



# **Board of Administration Agenda**

**REGULAR MEETING** 

TUESDAY, JANUARY 26, 2021

TIME: 10:00 A.M.

**MEETING LOCATION:** 

In conformity with the Governor's Executive Order N-29-20 (March 17, 2020) and due to the concerns over COVID-19, the LACERS Board of Administration's January 26, 2021, 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) 900-6833 or (346) 248-7799

Meeting ID# 884 4903 2301

# 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 <u>only</u>: 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).

#### **Disclaimer to Participants**

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

President: Cynthia M. Ruiz 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 Ghoukassian

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 <a href="mailto:ethics.commission@lacity.org">ethics.commission@lacity.org</a>.

## **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.ghoukassian@lacers.org.

## **CLICK HERE TO ACCESS BOARD REPORTS**

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 DECEMBER 22, 2020 AND POSSIBLE BOARD ACTION
- III. BOARD PRESIDENT VERBAL REPORT
- IV. GENERAL MANAGER VERBAL REPORT
  - A. REPORT ON DEPARTMENT OPERATIONS
  - B. UPCOMING AGENDA ITEMS
  - C. <u>PRESENTATION OF LACERS POPULAR ANNUAL FINANCIAL REPORT FOR</u> FISCAL YEAR ENDED JUNE 30, 2020
- V. RECEIVE AND FILE ITEMS
  - A. MONTHLY REPORT ON SEMINARS AND CONFERENCES FOR DECEMBER 2020
  - B. <u>COMPREHENSIVE ANNUAL FINANCIAL REPORT (CAFR) AND POPULAR ANNUAL</u> FINANCIAL REPORT (PAFR) FOR FISCAL YEAR ENDED JUNE 30, 2020
- VI. COMMITTEE REPORT(S)
  - A. BENEFITS ADMINISTRATION COMMITTEE VERBAL REPORT FOR THE MEETING ON JANUARY 26, 2021
  - B. INVESTMENT COMMITTEE VERBAL REPORT FOR THE MEETING ON JANUARY 12, 2021

# VII. INVESTMENTS

- A. CHIEF INVESTMENT OFFICER VERBAL REPORT
- B. <u>PRESENTATION BY NEPC, LLC REGARDING ASSET ALLOCATION AND POSSIBLE BOARD ACTION</u>
- C. INVESTMENT MANAGER CONTRACT WITH CORECOMMODITY MANAGEMENT, LLC REGARDING THE MANAGEMENT OF AN ACTIVE LONG-ONLY COMMODITIES PORTFOLIO AND POSSIBLE BOARD ACTION
- D. INVESTMENT MANAGER CONTRACT WITH BAIN CAPITAL SENIOR LOAN FUND, L.P. REGARDING THE MANAGEMENT OF AN ACTIVE U.S. BANK LOANS FUND AND POSSIBLE BOARD ACTION
- E. <u>FINALIST FIRMS OF THE CORE FIXED INCOME MANAGER SEARCH AND ALLOCATION PLAN AND POSSIBLE BOARD ACTION</u>

F. CONSIDERATION OF INVESTMENT COMMITTEE RECOMMENDATION REGARDING DISCUSSION OF INVESTMENT POLICY MANUAL REVIEW AND POSSIBLE BOARD ACTION

# VIII. LEGAL/LITIGATION

- A. AUTHORIZATION TO ISSUE A REQUEST FOR PROPOSALS FOR OUTSIDE REAL ESTATE AND INVESTMENTS COUNSEL, AMEND CURRENT CONTRACT WITH NOSSAMAN LLP TO EXTEND TERM BY ONE YEAR, AND POSSIBLE BOARD ACTION
- IX. DISABILITY RETIREMENT APPLICATION(S)
  - A. CONSIDER THE DISABILITY RETIREMENT APPLICATION OF MARIA CRUZ AND POSSIBLE BOARD ACTION
  - B. CLOSED SESSION PURSUANT TO GOVERNMENT CODE SECTION 54957(b) TO CONSIDER THE DISABILITY RETIREMENT APPLICATION OF SHAHNAM SHAHZEIDI AND POSSIBLE BOARD ACTION
- X. OTHER BUSINESS
- XI. NEXT MEETING: The next Regular meeting of the Board is scheduled for Tuesday, February 9, 2021 at 10:00 a.m. at LACERS, 977 N. Broadway, Suite 260, 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

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

In conformity with the Governor's Executive Order N-29-20 (March 17, 2020) and due to the concerns over COVID-19, the

LACERS Board of Administration's December 22, 2020, meeting was conducted via telephone and/or videoconferencing.

Agenda of: <u>Jan. 26, 2021</u>

Item No: II

December 22, 2020

10:01 a.m.

PRESENT via Videoconferencing: President Cynthia M. Ruiz

Vice President: Sung Won Sohn

Commissioners: (arrived at 10:17 a.m.) Elizabeth Lee

Sandra Lee Nilza R. Serrano Michael R. Wilkinson

Manager-Secretary: Neil M. Guglielmo

Legal Counselor: Anya Freedman

ABSENT: Commissioner: Annie Chao

PRESENT at LACERS offices: Executive Assistant: Ani Ghoukassian

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

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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 – President Ruiz asked if any persons wanted to make a general public comment to which there was no response.

П

APPROVAL OF MINUTES FOR THE REGULAR MEETING OF NOVEMBER 24, 2020 AND POSSIBLE BOARD ACTION – Commissioner Wilkinson moved approval, seconded by Commissioner Serrano, and adopted by the following vote: Ayes, Commissioners Sandra Lee, Serrano, Wilkinson, Vice President Sohn, and President Ruiz -5; Nays, None.

BOARD PRESIDENT VERBAL REPORT – President Ruiz stated she is proud of all LACERS staff during this challenging year with the pandemic. She thanked the Commissioners for their hard work and acknowledged staff for the fabulous LACERS Zoom holiday party and wished all a Happy Holiday season.

IV

Commissioner Elizabeth Lee joined the meeting at 10:17 a.m.

President Ruiz lost connection to the meeting at 10:22 a.m. and rejoined the meeting at 10:27 a.m.

# GENERAL MANAGER VERBAL REPORT

- A. REPORT ON DEPARTMENT OPERATIONS Neil M. Guglielmo, General Manager, advised the Board of the following items:
  - Updates on Departmental Operations including Open Enrollment, FY 21/22 Budget, 2021
     Wellness Planning, and Mask Campaign
  - MSC Stats
  - Tech Talks
  - City SIP Update
  - Financial Reporting
  - Investments Videos for Members

Mr. Guglielmo thanked the Board for their leadership and LACERS staff for going above and beyond during this difficult year.

B. UPCOMING AGENDA ITEMS – No items were discussed.

V

# RECEIVE AND FILE ITEMS

- A. MONTHLY REPORT ON SEMINARS AND CONFERENCES FOR NOVEMBER 2020 This report was received by the Board and filed.
- B. COMMISSIONER CHAO BOARD EDUCATION EVALUATION ON 2020 WOMEN ON BOARDS AND CITY/STATE CONVERSATIONS CONFERENCES, VIRTUAL; NOVEMBER 12 & 19, 2020 This report was received by the Board and filed.
- C. COMMISSIONER RUIZ BOARD EDUCATION EVALUATION ON 2020 WOMEN ON BOARDS CITY/STATE (SACRAMENTO) CONVERSATION CONFERENCES, VIRTUAL; DECEMBER 2, 2020 This report was received by the Board and filed.

# COMMITTEE REPORT(S)

- A. INVESTMENT COMMITTEE VERBAL REPORT FOR THE MEETING ON DECEMBER 8, 2020 Vice President Sohn stated the Committee approved the investment manager contract with State Street Global Advisors Trust Company and provided staff with guidance on the Investment Policy modifications.
- B. INVESTMENT COMMITTEE VERBAL REPORTS FOR THE SPECIAL MEETINGS ON DECEMBER 9, 2020 AND DECEMBER 10, 2020 Vice President Sohn stated the Committee interviewed four finalists on December 9 and three finalists on December 10 for the Core Fixed Income Manager Search. The Committee selected Robert W. Baird & Co. Inc., Loomis, Sayles & Company, L.P., Income Research & Management, Garcia Hamilton & Associates, L.P., and J.P. Morgan Asset Management.

VII

# **INVESTMENTS**

- A. CHIEF INVESTMENT OFFICER VERBAL REPORT Rod June, Chief Investment Officer, reported on the portfolio value of \$20.77 billion as of December 21, 2020. Mr. June discussed the following items:
  - SLC Management TALF Partners Fund 2, LP is winding down due to closing of the program by the Federal Reserve
  - SolarWinds Inc. hack status. LACERS has a small exposure to this company in the private equity portfolio.
  - Asset allocation study kick-off in January 2021
- B. NOTIFICATION OF COMMITMENT OF UP TO \$50 MILLION IN OAKTREE REAL ESTATE OPPORTUNITIES FUND VIII, L.P. This report was received by the Board and filed.

President Ruiz recessed the Regular Meeting at 10:44 a.m. to convene in Closed Session discussion.

C. CLOSED SESSION PURSUANT TO GOVERNMENT CODE SECTION 54956.81 TO CONSIDER THE SALE OF ONE PARTICULAR, SPECIFIC PENSION FUND INVESTMENT AND POSSIBLE BOARD ACTION

VIII

# LEGAL/LITIGATION

A. CLOSED SESSION TO CONFER WITH, OR RECEIVE ADVICE FROM, LEGAL COUNSEL REGARDING A SIGNIFICANT EXPOSURE TO LITIGATION, PURSUANT TO GOVERNMENT CODE SECTION 54956.9(a), (d)(2),(e)(3) (ONE CASE) REGARDING A WRITTEN COMMUNICATION FROM MICHELLE LYMAN THREATENING LITIGATION RELATING TO A RETIREMENT BENEFIT, AND POSSIBLE BOARD ACTION

| President Ruiz reconvened the Regular Meeting at 11:16 a.m.   |
|---|
| IX  |
| OTHER BUSINESS – Commissioner Serrano thanked staff for assisting the Board and wished all Happy Holidays.  |
| X   |
| NEXT MEETING: The next Regular meeting of the Board is scheduled for Tuesday, January 12, 2021 at 10:00 a.m. at LACERS, 977 N. Broadway, Suite 260, Los Angeles, CA 90012, and/or via telephone and/or videoconferencing. Please continue to view the LACERS website for updated information or public access to Board meetings while response to public health concerns relating to the nove coronavirus continue. |
| XI  |
| ADJOURNMENT – There being no further business before the Board, President Ruiz adjourned the Meeting at 11:20 a.m., in the memory of Officer Mike Robertson of General Services Division who had just retired with 30 years City service, and passed away on December 10, 2020.   |
|   |
| Cynthia M. Ruiz Presiden  |
| Neil M. Guglielmo<br>Manager-Secretary  |



Meeting of: January 26, 2021 Item No: IV-C

# 2020 POPULAR ANNUAL FINANCIAL REPORT

for the fiscal year ended June 30, 2020

Our Popular Annual Financial Report is a summary of the Los Angeles City Employees' Retirement System's Comprehensive Annual Financial Report.

Enter >>



**NEIL M. GUGLIELMO**General Manager

# IN OUR 83RD YEAR...

The global COVID-19 pandemic suddenly and unexpectedly accelerated the need for LACERS to transform and digitize our operations while also requiring us to make temporary adjustments in our investment policy to preserve the financial health of our Fund.

It is our mission to serve our Members with excellence and to protect and grow our Fund and it is with immense pride that I can say LACERS has responded to the challenges brought on by this pandemic with vigor. Since the first reported case of COVID-19 in the US, we grew our Fund and modernized our operations by strides, allowing us to create a more immersive experience for our Members and a safe work environment for our employees.

As a different world takes shape, LACERS will continue to respond by finding new and innovative ways to improve our operations, while ensuring the best experience for our Members.

NEIL M. GUGLIELMO

Mir/M. Sangliehno

General Manager

# LACERS



\$4,100

AVERAGE MONTHLY PENSION change from 2011: +28.8%

57,120

TOTAL MEMBERSHIP change from 2011: +18.3%

\$263.9

MILLION IN MEMBER CONTRIBUTIONS

change from 2011: +130.1%

60.4

AVERAGE AGE AT RETIREMENT change from 2011: +0.3%

**72** 

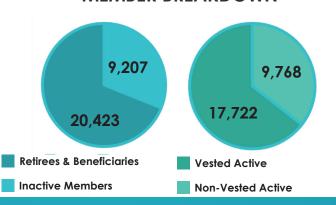
AVERAGE AGE OF RETIREE change from 2011: +1.6%

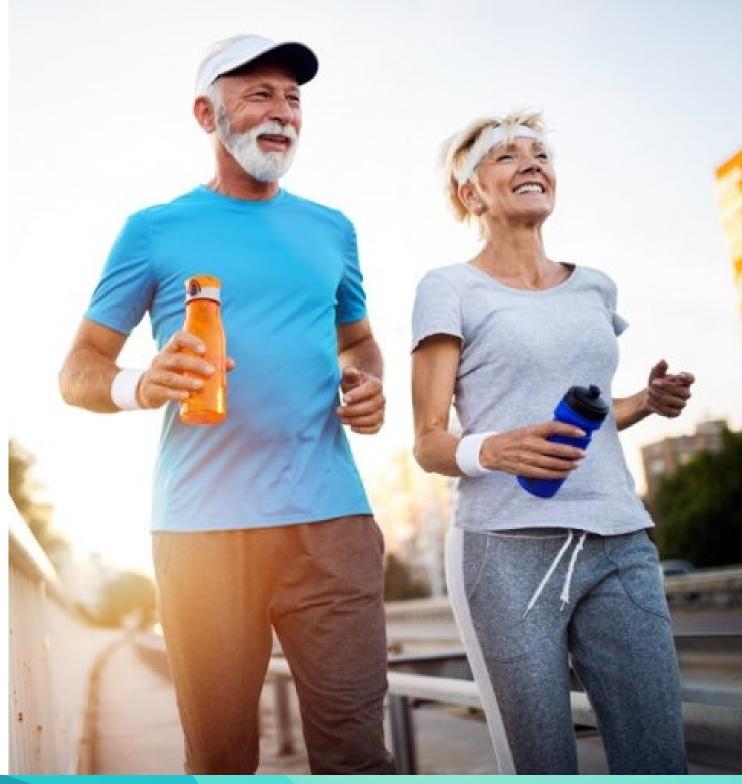
# COMMITTED TO OUR MEMBERS

LACERS is committed to providing the best experience for our Members by improving our outreach and engagement programming. Through maturing our data collection practices, identifying new effective outreach tools and strategies, and promoting an open and transparent environment to engage with Members, we strive to be best-in-class.

From a recently launched modern and mobile responsive website to a YouTube channel providing Member education to the roll-out of video and tele-conference capabilities for remote seminars, counseling, and meetings, we take our commitment to our Members seriously.

# MEMBER BREAKDOWN





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# WEATHERING THE STORM OF A GLOBAL PANDEMIC

How we ended net positive during an economic downturn

The COVID-19 pandemic suddenly and unexpectedly disrupted the global and local economies. In order to mitigate the impacts of the COVID-19 pandemic, the Board made several temporary modifications to its Investment Policy.

These modifications, combined with a steady hand, ensured that LACERS mitigated the economic volatility brought on by the pandemic and ended net positive from the year prior.

**NET INCREASE WITHIN THE YEAR** 

\$155,414,000



# FIDUCIARY NET POSITION



# **Allocation**

The total Fiduciary Net Position is allocated between the Retirement Plan and the Postemployment Health Care Plan.

