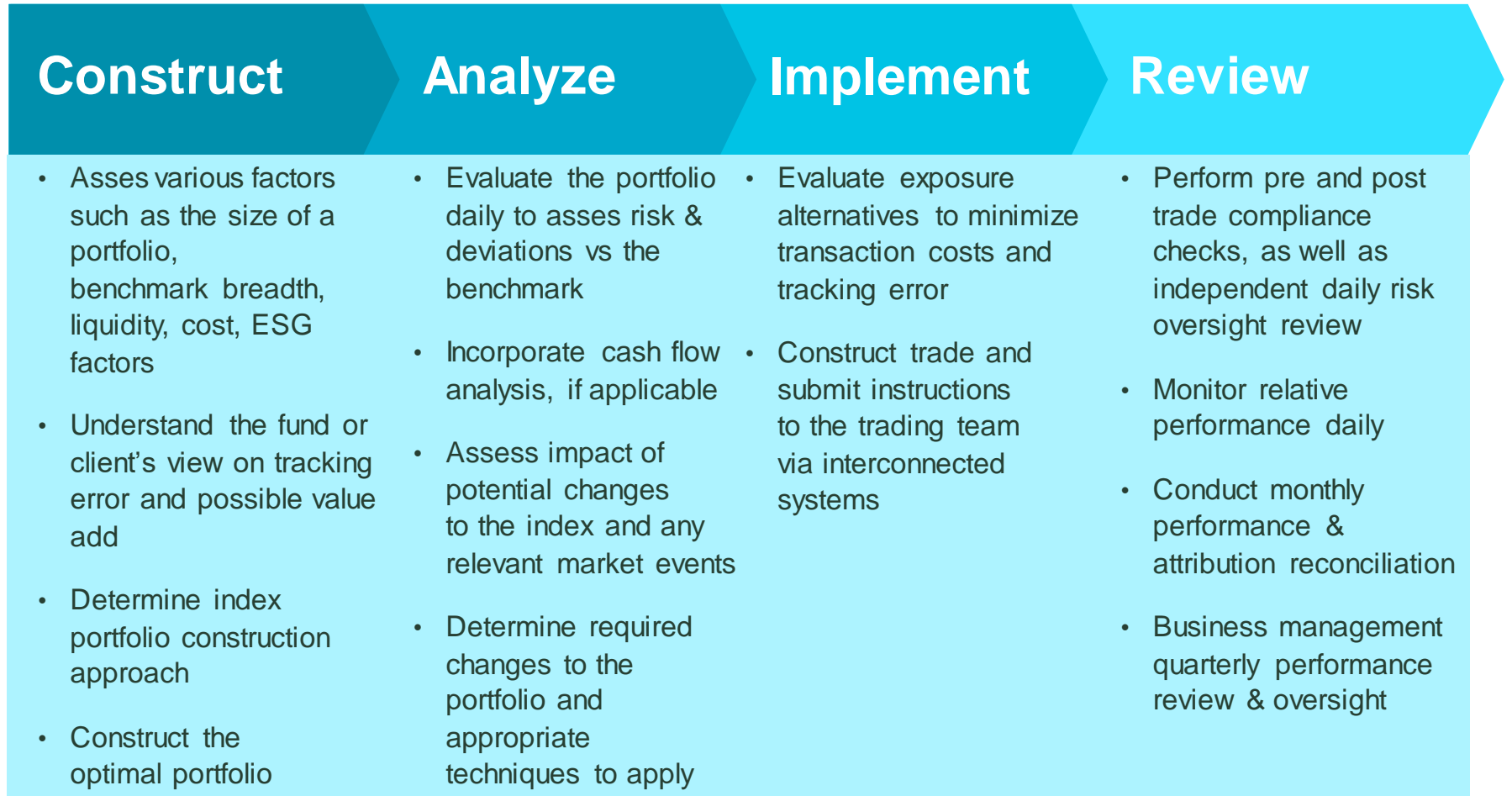
Senior Leadership	Exp Yrs
Jennifer Bender ² , PhD (Research)	24
Nobuya Endo, CFA (Japan)	27
Mike Feehily, CFA (US)	28
Julian Harding, IIMR, FCA (EMEA)	25
Mark Hui, CFA (Hong Kong)	22
Alex King, CFA (Australia)	18
Shayne White ² (Technology)	28

Portfolio Strategists ²	Exp Yrs
Heather Apperson	16
Emma Johnston	4
Yvette Murphy	12
Hidehiko Shimizu	14

As of March 31, 2022. ¹ Investment Team members include portfolio managers and researchers. ² Does not manage assets for the Global Equity Beta Solution team. CFA® is a trademark of the CFA Institute.

Investment Process

A tried and tested process marrying human insight and technology



Source: State Street Global Advisors.

Improving Risk Controls & Oversight Through Technology

Features of our portfolio management system:

- Full data integration with other State Street Global Advisors applications and risk/oversight teams
- Designed and customized to our process, workflow and portfolio universe
- Provides a comprehensive portfolio view for portfolio management, as well as risk and oversight
- Dedicated software development resources to ensure continuous development and improvements



Source: State Street Global Advisors.

Internal Crossing: A Powerful Source of Cost Savings & Liquidity

	Total Value ⁵	In-kind ⁴ /Internal Crossing/ Unit Crossing	Estimated Cost Savings ⁶	Transaction Cost Savings ⁶
US Market Case Study¹ (2018–2020)	\$193.5 Billion	91% of the Total	0.05% of the Total	\$87.8M
Non-US Developed Case Study² (2018–2020)	\$24.8 Billion	74% of the Total	0.20% of the Total	\$36.9M
Emerging Markets Case Study³ (2018–2020)	\$24.6 Billion	66% of the Total	0.25% of the Total	\$40.6M

Availability of internal crossing at State Street Global Advisors may be affected by your asset class, vehicle type, jurisdiction, or other factors.

¹ Based on actual client order flow trading activity in the S&P 500[®] Defined Contribution Commingled Fund.

² Based on actual client order flow trading activity in the Thrice-Monthly EAFE ERISA Commingled Funds.

³ Based on actual client order flow trading activity in the Thrice-Monthly Emerging Markets ERISA Commingled Funds.

⁴ In-kind transfers are redemptions/contributions made via security transfers.

⁵ For calendar years 2018–2020. It is not known whether similar results have been achieved after 2020.

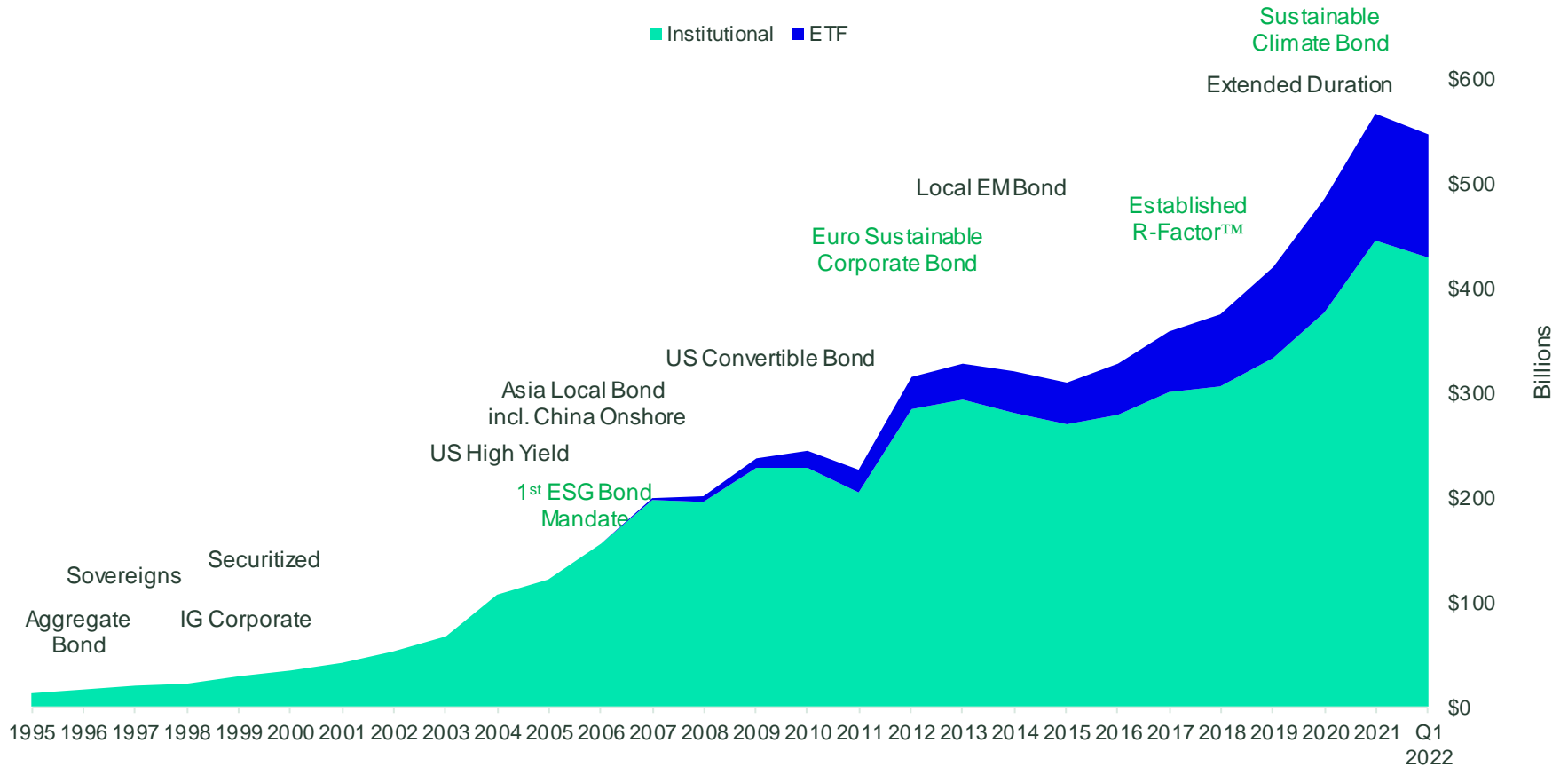
⁶ This represents estimated average savings across all aggregate trading over the period. These estimates are based on subjective judgments and assumptions and do not reflect the effect of unforeseen economic and market factors on decision making. There is no guarantee that a particular client transaction will experience the same level of savings.

In fact, savings could differ substantially. Any savings is contingent upon other activity taking place on a given transaction day. Had other funds been selected, different results of transaction cost savings may have been achieved. All figures are in USD.

Fixed Income Indexing

A History of Innovation in Indexing

Fixed income indexing is on the rise



Source: SSGA. As of March 31, 2022. 1995–2001 data includes active fixed income. AUM excludes custom solutions AUM from 2009–2012 (US Treasury TARP Assets).

Comprehensive Platform of Indexed Fixed Income Capabilities

Addressing client objectives from Simple to Complex

- \$547 Bn Indexed Fixed Income AUM
- 100+ Strategy “Building Blocks”
- Separate Accounts — Commingled — ETFs

Multi Sector \$149 B	Sovereign \$236 B	IG Corporate \$82 B	HY Corporate \$33 B	Securitized \$10 B	Emerging Markets \$37 B	ESG \$44 B
Global Aggregate	Global Governments	Global Credit	Global HY	Mortgage Backed	EM Local Currency	ESG-Screened
US, Euro, Sterling, Aggregate	US Treasuries, STRIPS	US, Euro, Sterling Credit	US, Euro HY	Asset Backed	EM Hard Currency	Climate
Asia Bond	Euro Governments	US High Quality Corporate	Short HY	Commercial Mortgage Backed	EM Corporate	R-Factor
Short, Intermediate, Long Duration	UK Gilts	US Long Duration Credit	Preferreds		EM Inflation	Values-Based/Client-Specific
LDI	Inflation Linked	Issuer Scored Corporate (ISC)	Convertibles			
	China Bond	Municipals				

Source: SSGA as at 31 March 2022.

Experienced and Specialized Global Team

Leverage Expertise and Insights across Entire Platform



Active FI & Currency
Matthew Nest, CFA
39 Professionals
\$129B Assets Managed

ESG & Asset Stewardship*
14 Professionals

Cash Management
Pia McCusker
22 Professionals
\$417B Assets Managed

Credit Research
9 Professionals

Portfolio Strategy
Thomas Coleman
12 Professionals

Quantitative Research
9 Professionals

Indexed Fixed Income

Stephen Yeats, CFA **38** Investment Professionals
Global Head of **19** Average Years Experience
Fixed Income Beta Solutions **\$547B** Assets Managed

Sector Specialization

	Rates & Securitized	Credit	Emerging Markets
Sector Specialist PMs	12	13	6
North America	6	9	1
EMEA	5	4	4
APAC	1		1

Fixed Income Trading
12 Fixed Income, 6 Currency
20 Average Years Experience

Investment Risk & Liquidity
13 Investment Professionals
12 Average Years Experience

140 Fixed Income Investment Professionals

As of 31 March 2022. CFA® is a trademark of the CFA Institute. *Cross-asset class team.