84%

RETIREMENT

HEALTH

16%

| ADDITIONS and DEDUCTIONS    |    |            |    | (Doll      | ars in Thousands) |  |
|-----------------------------|----|------------|----|------------|-------------------|--|
| DEDUCTIONS                  |    | 2020       |    | 2019 % Cha |                   |  |
| BEGINNING NET POSITION      | \$ | 17,707,910 | \$ | 4.2%       |                   |  |
| ADDITIONS                   |    |            |    |            |                   |  |
| City Contributions          |    | 665,358    |    | 586,754    | 13.4%             |  |
| Member Contributions        |    | 263,936    |    | 240,357    | 9.8%              |  |
| Insurance Premium & Reserve |    | 12,501     |    | 6,558      | 90.6%             |  |
| Net Investment Income       |    | 365,492    |    | 968,497    | (62.3%)           |  |
| Other Income                |    | 792        |    |            |                   |  |
| TOTAL ADDITIONS             | \$ | 1,308,079  | \$ | 1,802,166  | (27.4%)           |  |
| DEDUCTIONS                  |    |            |    |            |                   |  |
| Benefit Payments            |    | 1,112,911  |    | 1,049,283  | 6.1%              |  |
| Contribution Refunds        |    | 12,332     |    | 11,684     | 5.5%              |  |
| Administrative Expenses     |    | 27,422     |    | 22,905     | 19.7%             |  |
| TOTAL DEDUCTIONS            | \$ | 1,152,665  | \$ | 1,083,872  | 6.3%              |  |
| NET INCREASE WITHIN YEAR    | \$ | 155,414    | \$ | 718,294    | (78.4%)           |  |
| ENDING NET POSITION         | \$ | 17,863,324 | \$ | 17,707,910 | 0.9%              |  |

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ASSETS and LIABILITIES FUNDED STATUS

| 2020 vs 2019           |
|------------------------|
| ASSETS AND LIABILITIES |

(Dollars in Thousands)

| ASSETS   | 2020             | 2019             | % Change |
|--|------------------|------------------|----------|
| Cash, Short-term Investments, and Receivables    | \$<br>818,311    | \$<br>752,960    | 8.7%     |
| Investments, at Fair Value                       | 17,530,909       | 17,990,214       | (2.6%)   |
| Capital Assets, Net of<br>Depreciation           | 42,359           | 8,789            | 382.0%   |
| TOTAL ASSETS                                     | \$<br>18,391,579 | \$<br>18,751,963 | (1.9%)   |
| LIABILITIES                                      |                  |                  |          |
| Securities Lending Collateral and Other Payables | \$<br>528,255    | \$<br>1,044,053  | (49.4%)  |
| FIDUCIARY NET POSITION                           | \$<br>17,863,324 | \$<br>17,707,910 | 0.9%     |
|  |                  |                  |          |

| FIDUCIARY NET POSITION                           | Ф    | 17,863,324   | Ф  | 17,707,910  | ,  | 0.9%       |
|--|------|--------------|----|-------------|----|------------|
| 2020 RETIREMENT AND HEALTH PLANS                 |      | 2020         |    | 2020        |    | 2020       |
| ASSETS   | Reti | irement Plan |    | Health Plan |    | Total      |
| Cash, Short-term Investments, and Receivables    | \$   | 687,698      | \$ | 130,613     | \$ | 818,311    |
| Investments, at Fair Value                       |      | 14,732,763   |    | 2,798,146   |    | 17,530,909 |
| Capital Assets, Net of Depreciation              |      | 35,598       |    | 6,761       |    | 42,359     |
| TOTAL ASSETS                                     | \$   | 15,456,059   | \$ | 2,935,520   | \$ | 18,391,579 |
| LIABILITIES                                      |      |              |    |             |    |            |
| Securities Lending Collateral and Other Payables | \$   | 443,939      | \$ | 84,316      | \$ | 528,255    |
| FIDUCIARY NET POSITION                           | \$   | 15,012,120   | \$ | 2,851,204   | \$ | 17,863,324 |
|  |      |              |    |             |    |            |

# WHAT IS THE COMBINED FUNDED STATUS OF THE PLAN?

The Combined Funded Status is the ratio of the System's Fiduciary Net Position to Total Pension Liability. This funding ratio represents the percentage of Plan Assets available toward paying expected benefit obligations of LACERS Members.

71.6%

COMBINED PLAN
FUNDED STATUS

# **About the Retirement Plan**

LACERS administers a defined benefit pension plan that provides for service and disability retirement benefits, as well as death benefits.

The Retirement Plan covers all civilian and certain segments of sworn employees of the City who are not exempted due to employment from other proprietary agencies.

Plan Members have a vested right to their own contributions and accumulated interest posted to their accounts.

# RETIREMENT PLAN FUNDED STATUS

66.3%

# **About the Health Plan**

LACERS administers, and provides single-employer postemployment healthcare benefits to eligible retirees and their eligible spouses/domestic partners who participate in the Retirement Plan regardless of their membership tiers.

These benefits consist of subsidies which may also apply to the coverage of other eligible dependent(s).

HEALTH PLAN FUNDED STATUS

81.8%



**RODNEY JUNE** Chief Investment Officer

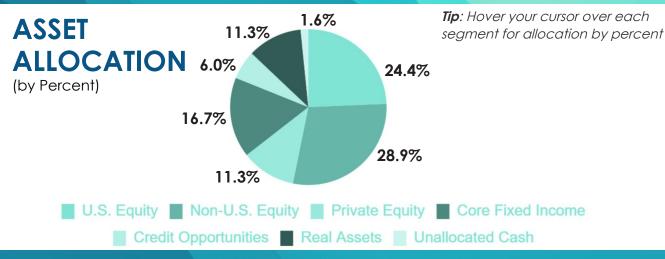
# INVESTMENT PORTFOLIO SUMMARY

Fiscal year 2019-2020 was an especially volatile period for financial markets due to the COVID-19 pandemic and unprecedented shutdown of the U.S. economy in an attempt to contain the virus. Consequently, the LACERS' investment portfolio returned 1.24% (gross of fees) for the one-year period ending June 30, 2020.

While markets have mostly recovered from the pandemic-induced bear market, serious questions remain about the real economy, as many job losses and business closures could be permanent. As we reflect on the unprecedented events of fiscal year 2019-2020, you should be reassured that the LACERS' investment portfolio is designed and constructed to weather such volatile periods and the challenges ahead.

# Read our market synopsis here.





# INVESTMENT PORTFOLIO VALUE

# HOW DID OUR INVESTMENT PORTFOLIO DO?



6.51

Though the Fiduciary Net Position increased over the previous year, the Investment Portfolio underperformed its policy benchmark by 277 basis points (gross of fees) for the fiscal year, mainly attributed to the relative underperformance of Credit Opportunities, U.S. equities, Real Assets and Private Equity.

TOTAL INVESTMENT PORTFOLIO VALUE

**LACERS Policy Benchmark** 

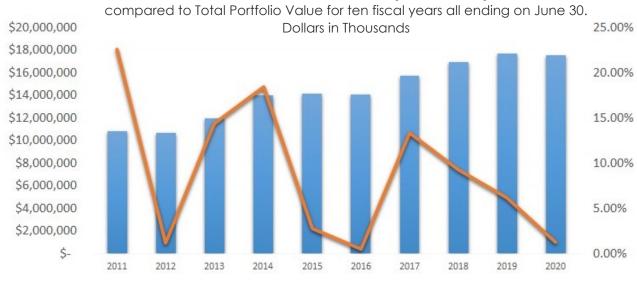
\$ 17,654,460,000

6.64

#### **ANNUALIZED RATES OF RETURN** (GROSS OF FEES) 3 YR (%) 1 YR (%) 5 YR (%) **LACERS Total Fund** 1.24 5.49 5.98

4.01

# Portfolio Value Rate of Return (Gross of Fees)



Total Investment Portfolio (Fair Value) Time-Weighted Rate of Return (Gross of Fees)

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# **EXECUTIVE OFFICERS**

Neil M. Guglielmo General Manager

**Lita Payne** Assistant General Manager

**Todd Bouey** Assistant General Manager

Rodney June
Chief Investment Officer



BOARD OF ADMINISTRATION

Cynthia M. Ruiz President

Michael R. Wilkinson Vice President

> Annie Chao Commissioner

> Elizabeth Lee Commissioner

> Sandra Lee Commissioner

> Nilza R. Serra Commissioner

**Dr. Sung Won Sohn**Commissioner

LACERS

202 W. First Street, Suite 500,
Los Angeles, CA 90012

M-F 7:00 am - 4:00pm

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Agenda of: <u>JAN. 26, 2021</u>

Item No: V-A

# MONTHLY REPORT ON SEMINARS AND CONFERENCES ATTENDED BY BOARD MEMBERS ON BEHALF OF LACERS (FOR THE MONTH OF DECEMBER 2020)

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 MEMBER:**

President Cynthia M. Ruiz Vice President Sung Won 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<br>(ORGANIZATION) | LOCATION<br>(CITY, STATE) |
|------------------|----------------------------|---------------------------------|---------------------------|
|                  | NOTHING TO REPORT          |                                 |                           |





REPORT TO BOARD OF ADMINISTRATION MEETING: JANUARY 26, 2021

From: Neil M. Guglielmo, General Manager ITEM: V-B

nefm. Duglishero

SUBJECT: COMPREHENSIVE ANNUAL FINANCIAL REPORT (CAFR) AND POPULAR ANNUAL

FINANCIAL REPORT (PAFR) FOR FISCAL YEAR ENDED JUNE 30, 2020

ACTION: ☐ CLOSED: ☐ CONSENT: ☐ RECEIVE & FILE: ☒

# Recommendation

That the Board receive and file the attached reports.

# **Executive Summary**

Each year, LACERS publishes a Comprehensive Annual Financial Report (CAFR) including the System's audited financial statements, investment performance results, and review of actuarial valuations. The CAFR provides a look back at the fiscal year just ended regarding LACERS' operations and financial condition.

Designed to supplement the CAFR, a Popular Annual Financial Report (PAFR) presents financial information in a short, condensed and easily understood manner. It communicates selected financial information to a broader audience and those who may need or desire a less detailed overview of LACERS' financial activities. LACERS published a PAFR for the first time last fiscal year.

# **Discussion**

Comprehensive Annual Financial Report (CAFR)

Financial information of interest, as well as a summary of the year's accomplishments are found in the General Manager's *Letter of Transmittal in Section I-Introduction*. This is followed by *Section II – Financial* which includes financial highlights and analysis in narrative format titled *Management's Discussion and Analysis*, LACERS' audited financial statements, as well the External Auditor's opinion. The remaining three sections are: *Section III – Investment* which discusses the investment results and activities; *IV –Actuarial* which includes the condensed actuarial valuations; and *V –Statistical* which provides historical information.

The CAFR is prepared in accordance with the requirements of the Government Finance Officers Association (GFOA) and has been submitted for consideration of the GFOA Achievement for Excellence in Financial Reporting Award. The award which LACERS has received annually for the last

21 years, recognizes individual governments that succeed in demonstrating a spirit of transparency and full disclosures in their CAFRs.

Popular Annual Financial Report (PAFR)

The PAFR presents information extracted from the CAFR in a readily accessible format and easily understandable to the general public and other interested parties without a background in public finance. Selected financial information such as LACERS Fiduciary Net Position, funded ratios, investment allocation and performance, and trend in Membership and benefit payments are presented in an easy-to-follow format in the PAFR.

For the current year, in addition to the attached pdf document of PAFR, LACERS developed a web based version with embedded features to provide additional information, and to make the report more user friendly. Staff believe this version provides the true form of how the document is intended to be viewed by interested LACERS Members and the general public. This current year PAFR has also been submitted to the GFOA for a PAFR award. LACERS is awaiting the result of GFOA's review of its inaugural PAFR submitted in early 2020.

Prepared By: Rahoof "Wally" Oyewole, Departmental Chief Accountant IV

NG:TB:RO

Attachments 1: Comprehensive Annual Financial Report for Fiscal Year Ended June 30, 2020

2: Popular Annual Financial Report for Fiscal Year Ended June 30, 2020

BOARD Meeting: 01/26/21

Item V-B Attachment 1



LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

A Department of the Municipality of the City of Los Angeles, California

**COMPREHENSIVE ANNUAL FINANCIAL REPORT** 

For the Fiscal Year Ending June 30, 2020

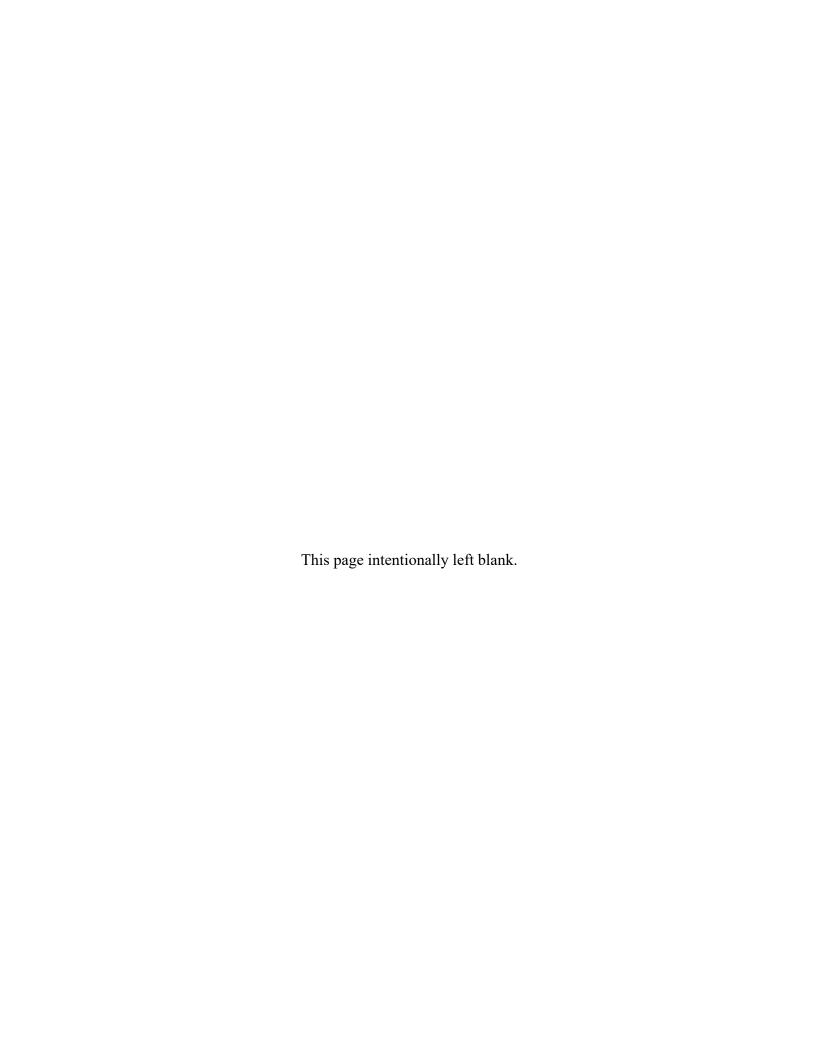
2020

# Los Angeles City Employees' Retirement System (A Department of the Municipality of the City of Los Angeles, California)

# **Comprehensive Annual Financial Report** For the Fiscal Year Ended June 30, 2020

Issued by Neil M. Guglielmo General Manager

> PO Box 512218 Los Angeles, CA 90051-0218 www.LACERS.org



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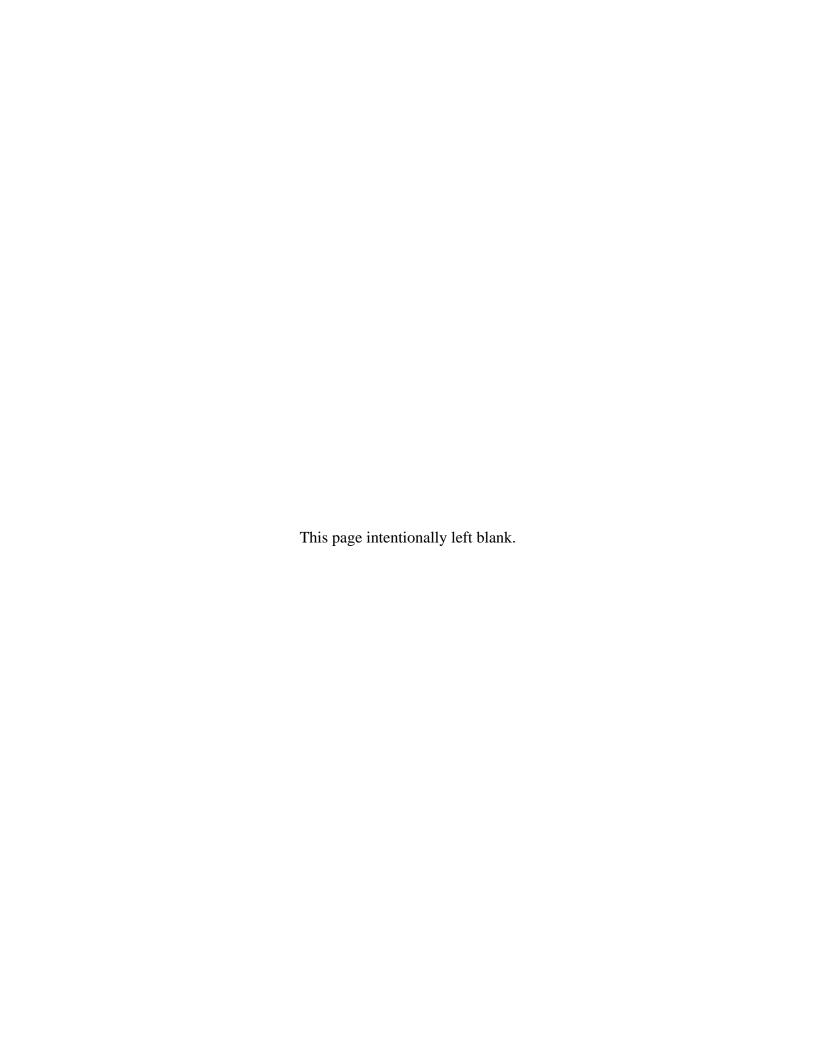
| Letter of Transmittal   | 1  |
|---|----|
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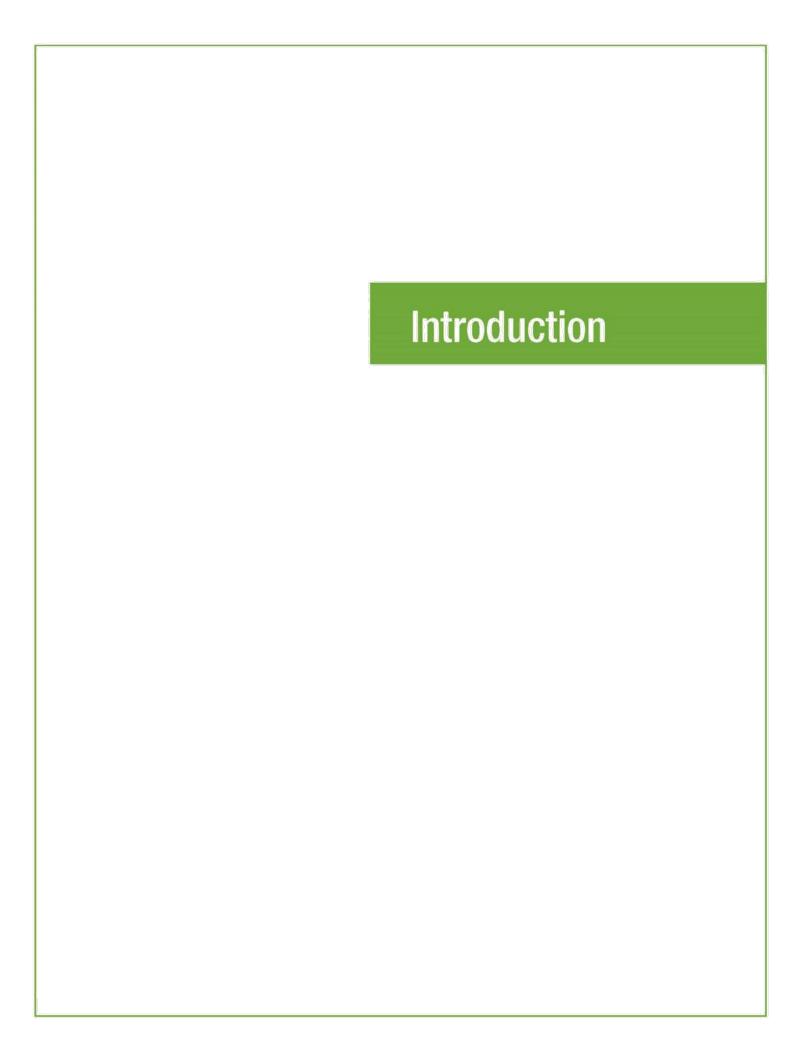
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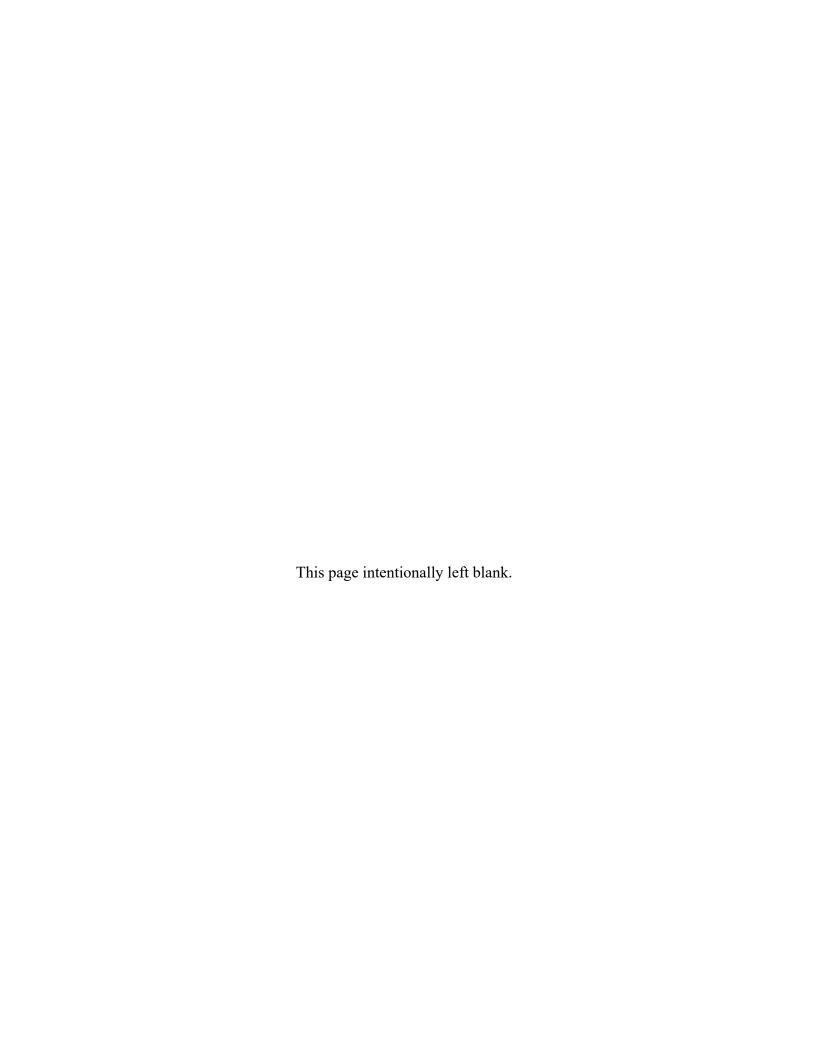
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Eric Garcetti Mayor of the City of Los Angeles

#### LACERS BOARD OF ADMINISTRATION

Cynthia M. Ruiz, President Annie Chao Elizabeth Lee Sandra Lee Nilza R. Serrano Sung Won Sohn Michael R. Wilkinson

#### LACERS EXECUTIVE STAFF

Neil M. Guglielmo, General Manager Lita Payne, Executive Officer Todd Bouey, Assistant General Manager Rodney June, Chief Investment Officer

# LETTER OF TRANSMITTAL

December 15, 2020

Dear Members of the Board,

We are pleased to present the Los Angeles City Employees' Retirement System (LACERS, or the System) Comprehensive Annual Financial Report (CAFR) for the fiscal year ended June 30, 2020, the System's 83<sup>rd</sup> year of operation. This report is intended to provide a comprehensive review of our financial condition at conclusion of the fiscal year including the System's audited financial statements, investment performance results, and actuarial valuations for retirement and health benefit plans.

#### LACERS History, Participants, and Services

In 1937, the Los Angeles City Charter established LACERS as a retirement trust fund for the purpose of providing the civilian employees of the City of Los Angeles, a defined benefit retirement plan inclusive of service retirements, disability retirements, and survivor benefits. In 1999, LACERS began administering the retiree health insurance program. All regular, full-time, and certified part-time City employees are eligible for LACERS benefits except employees of the Department of Water and Power, and sworn personnel who are members of the Los Angeles Fire and Police Pensions. Today, approximately 27,500 Active Members and 20,400 Retired Members and beneficiaries count on LACERS to provide a lifetime of retirement benefits.

### Governance

#### **Board of Administration**

The LACERS Board of Administration, consisting of four Commissioners appointed by the Mayor and three Commissioners elected by the Members, sets general policy and adopts rules and regulations necessary to operate LACERS. Among other duties, the Board directs investment strategy and policy for the System's assets, determines the health insurance carriers and health subsidy levels for retired employees, and approves Members' retirement applications, including applications for disability retirements.

The Board put a focus on actuarial practices in fiscal year 2019-20, conducting an actuarial audit of the June 30, 2019 Actuarial Valuation and 2014-2017 Experience Study, performing a new Actuarial Experience Study for the period of July 1, 2016 through June 30, 2019, and preparing the System's first Risk Assessment in accordance with Actuarial Standard of Practice No. 51.

During the fiscal year, Commissioner Nilza R. Serrano was reappointed by the Mayor for a five-year term beginning July 1, 2020; Commissioner Michael R. Wilkinson was re- elected to fill the Retired Member position for a five-year term beginning July 1,2020.

#### **Strategic Plan**

LACERS' mission is to protect and grow our trust fund and to ensure the sustainable delivery of ethical, reliable, and efficient retirement services to our Members. To help achieve this, LACERS' Strategic Plan is focused on the following seven goals:

- 1. Provide Outstanding Customer Service
- 2. Deliver Accurate and Timely Member Benefits
- 3. Improve Value and Minimize Costs of Members' Health and Wellness Benefits
- 4. Optimize Long-Term Risk-Adjusted Investment Returns
- 5. Uphold Good Governance Practices which Affirm Transparency, Accountability, and Fiduciary Duty
- 6. Increase Organizational Effectiveness, Efficiency and Resiliency
- 7. Recruit, Retain, Mentor, Empower, and Promote a High-Performing Workforce

# Organizational Transformation throughout a Global Pandemic

The global COVID-19 pandemic suddenly and unexpectedly accelerated the need for LACERS to transform operations in response to unprecedented circumstances as protecting the health and safety of staff and System Members from highly contagious and deadly illness became paramount to service delivery. In March 2020, the City's "Safer at Home Order" compelled City agencies to send home all but the most essential workers necessary to maintain on premise operations. Since that time LACERS has undergone a major transformation that not only allows for business continuity throughout the pandemic but positions LACERS well for the future.

### **Remote Operations**

LACERS has transitioned operations from being completely on premise to virtual wherein the vast majority of work is now able to be successfully conducted outside of the office. This effort involved transitioning resources to the cloud, enabling new collaboration and project management tools, implementing a cloud-based contact center, and deploying mobile equipment to all staff. These new technologies are now the foundation of LACERS' current and future business model.

#### **Transforming the Member Experience**

Communications is at the heart of the Member experience and LACERS is ensuring continuity and expansion of communications pivoting from traditional multi-channel communications to an omni-channel communications strategy aimed at providing tailored, accessible resources and content based on Members' needs. In the Spring of 2020 LACERS launched a modern and mobile responsive website improving updatability of information and access to content along with a YouTube channel providing Member education about benefits. Video and teleconference capabilities have been rolled out allowing for remote seminars, counseling, and meetings. Digital forms and e-signatures are provided to enable contactless document processing. LACERS is continuing to develop communications by maturing data collection practices, identifying new effective outreach tools and strategies, and promoting an open and transparent environment to engage with Members.

#### **Funding Status and Progress**

Actuarial assumptions are used in the actuarial valuation process for measuring the liabilities of the plan and the contribution requirements of the plan sponsor. While the City Charter requires that an actuarial experience study be completed every five years, the typical timeframe between experience studies for LACERS has been three years. LACERS' last experience study for the period of July 1, 2016 to June 30, 2019, was completed in 2020 with the Board adopting several assumption changes, including a reduction in the inflation assumption from 3.00% to 2.75% and a corresponding reduction in the investment return assumption from 7.25% to 7.00%. The Board also updated mortality tables to Public Retirements Plan Mortality Tables based on public sector pension plan experience.

Annual actuarial valuations are performed by LACERS' consulting actuary to determine the actuarial accrued liability arisen from the benefits promised by the City, among other things. Such liability is expected to be met by LACERS' assets accumulated through City contributions, Member contributions, and investment returns. The funding status, commonly expressed by the term "funded ratio," is calculated by dividing the plan assets, based either on actuarial (smoothed) value or fair value, by the actuarial accrued liabilities. The funded ratio is a snapshot of the relative status of LACERS' assets and liabilities at the end of each reporting year. Determined annually in

the actuarial valuation, it reflects changes that affect the assets and liabilities during the reporting year due to investment performance, change in demographics, assumptions, benefit terms, and other factors. Funded ratios are useful when they are looked at over several years to determine trends, and should be viewed in light of the economic situation at each time point. If the ratio is less than 100%, indicating an underfunding condition, then the underfunded portion is paid for by the City systematically over a period no longer than 20 years pursuant to LACERS' funding policy, which targets a funding status of 100% in the long run.

In the June 30, 2020 actuarial valuation, the combined funded ratio, based on the valuation value of assets, for the Retirement Plan and the Postemployment Health Care Plan decreased by 1.5% from a year ago to 71.6%. Individually, the funded ratio, on the same actuarial basis, for the Retirement Plan decreased from 71.3% to 69.4%; and for the Postemployment Health Care Plan, the ratio increased from 84.4% to 85.6%. The overall decrease in the funded ratio coincides with an increase of the Unfunded Actuarial Accrued Liabilities by \$902.7 million primarily as a result of the lower than expected investment return, higher than expected salary increases for continuing active members, and changes in actuarial assumptions.

The fair value of LACERS' assets as of June 30, 2020 deviates by \$834.6 million lower than the actuarial value of assets, which is determined by the seven-year asset smoothing policy, as a rate of return of 1.89% on the fair value of assets basis for the 2020 fiscal year is below the 6.53% rate of return on the actuarial value of assets basis.

#### **Investment Summary**

The System established its investment policies in accordance with Section 1106 of the Charter of the City of Los Angeles for the systematic administration of LACERS. The investment policies are designed to achieve the best risk-adjusted investment returns. The System's assets are managed on a total return basis in compliance with the investment policies to produce a total portfolio, long-term, real (above inflation), positive return above the asset allocation policy benchmark on a net-of-fee basis. Consequently, prudent risk-taking is warranted within the context of the overall portfolio diversification. The Board implements its risk management policy by monitoring the portfolio's compliance through the adoption of investment policies, guidelines, and procedures for determining the strategic management of investment risk, while allowing sufficient flexibility in capturing investment opportunities, as they may occur, and establishing reasonable risk parameters to ensure prudence and care in the management of the System's assets.

The portfolio consists of investments in U.S. and non-U.S. equities and fixed income, private equity, private real estate, public real assets, and short-term investments. The System's total portfolio, including cash and investments at fair value, was valued at \$18.2 billion as of June 30, 2020, a decrease of \$0.23 billion (1.3%) compared to the prior fiscal year. The portfolio posted a gross of fees return of 1.24% over a one-year period. The total fund underperformed its policy benchmark by -2.77% gross of fees return, and underperformed the actuarial assumed rate of investment return.

In order to mitigate the impacts of the COVID-19 pandemic, the Board made several temporary modifications to its Investment Policy. The Board authorized a temporary increase in cash balances from a maximum of 2% of the total portfolio to a maximum of 5% in order to enhance operational liquidity. The Board also authorized a temporary deferral of rebalancing of the asset allocation to avoid rebalancing during periods of extreme market volatility and incurring related transaction costs. Further, the Board authorized temporary risk reducing modifications to the Securities Lending Program to ensure receipt of the highest quality collateral from borrowers of LACERS' securities and to improve the liquidity and quality of investments made with cash collateral received from borrowers.

The annualized investment returns in detail are presented in the Investment Results on page 72 of the Investment Section. The detail of investment income and loss can be found on pages 24-25 of the Financial Section. Other investment related information is summarized in the Investment Section of this report.

#### **Financial Reporting**

The financial statements included within this report are the responsibility of LACERS' management and have been prepared in accordance with generally accepted accounting principles in the United States of America (US GAAP)

as promulgated or adopted by the Governmental Accounting Standards Board (GASB). A system of internal controls is designed, implemented, and maintained by management, as a means to protect System assets, and to assure the integrity of LACERS' financial statements. Management is confident that its system of internal control, with oversight from LACERS Audit Committee, in tandem with internal audit staff, as well as the annual engagement of an independent external auditing firm to render an opinion on LACERS' financial statements, provide the requisite level of due diligence expected from a governmental pension system. This position is supported by our external auditor, Moss Adams, which has audited and expressed an unmodified opinion that LACERS' basic financial statements are free of material misstatement, presented fairly, and in conformity with US GAAP.

Readers of this CAFR are encouraged to review the Management's Discussion and Analysis Section starting on page 15, which provides narrative analysis and highlights of our financial condition and fiscal operations during the reporting period.