Process Discipline Delivers Results

Our stratified sampling approach seeks to deliver reliable outcomes by controlling risks, minimizing costs and adding incremental returns

Control Risks

Identify and match key risk dimensions

Monitor and control risk within set tolerances

Minimize Costs

Selective turnover

Innovative trading techniques

Efficient execution

Add Incremental Return

Proactive management of index changes/events

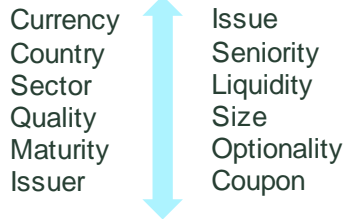
Pragmatic security selection

Harvest new issue/primary market premium

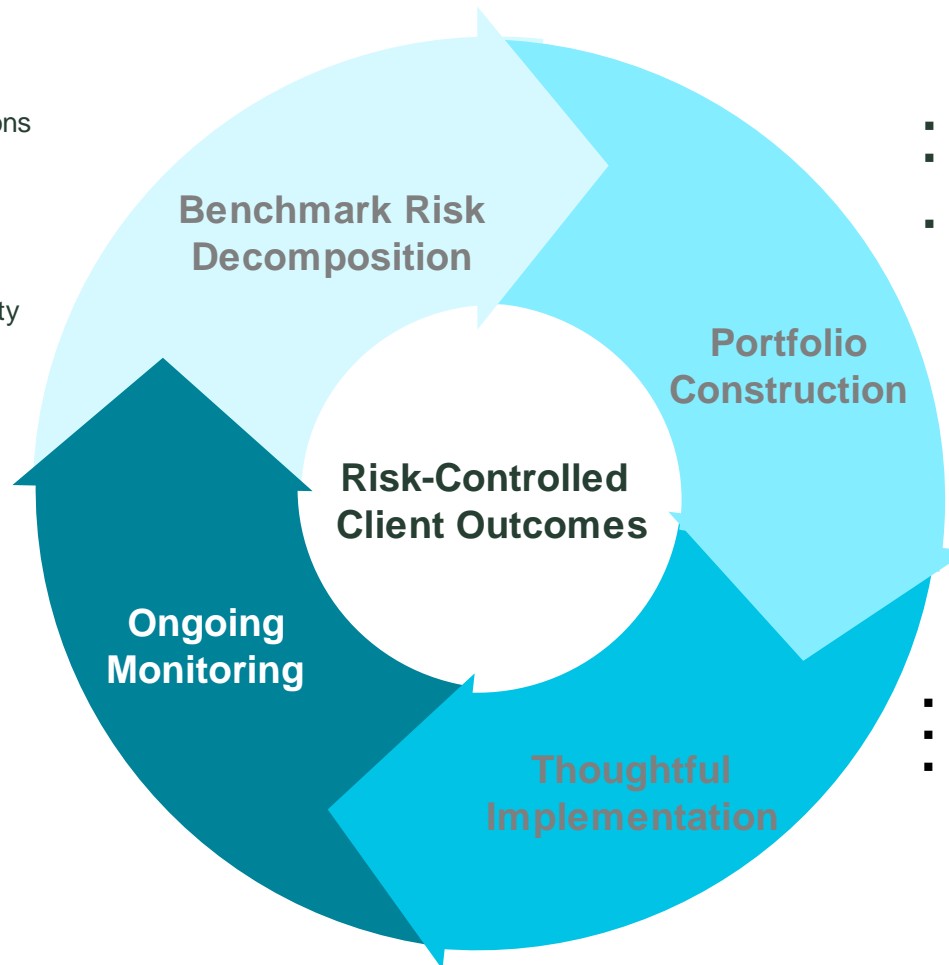
Source: SSGA. The above objectives are based on certain assumptions and analysis made by SSGA. There is no guarantee that the objectives will be achieved.

Dynamic Index Process Delivers Risk-Controlled Outcomes

- Evaluate key risk dimensions



- Stratified Sampling Structure
- Match risk dimensions within set tolerances
- Value-driven security selection



- Assess impact of flows
- Plan for index changes
- Rebalance as necessary

- Advanced trading techniques
- Access primary market
- Consider both if and when to trade

The information contained above is for illustrative purposes only

Performance

Domestic Equity Returns (Gross)

	One Month (%)	Three Months (%)	Year to Date (%)	Last 12 Months (%)	Three Years (%)	Five Years (%)	Ten Years (%)	Since Inception Date (%)	Strategy AUM	Strategy Expected Tracking Error Range
								Dec/1987	\$706B	+/- 0-5bps
S&P 500® Strategy	0.19	-5.16	-12.75	-0.32	16.41	13.39	14.42	10.94		
S&P 500® Index	0.18	-5.16	-12.76	-0.30	16.43	13.39	14.40	10.91		
Difference	0.00	0.00	0.00	-0.02	-0.02	0.00	0.03	0.03		
								Dec/2008	\$33B	+/- 5bps
Russell 1000® Index Strategy	-0.15	-5.98	-13.71	-2.70	16.04	13.13	14.26	14.37		
Russell 1000® Index	-0.15	-5.98	-13.72	-2.71	16.02	13.12	14.24	14.34		
Difference	0.00	0.00	0.01	0.01	0.02	0.01	0.02	0.02		
								Apr/2005	\$13B	+/- 5 to 10bps
Russell 1000® Growth Index Strategy	-2.32	-10.74	-21.84	-6.23	18.30	16.12	16.06	11.64		
Russell 1000® Growth Index	-2.32	-10.76	-21.88	-6.25	18.31	16.14	16.06	11.64		
Difference	0.01	0.02	0.04	0.02	0.00	-0.02	0.00	0.00		

As of 5/31/2022. These are representative funds.

Source: SSGA. Past performance is not a reliable indicator of future performance. Performance returns for periods of less than one year are not annualized. The performance figures contained herein are provided on a gross of fees basis and do not reflect the deduction of advisory or other fees which could reduce the return. The performance includes the reinvestment of dividends and other corporate earnings and is calculated in US dollars.

State Street Global Advisor's defines expected tracking error as the difference between our fund and benchmark returns.

Domestic Equity Returns, cont.

	One Month (%)	Three Months (%)	Year to Date (%)	Last 12 Months (%)	Three Years (%)	Five Years (%)	Ten Years (%)	Since Inception Date (%)	Strategy AUM	Strategy Expected Tracking Error Range
								Apr/2005	\$14B	+/- 5 to 10bps
Russell 1000® Value Index Strategy	1.94	-1.11	-4.54	0.94	12.80	9.55	12.11	8.14		
Russell 1000® Value Index	1.94	-1.09	-4.52	0.93	12.75	9.50	12.06	8.07		
Difference	-0.01	-0.02	-0.03	0.01	0.05	0.05	0.05	0.07		
								May/2017	\$102M	+/- 5bps
Russell Mid Cap Index Strategy	0.08	-5.26	-12.84	-6.71	12.87	10.50	N/A	10.51		
Russell Midcap® Index	0.08	-5.26	-12.87	-6.77	12.86	10.48	N/A	10.49		
Difference	0.00	0.00	0.04	0.06	0.00	0.02	N/A	0.02		
								Aug/1999	\$20B	+/- 5bps
S&P Midcap 400® Index Strategy	0.75	-5.11	-10.98	-6.52	13.25	9.54	12.23	10.06		
S&P MidCap 400® Index	0.75	-5.12	-10.98	-6.52	13.28	9.56	12.24	10.03		
Difference	0.00	0.01	0.00	0.00	-0.03	-0.02	-0.01	0.03		

As of 5/31/2022. These are representative funds.

Source: SSGA. Past performance is not a reliable indicator of future performance. Performance returns for periods of less than one year are not annualized. The performance figures contained herein are provided on a gross of fees basis and do not reflect the deduction of advisory or other fees which could reduce the return. The performance includes the reinvestment of dividends and other corporate earnings and is calculated in US dollars.

State Street Global Advisor's defines expected tracking error as the difference between our fund and benchmark returns.

Domestic Equity Returns, cont.

	One Month (%)	Three Months (%)	Year to Date (%)	Last 12 Months (%)	Three Years (%)	Five Years (%)	Ten Years (%)	Since Inception Date (%)	Strategy AUM	Strategy Expected Tracking Error Range
								Nov/2008	\$13B	+/- 5 to 10bps
Russell 2000® Index Strategy	0.14	-8.65	-16.54	-16.86	9.75	7.76	10.90	11.15		
Russell 2000® Index	0.15	-8.65	-16.56	-16.92	9.70	7.72	10.83	11.08		
Difference	-0.01	0.00	0.02	0.06	0.05	0.04	0.06	0.07		
								Sep/1999	\$472M	+/- 10 to 15bps
Russell 2000® Growth Index Strategy	-1.86	-13.43	-24.65	-25.58	6.18	6.90	10.57	6.54		
Russell 2000® Growth Index	-1.89	-13.53	-24.79	-25.71	6.18	6.87	10.55	6.43		
Difference	0.03	0.11	0.14	0.13	0.00	0.03	0.02	0.11		
								Apr/1996	\$501M	+/- 10 to 15bps
Russell 2000® Value Index Strategy	1.92	-4.13	-8.28	-7.77	12.23	7.90	10.76	9.31		
Russell 2000® Value Index	1.92	-4.15	-8.25	-7.67	12.21	7.83	10.72	9.32		
Difference	0.00	0.02	-0.03	-0.10	0.02	0.07	0.04	-0.01		

As of 5/31/2022. These are representative funds.

Source: SSGA. Past performance is not a reliable indicator of future performance. Performance returns for periods of less than one year are not annualized. The performance figures contained herein are provided on a gross of fees basis and do not reflect the deduction of advisory or other fees which could reduce the return. The performance includes the reinvestment of dividends and other corporate earnings and is calculated in US dollars.

State Street Global Advisor's defines expected tracking error as the difference between our fund and benchmark returns.

Non-US Equity Returns (Gross)

	One Month (%)	Three Months (%)	Year to Date (%)	Last 12 Months (%)	Three Years (%)	Five Years (%)	Ten Years (%)	Since Inception Date (%)	Strategy AUM	Strategy Expected Tracking Error Range
								Jun/2018	\$8B	+40bps +/- 10 to 15bps*
MSCI World ex U.S. IMI Strategy	0.74	-4.79	-10.64	-9.65	7.60	N/A	N/A	3.59		
MSCI World ex U.S. IMI Index	0.61	-5.06	-10.92	-9.92	7.21	N/A	N/A	3.21		
Difference	0.13	0.27	0.29	0.27	0.39	N/A	N/A	0.38		
								Dec/1980	\$51B	+40bps +/- 10bps*
MSCI EAFE Index Strategy	0.90	-4.87	-11.06	-10.09	6.81	4.55	7.51	8.26		
MSCI EAFE® Index	0.75	-5.16	-11.34	-10.38	6.43	4.18	7.15	7.98		
Difference	0.15	0.29	0.28	0.29	0.38	0.37	0.36	0.29		
								Sep/2007	\$2B	+25bps +/- 10 to 15bps*
MSCI EAFE Small Cap Index Strategy	-0.63	-7.34	-15.11	-15.71	6.73	4.30	9.06	4.28		
MSCI EAFE Small Cap Index	-0.72	-7.57	-15.42	-16.02	6.58	4.11	8.87	4.04		
Difference	0.10	0.23	0.32	0.31	0.15	0.19	0.19	0.24		

As of 5/31/2022. These are representative funds.

Source: SSGA. Past performance is not a reliable indicator of future performance. Performance returns for periods of less than one year are not annualized. The performance figures contained herein are provided on a gross of fees basis and do not reflect the deduction of advisory or other fees which could reduce the return. The performance includes the reinvestment of dividends and other corporate earnings and is calculated in US dollars.

State Street Global Advisor's defines expected tracking error as the difference between our fund and benchmark returns.

*We utilized our ERISA commingled funds (which LACERS is qualified to invest in) as representative funds. The majority of the estimated tracking error in ERISA commingled funds includes a positive mean expected t.e. attributed to tax withholdings differences (+25 to +50 basis points). The remaining contributors to estimated tracking error would be compounding, mis-weights, cash drag, and ineligibility to participate in certain corporate actions (because of non-QIB status).

Non-US Equity Returns, cont.

	One Month (%)	Three Months (%)	Year to Date (%)	Last 12 Months (%)	Three Years (%)	Five Years (%)	Ten Years (%)	Since Inception Date (%)	Strategy AUM	Strategy Expected Tracking Error Range
								Aug/2002	\$59B	+/- 15 to 20bps
MSCI Emerging Markets Index Strategy	0.54	-6.78	-11.72	-19.80	4.95	3.76	4.08	9.07		
MSCI Emerging Markets Index	0.44	-7.29	-11.76	-19.83	4.99	3.80	4.17	9.28		
Difference	0.10	0.51	0.04	0.03	-0.05	-0.04	-0.09	-0.20		
								Mar/2008	\$974M	+/- 60 to 70bps
MSCI Emerging Markets Small Cap Index Strategy	-1.29	-4.01	-10.36	-9.08	11.37	6.45	6.24	4.22		
MSCI Emerging Markets Small Cap Index	-1.64	-4.09	-10.62	-9.32	11.20	5.97	5.79	4.06		
Difference	0.35	0.08	0.26	0.24	0.17	0.48	0.45	0.16		

As of 5/31/2022. These are representative funds.