# **Awards and Acknowledgements**

#### **GFOA Certificate of Achievement**

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to LACERS for its CAFR for the fiscal year ended June 30, 2019. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized CAFR. This report must satisfy both US GAAP and applicable legal requirements.

A Certificate of Achievement is valid for a period of one year. We believe that this report for the fiscal year ended June 30, 2020, will again meet the requirements of the Certificate of Achievement Program and we are submitting it to the GFOA for consideration of an annual award.

#### **PPCC Standards Award**

The Public Pension Coordinating Council presented its Public Pension Standards Award For Funding and Administration to LACERS in recognition of compliance with professional standards for plan funding and administration for the fiscal year ended June 30, 2020. To receive this honor, LACERS was assessed to have met the standards in six key areas: Comprehensive Benefit Program, Actuarial Valuation, Independent Audit, Investments, Member Communications, and Funding Adequacy.

# Acknowledgements

Lastly, I would like to acknowledge the professional and dedicated staff of the Fiscal Management Division of LACERS for the preparation of this report. I would also like to express appreciation for the leadership and commitment of the LACERS Commissioners, as well as all of LACERS' staff, as we navigate a global pandemic and continue to achieve high standards of performance and reporting. Lastly, I would also like to thank our external auditor, Moss Adams, and our consulting actuary, Segal, for their professional assistance in the preparation of this report.

Respectfully Submitted,

NEIL M. GUGLIELMO General Manager

Rahoof Oyewole Chief Accountant

# **Board of Administration**

# For the Fiscal Year Ended June 30, 2020



Cynthia M. Ruiz President Appointed by the Mayor



Michael R. Wilkinson Vice President Elected by Retired Members



**Sung Won Sohn** Member Appointed by the Mayor Appointed by the Mayor



Sandra Lee Member



Nilza R. Serrano Member Appointed by the Mayor



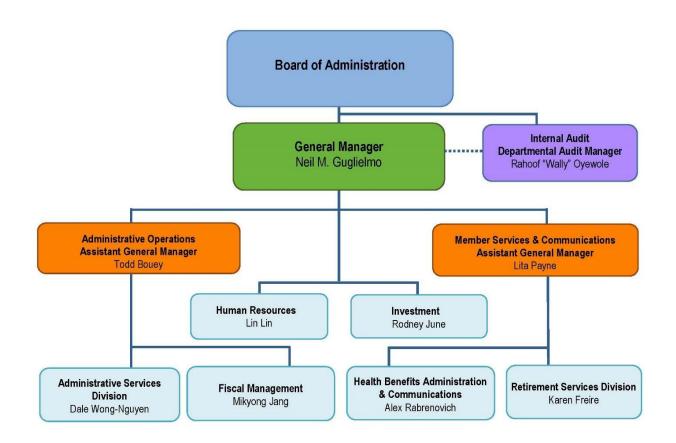
**Annie Chao** Member Elected by Active Members



Elizabeth Lee Member Elected by Active Members

# **Organization Chart**

As of June 30, 2020



# **Professional Consultants**

## Actuary

Segal Consulting

# **Independent Auditor**

Moss Adams LLP

# **Investment Consultants**

NEPC, LLC

Townsend Holdings, LLC

Aksia TorreyCove Capital Partners, LLC

#### **Health & Welfare Consultant**

Keenan & Associates

# **Legal/Fiduciary Counsel**

Ice Miller, LLP

Morgan, Lewis & Bockius, LLP

Nossaman, LLP

Reed Smith, LLP

# **Pension Administration System**

Levi, Ray & Shoup, Inc.

Linea Solutions

# Software Licensing, Hosting, & Analytics Services

The Jelly Vision Lab, Inc.

# **Strategic Planning Consultants**

**CEM Benchmarking** 

Emergency Management & Safety Solutions



Government Finance Officers Association

Certificate of Achievement for Excellence in Financial Reporting

Presented to

# Los Angeles City Employees' Retirement System California

For its Comprehensive Annual Financial Report For the Fiscal Year Ended June 30, 2019

Executive Director/CEO

Christopher P. Morrill



# **Public Pension Coordinating Council**

# Public Pension Standards Award For Funding and Administration 2020

Presented to

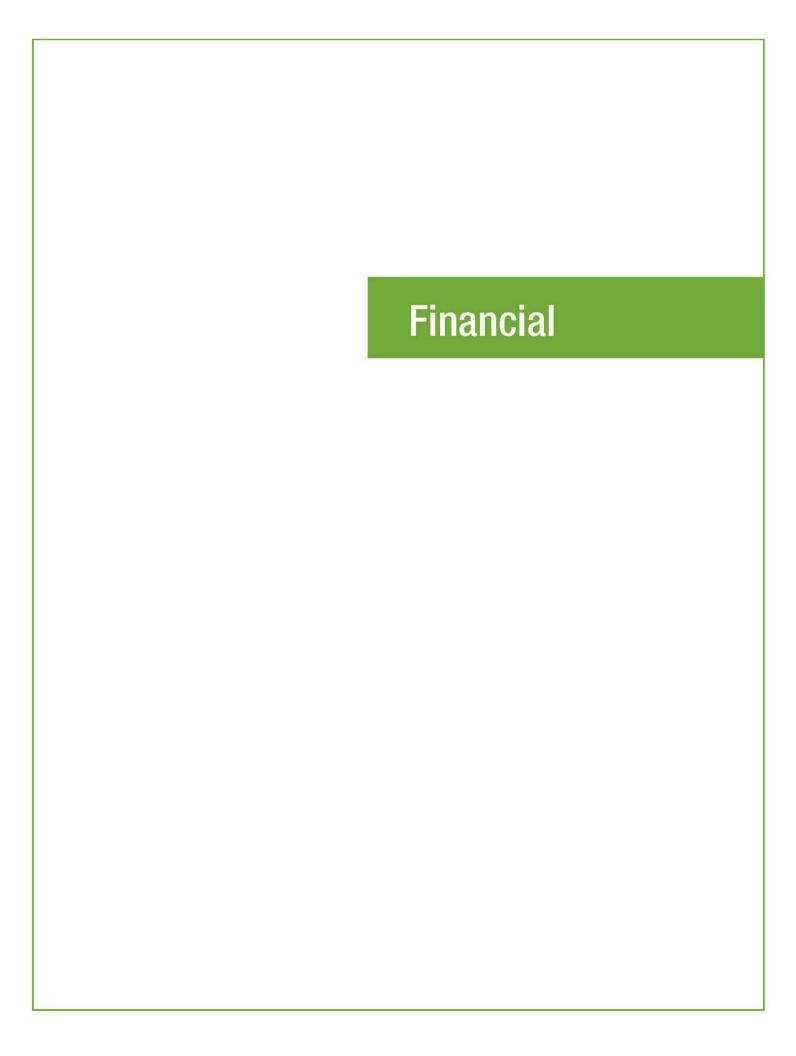
# Los Angeles City Employees' Retirement System (LACERS)

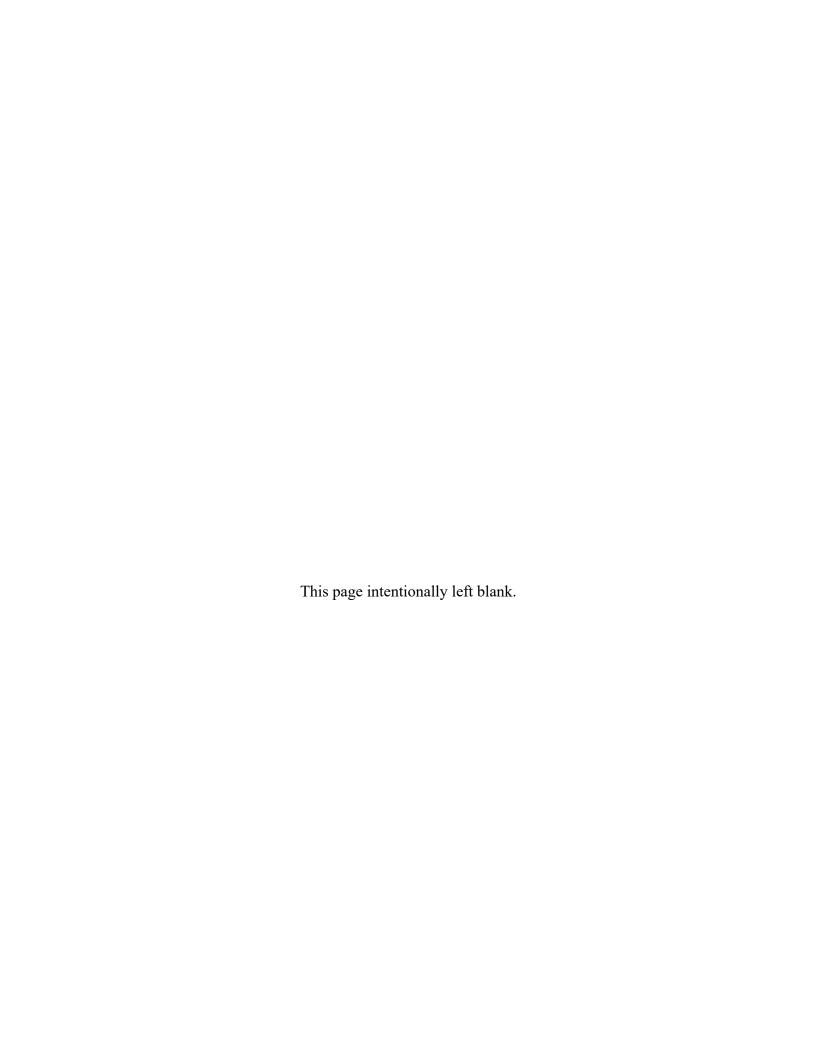
In recognition of meeting professional standards for plan funding and administration as set forth in the Public Pension Standards.

Presented by the Public Pension Coordinating Council, a confederation of

National Association of State Retirement Administrators (NASRA) National Conference on Public Employee Retirement Systems (NCPERS) National Council on Teacher Retirement (NCTR)

Alan H. Winkle







# **Report of Independent Auditors**

Board of Administration Los Angeles City Employees' Retirement System Los Angeles, California

# **Report on the Financial Statements**

We have audited the accompanying financial statements of the retirement plan and the postemployment health care plan of the Los Angeles City Employees' Retirement System (LACERS), a department of the Municipality of the City of Los Angeles, California, which comprise the statements of fiduciary net position as of June 30, 2020 and the related statements of changes in fiduciary net position for the year then ended, and the related notes to the financial statements, which collectively comprise LACERS' basic financial statements as listed in the table of contents.

### Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

## Auditor's Responsibility

Our responsibility is to express opinions on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinions.

# **Opinions**

In our opinion, the financial statements referred to above present fairly, in all material respects, the respective fiduciary net position of the retirement plan and the postemployment health care plan of the Los Angeles City Employees' Retirement System as of June 30, 2020, and the respective changes in fiduciary net position for the year then ended in accordance with accounting principles generally accepted in the United States of America.

# **Emphasis of Matter**

As discussed in Note 1, the financial statements of LACERS present the fiduciary net position and changes in fiduciary net position of the Municipality of the City of Los Angeles, California, that are attributable to the transactions of LACERS. The financial statements do not present fairly the financial position of the entire Municipality of the City of Los Angeles, California, as of June 30, 2020, the changes in its financial position, and its cash flows for the year then ended in accordance with accounting principles generally accepted in the United States of America. Our opinion is not modified with respect to this matter.

#### Other Matters

## Required Supplementary Information

Accounting principles generally accepted in the United States of America require that accompanying management's discussion and analysis; the retirement plan's schedule of net pension liability, schedule of changes in net pension liability and related ratios, schedule of contribution history, and schedule of investment returns; and the postemployment health care plan's schedule of net OPEB liability, schedule of changes in net OPEB liability and related ratios, schedule of contribution history, and schedule of investment returns (collectively, the required supplementary information) be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

## Supplemental Schedules

Our audit was conducted for the purpose of forming opinions on the financial statements that collectively comprise the LACERS' basic financial statements. The schedule of administrative expenses and schedule of investment fees and expenses (collectively, the supplemental schedules) are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The supplemental schedules are the responsibility of management and were derived from and relate directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic

financial statements or to the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the supplemental schedules are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

# Other Information

The introductory, investment, actuarial, and statistical sections are presented for purposes of additional analysis and are not a required part of the basic financial statements of LACERS. Such additional information has not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on it.

#### 2019 Financial Statements

The financial statements of Los Angeles City Employees' Retirement System, as of and for the year ended June 30, 2019, were audited by other auditors whose report thereon, dated November 25, 2019 expressed an unmodified opinion on the presentation of those financial statements in accordance with accounting principles generally accepted in the United States of America.

Los Angeles, California November 30, 2020

Mess adams LLP



As management of the Los Angeles City Employees' Retirement System (LACERS), we are pleased to provide this overview and analysis of the financial activities of LACERS for the fiscal year ended June 30, 2020. We encourage readers to consider the information presented here in conjunction with additional information included in our letter of transmittal in the Introductory Section of LACERS Comprehensive Annual Financial Report.

# **Financial Highlights**

- The Los Angeles City Employees' Retirement System (LACERS or the System) fiduciary net position as of June 30, 2020 was \$17,863,324,000, an increase of \$155,414,000 or 0.9% over the prior fiscal year.
- The total additions to the fiduciary net position of LACERS, from employer contributions made by the City of Los Angeles (the City), Member contributions, self-funded dental insurance premium, Members' portion of premium reserve, building lease and other income, and net investment income were \$1,308,079,000, a 27.4% decrease from the prior fiscal year.
- The employer contributions to the Retirement Plan represented 100% of the Actuarially Determined Contribution of the employer as defined by the Governmental Accounting Standards Board (GASB) Statements No. 67, Financial Reporting for Pension Plans, and No. 68, Accounting and Financial Reporting for Pensions.
- The employer contributions to the Postemployment Health Care Plan represented 100% of the Actuarially Determined Contribution of the employer as defined by GASB Statements No. 74, Financial Reporting for Postemployment Benefit Plans Other than Pension Plans, and No. 75, Accounting and Financial Reporting for Postemployment Benefits Other than Pensions.
- Net investment income for this fiscal year was \$365,492,000, representing a 62.3% decrease compared with an investment income of \$968,497,000 for the previous fiscal year.
- The total deductions from the fiduciary net position were \$1,152,665,000, a 6.3% increase from the prior fiscal year, for the payment of retirement and postemployment health care benefits, refunds of Member contributions, and administrative expenses.
- The System's Net Pension Liability (NPL) for the Retirement Plan was \$7,594,791,000 as of June 30, 2020. NPL, a measure required by GASB

- Statement No. 67 to disclose in the financial notes of a pension plan, is the difference between the Total Pension Liability (TPL) and the plan fiduciary net position. As the plan fiduciary net position is equal to the fair value of the plan's assets, NPL is determined on a fair value basis, and it fully reflects the plan's investment performance (1.2% rate of return, gross of fees) of this fiscal year. Compared with the previous fiscal year, the NPL increased by \$1,616,963,000.
- The System's Net Other Postemployment Benefits (OPEB) Plan Liability for the postemployment health care benefits was \$635,326,000 as of June 30, 2020. Net OPEB Liability (NOL) is a measure required by GASB Statement No. 74. NOL is determined on a fair value basis, and is the difference between the Total OPEB Liability (TOL) and the plan fiduciary net position (fair value of the plan's assets). NOL reflects the plan's investment performance (1.2% rate of return, gross of fees) for this fiscal year. As compared with the previous fiscal year, the NOL increased by \$113,125,000.
- The plan fiduciary net position as a percentage of TPL for the Retirement Plan, another required disclosure of GASB Statement No. 67, was 66.3%, which is the same as the funded ratio on a fair value basis reported in the actuarial valuation for the retirement benefits.
- The plan fiduciary net position as a percentage of TOL for the Postemployment Health Care Plan, another required disclosure of GASB Statement No. 74, was 81.8%, which is the same as the funded ratio on a fair value basis reported in the actuarial valuation for the postemployment health care benefits.

#### **COVID-19 Assessment**

It is important to note that the ongoing COVID-19 pandemic has adversely impacted global commercial activity and contributed to significant volatility in the global financial markets. LACERS Board, management and its consultants are closely monitoring the impact of COVID-19 and are taking necessary actions to safeguard the System's investments.

However, because of the adverse economic conditions that currently exist, it is possible that the estimates and assumptions utilized in preparation of these financial statements could change significantly. Additionally, while the extent of the impact, including the length or the severity, is difficult to assess, the financial and economic market uncertainty could have a significant adverse impact on the System's future financial performance.

#### **Overview of the Financial Statements**

The following discussion and analysis are intended to serve as an introduction to LACERS financial statements and the accompanying notes thereto. The required supplementary information and supplemental schedules provide additional financial data on LACERS operations.

#### **Financial Statements**

There are two financial statements presented by LACERS. The Statement of Fiduciary Net Position on page 24 gives a snapshot of the account balances at year-end and shows the amount of the fiduciary net position (the difference between the assets plus deferred outflows of resources, and liabilities plus deferred inflows of resources) available to pay future benefits. Over time, increases or decreases in fiduciary net position may serve as a useful indicator of whether the fiduciary net position of LACERS is improving or deteriorating. The Statement of Changes in Fiduciary Net Position on page 25 provides a view of current year additions to, and deductions from, the fiduciary net position.

### **Notes to the Basic Financial Statements**

The notes to the basic financial statements (Notes) provide additional information that is essential for a full understanding of the data provided in the financial statements. The notes to the basic financial statements can be found on pages 26-50 of this report.

### **Required Supplementary Information**

In addition to the Management's Discussion and Analysis, other required supplementary information consists of the Schedule of Net Pension Liability, Schedule of Changes in Net Pension Liability and Related Ratios, Schedule of Contribution History, and Schedule of Investment Returns for the Retirement Plan, and the Schedule of Net OPEB Liability, Schedule of Changes in Net OPEB Liability and Related Ratios, Schedule of Contribution History, and Schedule of Investment Returns Postemployment Health Care Plan. These schedules and notes primarily present multi-year information as required by the applicable financial reporting standards of GASB Statements No. 67 and No. 74. This required supplementary information can be found on pages 52 - 62 of this report.

## **Supplemental Schedules**

The supplemental schedules, including a Schedule of Administrative Expenses and a Schedule of Investment Fees and Expenses, are presented to provide additional financial information on LACERS operations for the current year. These can be found on pages 64 and 65 of this report.

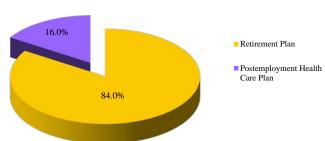
# **Financial Analysis**

# **Allocation of Fiduciary Net Position**

Fiduciary net position may serve as a useful indicator of a plan's financial position. The total fiduciary net position is allocated between the Retirement Plan and Postemployment Health Care Plan, as required by the existing reporting standards. The following information provides a brief description of the asset allocation between the Retirement Plan and the Postemployment Health Care Plan as of June 30, 2020 (dollars in thousands):

# **Allocation of Fiduciary Net Position**

| Fiduciary     |  |  |  |  |
|---------------|--|--|--|--|
| Net Position  | Percent                                    |  |  |  |
| \$ 15,012,120 | 84.0%                                      |  |  |  |
|               |  |  |  |  |
| 2,851,204     | 16.0                                       |  |  |  |
| \$ 17,863,324 | 100.0%                                     |  |  |  |
|               | Net Position<br>\$ 15,012,120<br>2,851,204 |  |  |  |



#### **Fiduciary Net Position**

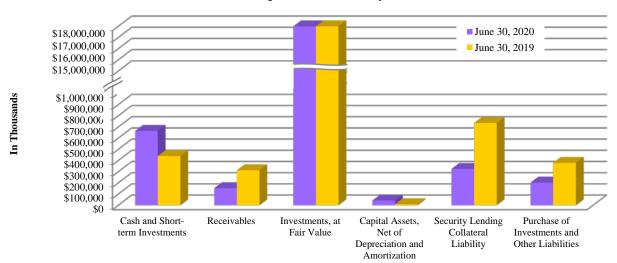
The following table and graph detail the components of the fiduciary net position of LACERS as of June 30, 2020 and 2019 (dollars in thousands):

|   | June 30, 2020                       | June 30, 2019                       | Change   |
|---|-------------------------------------|-------------------------------------|--|
| Cash and Short-Term Investments<br>Receivables<br>Investments, at Fair Value<br>Capital Assets, Net of Depreciation | \$ 665,048<br>153,263<br>17,530,909 | \$ 440,455<br>312,505<br>17,990,214 | \$ 224,593 51.0 %<br>(159,242) (51.0)<br>(459,305) (2.6) |
| and Amortization  | 42,359                              | 8,789                               | 33,570 382.0   |
| Total Assets  | 18,391,579                          | 18,751,963                          | (360,384) (1.9)  |
| Securities Lending Collateral Liability Purchase of Investments and   | 325,263                             | 705,535                             | (380,272) (53.9)   |
| Other Liabilities   | 202,992                             | 338,518                             | (135,526) (40.0)   |
| Total Liabilities   | 528,255                             | 1,044,053                           | (515,798) (49.4)   |
| Fiduciary Net Position Restricted for<br>Pension Benefits and Postemployment<br>Health Care Benefits                | \$ 17,863,324                       | \$ 17,707,910                       | <u>\$ 155,414</u> 0.9 %                                  |

# **Financial Analysis (Continued)**

## **Fiduciary Net Position (Continued)**

# **Components of Fiduciary Net Position**



The majority of LACERS fiduciary net position is contained in its investment portfolio, which consists of cash and short-term investments, receivables, fixed income, equities, real estate, private equity and other asset classes. Fiduciary net position increased by \$155,414,000, or 0.9%, during this fiscal year.

# **Net Increase in Fiduciary Net Position**

The increase in fiduciary net position during the reporting period was the net effect of factors that either added to or deducted from the fiduciary net position. The following table summarizes the changes in fiduciary net position during the report year, as compared with the prior year (dollars in thousands):

|  | <u>J</u> | une 30, 2020 | J  | une 30, 2019 | <br>Change      | 2        |
|--|----------|--------------|----|--------------|-----------------|----------|
| Additions  | \$       | 1,308,079    | \$ | 1,802,166    | \$<br>(494,087) | (27.4) % |
| Deductions   |          | 1,152,665    |    | 1,083,872    | <br>68,793      | 6.3      |
| Net Increase in Fiduciary<br>Net Position<br>Fiduciary Net Position, |          | 155,414      |    | 718,294      | (562,880)       | (78.4)   |
| Beginning of Year  |          | 17,707,910   |    | 16,989,616   | <br>718,294     | 4.2      |
| Fiduciary Net Position,<br>End of Year                               | \$       | 17,863,324   | \$ | 17,707,910   | \$<br>155,414   | 0.9 %    |

# **Financial Analysis (Continued)**

## Net Increase in Fiduciary Net Position - Additions to Fiduciary Net Position

The following table and graph represent the components that make up the additions to fiduciary net position for LACERS for the fiscal years ended June 30, 2020 and 2019 (dollars in thousands):

|                                      | Jı | ine 30, 2020 | Ju | ne 30, 2019 | Change   |
|--------------------------------------|----|--------------|----|-------------|----------|
| City Contributions                   | \$ | 665,358      | \$ | 586,754     | 13.4 %   |
| Member Contributions                 |    | 263,936      |    | 240,357     | 9.8      |
| Health Insurance Premium and Reserve |    | 12,501       |    | 6,558       | 90.6     |
| Net Investment Income                |    | 365,492      |    | 968,497     | (62.3)   |
| Building Lease & Other Income        |    | 792          |    |             | N/A      |
| Additions to Fiduciary Net Position  | \$ | 1,308,079    | \$ | 1,802,166   | (27.4) % |

**Allocation of Total Additions** 

#### **Additions to Fiduciary Net Position** June 30, 2020 \$1,000,000 \$900,000 June 30, 2020 June 30, 2019 50.9% \$800,000 0.1% \$700,000 \$600,000 \$500,000 \$400,000 \$300,000 \$200,000 \$100,000 0.9% Building City Member Insurance Net City Contributions Lease & Other Contributions Contributions Premium & Investment ■ Member Contributions ■ Insurance Premium & Reserve Reserve Income Inc Net Investment Income ■ Building Lease & Other Inc

The additions to LACERS fiduciary net position that primarily constitute the funding sources of LACERS benefits are City Contributions, Member Contributions, Health Insurance Premium and Reserve, and Net Investment Income.

City contributions to the Retirement Plan, the Postemployment Health Care Plan, and the Family Death Benefit Plan were \$665,358,000 during the fiscal year. The total increase of \$78,604,000 or 13.4% over the prior fiscal year was due to a higher payroll base (approximately 7.7% increase in payroll) and higher contribution rate recommended by the actuary for the reporting year. The total City contributions include a \$46,117,000 true-up credit adjustment, a reduction from the City's advanced contribution payment, to reconcile the difference of the City's contributions based on projected payroll against actual payroll. This true-up amount, which included accrued interest at 7.25%, was recognized as liability as of the end of the reporting period. After reflecting the true-up adjustment, the aggregate employer contribution rate for this fiscal year was 29.30% (24.36% for the Retirement Plan and 4.94% for the Postemployment Health Care Plan), which is 1.47% higher than the prior fiscal year at 27.83%. \$553,118,000 of actual contribution to the Retirement Plan was equal to 100% of the Actuarially Determined Contribution (ADC) of the employer, as defined by GASB Statement No. 67. \$112,136,000 of actual contribution to the Postemployment Health Care Plan was equal to 100% of the ADC, as defined by GASB Statement No. 74.

In fiscal year 2019-20, Member contributions were \$263,936,000, which was \$23,579,000 or 9.8% greater than the prior year. The increase in Member contributions was primarily attributable to the increase in the number of Members and their salaries during the fiscal year.

# **Financial Analysis (Continued)**

# Net Increase in Fiduciary Net Position - Additions to Fiduciary Net Position (Continued)

LACERS established a Postemployment Health Care 115 Trust fund (the "115 Trust fund") in late December 2018, and replaced the existing Delta Dental PPO Plan with a self-funded Dental Plan under the 115 Trust fund effective January 1, 2019. Accordingly, LACERS recognized revenue of \$10,364,000 representing monthly dental insurance premium and \$2,137,000 of Member's portion from health insurance premium reserve that includes \$1,319,000, Member's portion of Anthem Premium Stabilization Reserve fund transferred to LACERS.

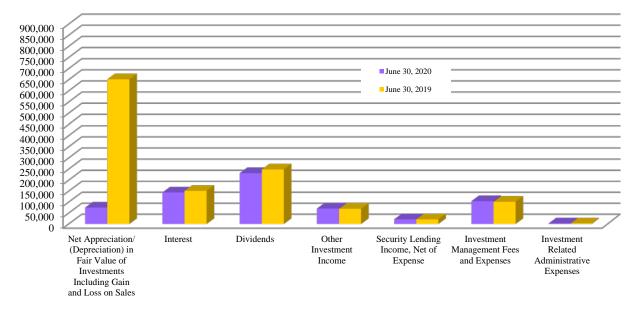
The net investment income was \$365,492,000, which included \$50,201,000 of net appreciation in the fair value of investments. This is discussed in more detail in the next section.

#### **Investment Income**

The following table and graph present the detail of investment income, net of investment management fees and expenses for the fiscal years ended June 30, 2020 and 2019 (dollars in thousands):

|  | Jui | ne 30, 2020 | Ju | ne 30, 2019 | Change   |
|--|-----|-------------|----|-------------|----------|
| Net Appreciation in Fair Value of Investments, |     |             |    |             |          |
| Including Gain and Loss on Sales               | \$  | 50,201      | \$ | 637,092     | (92.1) % |
| Interest                                       |     | 124,053     |    | 121,215     | 2.3      |
| Dividends                                      |     | 221,790     |    | 238,458     | (7.0)    |
| Other Investment Income                        |     | 50,668      |    | 49,475      | 2.4      |
| Securities Lending Income, Net of Expense      |     | 6,310       |    | 6,179       | 2.1      |
| Sub-Total                                      |     | 453,022     |    | 1,052,419   | (57.0)   |
| Less: Investment Management Fees and Expenses  |     | (84,571)    |    | (81,582)    | 3.7      |
| Investment Related Administrative Expenses     |     | (2,959)     |    | (2,340)     | 26.5     |
| Net Investment Income                          | \$  | 365,492     | \$ | 968,497     | (62.3) % |

# **Investment Income and Expenses**



# **Financial Analysis (Continued)**

#### **Investment Income (Continued)**

The net investment income for the current fiscal year was \$365,492,000, as compared with the income of \$968,497,000 for the previous fiscal year (62.3% decrease). This decrease was due primarily to a lower net appreciation in the fair value of investments of \$50,201,000, compared with the previous fiscal year's amount of \$637,092,000 (92.1% decrease). In general, public equity market returns were lower for the current year relative to the previous fiscal year. The Russell 3000 Index, which tracks U.S. broad market equities, returned 6.5% compared with 9.0% for the previous year. The MSCI All Country World ex-U.S. Index, which tracks non-U.S. equities in developed and emerging markets, returned -4.8% compared with 1.3% for the previous year. Fixed income markets, as represented by the Bloomberg Barclays U.S. Aggregate Bond Index, experienced a strong rally during the current fiscal year, returning 8.7% compared with 7.9% for the previous year. The net appreciation reported reflects a deduction for carried interest in the amount of \$32,095,000, which represents a profit share that the general partners of these funds received as a compensation after the performance of the funds achieved agreed-upon return level.

Interest income derived from fixed income securities increased by \$2,838,000 or 2.3%, while dividend income derived from equities decreased by \$16,668,000 or 7.0%. The slight increase in interest income from fixed income is attributed to a portfolio rebalancing that shifted assets away from the core

fixed income asset class and into the higher yielding credit opportunities and real assets asset classes. The decrease in dividend yield from equities is attributed to companies lowering or suspending dividend payments due to an uncertain economic outlook created by the COVID-19 pandemic.

Other investment income, primarily derived from private equity and private real estate partnership investments, increased by \$1,193,000 or 2.4%, mainly due to several large distributions received from private real estate partnership investments currently in the process of winding down.

LACERS earns additional investment income by lending its securities to borrowers through its custodian bank. To earn income for LACERS, the custodian bank invests cash collateral pledged by borrowers on behalf of LACERS in short term fixed income securities. LACERS also generates income from fees paid by borrowers that pledge non-cash collateral. In the current fiscal year, LACERS securities lending income (net of expense) increased by \$131,000 or 2.1%, from a year ago due to higher lending spreads and reinvestment spreads.

Total investment management fees, expenses, and investment related administrative expenses increased by \$3,608,000 or 4.3% from the prior year. This increase corresponded with the increase in the fair value of LACERS investments over the fiscal year.

# **Net Increase in Fiduciary Net Position – Deductions from Fiduciary Net Position**

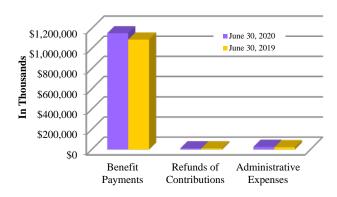
The following table and graphs provide information related to the deductions from fiduciary net position for the fiscal years ended June 30, 2020 and 2019 (dollars in thousands):

|                           | Jı | ine 30, 2020 | Jı | ane 30, 2019 | Change |
|---------------------------|----|--------------|----|--------------|--------|
| Benefit Payments          | \$ | 1,112,911    | \$ | 1,049,283    | 6.1%   |
| Refunds of Contributions  |    | 12,332       |    | 11,684       | 5.5    |
| Administrative Expenses   |    | 27,422       |    | 22,905       | 19.7   |
| Deductions from Fiduciary |    |              |    |              |        |
| Net Position              | \$ | 1,152,665    | \$ | 1,083,872    | 6.3%   |

### **Financial Analysis (Continued)**

Net Increase in Fiduciary Net Position – Deductions from Fiduciary Net Position (Continued)

# **Deductions from Fiduciary Net Position**

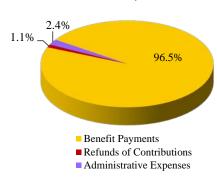


LACERS' deductions from fiduciary net position in this reporting period can be summarized as Benefit Payments, Refunds of Contributions, and Administrative Expenses. These deductions represent the types of benefit delivery operations undertaken by LACERS and the costs associated with them. Total deductions increased by \$68,793,000 or 6.3% from the prior fiscal year.