Source: SSGA. Past performance is not a reliable indicator of future performance. Performance returns for periods of less than one year are not annualized. The performance figures contained herein are provided on a gross of fees basis and do not reflect the deduction of advisory or other fees which could reduce the return. The performance includes the reinvestment of dividends and other corporate earnings and is calculated in US dollars.

State Street Global Advisor's defines expected tracking error as the difference between our fund and benchmark returns.

For the EM country funds, custody fees, mis-weights, cash/receivables drag, and compounding are the typical sources of tracking error.

*

Fixed Income (Gross)

	One Month (%)	Three Months (%)	Year to Date (%)	Last 12 Months (%)	Three Years (%)	Five Years (%)	Ten Years (%)	Since Inception Date (%)	Strategy AUM	Strategy Expected Tracking Error Range
								Oct/2000	\$77B	0-15bps
U.S. Aggregate Bond Index Strategy	0.64	-5.88	-8.91	-8.23	0.03	1.20	1.74	4.13		
Bloomberg US Aggregate Bond Index	0.64	-5.86	-8.92	-8.22	0.00	1.18	1.71	4.11		
Difference	0.00	-0.01	0.01	-0.01	0.03	0.03	0.03	0.02		
								Mar/2010	\$7B	25-35bps
Real Asset Strategy	1.67	6.12	12.26	19.76	14.59	9.94	5.10	5.11		
Real Asset NL Custom Blended Index	1.68	5.81	11.93	19.26	13.93	9.51	4.85	4.88		
Difference	-0.01	0.31	0.33	0.50	0.66	0.43	0.25	0.23		
								Jul/2000	\$29B	0-10bps
Bloomberg U.S. TIPS Index Strategy	-1.01	-4.86	-5.97	-1.47	4.43	3.67	1.99	5.16		
Bloomberg U.S. TIPS Index	-0.99	-4.82	-5.95	-1.45	4.45	3.68	2.00	5.16		
Difference	-0.01	-0.04	-0.02	-0.03	-0.01	-0.01	-0.01	0.00		

As of 5/31/2022. These are representative funds.

Source: SSGA. Past performance is not a reliable indicator of future performance. Performance returns for periods of less than one year are not annualized. The performance figures contained herein are provided on a gross of fees basis and do not reflect the deduction of advisory or other fees which could reduce the return. The performance includes the reinvestment of dividends and other corporate earnings and is calculated in US dollars.

State Street Global Advisor's defines expected tracking error as the difference between our fund and benchmark returns.

Lending Returns

Domestic Equity Lending Returns

Fund Name	Securities Lending Return (bps)		
	2019	2020	2021
State Street S&P 500® Flagship Securities Lending Fund	0.4	0.2	0.2
State Street Russell 1000® Index Securities Lending Fund	0.8	0.5	0.3
State Street Russell 1000® Growth Index Securities Lending Fund	0.7	0.4	0.3
State Street Russell 1000® Value Index Securities Lending Fund	0.9	0.6	0.4
Russell Mid Cap Index Strategy*	N/A	N/A	N/A
State Street S&P MidCap 400® Index Securities Lending Common Trust Fund	1.4	0.8	0.2
State Street Russell 2000® Index Securities Lending Fund	11.9	11.9	3.2
State Street Russell 2000® Growth Index Securities Lending Fund	17.3	15.7	4.0
State Street Russell 2000® Value Index Securities Lending Common Trust Fund	5.8	7.9	2.0

*No commingled fund available.
 Past performance is not a reliable indicator of future performance.

Non-US Equity Lending Returns

Fund Name	Securities Lending Return (bps)		
	2019	2020	2021
MSCI World ex U.S. IMI Strategy*	2.0-3.0	2.0-3.0	2.0-3.0
State Street MSCI EAFE Index Securities Lending Fund	1.5	0.9	1.3
State Street MSCI EAFE Small Cap Index Securities Lending Fund	14.2	11.3	7.8
State Street Daily MSCI Emerging Markets Index Securities Lending Fund	2.7	1.8	2.1
State Street MSCI Emerging Markets Small Cap Index Securities Lending Fund	12.7	13.6	10.6

*The MSCI World Ex US IMI strategy is composed of underlying lending commingled funds. The estimated lending returns for this exposure is 2-3 basis points. Past performance is not a reliable indicator of future performance.

Fixed Income Lending Returns

Fund Name	Securities Lending Return (bps)		
	2019	2020	2021
State Street U.S. Aggregate Bond Index Securities Lending Fund	1.9	3.3	1.1
State Street U.S. Treasury Inflation Protected Securities (TIPS) Index Securities Lending Fund	2.7	6.8	1.2

The SSGA Real Asset Strategy CIT does not have a lending option/sleeve at this time.
 Past performance is not a reliable indicator of future performance.

Closing Remarks

Why Choose State Street Global Advisors?

Indexing Skillfully Delivered

Research

Embedded research team delivering innovative solutions — such as factors, ESG and implementation techniques

Client Centric Focus

Listen, understand and adapt to client needs and challenges

Performance

Aim to before deliver performance by striking the appropriate balance between return, risk and costs (>98% of funds have consistently* tracked within expectations)

Team

Tenured and stable team with dedicated portfolio managers

Asset Stewardship

Effective steward of client assets with a coordinated firm wide proxy voting platform and focused engagement

Source: State Street Global Advisors. * Based on cumulative quarterly gross-of-fees returns for all GEBS managed pooled, and separate account for both 3 years and 5 years period ending December 31, 2021. Tracking error based on the difference between portfolio and benchmark cumulative returns.

The Benefits of Partnering with SSGA

Our objectives in working with you will be to:

- Deliver consistent, risk-controlled investment outcomes
- Emphasize transparency on key drivers of portfolio risks and returns
- Provide comprehensive exposures across fixed income
- Improve overall results through cost efficiencies

Appendix A: Important Disclosures

Important Risk Disclosure

Investing involves risk including the risk of loss of principal.

The whole or any part of this work may not be reproduced, copied or transmitted or any of its contents disclosed to third parties without SSGA's express written consent.

The information provided does not constitute investment advice and it should not be relied on as such. It should not be considered a solicitation to buy or an offer to sell a security. It does not take into account any investor's particular investment objectives, strategies, tax status or investment horizon. You should consult your tax and financial advisor.

All information has been obtained from sources believed to be reliable, but its accuracy is not guaranteed. There is no representation or warranty as to the current accuracy, reliability or completeness of, nor liability for, decisions based on such information and it should not be relied on as such.

The returns on a portfolio of securities which exclude companies that do not meet the portfolio's specified ESG criteria may trail the returns on a portfolio of securities which include such companies. A portfolio's ESG criteria may result in the portfolio investing in industry sectors or securities which underperform the market as a whole.

Responsible-Factor (R Factor) scoring is designed by State Street to reflect certain ESG characteristics and does not represent investment performance. Results generated out of the scoring model is based on sustainability and corporate governance dimensions of a scored entity.

Bonds generally present less short-term risk and volatility than stocks, but contain interest rate risk (as interest rates rise, bond prices usually fall); issuer default risk; issuer credit risk; liquidity risk; and inflation risk. These effects are usually pronounced for longer-term securities. Any fixed income security sold or redeemed prior to maturity may be subject to a substantial gain or loss.

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The Fund's securities lending returns shown above are estimates and are based on certain assumptions. Annual returns are calculated by compounding the monthly returns of the fund for a calendar year. Monthly returns are calculated by dividing the earnings realized by the Fund from securities lending activities for the period of a calendar month (net of applicable fees and expenses associated with the Fund's participation in State Street's securities lending program) by the Fund's average daily net asset value for the month in which they are earned. Daily net assets are calculated by multiplying the net asset value per share by the total number of shares on a given day, where the total number of shares takes into account contribution and redemption requests submitted to the Fund one day subsequent to trade date (TD+1). Prior to January 1, 2015, the number of shares took into account the contribution and redemption requests submitted to the Fund on trade date, and the net asset value per share was rounded to 3 digits after the decimal point.

To the extent the Fund invests in underlying funds that participate in securities lending, the Fund's securities lending returns are calculated based on the monthly returns of the underlying funds in proportion to the allocation of the Fund's assets to such funds as of the first day of the applicable month. The Fund's actual securities lending returns for the period shown may differ for reasons including but not limited to the timing of the Fund's recognition of the earnings, fluctuations in the Fund's daily NAV, and/or fluctuations in the proportion of assets a fund of fund has invested in the underlying funds during the period. Past revenues are not a guarantee of future results, which could differ substantially for any reason, including without limitation market conditions, asset allocation changes, fluctuations in the Fund's net assets, securities lending limits imposed on the Fund and modifications to applicable tax rates and regulations.

Important Risk Disclosure

United States: State Street Global Advisors, 1 Iron Street, Boston, MA 02210-1641.

Information Classification: Limited Access

Web: www.ssga.com

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Tracking Number: 4796604.3.1.AM.INST

Expiration Date: August 31, 2022

CONTRACT AWARD
BLACKROCK INSTITUTIONAL TRUST COMPANY, N.A.
FOR MULTI PASSIVE INDEX PORTFOLIO MANAGEMENT

PROPOSED RESOLUTION

WHEREAS, on August 24, 2021, the Board authorized a Request for Proposal for Passive U.S., Non-U.S., and Global Index Strategies Management; and,

WHEREAS, on February 8, 2022, the Investment Committee concurred with the recommendation from staff and NEPC, LLC (NEPC), LACERS' General Fund Consultant, to advance BlackRock Institutional Trust Company, N.A. (BlackRock); Mellon Investments Corporation; Northern Trust Investments, Inc.; RhumbLine Advisers Limited Partnership (RhumbLine); and State Street Global Advisors Trust Company (State Street) as semi-finalist candidates; and,

WHEREAS, staff conducted due diligence on the five semi-finalist candidates; and,

WHEREAS, based upon due diligence activities, staff and NEPC recommended BlackRock, RhumbLine, and State Street as qualified semi-finalists to be interviewed by the Investment Committee; and,

WHEREAS, on July 14, 2022, the Investment Committee interviewed BlackRock, RhumbLine, and State Street and subsequently recommended these three firms to the Board for consideration for hire; and,

WHEREAS, on July 26, 2022, the Board approved the Investment Committee's recommendation for a five-year contract with BlackRock.

NOW, THEREFORE, BE IT RESOLVED, that the General Manager is hereby authorized to approve and execute a contract subject to satisfactory business and legal terms and consistent with the following services and terms:

<u>Company Name:</u>	BlackRock Institutional Trust Company, N.A.
<u>Service Provided:</u>	Multi Passive Index Portfolio Management
<u>Effective Dates:</u>	September 1, 2022 through August 31, 2027
<u>Duration:</u>	Five years
<u>Strategies:</u>	Equity Index (S&P 500) Fund Equity Index (S&P 500) Non-Lendable Fund Russell 1000 Index Fund Russell 1000 Index Non-Lendable Fund Russell 1000 Growth Fund Russell 1000 Growth Non-Lendable Fund Russell 1000 Value Fund

Russell 1000 Value Non-Lendable Fund
Russell 2000 Index Fund
Russell 2000 Index Non-Lendable Fund
Russell 2000 Growth Fund
Russell 2000 Value Fund
BlackRock MSCI World ex-U.S. IMI Index Fund
BlackRock MSCI World ex-U.S. IMI Index Non-Lendable Fund
EAFE Equity Index Fund
BlackRock MSCI EAFE Equity Index Non-Lendable Fund
EAFE Equity Growth Index Fund
EAFE Equity Value Index Fund
BlackRock MSCI EAFE Small Cap Equity Index Fund
BlackRock MSCI EAFE Small Cap Equity Index Non-Lendable Fund
MSCI Emerging Markets Free Fund
Emerging Markets Index Non-Lendable Fund
Emerging Markets Small Cap Equity Index Fund
Emerging Markets Small Cap Equity Index Non-Lendable Fund
U.S. Debt Index (Bloomberg U.S. Aggregate Bond) Fund
U.S. Debt Index (Bloomberg U.S. Aggregate Bond)
Non-Lendable Fund
Bloomberg U.S. TIPS Index Fund
Bloomberg U.S. TIPS Non-Lendable Fund

July 26, 2022

CONTRACT AWARD
RHUMBLINE ADVISERS LIMITED PARTNERSHIP
FOR MULTI PASSIVE INDEX PORTFOLIO MANAGEMENT

PROPOSED RESOLUTION

WHEREAS, on August 24, 2021, the Board authorized a Request for Proposal for Passive U.S., Non-U.S., and Global Index Strategies Management; and,

WHEREAS, on February 8, 2022, the Investment Committee concurred with the recommendation from staff and NEPC, LLC (NEPC), LACERS' General Fund Consultant, to advance BlackRock Institutional Trust Company, N.A. (BlackRock); Mellon Investments Corporation; Northern Trust Investments, Inc.; RhumbLine Advisers Limited Partnership (RhumbLine); and State Street Global Advisors Trust Company (State Street) as semi-finalist candidates; and,

WHEREAS, staff conducted due diligence on the five semi-finalist candidates; and,

WHEREAS, based upon due diligence activities, staff and NEPC recommended BlackRock, RhumbLine, and State Street as qualified semi-finalists to be interviewed by the Investment Committee; and,

WHEREAS, on July 14, 2022, the Investment Committee interviewed BlackRock, RhumbLine, and State Street and subsequently recommended these three firms to the Board for consideration for hire; and,

WHEREAS, on July 26, 2022, the Board approved the Investment Committee's recommendation for a five-year contract with RhumbLine.