Compared to the prior fiscal year, benefit payments increased by \$63,628,000 or 6.1%. The benefit payments for the Retirement Plan increased by \$64,043,000 or 7.0% mainly due to the annual cost of living adjustments (COLA) (approximately 3.0% increase on average); increased number of retirees and beneficiaries; and the average retirement allowance of newly retired Members being higher than those of the deceased Members who were removed from the retirement payroll. On the other hand, payments for Postemployment Health Care Plan benefits decreased by \$415,000 or -0.3%. This decrease was mainly due to the receipt of \$10,154,000, LACERS' portion of Premium Stabilization Reserve fund maintained with Anthem Blue Cross. This amount comprise of accumulated surplus premium dollars from prior years when annual premium payments to Anthem Blue Cross exceeded annual claim costs and administrative expenses. The amount, to a degree, helped offset the increase in healthcare cost due to the increase in number of retirees and their dependents eligible for medical subsidy; increased reimbursement of Medicare Part B premium; and the full year payment of dental benefit claims paid from the Self-Funded Plan established in January 2019.

The Refunds of Member contributions increased by \$648,000 or 5.5% from the prior fiscal year's \$11,684,000, due primarily to the increase in refunds to Members leaving the City service.

# Allocation of Total Deductions June 30, 2020



LACERS' administrative expenses increased by \$4,517,000 or 19.7% from the prior fiscal year. The increase was mainly due to higher personnel cost resulted from the mandatory COLA increases, which include retroactive payments and mandatory payouts to employees in accordance with the City's negotiated salary contracts, increased hiring to fill vacant positions, higher employee retirement payouts and increased employee health and retirement costs. Some of the increase can also be attributed to the payment of fees covering full fiscal year administration of the Self-Funded Plan. In addition, \$1,329,000 of various building operating expenses was incurred this fiscal year related to the purchase of the new LACERS headquarter building.

# **Requests for Information**

This financial report is designed to provide a general overview of LACERS finances. Questions concerning any of the information provided in this report or requests for additional financial information should be addressed to:

LACERS
Fiscal Management Division
PO Box 512218
Los Angeles, CA 90051-0218



# Statement of Fiduciary Net Position Retirement Plan and Postemployment Health Care Plan As of June 30, 2020, with Comparative Totals (In Thousands)

|                                       | Retirement<br>Plan |            | Postemployment<br>Health Care Plan |           | 2020<br>Total |            | 2019<br>Total |            |
|---------------------------------------|--------------------|------------|------------------------------------|-----------|---------------|------------|---------------|------------|
| Assets                                |                    |            |                                    |           |               |            |               |            |
| Cash and Short-Term Investments       | \$                 | 558,898    | \$                                 | 106,150   | \$            | 665,048    | \$            | 440,455    |
| Receivables                           |                    |            |                                    |           |               |            |               |            |
| Accrued Investment Income             |                    | 51,228     |                                    | 9,730     |               | 60,958     |               | 62,832     |
| Proceeds from Sales of Investments    |                    | 61,795     |                                    | 11,737    |               | 73,532     |               | 234,349    |
| Other                                 |                    | 15,777     |                                    | 2,996     |               | 18,773     |               | 15,324     |
| Total Receivables                     |                    | 128,800    |                                    | 24,463    |               | 153,263    |               | 312,505    |
| Investments, at Fair Value            |                    |            |                                    |           |               |            |               |            |
| U.S. Government Obligations           |                    | 1,343,146  |                                    | 255,100   |               | 1,598,246  |               | 1,417,515  |
| Domestic Corporate Bonds              |                    | 909,500    |                                    | 172,738   |               | 1,082,238  |               | 882,229    |
| International Bonds                   |                    | 547,866    |                                    | 104,054   |               | 651,920    |               | 599,693    |
| Other Fixed Income                    |                    | 438,911    |                                    | 83,361    |               | 522,272    |               | 902,587    |
| Bank Loans                            |                    | 3,535      |                                    | 671       |               | 4,206      |               | 8,868      |
| Opportunistic Debts                   |                    | 187,722    |                                    | 35,653    |               | 223,375    |               | 203,701    |
| Domestic Stocks                       |                    | 3,826,132  |                                    | 726,685   |               | 4,552,817  |               | 4,672,500  |
| International Stocks                  |                    | 4,180,522  |                                    | 793,994   |               | 4,974,516  |               | 5,239,973  |
| Mortgages                             |                    | 474,694    |                                    | 90,157    |               | 564,851    |               | 526,389    |
| Government Agencies                   |                    | 31,572     |                                    | 5,996     |               | 37,568     |               | 30,947     |
| Derivative Instruments                |                    | 1,785      |                                    | 339       |               | 2,124      |               | (797)      |
| Real Estate                           |                    | 629,395    |                                    | 119,539   |               | 748,934    |               | 792,516    |
| Private Equity                        |                    | 1,884,636  |                                    | 357,943   |               | 2,242,579  |               | 2,008,558  |
| Securities Lending Collateral         |                    | 273,347    |                                    | 51,916    |               | 325,263    |               | 705,535    |
| Total Investments, at Fair Value      |                    | 14,732,763 |                                    | 2,798,146 |               | 17,530,909 |               | 17,990,214 |
| Capital Assets, Net of Depreciation   |                    |            |                                    |           |               |            |               |            |
| and Amortization                      |                    | 35,598     |                                    | 6,761     |               | 42,359     |               | 8,789      |
| <b>Total Assets</b>                   |                    | 15,456,059 |                                    | 2,935,520 |               | 18,391,579 |               | 18,751,963 |
| Liabilities                           |                    |            |                                    |           |               |            |               |            |
| Accounts Payable and Accrued Expenses |                    | 54,859     |                                    | 10,419    |               | 65,278     |               | 54,418     |
| Accrued Investment Expenses           |                    | 10,184     |                                    | 1,934     |               | 12,118     |               | 9,664      |
| Purchases of Investments              |                    | 105,549    |                                    | 20,047    |               | 125,596    |               | 274,436    |
| Securities Lending Collateral         |                    | 273,347    |                                    | 51,916    |               | 325,263    |               | 705,535    |
| Total Liabilities                     |                    | 443,939    |                                    | 84,316    |               | 528,255    |               | 1,044,053  |
| Fiduciary Net Position Restricted for |                    |            |                                    |           |               |            |               |            |
| Pension and Postemployment            |                    |            |                                    |           |               |            |               |            |
| Health Care Benefits                  | \$                 | 15,012,120 | \$                                 | 2,851,204 | \$            | 17,863,324 | \$            | 17,707,910 |

The accompanying notes are an integral part of these financial statements.

# Statement of Changes in Fiduciary Net Position Retirement Plan and Postemployment Health Care Plan For the Fiscal Year Ended June 30, 2020, with Comparative Totals (In Thousands)

|   | Ro | etirement<br>Plan | temployment<br>lth Care Plan |             | 2020<br>Fotal |    | 2019<br>Total |
|---|----|-------------------|------------------------------|-------------|---------------|----|---------------|
| Additions   |    |                   |                              |             |               |    |               |
| Contributions   |    |                   |                              |             |               |    |               |
| City Contributions  | \$ | 553,222           | \$<br>112,136                | \$          | 665,358       | 9  | 586,754       |
| Member Contributions  |    | 263,936           | <br><u> </u>                 |             | 263,936       | -  | 240,357       |
| Total Contributions   |    | 817,158           | <br>112,136                  |             | 929,294       |    | 827,111       |
| Self-Funded Insurance Premium   |    | -                 | 10,364                       |             | 10,364        |    | 6,090         |
| Health Insurance Premium Reserve  |    | -                 | 2,137                        |             | 2,137         |    | 468           |
| Investment Income   |    |                   |                              |             |               |    |               |
| Net Appreciation in Fair Value of   |    |                   |                              |             |               |    |               |
| Investments, Including Gain and Loss on Sales   |    | 41,055            | 9,146                        |             | 50,201        |    | 637,092       |
| Interest  |    | 102,466           | 21,587                       |             | 124,053       |    | 121,215       |
| Dividends   |    | 185,605           | 36,185                       |             | 221,790       |    | 238,458       |
| Other Investment Income   |    | 42,402            | 8,266                        |             | 50,668        |    | 49,475        |
| Securities Lending Income   |    | 6,210             | 1,211                        |             | 7,421         |    | 7,268         |
| Less: Securities Lending Expense  |    | (917)             | <br>(194)                    |             | (1,111)       |    | (1,089)       |
| Sub-Total   |    | 376,821           | 76,201                       |             | 453,022       |    | 1,052,419     |
| Less: Investment Management Fees and Expenses   |    | (69,121)          | (15,450)                     |             | (84,571)      |    | (81,582)      |
| Investment Related Administrative Expenses  |    | (2,409)           | <br>(550)                    |             | (2,959)       |    | (2,340)       |
| Net Investment Income   |    | 305,291           | 60,201                       |             | 365,492       |    | 968,497       |
| Building Lease and Other Income   |    | 645               | 147                          |             | 792           |    |               |
| <b>Total Additions</b>  |    | 1,123,094         | 184,985                      |             | 1,308,079     |    | 1,802,166     |
| Deductions  |    |                   |                              |             |               |    |               |
| Benefit Payments  |    | 973,197           | 139,714                      |             | 1,112,911     |    | 1,049,283     |
| Refunds of Contributions  |    | 12,332            | ·<br>-                       |             | 12,332        |    | 11,684        |
| Administrative Expenses   |    | 21,257            | <br>6,165                    |             | 27,422        |    | 22,905        |
| <b>Total Deductions</b>   |    | 1,006,786         | <br>145,879                  |             | 1,152,665     |    | 1,083,872     |
| Net Increase in Fiduciary Net Position  |    | 116,308           | 39,106                       |             | 155,414       |    | 718,294       |
| Fiduciary Net Position Restricted for Pension<br>and Postemployment Health Care Benefits<br>Beginning of Year |    | 14,895,812        | 2,812,098                    | 1           | 17,707,910    |    | 16,989,616    |
| End of Year   | \$ | 15,012,120        | \$<br>2,851,204              | <b>\$</b> 1 | 17,863,324    | \$ | 17,707,910    |

The accompanying notes are an integral part of these financial statements.

# 1. Description of LACERS and Significant Accounting Policies

# **General Description**

The Los Angeles City Employees' Retirement System (LACERS or the System) is under the exclusive management and control of its Board of Administration (the Board), whose authority is granted by statute in Article XVI, Section 17 of the California State Constitution, and Article XI of the Los Angeles City Charter. The Board has seven members. Four members, one of whom shall be a retired Member of the System, shall be appointed by the Mayor subject to the approval of the City Council. Two members shall be active employee Members of the System elected by active employee Members. One shall be a retired Member of the System elected by retired Members of the System. Elected Board members serve five-year terms in office, with no term limits. The System is a Department of the Municipality of the City of Los Angeles (the City). The System's financial statements are included in the City of Los Angeles Annual Financial Report as a pension trust fund.

The System operates a single-employer defined benefit plan (the Retirement Plan) and a single-employer Postemployment Health Care Plan. Benefits and benefit changes are established by ordinance and approved by the City Council and the Mayor. A description of each plan is located in Note 2 and Note 3 on pages 30 - 40 of this report. All Notes to the Basic Financial Statements apply to both plans unless indicated otherwise.

### **Basis of Accounting and Presentation**

The financial statements have been prepared in accordance with the accounting principles generally accepted in the United States of America (US GAAP) as outlined by the Governmental Accounting Standards Board (GASB). The financial statements are maintained on the accrual basis of accounting. Contributions from the employer and Members were recognized when due pursuant to formal commitments and contractual requirements. Benefits, refunds, and other expenses are recognized when due and payable. The accompanying financial statements include information from the prior year summarized for comparative purpose only. Such information does not include sufficient detail to constitute a presentation in accordance with US GAAP.

#### **Investments**

# **Investment Policies**

Funds of the System are invested pursuant to the System's investment policy, established by the Board, in compliance with Article XI Section 1106(d) of the City Charter. The System has a long-term investment

horizon, and utilizes an asset allocation that encompasses a strategic, long run perspective of capital markets. The System's investment portfolio is composed of domestic and international equities, domestic and international bonds, bank loans, derivative instruments, real assets, private equity, and short-term investments. During the reporting period, there were no significant investment policy changes.

As of June 30, 2020, the Board's target asset allocation policy was as follows:

|                                     | Target     |
|-------------------------------------|------------|
| Asset Class                         | Allocation |
| Domestic and International Equities | 46.00%     |
| Domestic and International Bonds    | 13.75      |
| Private Equity                      | 14.00      |
| Real Assets                         | 13.00      |
| Short-Term Investments              | 1.00       |
| Credit Opportunities                | 12.25      |
| Total                               | 100.00%    |

#### **Fair Value of Investments**

Securities traded on national or international exchanges are valued at the last reported sales price at the current exchange rates. Short-term investments, bonds, bank loans, stocks, and private equities are reported at fair value. The fair values of real estate investment funds are provided by the individual real estate fund managers based on periodic appraisals, in the form of either annual in-house appraisals or longer-term appraisals by outside professionals, in accordance with industry practice. The fair value determined as such is also reviewed and evaluated by the Board's real estate consultant. The private equity funds ("partnership investment"), which are managed by third party investment managers, are valued on a quarterly and/or annual basis at their net asset value as reported by the investment managers under US GAAP. US GAAP requires that assets be reported at fair value in accordance with GASB Statement No. 72 - Fair Value Measurement and Application. The fair values of derivative instruments are determined using available market information.

Debt rewrites are valued based on yields currently available on comparable securities of issuers with similar credit ratings. LACERS investment strategy, as it relates to the debt portfolio, is mainly to achieve market appreciation and not to hold bonds to their maturities.

The provisions of the GASB Statement No. 72, *Fair Value Measurement and Application*, require investments to be measured at fair value as well as to classify the inputs used to determine fair value based on a three-level fair value hierarchy.

# 1. Description of LACERS and Significant Accounting Policies (Continued)

### **Investments (Continued)**

#### **Fair Value of Investments (Continued)**

Investment transactions are accounted for on the date the securities are purchased or sold (trade date). Unsettled investment trades as of fiscal year-end are reported in the financial statements on an accrual basis. The corresponding proceeds due from sales are reported on the Statement of Fiduciary Net Position under Receivables and labeled as Proceeds from Sales of Investments, and amounts payable for purchases are reported under Liabilities and labeled as Purchases of Investments. Dividend income is recorded on the exdividend date. Interest income is reported at the stated interest rate as earned, and any premiums or discounts on debt securities are not amortized. The calculation of realized gains and losses is independent of the calculation of the net change in the fair value of LACERS pension plan investment. Realized gains and losses on investments that had been held in more than one reporting period and sold in the current period were included as a change in the fair value reported in the prior period(s) and the current period.

For the future contracts, an initial margin is required to open a position and maintain the collateral requirement until the position is closed. LACERS reports the collateral for the future contracts in the short-term investments.

#### **Concentrations**

The investment portfolio as of June 30, 2020, contained no concentration of investments in any one entity that represented 5% or more of the total investment portfolio.

#### **Rate of Return on Investments**

For the fiscal year ended June 30, 2020, the aggregate annual money-weighted rate of return for the Retirement Plan and the Postemployment Health Care Plan on LACERS investments, net of investment expenses, was 2.04%. The money-weighted rate of return expresses investment performance, net of investment expenses, adjusted for the changing amounts actually invested. Separate schedules for the money-weighted rate of return for Retirement Plan and Postemployment Health Care Plan are presented in the Required Supplementary Information (RSI).

#### Receivables

As of June 30, 2020, LACERS held no long-term contracts for contributions receivable from the City.

## **Capital Assets**

Purchases of capital assets are capitalized upon acquisition if the cost of purchase was \$5,000 or more, and depreciated over five years using the straight-line method.

Certain costs to develop LACERS Pension Administration System (PAS), a customized software solution critical to LACERS core operations was capitalized in accordance with GASB Statement No. 51, Accounting and Financial Reporting for Intangible Assets. The total capitalized cost of \$9,413,000 is being amortized over 15 years using the straight-line method.

On October 9, 2019, LACERS Board approved the purchase of a commercial office building and underground parking structure located at 977 N. Broadway in Los Angeles, California to serve as LACERS future headquarters building. The purchase was settled at \$33,750,000 on October 23, 2019. The purchase price was allocated to Land valued at \$4,023,000 and Building valued at \$29,727,000, based on the assessment performed on the fair value of acquired assets. In addition, LACERS incurred \$236,000 in acquisition costs and subsequent Building improvements costing \$89,000 during the fiscal year, which were capitalized as part of the Building cost. As of the end of the fiscal year, major capital improvements are still in progress to prepare the building for occupancy. Once the building is put to use, the System will capitalize all costs associated and begin to record depreciation expense of the headquarters in 2021.

### **Administrative Expenses**

All administrative expenses are funded from LACERS fiduciary net position, which represents accumulated investment earnings and contributions from the City and the Members net of payments.