NOW, THEREFORE, BE IT RESOLVED, that the General Manager is hereby authorized to approve and execute a contract subject to satisfactory business and legal terms and consistent with the following services and terms:

<u>Company Name:</u>	RhumbLine Advisers Limited Partnership
<u>Service Provided:</u>	Multi Passive Index Portfolio Management
<u>Effective Dates:</u>	September 1, 2022 through August 31, 2027
<u>Duration:</u>	Five years
<u>Strategies:</u>	S&P 500 Index (SMA) Russell 1000 Index (SMA) Russell 1000 Growth Index (SMA) Russell 1000 Value Index (SMA) Russell Mid Cap Index (SMA) Russell Mid Cap Growth Index (SMA) Russell Mid Cap Value Index (SMA)

S&P 400 Index (SMA)
S&P 400 Growth Index (SMA)
Russell 2000 Index (SMA)
Russell 2000 Growth Index (SMA)
Russell 2000 Value Index (SMA)
MSCI EAFE Index (SMA)
MSCI Emerging Markets Index (SMA)
Core Bond (Bloomberg U.S. Aggregate Bond) Index (SMA)

SMA = Separately Managed Account

July 26, 2022

CONTRACT AWARD
STATE STREET GLOBAL ADVISORS TRUST COMPANY
FOR MULTI PASSIVE INDEX PORTFOLIO MANAGEMENT

PROPOSED RESOLUTION

WHEREAS, on August 24, 2021, the Board authorized a Request for Proposal for Passive U.S., Non-U.S., and Global Index Strategies Management; and,

WHEREAS, on February 8, 2022, the Investment Committee concurred with the recommendation from staff and NEPC, LLC (NEPC), LACERS' General Fund Consultant, to advance BlackRock Institutional Trust Company, N.A. (BlackRock); Mellon Investments Corporation; Northern Trust Investments, Inc.; RhumbLine Advisers Limited Partnership (RhumbLine); and State Street Global Advisors Trust Company (State Street) as semi-finalist candidates; and,

WHEREAS, staff conducted due diligence on the five semi-finalist candidates; and,

WHEREAS, based upon due diligence activities, staff and NEPC recommended BlackRock, RhumbLine, and State Street as qualified semi-finalists to be interviewed by the Investment Committee; and,

WHEREAS, on July 14, 2022, the Investment Committee interviewed BlackRock, RhumbLine, and State Street and subsequently recommended these three firms to the Board for consideration for hire; and,

WHEREAS, on July 26, 2022, the Board approved the Investment Committee's recommendation for a five-year contract with State Street.

NOW, THEREFORE, BE IT RESOLVED, that the General Manager is hereby authorized to approve and execute a contract subject to satisfactory business and legal terms and consistent with the following services and terms:

<u>Company Name:</u>	State Street Global Advisors Trust Company
<u>Service Provided:</u>	Multi Passive Index Portfolio Management
<u>Effective Dates:</u>	September 1, 2022 through August 31, 2027
<u>Duration:</u>	Five years
<u>Strategies:</u>	S&P 500 Index (SMA/NL CIT/SL CIT) Russell 1000 Index (SMA/NL CIT/SL CIT) Russell 1000 Growth Index (SMA/NL CIT/SL CIT) Russell 1000 Value Index (SMA/NL CIT/SL CIT) Russell MidCap (SMA) S&P Mid Cap 400 (SMA/NL CIT/SL CIT) Russell 2000 Index (SMA/NL CIT/SL CIT)

Russell 2000 Growth (SMA/NL CIT/SL CIT)
Russell 2000 Value (SMA/NL CIT/SL CIT)
MSCI World ex US IMI Index (SMA/NL CIT/SL CIT)
MSCI EAFE Index (SMA/NL CIT/SL CIT)
MSCI EAFE Small Cap Index (SMA/NL CIT/SL CIT)
MSCI Emerging Markets Index (SMA/NL CIT/SL CIT)
MSCI Emerging Markets Small Cap Index (SMA/NL CIT/SL CIT)
BB US Agg Bond Index (SMA/NL CIT/SL CIT)
BB U.S. TIPS Index (SMA/NL CIT/SL CIT)

SMA = Separately Managed Account

NL CIT = Non-lending Commingled Investment Trust

SL CIT = Securities Lending Commingled Investment Trust

July 26, 2022



LACERS
LA CITY EMPLOYEES'
RETIREMENT SYSTEM



REPORT TO BOARD OF ADMINISTRATION

From: Neil M. Guglielmo, General Manager

Neil M. Guglielmo

MEETING: JULY 26, 2022

ITEM: X - D

**SUBJECT: RESPONSE TO CITY CONTROLLER REGARDING RUSSIAN ASSET HOLDINGS
AND POSSIBLE BOARD ACTION**

ACTION: CLOSED: CONSENT: RECEIVE & FILE:

Recommendation

That the Board instruct staff to continue to monitor and periodically report back to the Board on the status of Russian holdings in the LACERS portfolio.

Executive Summary

On May 3, 2022, LACERS received correspondence from the City of Los Angeles Controller's Office requesting all three of the City's pension plans begin identification of all current Russian investments and explore the possibility of divestment.

Divestment of pension trust funds for reasons other than achieving best risk-adjusted returns for pension plan participants raises fiduciary concerns. Furthermore, divestment may have material financial impact including higher realized losses and additional transaction fees.

Discussion

Background

On May 3, 2022, LACERS received the attached correspondence (Attachment 1) from the City of Los Angeles Controller's Office requesting all three City pension plans to begin identification of current Russian investments and explore the possibility of divesting from them.

LACERS' Exposure to Russian Assets

As of July 1, 2022, the Board's total exposure to Russian equities and fixed income was approximately \$8.84 million, representing 0.04% (4 basis points) of LACERS' total portfolio.

Valuing current Russian exposure is challenging as market pricing generally provides the best reflection of true value based on price that an investor realizes when selling an asset. Given limited market liquidity, most Russian assets are reflecting a steep discount. As of July 1, 2022, three of LACERS' investment managers held Russian assets as presented in the following table:

Investment Manager	Asset Type	Description
DFA - Emerging Markets	Equities	VTB BANK PUBLIC JOINT STOCK COMPANY GDR (EACH REPR 2000 ORDS) (REGS)
		RUSHYDRO PJSC SPON ADR EACH REPR 100 ORD
		ROSNEFT OIL CO GDR EACH REPR 1 ORD 'REGS'
		OIL CO LUKOIL PJSC ADR EACH REPR 1 ORD RUB0.02
		GAZPROM PJSC SPON ADR-EACH REPR 2 ORD SHS
		ETALON GROUP PLC GDR EACH REPR 1 SHARE REG S
PGIM Fixed Income - Emerging Market Debt	Fixed Income	PVTPL GAZ CAPITAL LOAN PARTICIPATION NOTES REGS S 8.625 DUE 04-28-2034 BEO
		LUKOIL SECS B V 3.875% GTD SNR 06/05/30 USD
		GAZ CAPITAL SA 8.625% SNR 28/04/2034 USD
		GAZ CAPITAL SA 4.95% SNR 06/02/2028 USD
		RUSSIAN FEDN 5.875% 16/09/2043
		RUSSIAN FEDERATION TBOND 5.625% 04/04/2042
		RUSSIAN FEDERATION 5.875 09-16-2043
		RUSSIAN FEDERATION 5.625% SNR 04/04/2042USD
		RUSSIAN FEDERATION 5.1% SNR 28/03/35 USD
		RUSSIAN FEDERATION 7.7% SNR 16/03/2039 RUB
		RUSSIAN FEDERATION 7.7% BDS 23/03/2033 RUB
		RUSSIAN FEDERATION 7.65% SNR 10/04/30 RUB
		RUSSIAN FEDERATION 6.9% SNR 23/05/2029 RUB
		RUSSIAN FEDERATION 6% SNR 06/10/2027 RUB
		RUSSIAN FEDERATION 5.9% SNR 12/03/2031 RUB
RUSSIAN FEDERATION 4.5% SNR 16/07/2025 RUB		
RUSSIAN FEDERATION 1.85% SNR 20/11/2032 EUR		
RUSSIAN FEDERATION 2.5% IDX/LKD 07/2030 RUB		
Wellington - Emerging Market Debt	Fixed Income	PVTPL LUKOIL CAPITAL DAC 2.8% 04-26-2027
		GTLK EUROPE CAP BDS 4.65% 10/03/2027
		RUSSIAN FEDERATION 4.75% SNR 27/05/2026 USD
		RUSSIAN FEDERATION 4.375% SNR 21/03/2029USD
		RUSSIAN FEDERATION 4.25% SNR 23/06/2027 USD
		RUSSIAN FEDERATION 7.7% BDS 23/03/2033 RUB
		RUSSIAN FEDERATION 7.65% SNR 10/04/30 RUB
		RUSSIAN FEDERATION 7% SNR 16/08/2023 RUB
		RUSSIAN FEDERATION 6.9% SNR 23/05/2029 RUB
		RUSSIAN FEDERATION 6% SNR 06/10/2027 RUB
RUSSIA GOVT BD - OFZ 7.05% 19/01/2028		

Liquidity Concerns

Russian equities held in LACERS' portfolio consist of American Depositary Receipts (ADRs) and Global Depositary Receipts (GDRs). Created to simplify foreign investing, ADRs and GDRs represent one or

more shares of a foreign company. Sponsored depositary receipts can be listed on major exchanges and enable investors to participate in global markets with increased liquidity. Currently, the Russian ADRs and GDRs within LACERS' portfolio are mostly illiquid due to U.S. sanctions imposed on the Russian Federation, trading halts and closures imposed by major stock exchanges, and a recently passed law by the Russian Federation requiring Russian companies to de-list their depositary receipts from foreign exchanges to reduce foreign influence on their local economy. According to the investment manager that holds these securities, there are limited opportunities to sell them to non-U.S. private investors at pennies on the dollar, but the manager does not believe these are value-maximizing transactions since the underlying local shares of these ADRs and GDRs are currently trading at significantly higher prices. Once the market opens to U.S. investors, the manager anticipates liquidating these securities at higher prices as market conditions allow.

Russian fixed income assets held in LACERS' portfolio consist of hard currency (U.S. Dollar or Euro-denominated) sovereign bonds, local currency (Russian Ruble-denominated) sovereign bonds, and corporate bonds issued by Russian companies. Similar to the equities held in LACERS' portfolio, these securities are mostly illiquid primarily due to U.S. sanctions imposed on the Russian Federation. These sanctions prohibit U.S. investors from purchasing Russian debt and limit sales only to non-U.S. investors. Additionally, the sanctions prevent the Russian Federation from transmitting coupon and principal payments on its sovereign debt to U.S. investors, and have forced the Russian Federation into a technical default. As a result of the sanctions, trade volumes in Russian sovereign and corporate debt have materially decreased. Both investment managers that hold these securities believe that the current bond valuations are not indicative of the underlying creditworthiness of the borrowers; these managers will take a measured and patient approach to maximizing recovery value of these securities, as market conditions allow.

Investors in global portfolios inevitably face periods of market disruption and geopolitical tension. The length of the Russian/Ukraine conflict bears uncertainty and raises questions regarding future actions the Russian Federation will take to stabilize and protect its economy. Accordingly, staff will continue to monitor this conflict and report back to the Board any material findings that impact the LACERS portfolio.

Fiduciary and Policy Considerations

All investments managed by the LACERS Board are held in trust for its pension plan participants. When considering divestment, it is the LACERS Board alone that has the legal authority to determine investment decisions pursuant to its fiduciary responsibilities. Divestment of pension trust funds for reasons other than achieving the best risk-adjusted return for the pension plan participants raises fiduciary concerns.

Further, the LACERS Responsible Investment Policy, Proxy Voting Policy, and ESG Risk Framework reflect the Board's established approach to managing the plan assets in light of ESG risks and sensitivities.

Staff recommends that the Board instruct staff to continue to monitor Russian holdings.

Strategic Plan Impact Statement

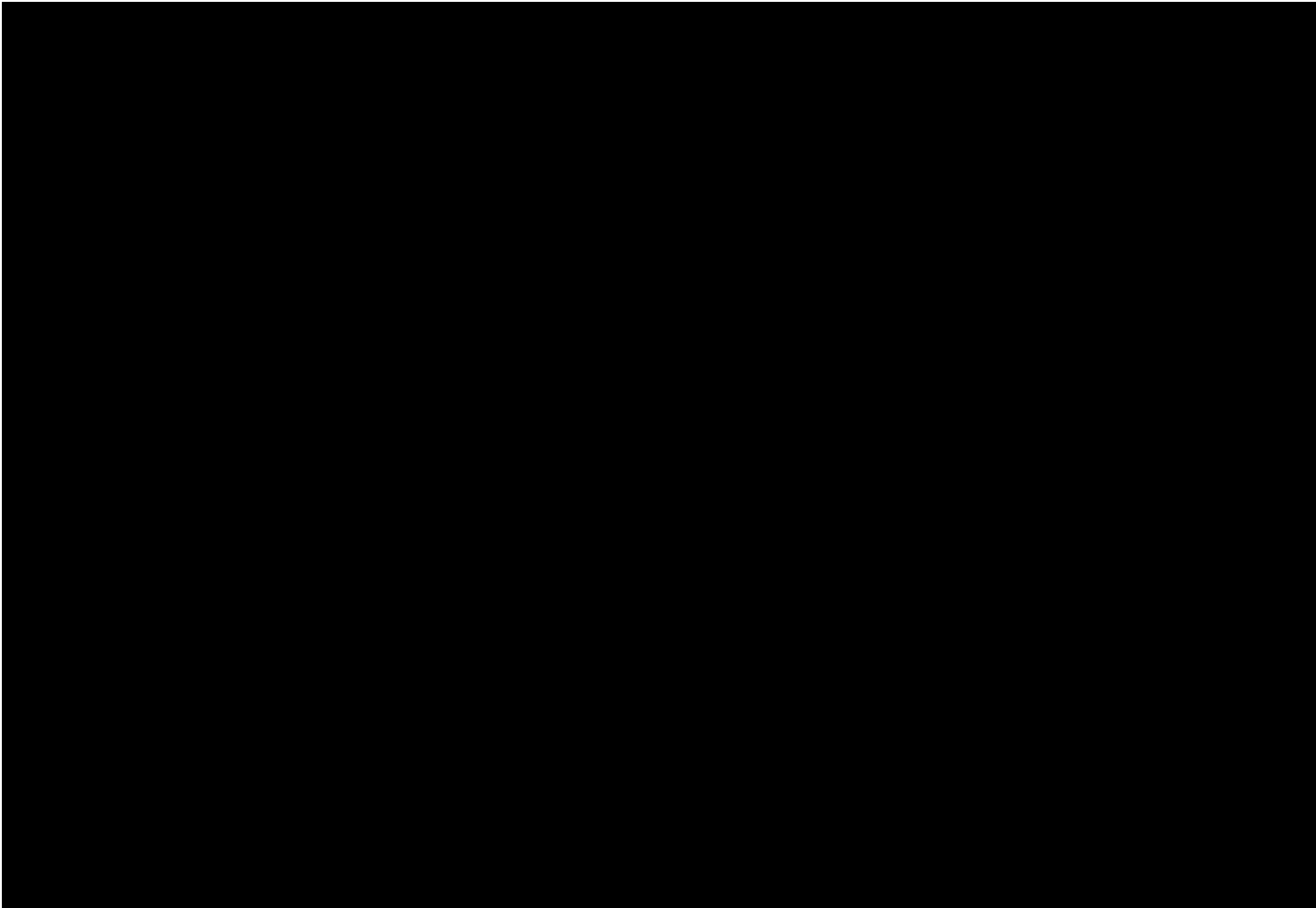
Continued monitoring of Russian asset holdings aligns with optimizing long-term risk adjusted investment returns (Goal IV); and upholds good governance practices which affirm transparency, accountability and fiduciary duty (Goal V).

Prepared By: Ellen Chen, Investment Officer II and ESG Risk Officer, Investment Division
James Wang, Investment Officer I, Investment Division

NMG/RJ/BF/EC/JW:jp

Attachment: 1. Correspondence from Controller's Office
 2. Valuations of Russian Assets Held in LACERS' Portfolio

Fwd: [EXTERNAL] Request to Identify Russian Investments and Explore Divestment



RON GALPERIN
CONTROLLER

May 3, 2022

Cynthia M. Ruiz
President, LACERS
202 W. First Street, Suite 500
Los Angeles, CA 90012

Brian Pendleton
President, LAFPP
701 E. Third Street, Suite 200
Los Angeles, CA 90013

LaTanya Bogin
President, WPERP

111 N. Hope Street, Room 357
Los Angeles, CA 90012

Re: Request to Identify Russian Investments and Explore Divestment

Dear Retirement Board Presidents and Commissioners:

On February 24, 2022, the Russian Federation launched a full-scale war on the sovereign nation of Ukraine — and more than two months later, there is still no end in sight. The atrocities committed by the Russian military have led to thousands of Ukrainian deaths and millions of displaced individuals and families. Across the United States, we have seen cities, states and the federal government condemn Russia's actions and take steps to divest from assets belonging to individuals, organizations and entities associated with Russia. In Los Angeles, the City Council passed a resolution affirming the City's support for any federal legislation to divest from Russian assets and, separately, introduced a motion calling for the City to comply with sanctions imposed by the federal government against Russia.

As the second-largest municipality in the country with a history of standing up for human rights, I believe the City of Los Angeles can and must do more. **I hereby request that the City's three retirement plans — the Los Angeles Fire and Police Pensions (LAFPP), the Los Angeles City Employees' Retirement System (LACERS) and the Water and Power Employees' Retirement Plan (WPERP) — immediately identify all current Russian investments and explore the possibility of divesting from them.**

The City's retirement plans combined have more than 100,000 active members and total assets of approximately \$74 billion. Each plans' board has the sole and exclusive responsibility to make investment decisions, including investing in or divesting from specific assets. **As of March 31, 2022, the plans reported a combined investment total of \$46.2 million in Russian securities — \$33,297,464 in LAFPP, \$12,345,173 in LACERS and \$580,304 in WPERP.**

As the City's chief financial officer, I do not make this request lightly. I understand there could be complexities with removing assets that may be restricted and am aware that the potential impacts to investment strategies must be examined. However, due to the war crimes and crimes against humanity committed by Russia against the people of Ukraine, I believe it is incumbent upon us to take action. Our pension and retirement boards should act now to produce a list identifying all investments tied to Russia or the Russian government and work quickly to outline a path toward divestment. We should explore every option and take every measure in our power to support the people of Ukraine as they weather this dreadful onslaught. Acting in solidarity with those suffering and taking a strong stand against violations of international law is in the interest of current and former City employees, and the residents of Los Angeles.

Thank you in advance for your time and consideration of this urgent matter. If you have questions or require any assistance during this process, please do not hesitate to contact me.

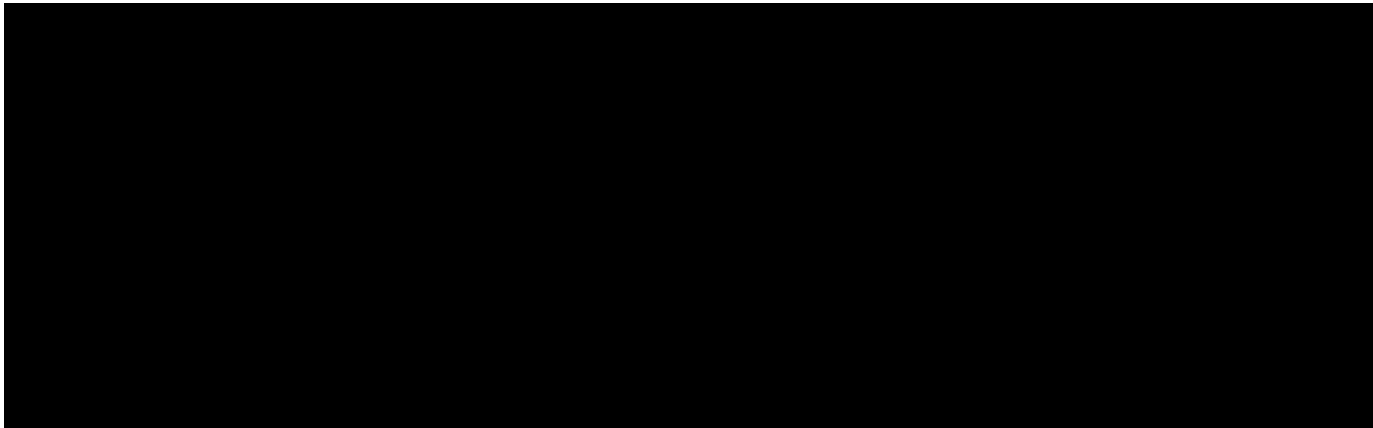
Respectfully,



RON GALPERIN
L.A. Controller

CC:

Neil Guglielmo, General Manager, LACERS
Rodney June, Chief Investment Officer, LACERS
Ray Ciranna, General Manager, LAFPP
Ray Joseph, Chief Investment Officer, LAFPP
Martin Adams, General Manager, LADWP
Linda Le, Retirement Plan Manager, WPERP
Jeremy Wolfson, Chief Investment Officer, WPERP



Valuations of Russian Assets Held in LACERS' Portfolio
As of July 1, 2022

Equity					
Manager	Asset Type	Asset Name	Market Value (USD)	Cost (USD)	Unrealized Losses (USD)
DFA - Emerging Markets	Common Stock	VTB BANK PUBLIC JOINT STOCK COMPANY GDR	157,580	238,560	(80,980)
		RUSHYDRO PJSC SPON ADR	80,628	171,255	(90,628)
		ROSNEFT OIL CO GDR	17,638	160,008	(142,371)
		OIL CO LUKOIL PJSC ADR	28,579	2,040,078	(2,011,499)
		GAZPROM PJSC SPON ADR	146,241	2,079,974	(1,933,732)
		ETALON GROUP PLC GDR	239	2,842	(2,603)
Subtotal			430,905	4,692,717	(4,261,812)
Fixed Income					
Manager	Asset Type	Asset Name	Market Value (USD)	Cost (USD)	Unrealized Losses (USD)
PGIM Fixed Income - Emerging Market Debt	Government Bonds	RUSSIAN FEDN 5.875% 16/09/2043	244,400	1,002,713	(758,313)
		RUSSIAN FEDN 5.875% 16/09/2043	174,300	762,980	(588,680)
		RUSSIAN FEDN 5.875% 09-16-2043	61,100	209,150	(148,050)
		RUSSIAN FEDN 5.625% 04/04/2042	174,300	823,331	(649,031)
		RUSSIAN FEDN 5.1% SNR 28/03/35 USD200000	316,800	1,381,354	(1,064,554)
		RUSSIAN FEDN 7.7% SNR 16/03/2039 RUB1000	82,219	740,739	(925,284)
		RUSSIAN FEDN 7.7% BDS 23/03/2033 RUB1000	380,228	3,401,796	(4,245,944)
		RUSSIAN FEDN 7.65% SNR 10/04/30 RUB1000	236,357	2,115,996	(2,641,235)
		RUSSIAN FEDN 6.9% SNR 23/05/2029 RUB1000	59,537	509,441	(603,544)
		RUSSIAN FEDN 6% SNR 06/10/2027 RUB1000	246,640	2,014,645	(2,493,199)
		RUSSIAN FEDN 5.9% SNR 12/03/2031 RUB1000	278,952	2,163,279	(2,552,830)
		RUSSIAN FEDN 4.5% SNR 16/07/2025 RUB1000	452,163	3,541,193	(4,361,648)
		RUSSIAN FEDN 1.85% SNR 20/11/2032 EUR	241,576	1,059,960	(696,037)
	Index Linked Government Bonds	RUSSIAN FEDN 2.5% IDX/LKD 07/2030 RUB	211,275	1,442,818	(1,749,968)
	Corporate Bonds	PVTPL GAZ CAPITAL LOAN PARTICIPATION NOTES REGS S 8.625 DUE 04-28-2034 BEO	178,157	624,711	(446,555)
		LUKOIL SECS B V 3.875% GTD SNR 06/05/30 USD	367,920	777,569	(409,649)
		GAZ CAPITAL SA 8.625% SNR 28/04/2034 USD	44,080	153,812	(109,732)
GAZ CAPITAL SA 4.95% SNR 06/02/2028 USD		59,440	224,090	(164,650)	
Wellington - Emerging Market Debt	Government Agencies	GTLK EUROPE CAP BDS 4.65% 10/03/2027	193,520	1,225,725	(1,032,205)
	Government Bonds	RUSSIAN FEDN 4.75% SNR 27/05/2026 USD	108,467	460,488	(352,021)
		RUSSIAN FEDN 4.375% SNR 21/03/2029USD	699,400	2,945,518	(2,246,118)
		RUSSIAN FEDN 4.25% SNR 23/06/2027 USD	592,900	2,471,466	(1,878,566)
		RUSSIAN FEDN 7.7% BDS 23/03/2033 RUB1000	261,331	2,345,112	(2,932,017)
		RUSSIAN FEDN 7.65% SNR 10/04/30 RUB1000	413,798	3,723,838	(4,655,965)
		RUSSIAN FEDN 7% SNR 16/08/2023 RUB1000	297,718	2,493,154	(3,028,127)
		RUSSIAN FEDN 6.9% SNR 23/05/2029 RUB1000	536,045	4,569,138	(5,647,521)
		RUSSIAN FEDN 6% SNR 06/10/2027 RUB1000	861,934	5,919,050	(7,314,297)
	RUSSIA GOVT BD - OFZ 7.05% 19/01/2028	129,963	1,106,822	(1,346,281)	
Corporate Bonds	PVTPL LUKOIL CAPITAL DAC 2.8% 04-26-2027	506,300	830,000	(323,700)	
Subtotal			8,410,820	51,039,886	(55,365,721)
Total Equity and Fixed Income			8,841,724	55,732,603	(59,627,534)



REPORT TO BOARD OF ADMINISTRATION

From: Investment Committee
Sung Won Sohn, Chair
Elizabeth Lee
Nilza R. Serrano

MEETING: JULY 26, 2022
ITEM: X - E

SUBJECT: UNIQUE INVESTMENT OPPORTUNITIES POLICY AND POSSIBLE BOARD ACTION

ACTION: CLOSED: CONSENT: RECEIVE & FILE:

Recommendation

That the Board approve the proposed Unique Investment Opportunities Policy.