# 1. Description of LACERS and Significant Accounting Policies (Continued)

#### **Reserves**

As provided in the Los Angeles City Charter, LACERS is maintained on a reserve basis, determined in accordance with recognized actuarial methods. The Los Angeles City Charter establishes reserves for the following:

#### Reserves for the Retirement Plan

Member Contributions (Mandatory) – To provide for individual accounts of Members consisting of Active Member mandatory contributions to the Retirement Plan and interest credited to Members accounts, less refunds of Members contributions and transfers to the Annuity reserve.

Member Contributions (Voluntary) – To provide for individual accounts of Members participating in the larger annuity program of Active Member voluntary contributions and interest/investment return credited to Members' accounts, less refunds of Member contributions (voluntary) and transfers to the Larger Annuity reserve.

Basic Pensions – To provide for the City's guaranteed portion of retirement benefits consisting of City contributions; investment earnings (losses) including net appreciation (depreciation) in fair value of investments; less payments to retired Members and beneficiaries, and allocated investment and administrative expenses.

Annuity – To provide for the Members' share of retirement benefits consisting of Members' mandatory contribution balances transferred at retirement; investment earnings (losses) excluding net appreciation (depreciation) in fair value of investments; less payments to retired Members and beneficiaries, and allocated investment and administrative expenses.

Larger Annuity – To provide for the Larger Annuity benefit consisting of Members' voluntary contribution balances transferred at retirement including Internal Revenue Service (IRS) Section 457 deferred compensation and other rollovers; investment earnings (losses) including net appreciation (depreciation) in fair value of investments; less payments to participating retired Members and beneficiaries, and allocated investment and administrative expenses.

Family Death Benefit Plan (FDBP) – To pay benefits under the Family Death Benefit Plan administered by LACERS consisting of Active Member voluntary contributions; matching City of Los Angeles contributions; and investment earnings (losses) including net appreciation (depreciation) in fair value of investments; less payments to beneficiaries and allocated investment and administrative expenses.

### Reserves for the Postemployment Health Care Plan

401(h) Account- To provide health care benefits for retirees consisting of City Contributions received until fiscal year 2019; investment earnings (losses) including net appreciation (depreciation) in fair value of investments; less payments to insurance providers, including payment to the 115 Trust fund for the self-funded dental insurance premium and Members' portion of insurance premium reserve.

115 Trust Account – This new Health Care fund is currently limited to pay the benefit claims from LACERS self-funded Dental Plan, but ultimately will fund all health care benefits for retirees upon depletion of the existing 401(h) account reserves. The 115 Trust account currently consists of City Contributions received starting in fiscal year 2020, dental plan premium and prepayment; certain retired Members' health insurance premium deductions; investment earnings (losses) including net appreciation (depreciation) in fair value of investments; less payments of the dental plan claims and administration fees to the third party contractor who administered the dental plan claims for the System; and certain allocated administrative expenses. During this reporting year, funds from this reserve account were invested in LACERS investment pool, and therefore, investment earnings (losses) including net appreciation (depreciation) in fair value of investments were distributed.

# 1. Description of LACERS and Significant Accounting Policies (Continued)

#### **Reserves (Continued)**

Reserve balances as of June 30, 2020, were as follows (in thousands):

# Reserved for the Retirement Plan Member Contributions:

| memoer contributions. |               |
|-----------------------|---------------|
| - Mandatory           | \$ 2,640,371  |
| - Voluntary           | 7,268         |
| Basic Pensions        | 11,703,185    |
| Annuity               | 588,848       |
| Larger Annuity        | 56,316        |
| FDBP                  | 16,132        |
|                       | \$ 15,012,120 |

# Reserve for the Postemployment Health Care Plan

| 401 (h) Account   | \$<br>2,730,003 |
|-------------------|-----------------|
| 115 Trust Account | <br>121,201     |
|                   | <br>2,851,204   |

\$ 17,863,324

#### **Estimates**

The preparation of the financial statements in conformity with US GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting years. Changes in economic environment, financial markets and any other parameters used in determining these estimates could cause actual results to differ from those estimates materially.

# Risk and Uncertainty That May Impact Financial Operations and Performance

In March 2020, the World Health Organization declared Coronavirus COVID-19 a global pandemic. The Coronavirus outbreak has caused tremendous human and economic hardship both globally and throughout the United States. The measures taken to protect public health has had an adverse impact, disrupting economic activity and creating a surge in job losses. While the ongoing pandemic poses considerable economic risks, there has been no significant disruption to LACERS' operations. The System has largely been successful in maintaining normal operation remotely. Although the financial markets remain volatile, LACERS' investment strategy is to maintain a well-diversified portfolio in order to mitigate the risk of market uncertainty.

The System is exposed to a risk that the long-term rate of return currently earned on the pension plan assets could be below the actuarially assumed rate of return, which is currently 7.00%. This could impact the plan participant actuarial determined contributions. The System's actuarial valuations use a seven year smoothing method for investment returns; any contribution rate impact from the capital markets depends largely on how deep the future market downturn is, how long it lasts, and how it fits within the fiscal year reporting periods. While the global markets have largely recouped early 2020 losses due to the pandemic, COVID-19 continues to surge globally and in many parts of the United States. LACERS' Board and management will continue to closely monitor any adverse impact on the System's investments.

#### **New Accounting Pronouncements**

GASB Statement No. 87 -Leases, issued in June 2017, increases the usefulness of government's financial statements by requiring recognition of certain lease assets and liabilities for leases that were previously classified as operating leases. It establishes a single model for lease accounting based on the foundational principle that leases are financings of the right to use an underlying asset. Under this Statement, a lessee is required to recognize a lease liability and an intangible right-to-use lease asset thereby enhancing the relevance and consistency of information about government's leasing activities. As a result of GASB Statement No. 95 issued in May 2020 to provide temporary relief from implementation of certain pronouncements, the effective date for Statement No. 87 is postponed to fiscal year beginning after June 15, 2021. LACERS is currently examining the impact to its current accounting policies and financial reporting from this Statement.

### 2. Retirement Plan Description

## Plan Administration and Membership

LACERS administers a defined benefit pension plan that provides for service and disability retirement benefits, as well as death benefits.

The Retirement Plan covers all full-time personnel and department-certified part-time employees of the City, except for sworn employees of the Fire and Police departments, Department of Water and Power employees, elected officials who elected to participate in an alternative Defined Contribution Plan, certain Port Police officers of the Harbor, and certain Airport Peace Officers of the Airports who elected to opt out of LACERS. Upon transferring all active Tier 2 Members to Tier 1 as of February 21, 2016, Membership to Tier 1 is now closed to new entrants unless a Member meets one of the exceptions allowed in the Ordinance (No. 184134). Eligible employees hired on or after February 21, 2016, become Members of Tier 3.

Plan Members have a vested right to their own contributions and accumulated interest posted to their accounts. Generally, after five years of employment, Members are eligible for future retirement benefits, which increase with length of service. If a Member who has five or more years of continuous City service terminates employment, the Member has the option of receiving retirement benefits when eligible or having his or her contributions and accumulated interest refunded. Benefits are based upon age, length of service, and compensation.

As of June 30, 2020, the components of LACERS membership in both tiers (Tier 1 and Tier 3) were as follows:

#### Active:

| Vested                           | 17,722 |
|----------------------------------|--------|
| Non-vested                       | 9,768  |
|                                  | 27,490 |
| Inactive:                        |        |
| Non-vested                       | 6,728  |
| Terminated Entitled to Benefits, |        |
| Not Yet Receiving Benefits       | 2,479  |
| Retired                          | 20,423 |
| Total                            | 57,120 |

# **Eligibility Requirement and Benefits Provided**

#### Tier 1

Plan Members are eligible to retire with unreduced benefits if they have 10 or more years of continuous City service at age 60, or at least 30 years of City service at age 55, or with any years of City service at age 70 or older. Plan Members also are eligible to retire with age-based reduced benefits after reaching age 55 with 10 or more years of continuous City service, or at any age with 30 or more years of City service. Full (unreduced) retirement benefits are determined as 2.16% of the Member's average monthly pensionable salary during the Member's last 12 months of service, or during any other 12 consecutive months of service designated by the Member, multiplied by the Member's years of service credit.

Plan Members with five years of continuous service are eligible for disability retirement, and the benefits are determined as 1/70 of the Member's final average monthly salary for each year of service or 1/3 of the Member's final average monthly salary, if greater. Upon an active Member's death, a refund of the Member's contributions and, depending on the Member's years of service, a limited pension benefit equal to 50% of monthly salary may be paid up to 12 months. Or, if such Member was eligible to retire, survivor benefits may be paid to an eligible spouse or qualified domestic partner. Upon a retired Member's death, a \$2,500 funeral allowance is paid, and a modified or unmodified allowance is continued to an eligible spouse or qualified domestic partner.

#### Tier 1 - Enhanced Benefits

On March 28, 2017, the City Council adopted an ordinance (No. 184853) to amend the Los Angeles Administrative Code (LAAC) authorizing certain sworn Airport Peace Officers (APO) at LACERS to elect to transfer into Tier 6 of LAFPP Plan or to remain in LACERS Plan with enhanced benefits.

All new APO hired after that date would be enrolled in LAFPP Tier 6. Under the ordinance, APO Members who elect to remain in LACERS would be Tier 1 Members, and be eligible for enhanced benefits including more favorable disability benefits, death benefits, and a higher retirement factor of 2.30% (versus 2.16% for all other Tier 1 Members), contingent upon a mandatory additional contribution payment of \$5,700 required by LAAC Section 4.1002(e)(2) to LACERS before January 8, 2019, or prior to the Member's retirement date, whichever is earlier. Among 503 APO Members who elected to remain Members of LACERS on January 7, 2018, 469 APO Members, inclusive of 43 APO Members who retired with the enhanced benefits, paid their mandatory additional contribution.

# **Eligibility Requirement and Benefits Provided** (Continued)

#### Tier 3

Plan Members are eligible to retire with unreduced benefits if they have at least 10 or more years of City service at age 60 or at least 30 years of City service at age 55, provided that five years of service must be continuous. Full unreduced retirement benefits at age 60 with 10 years of City service are determined with a 1.5% retirement factor. Plan Members also are eligible to retire with an age-based reduced benefit before reaching age 60 with 30 or more years of City service with a retirement factor of 2.0%. If the Member is age 55 or older with 30 years of service at the time of retirement, his or her retirement allowance will not be subject to reduction on account of age. However, if the Member is younger than age 55 with 30 years of service at the time of retirement, his or her retirement allowance will be reduced by the applicable early retirement reduction factor. In addition, the System also provides Tier 3 Members enhanced retirement benefits with a 2.0% retirement factor if the Member retires at age 63 with at least 10 years of service, or a retirement factor of 2.1% if the Member retires at age 63 with 30 years of service.

Tier 3 retirement benefits are determined by multiplying the Member's retirement factor (1.5% - 2.1%), with the Member's Final Average Compensation (FAC) based on the Member's pensionable salary for the last 36 months or any other 36 consecutive months designated by the Member, and by the Member's years of service credit (SC) as follows:

| Age at<br>Retirement   | Required<br>Years of<br>Service                          | Retirement Benefit <sup>(1)</sup>  |
|--|--|--|
| Under 55<br>55 and Over<br>60 and Over<br>63 and Over<br>63 and Over | 30 Years<br>30 Years<br>10 Years<br>10 Years<br>30 Years | 2.0% x FAC x Yrs. of SC <sup>(2)</sup> 2.0% x FAC x Yrs. of SC 1.5% x FAC x Yrs. of SC 2.0% x FAC x Yrs. of SC 2.1% x FAC x Yrs. of SC |

- Retirement allowance may not exceed 80% of final compensation except when benefit is based solely on the annuity component funded by the Member's contributions.
- (2) A reduction factor will be applied based on age at retirement.

Plan Members with five years of continuous service are eligible for disability retirement, and the benefits are determined as 1/70 of the Member's final average monthly salary for each year of service or 1/3 of the Member's final average monthly salary, if greater. Upon an active Member's death, a refund of the Member's contributions and, depending on the Member's years of service, a limited pension benefit equal to 50% of monthly salary may be paid up to 12 months. Or, if such Member was eligible to retire, survivor benefits may be paid to an eligible spouse or qualified domestic partner. Upon a retired Member's death, a \$2,500 funeral allowance is paid, and a modified or unmodified allowance is continued to an eligible spouse or qualified domestic partner.

There were no Tier 3 Members who retired during this reporting period.

#### **Cost of Living Adjustment**

Retirement allowances are indexed annually for inflation. The Board has authority to determine, no later than May 1<sup>st</sup> of each year, the average annual percentage change in the Consumer Price Index (CPI) for the purpose of providing a Cost of Living Adjustment (COLA) to the benefits of eligible Members and beneficiaries in July. The adjustment is based on the prior year's change of Los Angeles area CPI subject to a maximum of 3.0% for Tier 1 Members or 2.0% for Tier 3 Members. For Tier 1 Members, the COLA percentage greater than 3.0% is banked for future use.

## **Employer Contributions**

The Los Angeles City Charter Sections 1158 and 1160 provide for periodic actuarially-determined employer contribution rates that, expressed as percentages of annual covered payroll, are sufficient to accumulate the required assets to pay benefits when due. For the fiscal year ended June 30, 2020, the actuarially-determined aggregate employer contribution rate to the Retirement Plan by the City was 24.75% of projected payroll, based on the June 30, 2018 actuarial valuation.

Upon closing the fiscal year 2019-20, LACERS recalculated the employer contribution rate using actual payroll incurred during the fiscal year, which was smaller than projected covered payroll used by the City to make the advance payment on July 15, 2019. As a result, employer contributions received for the Retirement Plan were \$39,069,000 more than required, and this amount was credited to the employer toward employer contributions for fiscal year 2020-21. Based on actual payroll, the effective rate of employer contribution for Retirement Plan was 24.36% for fiscal year 2019-20.

#### **Member Contributions**

#### Tier 1 and Tier 1 Enhanced

The current contribution rate for Tier 1 and Tier 1 Enhanced Members is 11% of their pensionable salary including a 1% increase in the Member contribution rate pursuant to 2009 Early Retirement Incentive Program (ERIP) ordinance for all employees for a period of 15 years (or until the ERIP Cost obligation is fully recovered, whichever comes first). Contribution rates for Tier 1 and Tier 1 Enhanced Members is expected to decrease by 1% once ERIP obligation is fully paid.

#### Tier 3

The contribution rate for Tier 3 Members is 11% of their pensionable salary. Unlike Tier 1, Tier 3 Members do not pay ERIP contribution, therefore, Tier 3 Members' contribution rate will not drop down when Tier 1 Members cease to pay the 1% ERIP contribution.

#### **Net Pension Liability**

As of June 30, 2020, the components of the net pension liability were as follows (in thousands):

Plan Fiduciary Net Position as a percentage

of the Total Pension Liability 66.3%

(1) In calculating the Plan's net pension liability, the total pension liability and the Plan fiduciary net position exclude a total amount of \$79,716,000 associated with Family Death and Larger Annuity Benefits. The details of the amount excluded can be found in the Schedule of Net Pension Liability on page 52.

#### **Significant Assumptions**

Projections of benefits for financial reporting purposes are based on the types of benefits provided to active, inactive, and retired Members at the time of each valuation, including expected future COLAs. The attribution method and significant assumptions used in the valuation year of June 30, 2020, are summarized below:

Valuation Date June 30, 2020

Actuarial Cost Method Entry Age Method (individual basis).

Amortization Method Level Percent of Payroll

**Actuarial Assumptions:** 

Date of Experience Study June 30, 2019 (July 1, 2016 through June 30, 2019)

Long-Term Expected Rate of Return7.00%Inflation2.75%Real Across-the-Board Salary Increase0.50%

Projected Salary Increases Ranges from 4.25% to 9.95% based on years of service, including inflation

assumption at 2.75% and the real across-the-board salary increase

assumption of 0.50%.

Annual COLAs 2.75% maximum for Tier 1 and 2.00% maximum for Tier 3.

Mortality Table for Healthy Retirees Pub-2010 General Healthy Retiree Amount-Weighted Above-Median

Mortality Tables (separate tables for males and females) with rates increased by 10% for males, projected generationally with the two-dimensional

mortality improvement scale MP-2019.

Mortality Table for Disabled Retirees Pub-2010 Non-Safety Disabled Retiree Amount-Weighted Mortality Tables

with rates increased by 10% for males and decreased by 5% for females, projected generationally with the two dimensional mortality improvement

scale MP-2019.

Mortality Table for Beneficiaries Pub-2010 Contingent Survivor Amount-Weighted Above Meridian

Mortality Tables with rates increased by 10% for males and females, projected generationally with the two dimensional mortality improvement

scale MP-2019.