Discussion

The proposed Unique Investment Opportunities Policy (UIOP) was developed to provide LACERS staff flexibility and authority to take advantage of potential unique and time-sensitive strategies that are expected to enhance the risk-adjusted returns of the LACERS investment portfolio. UIOP investments typically arise during periods of market stress, dislocations, or changing market dynamics and have the potential to generate returns in excess of those expected from traditional investments within the LACERS portfolio. Two key defining characteristics of a UIOP investment are a short window of time to capitalize on the opportunity and a short-term investment horizon; such an opportunity would be missed if it were subject to a traditional and lengthy request for proposal search process. Therefore, the proposed policy provides limited discretion to staff, with concurrence from the appropriate investment consultant, to consummate UIOP investments similar to the limited discretion provided to staff and consultant under the Private Equity Investment Policy.

On July 12, 2022, the Committee discussed the proposed UIOP with staff and approved moving it forward to the Board for consideration subject to including a provision that the UIOP be reviewed by the Board at least once every three years to evaluate its effectiveness and make appropriate revisions. This revision has been incorporated in the attached redlined and clean versions of the UIOP (Attachments 2 and 3).

The proposed UIOP has been reviewed by NEPC, LLC, LACERS' General Fund Consultant; Aksia LLC, LACERS' Private Equity Consultant; The Townsend Group, LACERS' Real Estate Consultant; and the Office of the City Attorney. Upon the Board's approval of the UIOP, staff may make additional minor administrative edits to be incorporated in the final version of the policy.

Strategic Plan Impact Statement

The Unique Investment Opportunities Policy assists the Board with optimizing LACERS' long-term risk-adjusted return profile (Goal IV) and promotes good governance practices (Goal V).

Prepared By: James Wang, Investment Officer I, Investment Division

NMG/RJ/BF/JW:rm

Attachment:

1. Report to Investment Committee Dated July 12, 2022
2. Proposed Revised Unique Investment Opportunities Policy – Redlined
3. Proposed Revised Unique Investment Opportunities Policy – Clean



REPORT TO INVESTMENT COMMITTEE
From: Neil M. Guglielmo, General Manager

MEETING: JULY 12, 2022
ITEM: VI

Neil M. Guglielmo

SUBJECT: UNIQUE INVESTMENT OPPORTUNITIES POLICY AND POSSIBLE COMMITTEE ACTION

ACTION: CLOSED: CONSENT: RECEIVE & FILE:

Recommendation

That the Committee consider and provide comments to the proposed Unique Investment Opportunities Policy.

Discussion

The Board believes that the LACERS investment portfolio is best managed when additional tools are available for staff to address and respond to dynamic and rapid changes to investment markets. Staff developed the attached proposed Unique Investment Opportunities Policy (UIOP), which sets forth guidelines to invest in unique, time-sensitive strategies expected to enhance the risk-adjusted returns of the LACERS investment portfolio. UIOP investments typically arise during periods of market stress, dislocations, or changing market dynamics and have the potential to generate returns in excess of those expected from traditional investments within the LACERS portfolio. Two key defining characteristics of a UIOP investment are a short window of time to capitalize on the opportunity and a short-term investment horizon; such an opportunity would be missed if it were subject to a traditional and lengthy request for proposal search process. Therefore, the proposed policy provides limited discretion to staff, with concurrence from the appropriate investment consultant, to consummate UIOP investments similar to the limited discretion provided to staff and consultant under the Private Equity Investment Policy.

The proposed UIOP has been reviewed by NEPC, LLC, LACERS' General Fund Consultant; Aksia LLC, LACERS' Private Equity Consultant; The Townsend Group, LACERS' Real Estate Consultant; and the Office of the City Attorney.

Staff request the Committee to provide further comments regarding the proposed UIOP.

Strategic Plan Impact Statement

The Unique Investment Opportunities Policy assists the Board with optimizing LACERS' long-term risk-adjusted return profile (Goal IV) and promotes good governance practices (Goal V).

Prepared By: James Wang, Investment Officer I, Investment Division

NMG/RJ/BF/JW:rm

Attachment: 1. Proposed Unique Investment Opportunities Policy

UNIQUE INVESTMENT OPPORTUNITIES POLICY

A. Purpose

The Board believes that LACERS Total Fund (Total Fund) is best managed when additional tools are available for Staff to address and respond to dynamic and rapid changes to investment markets or a particular sector. The Unique Investment Opportunities Policy (UIOP) sets forth a framework and guidelines to provide Staff limited discretion to invest in unique, time-sensitive strategies (Unique Investment Opportunities or UIO) expected to enhance Total Fund risk-adjusted returns. UIO investments typically arise during periods of market stress, dislocations, or changing market dynamics and have the potential to generate returns in excess of those expected from traditional investments within the LACERS portfolio. UIO investments generally have limited windows of opportunity, short-term investment horizons, and reasonable likelihood of return of capital; therefore, this policy is designed to give limited investment discretion to Staff to expediently and efficiently consummate such investments.

B. Investment Objectives

The objective of the UIOP is to proactively identify and utilize opportunistic investments within public and private markets that may or may not have an existing long-term asset allocation policy or risk budget targets in the LACERS portfolio. UIO investments may be made in order to accomplish one or more of the following:

1. Generate incremental returns equal to or in excess of LACERS' actuarial assumed rate of return, commensurate with risk.
2. Generate incremental returns in excess of expected returns from LACERS' traditional portfolio of investments—as identified by the asset allocation policy and risk budget targets—commensurate with risk.
3. Reduce downside volatility and optimize risk-adjusted returns for the LACERS portfolio by investing in UIO that have low correlations to existing investments.

C. Scope and Characteristics of Unique Investment Opportunities

UIO investments may be public or private markets investments and may span the capital structure of companies, properties, and other asset types or investment vehicles. Investments to be pursued under the UIOP generally exhibit, but are not limited to, the following characteristics:

1. Situational Economic and Market Conditions - UIO investments generally arise from the following economic and market circumstances:
 - Capital shortages – driven by low market liquidity or scarce capital that result in attractive asset pricing

- Extreme valuations – driven by unique events or macroeconomic environments, in some cases unrelated to fundamentals and resulting in significantly discounted valuations relative to the historical long-run values
 - Stressed or distressed markets – where economic stresses force non-economic sellers to transact at a significant discount relative to fair market value
 - Structural changes – caused by abrupt structural changes including technological disruptions, regulatory changes, capital market structures, or other factors
 - Innovations – where a new phenomenon or development creates opportunities driven by a slow market response to new information and expected trends
 - Niche investment markets – characterized by narrow markets with limited opportunities for capital deployment such as sector-focused fund investments and other funds with niche strategies
2. Limited Windows of Opportunity and Investment Horizons – UIO investments are generally fleeting investment opportunities with brief windows of opportunity to access the investment and execute a transaction. UIO investments may have shorter term holding periods of approximately one to five years as the economic and/or market pressures driving the UIO dissipate and the underlying investment theme matures.
 3. Limited Liquidity – UIO investments, particularly those made in private markets or in non-traditional asset classes, may require a lock-up of capital in order to capture the return potential of the opportunity.
 4. Non-traditional Risk-Return Profiles – UIO investment risk-return profiles may differ from traditional public or private market investments due to the idiosyncratic nature of UIO investments, which may emphasize certain risk factors such as deep value style bias, sector/industry concentration, or credit risk. UIO investments may have unusual cash flow patterns (e.g., asymmetric payoffs) and may distribute cash more or less frequently than traditional strategies.

D. Investment Guidelines

UIO investments may be made in public or private market investment strategies that are either not currently utilized by LACERS (i.e., the strategy does not have an existing target allocation pursuant to the approved Asset Allocation Policy and risk budgets) or have

existing allocations in the LACERS portfolio. UIO shall be managed by external investment managers and have time horizons deemed appropriate for the strategy and commensurate with similar investments held in the LACERS portfolio. Both public and private market UIO investments may be implemented through separate accounts, open-end commingled funds, closed-end commingled funds, or any other suitable investment structure.

For public market UIO investments, each investment may not exceed 0.5% of the total market value of the LACERS portfolio at the time of investment. For private market UIO investments, the commitment size of each investment may not exceed 0.5% of the total market value of the LACERS portfolio at the time of commitment. Total value of UIO investments and unfunded commitments shall be limited to 5% of the total market value of LACERS portfolio.

Each UIO shall be attributed to an existing asset class in LACERS' allocation strategy. The underlying assets of each UIO investment shall be considered to determine which asset class it will be classified under for purposes of overall portfolio construction, diversification, risk budgeting, risk management, and asset allocation considerations.

The funding of any UIO investment shall not cause any asset class weighting to move beyond its established minimum or maximum target ranges, but may cause an asset class to deviate from its asset allocation policy target.

All UIO investments shall be subject to LACERS Responsible Investment Policy and ESG Risk Framework. UIO investments in strategies with existing LACERS allocations pursuant to the adopted asset allocation and risk budgets shall be subject to existing LACERS investment policies. Investment management guidelines will be negotiated for UIO investments that utilize separate account vehicles.

All UIO investments shall be institutional quality and non-speculative, and, when the investment is effectuated, shall have a reasonable, foreseeable path to liquidity and exit.

E. Investment Process

Staff, with written concurrence from LACERS investment consultant(s), shall select and consummate new UIO investments in accordance with the following investment process. UIO investments shall not be subject to a competitive bidding search process (i.e., request for proposal process) due to the time-sensitive nature of these investments. For each UIO investment considered, Staff shall justify in writing why a competitive bidding process was not utilized.

1. Sourcing and Due Diligence

Staff and/or the appropriate LACERS investment consultant (Consultant) shall be responsible for sourcing UIO investments. All UIO investments are subject to a thorough and rigorous investment due diligence process conducted by Staff and/or Consultants. That process may include but is not limited to analysis of projected return, expected holding period, risks (including but not limited to ESG factors, liquidity, and operational risks), correlation with existing LACERS portfolio investments, and exit strategy. Further operational due diligence on the investment management team, risk management processes, legal, and other factors will also be conducted. Section F describes the general qualifications desired of investment managers to be considered for UIO investment mandates.

2. Approval of Investments

Staff shall submit written investment proposals for consideration under the UIOP to a Review Committee (RC) comprised of the Chief Investment Officer, Chief Operating Officer, and Director of Private Markets or their designees. The proposal shall include (a) an investment thesis, (b) summary of the investment opportunity, (c) the expected risk, return, and holding period of the investment, (d) expected path to liquidity, (e) a pro forma analysis to justify the proposed investment meets one of the investment objectives of Section B of this policy, (f) any other information deemed necessary by the RC to evaluate the proposal, and (g) justification for not using a competitive bidding process. Unanimous approval of the RC is required to proceed with any proposed UIO investment.

Any UIO investment approved by the RC will then require the written authorization of the General Manager and Chief Investment Officer and concurrence from the appropriate LACERS Consultant.

The RC shall designate the source of funding from within the LACERS portfolio for any UIO investment.

3. Board Notification of Authorized Investments

Approved UIO investments shall be reported to the Board in writing as soon as reasonably practicable after the investment has been consummated. The report shall include (but not be limited to) the following information:

- Name of the firm and if the firm qualifies as an emerging manager
- Investment strategy and thesis
- Total commitment or investment size

4. Exiting Investments

To the extent that a UIO investment vehicle is liquid, Staff, with concurrence from the appropriate Consultant, shall have discretion to initiate an exit from a UIO investment when it is determined that (a) the UIO investment has met its expected objective or (b) the UIO investment will not meet its expected objective due to changing market conditions, the investment manager's inability to execute the strategy, or other relevant factors.

For illiquid UIO investment vehicles with no redemption terms, exits will occur through distributions made by the investment manager over the life of the vehicle.

The Board shall be notified in writing as soon as reasonably practicable after an investment has been fully exited.

F. Investment Manager Qualifications

UIO investment managers selected by LACERS under the UIOP will exhibit the following characteristics:

- Demonstrates sufficient experience and a verifiable, positive performance track record in the given strategy LACERS is pursuing through the particular UIO.
- Investment thesis that distinguishes the manager from other, existing approaches already in the LACERS portfolio.
- Appropriate resources and research capabilities to identify and execute unique strategies.
- Disciplined execution process to protect against style drift.
- Niche or specific expertise that can be leveraged in unique market environments.
- Fee structure within industry standard for the strategy.
- Manager is a registered investment adviser under the Investment Advisers Act of 1940 or provides a valid exemption at the time of contract execution.

Staff may hire managers who may qualify under LACERS' Emerging Investment Manager Policy. Staff will make every reasonable effort to consider Emerging Investment Managers for UIO investment mandates when appropriate.

G. Benchmarking and Reporting

1. Performance Benchmarking

LACERS' assumed rate of investment return will serve as the baseline benchmark to measure the performance of UIO investments. The Review Committee may establish a higher or lower benchmark if the risk-return characteristics of the investment warrant doing so.

2. Monitoring

Staff and Consultant will diligently monitor the performance of any UIO investment including but not limited to reviewing quarterly, annual, and other periodic reports as well as meeting with the managers periodically when appropriate. Further duties are listed in Section H. Roles and Responsibilities. The Manager Monitoring Policy may not apply to these investments due to their unique nature; managers will be monitored against the objectives and benchmarks set forth by this policy.

3. Reporting

Performance of individual UIO investments and performance of UIO investments at the aggregated level shall be incorporated into LACERS’ established reporting practices. Certain UIO investments may be subject to transparency reporting requirements per California Government Code § 7514.7.

H. Roles and Responsibilities

	Role of the Board	Role of Staff	Role of Consultant
Strategy / Policy	<ul style="list-style-type: none"> Approve applicable policy. 	<ul style="list-style-type: none"> In consultation with appropriate LACERS’ consultants, develop policies, procedures, guidelines, and allocation limits for recommendation to the Board. 	<ul style="list-style-type: none"> Consultation and feedback.
Investment Selection & Execution	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Identify and evaluate UIO investment ideas. The Chief Investment Officer, in conjunction with designated senior investment division staff, will approve or reject proposed investments for due diligence and execution. Conduct due diligence and prepare a written report for file. General Manager and Chief Investment Officer authorize investments General Manager or designee with signature authority will execute agreements and other legal or business documents to effectuate the transaction closing. 	<ul style="list-style-type: none"> Review investment opportunities. Assist with due diligence as appropriate. Provide written concurrence with proposed investments

		<ul style="list-style-type: none"> • Ensure review of relevant fund documents by the City Attorney and/or external legal counsel. • Designate source of funding for the investment and prepare written justification report for file. • Prepare written report for file to justify why a competitive bidding process was not used. 	
Investment Management & Monitoring	<ul style="list-style-type: none"> • Review investment notification reports. 	<ul style="list-style-type: none"> • Monitor investment performance relative to the appropriate benchmark. • Conduct periodic meetings with existing managers. • Prepare investment notification reports for Board. • Review periodic reports prepared by investment managers and consultants. • Fund capital calls and manage distributions when necessary. • Execute partnership amendments and consents (General Manager or designee). 	<ul style="list-style-type: none"> • Consultation and feedback.
Investment Wind Down and Exit	<ul style="list-style-type: none"> • Review investment exit notification reports 	<ul style="list-style-type: none"> • Review investment wind down and exit strategies including secondary transactions. • Prepare investment wind down and exit documents. • General Manager and Chief Investment Officer authorize secondary transactions and/or execute other documents necessary to wind down investments as situation warrants. • Prepare exit notification reports for Board. 	<ul style="list-style-type: none"> • Provide written concurrence on secondary transactions and other investment wind down actions.

UNIQUE INVESTMENT OPPORTUNITIES POLICY

A. Purpose

The Board believes that LACERS Total Fund (Total Fund) is best managed when additional tools are available for Staff to address and respond to dynamic and rapid changes to investment markets or a particular sector. The Unique Investment Opportunities Policy (UIOP) sets forth a framework and guidelines to provide Staff limited discretion to invest in unique, time-sensitive strategies (Unique Investment Opportunities or UIO) expected to enhance Total Fund risk-adjusted returns. UIO investments typically arise during periods of market stress, dislocations, or changing market dynamics and have the potential to generate returns in excess of those expected from traditional investments within the LACERS portfolio. UIO investments generally have limited windows of opportunity, short-term investment horizons, and reasonable likelihood of return of capital; therefore, this policy is designed to give limited investment discretion to Staff to expediently and efficiently consummate such investments.

B. Investment Objectives

The objective of the UIOP is to proactively identify and utilize opportunistic investments within public and private markets that may or may not have an existing long-term asset allocation policy or risk budget targets in the LACERS portfolio. UIO investments may be made in order to accomplish one or more of the following:

1. Generate incremental returns equal to or in excess of LACERS' actuarial assumed rate of return, commensurate with risk.
2. Generate incremental returns in excess of expected returns from LACERS' traditional portfolio of investments—as identified by the asset allocation policy and risk budget targets—commensurate with risk.
3. Reduce downside volatility and optimize risk-adjusted returns for the LACERS portfolio by investing in UIO that have low correlations to existing investments.

C. Scope and Characteristics of Unique Investment Opportunities

UIO investments may be public or private markets investments and may span the capital structure of companies, properties, and other asset types or investment vehicles. Investments to be pursued under the UIOP generally exhibit, but are not limited to, the following characteristics:

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 - Stressed or distressed markets – where economic stresses force non-economic sellers to transact at a significant discount relative to fair market value
 - Structural changes – caused by abrupt structural changes including technological disruptions, regulatory changes, capital market structures, or other factors
 - Innovations – where a new phenomenon or development creates opportunities driven by a slow market response to new information and expected trends
 - Niche investment markets – characterized by narrow markets with limited opportunities for capital deployment such as sector-focused fund investments and other funds with niche strategies
2. Limited Windows of Opportunity and Investment Horizons – UIO investments are generally fleeting investment opportunities with brief windows of opportunity to access the investment and execute a transaction. UIO investments may have shorter term holding periods of approximately one to five years as the economic and/or market pressures driving the UIO dissipate and the underlying investment theme matures.
 3. Limited Liquidity – UIO investments, particularly those made in private markets or in non-traditional asset classes, may require a lock-up of capital in order to capture the return potential of the opportunity.
 4. Non-traditional Risk-Return Profiles – UIO investment risk-return profiles may differ from traditional public or private market investments due to the idiosyncratic nature of UIO investments, which may emphasize certain risk factors such as deep value style bias, sector/industry concentration, or credit risk. UIO investments may have unusual cash flow patterns (e.g., asymmetric payoffs) and may distribute cash more or less frequently than traditional strategies.

D. Investment Guidelines

UIO investments may be made in public or private market investment strategies that are either not currently utilized by LACERS (i.e., the strategy does not have an existing target allocation pursuant to the approved Asset Allocation Policy and risk budgets) or have

existing allocations in the LACERS portfolio. UIO shall be managed by external investment managers and have time horizons deemed appropriate for the strategy and commensurate with similar investments held in the LACERS portfolio. Both public and private market UIO investments may be implemented through separate accounts, open-end commingled funds, closed-end commingled funds, or any other suitable investment structure.

For public market UIO investments, each investment may not exceed 0.5% of the total market value of the LACERS portfolio at the time of investment. For private market UIO investments, the commitment size of each investment may not exceed 0.5% of the total market value of the LACERS portfolio at the time of commitment. Total value of UIO investments and unfunded commitments shall be limited to 5% of the total market value of LACERS portfolio.

Each UIO shall be attributed to an existing asset class in LACERS' allocation strategy. The underlying assets of each UIO investment shall be considered to determine which asset class it will be classified under for purposes of overall portfolio construction, diversification, risk budgeting, risk management, and asset allocation considerations.

The funding of any UIO investment shall not cause any asset class weighting to move beyond its established minimum or maximum target ranges, but may cause an asset class to deviate from its asset allocation policy target.

All UIO investments shall be subject to LACERS Responsible Investment Policy and ESG Risk Framework. UIO investments in strategies with existing LACERS allocations pursuant to the adopted asset allocation and risk budgets shall be subject to existing LACERS investment policies. Investment management guidelines will be negotiated for UIO investments that utilize separate account vehicles.

All UIO investments shall be institutional quality and non-speculative, and, when the investment is effectuated, shall have a reasonable, foreseeable path to liquidity and exit.

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Staff, with written concurrence from LACERS investment consultant(s), shall select and consummate new UIO investments in accordance with the following investment process. UIO investments shall not be subject to a competitive bidding search process (i.e., request for proposal process) due to the time-sensitive nature of these investments. For each UIO investment considered, Staff shall justify in writing why a competitive bidding process was not utilized.

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Staff and/or the appropriate LACERS investment consultant (Consultant) shall be responsible for sourcing UIO investments. All UIO investments are subject to a thorough and rigorous investment due diligence process conducted by Staff and/or Consultants. That process may include but is not limited to analysis of projected return, expected holding period, risks (including but not limited to ESG factors, liquidity, and operational risks), correlation with existing LACERS portfolio investments, and exit strategy. Further operational due diligence on the investment management team, risk management processes, legal, and other factors will also be conducted. Section F describes the general qualifications desired of investment managers to be considered for UIO investment mandates.

2. Approval of Investments

Staff shall submit written investment proposals for consideration under the UIOP to a Review Committee (RC) comprised of the Chief Investment Officer, Chief Operating Officer, and Director of Private Markets or their designees. The proposal shall include (a) an investment thesis, (b) summary of the investment opportunity, (c) the expected risk, return, and holding period of the investment, (d) expected path to liquidity, (e) a pro forma analysis to justify the proposed investment meets one of the investment objectives of Section B of this policy, (f) any other information deemed necessary by the RC to evaluate the proposal, and (g) justification for not using a competitive bidding process. Unanimous approval of the RC is required to proceed with any proposed UIO investment.

Any UIO investment approved by the RC will then require the written authorization of the General Manager and Chief Investment Officer and concurrence from the appropriate LACERS Consultant.

The RC shall designate the source of funding from within the LACERS portfolio for any UIO investment.

3. Board Notification of Authorized Investments

Approved UIO investments shall be reported to the Board in writing as soon as reasonably practicable after the investment has been consummated. The report shall include (but not be limited to) the following information:

- Name of the firm and if the firm qualifies as an emerging manager
- Investment strategy and thesis
- Total commitment or investment size

4. Exiting Investments

To the extent that a UIO investment vehicle is liquid, Staff, with concurrence from the appropriate Consultant, shall have discretion to initiate an exit from a UIO investment when it is determined that (a) the UIO investment has met its expected objective or (b) the UIO investment will not meet its expected objective due to changing market conditions, the investment manager's inability to execute the strategy, or other relevant factors.

For illiquid UIO investment vehicles with no redemption terms, exits will occur through distributions made by the investment manager over the life of the vehicle.

The Board shall be notified in writing as soon as reasonably practicable after an investment has been fully exited.

F. Investment Manager Qualifications

UIO investment managers selected by LACERS under the UIOP will exhibit the following characteristics:

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- Investment thesis that distinguishes the manager from other, existing approaches already in the LACERS portfolio.
- Appropriate resources and research capabilities to identify and execute unique strategies.
- Disciplined execution process to protect against style drift.
- Niche or specific expertise that can be leveraged in unique market environments.
- Fee structure within industry standard for the strategy.
- Manager is a registered investment adviser under the Investment Advisers Act of 1940 or provides a valid exemption at the time of contract execution.

Staff may hire managers who may qualify under LACERS' Emerging Investment Manager Policy. Staff will make every reasonable effort to consider Emerging Investment Managers for UIO investment mandates when appropriate.

G. Benchmarking and Reporting

1. Performance Benchmarking

LACERS' assumed rate of investment return will serve as the baseline benchmark to measure the performance of UIO investments. The Review Committee may establish a higher or lower benchmark if the risk-return characteristics of the investment warrant doing so.

2. Monitoring

Staff and Consultant will diligently monitor the performance of any UIO investment including but not limited to reviewing quarterly, annual, and other periodic reports as well as meeting with the managers periodically when appropriate. Further duties are listed in Section H. Roles and Responsibilities. The Manager Monitoring Policy may not apply to these investments due to their unique nature; managers will be monitored against the objectives and benchmarks set forth by this policy.

3. Reporting

Performance of individual UIO investments and performance of UIO investments at the aggregated level shall be incorporated into LACERS' established reporting practices. Certain UIO investments may be subject to transparency reporting requirements per California Government Code § 7514.7.

4. Policy Review

[This policy shall be reviewed by the Board at least once every three years to determine its effectiveness and applicability under prevailing circumstances and conditions.](#)

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H. Roles and Responsibilities

	Role of the Board	Role of Staff	Role of Consultant
Strategy / Policy	<ul style="list-style-type: none"> Approve applicable policy. <u>Review policy at least once every three years.</u> 	<ul style="list-style-type: none"> In consultation with appropriate LACERS' consultants, develop policies, procedures, guidelines, and allocation limits for recommendation to the Board. 	<ul style="list-style-type: none"> Consultation and feedback.
Investment Selection & Execution	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Identify and evaluate UIO investment ideas. The Chief Investment Officer, in conjunction with designated senior investment division staff, will approve or reject proposed investments for due diligence and execution. 	<ul style="list-style-type: none"> Review investment opportunities. Assist with due diligence as appropriate. Provide written concurrence with proposed investments

		<ul style="list-style-type: none"> • Conduct due diligence and prepare a written report for file. • General Manager and Chief Investment Officer authorize investments • General Manager or designee with signature authority will execute agreements and other legal or business documents to effectuate the transaction closing. • Ensure review of relevant fund documents by the City Attorney and/or external legal counsel. • Designate source of funding for the investment and prepare written justification report for file. • Prepare written report for file to justify why a competitive bidding process was not used. 	
<p>Investment Management & Monitoring</p>	<ul style="list-style-type: none"> • Review investment notification reports. 	<ul style="list-style-type: none"> • Monitor investment performance relative to the appropriate benchmark. • Conduct periodic meetings with existing managers. • Prepare investment notification reports for Board. • Review periodic reports prepared by investment managers and consultants. • Fund capital calls and manage distributions when necessary. • Execute partnership amendments and consents (General Manager or designee). 	<ul style="list-style-type: none"> • Consultation and feedback.

Investment Wind Down and Exit	<ul style="list-style-type: none">• Review investment exit notification reports	<ul style="list-style-type: none">• Review investment wind down and exit strategies including secondary transactions.• Prepare investment wind down and exit documents.• General Manager and Chief Investment Officer authorize secondary transactions and/or execute other documents necessary to wind down investments as situation warrants.• Prepare exit notification reports for Board.	<ul style="list-style-type: none">• Provide written concurrence on secondary transactions and other investment wind down actions.
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UNIQUE INVESTMENT OPPORTUNITIES POLICY

A. Purpose

The Board believes that LACERS Total Fund (Total Fund) is best managed when additional tools are available for Staff to address and respond to dynamic and rapid changes to investment markets or a particular sector. The Unique Investment Opportunities Policy (UIOP) sets forth a framework and guidelines to provide Staff limited discretion to invest in unique, time-sensitive strategies (Unique Investment Opportunities or UIO) expected to enhance Total Fund risk-adjusted returns. UIO investments typically arise during periods of market stress, dislocations, or changing market dynamics and have the potential to generate returns in excess of those expected from traditional investments within the LACERS portfolio. UIO investments generally have limited windows of opportunity, short-term investment horizons, and reasonable likelihood of return of capital; therefore, this policy is designed to give limited investment discretion to Staff to expediently and efficiently consummate such investments.

B. Investment Objectives

The objective of the UIOP is to proactively identify and utilize opportunistic investments within public and private markets that may or may not have an existing long-term asset allocation policy or risk budget targets in the LACERS portfolio. UIO investments may be made in order to accomplish one or more of the following:

1. Generate incremental returns equal to or in excess of LACERS' actuarial assumed rate of return, commensurate with risk.
2. Generate incremental returns in excess of expected returns from LACERS' traditional portfolio of investments—as identified by the asset allocation policy and risk budget targets—commensurate with risk.
3. Reduce downside volatility and optimize risk-adjusted returns for the LACERS portfolio by investing in UIO that have low correlations to existing investments.

C. Scope and Characteristics of Unique Investment Opportunities

UIO investments may be public or private markets investments and may span the capital structure of companies, properties, and other asset types or investment vehicles. Investments to be pursued under the UIOP generally exhibit, but are not limited to, the following characteristics:

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- Extreme valuations – driven by unique events or macroeconomic environments, in some cases unrelated to fundamentals and resulting in significantly discounted valuations relative to the historical long-run values
 - Stressed or distressed markets – where economic stresses force non-economic sellers to transact at a significant discount relative to fair market value
 - Structural changes – caused by abrupt structural changes including technological disruptions, regulatory changes, capital market structures, or other factors
 - Innovations – where a new phenomenon or development creates opportunities driven by a slow market response to new information and expected trends
 - Niche investment markets – characterized by narrow markets with limited opportunities for capital deployment such as sector-focused fund investments and other funds with niche strategies
2. Limited Windows of Opportunity and Investment Horizons – UIO investments are generally fleeting investment opportunities with brief windows of opportunity to access the investment and execute a transaction. UIO investments may have shorter term holding periods of approximately one to five years as the economic and/or market pressures driving the UIO dissipate and the underlying investment theme matures.
 3. Limited Liquidity – UIO investments, particularly those made in private markets or in non-traditional asset classes, may require a lock-up of capital in order to capture the return potential of the opportunity.
 4. Non-traditional Risk-Return Profiles – UIO investment risk-return profiles may differ from traditional public or private market investments due to the idiosyncratic nature of UIO investments, which may emphasize certain risk factors such as deep value style bias, sector/industry concentration, or credit risk. UIO investments may have unusual cash flow patterns (e.g., asymmetric payoffs) and may distribute cash more or less frequently than traditional strategies.

D. Investment Guidelines

UIO investments may be made in public or private market investment strategies that are either not currently utilized by LACERS (i.e., the strategy does not have an existing target allocation pursuant to the approved Asset Allocation Policy and risk budgets) or have

existing allocations in the LACERS portfolio. UIO shall be managed by external investment managers and have time horizons deemed appropriate for the strategy and commensurate with similar investments held in the LACERS portfolio. Both public and private market UIO investments may be implemented through separate accounts, open-end commingled funds, closed-end commingled funds, or any other suitable investment structure.

For public market UIO investments, each investment may not exceed 0.5% of the total market value of the LACERS portfolio at the time of investment. For private market UIO investments, the commitment size of each investment may not exceed 0.5% of the total market value of the LACERS portfolio at the time of commitment. Total value of UIO investments and unfunded commitments shall be limited to 5% of the total market value of LACERS portfolio.

Each UIO shall be attributed to an existing asset class in LACERS' allocation strategy. The underlying assets of each UIO investment shall be considered to determine which asset class it will be classified under for purposes of overall portfolio construction, diversification, risk budgeting, risk management, and asset allocation considerations.

The funding of any UIO investment shall not cause any asset class weighting to move beyond its established minimum or maximum target ranges, but may cause an asset class to deviate from its asset allocation policy target.

All UIO investments shall be subject to LACERS Responsible Investment Policy and ESG Risk Framework. UIO investments in strategies with existing LACERS allocations pursuant to the adopted asset allocation and risk budgets shall be subject to existing LACERS investment policies. Investment management guidelines will be negotiated for UIO investments that utilize separate account vehicles.

All UIO investments shall be institutional quality and non-speculative, and, when the investment is effectuated, shall have a reasonable, foreseeable path to liquidity and exit.

E. Investment Process

Staff, with written concurrence from LACERS investment consultant(s), shall select and consummate new UIO investments in accordance with the following investment process. UIO investments shall not be subject to a competitive bidding search process (i.e., request for proposal process) due to the time-sensitive nature of these investments. For each UIO investment considered, Staff shall justify in writing why a competitive bidding process was not utilized.

1. Sourcing and Due Diligence

Staff and/or the appropriate LACERS investment consultant (Consultant) shall be responsible for sourcing UIO investments. All UIO investments are subject to a thorough and rigorous investment due diligence process conducted by Staff and/or Consultants. That process may include but is not limited to analysis of projected return, expected holding period, risks (including but not limited to ESG factors, liquidity, and operational risks), correlation with existing LACERS portfolio investments, and exit strategy. Further operational due diligence on the investment management team, risk management processes, legal, and other factors will also be conducted. Section F describes the general qualifications desired of investment managers to be considered for UIO investment mandates.

2. Approval of Investments

Staff shall submit written investment proposals for consideration under the UIOP to a Review Committee (RC) comprised of the Chief Investment Officer, Chief Operating Officer, and Director of Private Markets or their designees. The proposal shall include (a) an investment thesis, (b) summary of the investment opportunity, (c) the expected risk, return, and holding period of the investment, (d) expected path to liquidity, (e) a pro forma analysis to justify the proposed investment meets one of the investment objectives of Section B of this policy, (f) any other information deemed necessary by the RC to evaluate the proposal, and (g) justification for not using a competitive bidding process. Unanimous approval of the RC is required to proceed with any proposed UIO investment.

Any UIO investment approved by the RC will then require the written authorization of the General Manager and Chief Investment Officer and concurrence from the appropriate LACERS Consultant.

The RC shall designate the source of funding from within the LACERS portfolio for any UIO investment.

3. Board Notification of Authorized Investments

Approved UIO investments shall be reported to the Board in writing as soon as reasonably practicable after the investment has been consummated. The report shall include (but not be limited to) the following information:

- Name of the firm and if the firm qualifies as an emerging manager
- Investment strategy and thesis
- Total commitment or investment size

4. Exiting Investments

To the extent that a UIO investment vehicle is liquid, Staff, with concurrence from the appropriate Consultant, shall have discretion to initiate an exit from a UIO investment when it is determined that (a) the UIO investment has met its expected objective or (b) the UIO investment will not meet its expected objective due to changing market conditions, the investment manager's inability to execute the strategy, or other relevant factors.

For illiquid UIO investment vehicles with no redemption terms, exits will occur through distributions made by the investment manager over the life of the vehicle.

The Board shall be notified in writing as soon as reasonably practicable after an investment has been fully exited.

F. Investment Manager Qualifications

UIO investment managers selected by LACERS under the UIOP will exhibit the following characteristics:

- Demonstrates sufficient experience and a verifiable, positive performance track record in the given strategy LACERS is pursuing through the particular UIO.
- Investment thesis that distinguishes the manager from other, existing approaches already in the LACERS portfolio.
- Appropriate resources and research capabilities to identify and execute unique strategies.
- Disciplined execution process to protect against style drift.
- Niche or specific expertise that can be leveraged in unique market environments.
- Fee structure within industry standard for the strategy.
- Manager is a registered investment adviser under the Investment Advisers Act of 1940 or provides a valid exemption at the time of contract execution.

Staff may hire managers who may qualify under LACERS' Emerging Investment Manager Policy. Staff will make every reasonable effort to consider Emerging Investment Managers for UIO investment mandates when appropriate.

G. Benchmarking and Reporting

1. Performance Benchmarking

LACERS' assumed rate of investment return will serve as the baseline benchmark to measure the performance of UIO investments. The Review Committee may establish a higher or lower benchmark if the risk-return characteristics of the investment warrant doing so.

2. Monitoring

Staff and Consultant will diligently monitor the performance of any UIO investment including but not limited to reviewing quarterly, annual, and other periodic reports as well as meeting with the managers periodically when appropriate. Further duties are listed in Section H. Roles and Responsibilities. The Manager Monitoring Policy may not apply to these investments due to their unique nature; managers will be monitored against the objectives and benchmarks set forth by this policy.

3. Reporting

Performance of individual UIO investments and performance of UIO investments at the aggregated level shall be incorporated into LACERS' established reporting practices. Certain UIO investments may be subject to transparency reporting requirements per California Government Code § 7514.7.

4. Policy Review

This policy shall be reviewed by the Board at least once every three years to determine its effectiveness and applicability under prevailing circumstances and conditions.

H. Roles and Responsibilities

	Role of the Board	Role of Staff	Role of Consultant
Strategy / Policy	<ul style="list-style-type: none"> Approve applicable policy. Review policy at least once every three years. 	<ul style="list-style-type: none"> In consultation with appropriate LACERS' consultants, develop policies, procedures, guidelines, and allocation limits for recommendation to the Board. 	<ul style="list-style-type: none"> Consultation and feedback.
Investment Selection & Execution	<ul style="list-style-type: none"> None 	<ul style="list-style-type: none"> Identify and evaluate UIO investment ideas. The Chief Investment Officer, in conjunction with designated senior investment division staff, will approve or reject proposed investments for due diligence and execution. 	<ul style="list-style-type: none"> Review investment opportunities. Assist with due diligence as appropriate. Provide written concurrence with proposed investments

		<ul style="list-style-type: none"> • Conduct due diligence and prepare a written report for file. • General Manager and Chief Investment Officer authorize investments • General Manager or designee with signature authority will execute agreements and other legal or business documents to effectuate the transaction closing. • Ensure review of relevant fund documents by the City Attorney and/or external legal counsel. • Designate source of funding for the investment and prepare written justification report for file. • Prepare written report for file to justify why a competitive bidding process was not used. 	
<p>Investment Management & Monitoring</p>	<ul style="list-style-type: none"> • Review investment notification reports. 	<ul style="list-style-type: none"> • Monitor investment performance relative to the appropriate benchmark. • Conduct periodic meetings with existing managers. • Prepare investment notification reports for Board. • Review periodic reports prepared by investment managers and consultants. • Fund capital calls and manage distributions when necessary. • Execute partnership amendments and consents (General Manager or designee). 	<ul style="list-style-type: none"> • Consultation and feedback.

Investment Wind Down and Exit	<ul style="list-style-type: none">• Review investment exit notification reports	<ul style="list-style-type: none">• Review investment wind down and exit strategies including secondary transactions.• Prepare investment wind down and exit documents.• General Manager and Chief Investment Officer authorize secondary transactions and/or execute other documents necessary to wind down investments as situation warrants.• Prepare exit notification reports for Board.	<ul style="list-style-type: none">• Provide written concurrence on secondary transactions and other investment wind down actions.
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