Percent Married / Domestic Partner 76% of male participants and 52% of female participants are assumed to be

married or have a qualified domestic partner.

Spouse Age Difference Male retirees are assumed to be three years older than their female spouses.

Female retirees are assumed to be two years younger than their male spouses.

#### **Net Pension Liability (Continued)**

#### **Discount Rate**

The discount rate used to measure the total pension liability was 7.00% as of June 30, 2020 and 7.25% as of June 30, 2019.

The projection of cash flows used to determine the discount rate assumed Plan Member contributions will be made at the current contribution rates and that employer contributions will be made at rates equal to the actuarially-determined contribution rates. For this purpose, only employee and employer contributions that are intended to fund benefits for current Plan Members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs for future Plan Members and their beneficiaries, as well as projected contributions from future Plan Members, are not included.

Based on those assumptions, the retirement plan's fiduciary net position was projected to be available to make all projected future benefit payments for current Plan Members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability as of both June 30, 2020 and June 30, 2019.

The long-term expected rate of return on retirement plan investments was determined using a buildingblock method in which expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation and subtracting expected investment expenses and a risk margin. The target allocation and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before deducting investment expenses, are summarized in the following table. These values were used in the derivation of the long-term expected investment rate of return assumption that was used in the actuarial valuation as of June 30, 2020. This information is subject to change every three years based on the actuarial experience study. The last experience study was for July 1, 2016 through June 30, 2019. The next experience study will be conducted in 2022.

| Asset Class            | Target<br>Allocation | Arithmetic<br>Long-Term<br>Expected<br>Real Rate<br>of Return |
|------------------------|----------------------|---|
|                        |                      |   |
| U.S. Large Cap Equity  | 15.01%               | 5.5%  |
| U.S. Small Cap Equity  | 3.99                 | 6.3   |
| Developed Int'l Large  |                      |   |
| Cap Equity             | 17.01                | 6.6   |
| Developed Int'l Small  |                      |   |
| Cap Equity             | 2.97                 | 6.9   |
| Emerging Int'l Large   |                      |   |
| Cap Equity             | 5.67                 | 8.7   |
| Emerging Int'l Small   |                      |   |
| Cap Equity             | 1.35                 | 10.6  |
| Core Bonds             | 13.75                | 1.2   |
| High Yield Bonds       | 2.00                 | 3.1   |
| Bank Loans             | 2.00                 | 3.7   |
| Emerging Market Debt   |                      |   |
| (External)             | 2.25                 | 3.6   |
| Emerging Market Debt   |                      |   |
| (Local)                | 2.25                 | 4.8   |
| Private Debt           | 3.75                 | 6.0   |
| Core Real Estate       | 4.20                 | 4.6   |
| Real Estate Investment |                      |   |
| Trust (REIT)           | 1.00                 | 6.0   |
| Treasury Inflation     |                      |   |
| Protected Securities   |                      |   |
| (TIPS)                 | 4.00                 | 0.9   |
| Commodities            | 1.00                 | 3.3   |
| Non-Core Real Assets   | 2.80                 | 5.8   |
| Private Equity         | 14.00                | 9.0   |
| Cash                   | 1.00                 | 0.0   |
| Total                  | 100.00%              |   |

# Sensitivity of the Net Pension Liability to Changes in the Discount Rate

The following presents the net pension liability of LACERS as of June 30, 2020, calculated using the discount rate of 7.00%, as well as what LACERS net pension liability would be if it were calculated using a discount rate that is one percentage point lower (6.00%) or one percentage point higher (8.00%) than the current rate (dollar in thousands):

|              | Current     |             |
|--------------|-------------|-------------|
| 1%           | Discount    | 1%          |
| Decrease     | Rate        | Increase    |
| (6.00%)      | (7.00%)     | (8.00%)     |
| \$10,642,600 | \$7,594,791 | \$5,073,179 |

# 3. Postemployment Health Care Plan Description

# **Plan Administration and Membership**

LACERS administers, and provides single-employer postemployment healthcare benefits to eligible retirees and their eligible spouses/domestic partners who participate in the Retirement Plan regardless of their membership tiers. These benefits consist of subsidies which may also apply to the coverage of other eligible dependent(s).

On November 9, 2018, the City Council approved Ordinance No. 185829 to amend Article 1 of Chapter 11, Division 4 of the Los Angeles Administrative Code to establish the LACERS Health Care Fund (115 Trust Account) for the sole purpose of funding the retiree healthcare benefits for eligible LACERS retirees and beneficiaries as well as to help stabilize premium rates over time.

The City and the Board of LACERS entered into a written trust agreement for the LACERS Health Care Fund which shall provide an alternative funding mechanism, in addition to or in lieu of the existing 401 (h) account described in LAAC Section 4.1102 for funding benefits under the health and welfare The LACERS Health Care Fund is programs. intended to qualify for federal tax exemption under Section 115 of the Internal Revenue Code. Because health benefits paid out of the LACERS Health Care Fund are not required to be subordinate to the Plan retirement benefits, the LACERS Health Care Fund would not become taxable if the Plan health benefits surpass the 25% threshold. Second, the LACERS Health Care Fund gives LACERS more flexibility to invest premium surpluses to provide for smoothing should healthcare premiums increased considerably in the future. Currently, the Health Care Coverage Account (401 (h) account) cannot receive full refunds of excess premiums from insurance providers. However, the LACERS Health Care Fund can receive full premium surplus refunds from insurance providers; therefore, the System can invest these funds at a higher rate of return than the insurance providers' reserve account interest rate.

Effective January 1, 2019, LACERS fully-insured Delta Dental PPO Plan was replaced with LACERS self-funded Delta Dental PPO Plan. Although Delta continues to administer the plan for a fee, LACERS sets and collects premiums from enrolled Members and pays billed claims to Delta. With this arrangement, LACERS bears financial risk if claims cost exceed collected premiums. This change does not affect the maximum dental subsidy amount to the eligible retired Members.

As of June 30, 2020, the components of Membership, excluding non-participating retirees and surviving spouses of LACERS postemployment healthcare benefits were as follows:

| Vested terminated Members entitled                |        |
|---|--------|
| to, but not yet receiving benefits <sup>(2)</sup> | 1,526  |
| Retired Members and surviving                     |        |
| spouses not yet eligible for health               |        |
| benefits  | 142    |
| Active Members 2                                  | 27,490 |
| Total   | 45,265 |

- Total participants including married dependents and dependent children currently receiving benefits are 21.572.
- Includes terminated Members due a refund of employee contributions.

## **Eligibility Requirement and Benefits Provided**

To be eligible for LACERS postemployment healthcare benefits, Member must: 1) be at least age 55; 2) have at least 10 whole years of service with LACERS; and 3) be enrolled in a System-sponsored medical or dental plan or are a participant in the Medical Premium Reimbursement Program (MPRP). Retirees and surviving spouses/domestic partners can choose from the health plans that are available, which include medical, dental, and vision benefits, or participate in the MPRP if he/she resides in an area not covered by the available medical plans. Retirees and surviving spouses/domestic partners receive medical subsidies based on service years and service credit. The dental subsidies are provided to the retirees only, based on service years and service credit.

The maximum subsidies are set annually by the Board. Effective February 21, 2016, healthcare benefit eligibility requirements have changed for the Members who have periods of part-time service. Such Members are now eligible to participate in the LACERS retiree medical programs with a 10 whole years of service, even if some or all of that service was part-time, provided that the Member meets the eligibility requirements. Both Tier 1 and Tier 3 Members will be eligible for 40% of maximum medical plan premium subsidy for 1 - 10 whole years of service credit, and eligible Members earn 4% per year of service credit for their annual medical subsidy accrual after 10 years of service. Eligible spouses/domestic partners of Plan Members are entitled to the System's postemployment healthcare benefits after the retired Member's death.

# **Eligibility Requirement and Benefits Provided** (Continued)

During the 2011 fiscal year, the City adopted an ordinance ("Subsidy Cap Ordinance") to limit the maximum medical subsidy at \$1,190 for those Members who retire on or after July 1, 2011; however, Members who at any time prior to retirement made additional contributions are exempted from the subsidy cap and obtain a vested right to future increases in the maximum medical subsidy at an amount not less than the dollar increase in the Kaiser two-party non-Medicare Part A and Part B premium. As of June 30, 2020, all active Tier 1 and Tier 3 Members were making the additional contributions, and therefore will not be subject to the medical subsidy cap.

### **Employer Contributions**

The Los Angeles City Charter Sections 1158 and 1160 require periodic employer contributions at actuarially determined rates that, expressed as percentages of annual covered payroll, are sufficient to accumulate the required assets to pay benefits when due. The required contribution rate for the Postemployment Health Care Plan for the fiscal year ended June 30, 2020, was 4.91% of projected payroll, based on the June 30, 2018 actuarial valuation.

Upon closing the fiscal year 2019-20, LACERS recalculated employer contribution rate using actual payroll incurred during the fiscal year which was smaller than projected covered payroll used by the City to make the advance payment on July 15, 2019. employer result, contributions a Postemployment Health Care Plan were \$7,048,000 more than required, and this amount was returned to the employer as a credit toward employer contribution for fiscal year 2020-21. While the total actual payroll was lower than projected, actual payroll for Tier 3 Members was higher than projected. Because the employer contribution rate for Postemployment Health Care Plan for Tier 3 Members was higher than the rate for Tier 1 Members, the overall effective rate of employer contribution for Postemployment Health Care Plan, based on actual payroll, was 4.94%, a slightly higher rate than 4.91% originally projected.

#### **Net OPEB Liability**

As of June 30, 2020, the components of the net OPEB liability were as follows (in thousands):

Total OPEB Liability\$ 3,486,530Plan Fiduciary Net Position2,851,204Plan's Net OPEB Liability\$ 635,326

Plan Fiduciary Net Position as a percentage

of the Total OPEB Liability 81.8%

# **Significant Assumptions**

The total OPEB liability as of June 30, 2020 was determined by actuarial valuation as of June 30, 2020. The attribution method and significant assumptions used to measure the total OPEB liability, including assumptions about inflation, and healthcare cost trend rates in the valuation year of June 30, 2020, are summarized below:

Valuation Date June 30, 2020

Actuarial Cost Method Entry Age Cost Method – level percent of salary.

Amortization Method: Level Percent of Payroll – assuming a 3.25% increase in total covered

payroll.

**Actuarial Assumptions:** 

Date of Experience Study June 30, 2019 (July 1, 2016 through June 30, 2019)

Long-Term Expected Rate of Return 7.00% Inflation 2.75%

Salary Increase Range from 4.25% to 9.95% based on years of service, including

inflation assumption at 2.75%.

Mortality Table for Retirees Pub-2010 General Healthy Retiree Amount-Weighted Above-Median

Mortality Tables (separate tables for males and females) with rates increased by 10% for males, projected generationally with the two-

dimensional mortality improvement scale MP-2019.

Mortality Table for Disabled Retirees Pub-2010 Non-Safety Disabled Retiree Amount-Weighted Mortality

Tables with rates increased by 10% for males and decreased by 5% for females, projected generationally with the two dimensional mortality

improvement scale MP-2019.

Mortality Table for Beneficiaries Pub-2010 Contingent Survivor Amount-Weighted Above Meridian

Mortality Tables with rates increased by 10% for males and females, projected generationally with the two dimensional mortality

improvement scale MP-2019.

Marital Status 60% of male and 35% of female retirees who receive a subsidy are

assumed to be married or have a qualified domestic partner and elect

dependent coverage.

Spouse Age Difference Male retirees are assumed to be four years older than their female

spouses. Female retirees are assumed to be two years younger than their

male spouses.

Surviving Spouse Coverage With regard to Members who are currently alive, 100% of eligible

spouses or domestic partners are assumed to elect continued health

coverage after the Member's death.

# **Net OPEB Liability (Continued)**

# **Significant Assumptions (Continued)**

Healthcare Cost Trend Rates

Medical Premium Trend Rates to be applied in the following fiscal years, to all health plans. Trend Rate is to be applied to the premium for shown fiscal year to calculate next fiscal year's projected premium.

Medical Premium Trend Rates to be applied to fiscal year 2020-2021 and later years are:

| First Fiscal Year (July 1, 2020 through June 30, 2021) |        |          |  |
|--|--------|----------|--|
| Carrier  | Under  | Age 65 & |  |
| Carrier  | Age 65 | Over     |  |
| Kaiser HMO   | 3.37%  | 3.12%    |  |
| Anthem Blue Cross HMO                                  | 4.85%  | N/A      |  |
| Anthem Blue Cross PPO                                  | 3.71%  | 4.45%    |  |
| UHC Medicare HMO                                       | N/A    | 3.12%    |  |

| Fiscal Year 2021 - 2022 and later |                 |  |  |  |
|-----------------------------------|-----------------|--|--|--|
| Fiscal Year                       | Trend (Approx.) |  |  |  |
| 2021 - 2022                       | 6.62%           |  |  |  |
| 2022 - 2023                       | 6.37%           |  |  |  |
| 2023 - 2024                       | 6.12%           |  |  |  |
| 2024 - 2025                       | 5.87%           |  |  |  |
| 2025 - 2026                       | 5.62%           |  |  |  |
| 2026 - 2027                       | 5.37%           |  |  |  |
| 2027 - 2028                       | 5.12%           |  |  |  |
| 2028 - 2029                       | 4.87%           |  |  |  |
| 2029 - 2030                       | 4.62%           |  |  |  |
| 2030 - 2031 and later             | 4.50%           |  |  |  |
|                                   |                 |  |  |  |

Dental Premium Trend to be applied is 4.00% for all years.

Medicare Part B Premium Trend is 4.50% for all years.

# **Net OPEB Liability (Continued)**

#### **Discount Rate**

The discount rate used to measure the total OPEB liability was 7.00% as of June 30, 2020 and 7.25% as of June 30, 2019.

The projection of cash flows used to determine the discount rate assumed that employer contributions will be made at rates equal to the actuarially-determined contribution rates. For this purpose, employer contributions that are intended to fund benefits only for current Plan Members and their beneficiaries are included. Projected employer contributions that are intended to fund the service costs for future Plan Members and their beneficiaries, as well as projected contributions from future Plan Members, are not included.

Based on those assumptions, the OPEB plan's fiduciary net position was projected to be available to make all projected future benefit payments for current Plan Members. Therefore, the long-term expected rate of return on OPEB plan investments was applied to all periods of projected benefit payments to determine the Total OPEB Liability as of June 30, 2020 and June 30, 2019.

The long-term expected rate of return on OPEB plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation and subtracting expected investment expenses and a risk margin. The target allocation and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before deducting investment expenses, are summarized in the following table. These values were used in the derivation of the long-term expected investment rate of return assumption for the actuarial valuation as of June 30, 2020. This information is subject to change every three years based on the actuarial experience study. The last experience study was for July 1, 2016 through June 30, 2019. The next experience study will be conducted in 2022.

|                        | Target     | Arithmetic<br>Long-Term<br>Expected<br>Real Rate |
|------------------------|------------|--|
| Asset Class            | Allocation | of Return  |
| U.S. Large Cap Equity  | 15.01%     | 5.5%   |
| U.S. Small Cap Equity  | 3.99       | 6.3  |
| Developed Int'l Large  |            |  |
| Cap Equity             | 17.01      | 6.6  |
| Developed Int'l Small  |            |  |
| Cap Equity             | 2.97       | 6.9  |
| Emerging Int'l Large   |            |  |
| Cap Equity             | 5.67       | 8.7  |
| Emerging Int'l Small   |            |  |
| Cap Equity             | 1.35       | 10.6   |
| Core Bonds             | 13.75      | 1.2  |
| High Yield Bonds       | 2.00       | 3.1  |
| Bank Loans             | 2.00       | 3.7  |
| Emerging Market Debt   |            |  |
| (External)             | 2.25       | 3.6  |
| Emerging Market Debt   |            |  |
| (Local)                | 2.25       | 4.8  |
| Private Debt           | 3.75       | 6.0  |
| Core Real Estate       | 4.20       | 4.6  |
| Real Estate Investment | 4.00       | - 0  |
| Trust (REIT)           | 1.00       | 6.0  |
| Treasury Inflation     |            |  |
| Protected Securities   | 4.00       | 0.0  |
| (TIPS)                 | 4.00       | 0.9  |
| Commodities            | 1.00       | 3.3  |
| Non-Core Real Assets   | 2.80       | 5.8  |
| Private Equity         | 14.00      | 9.0  |
| Cash                   | 1.00       | 0.0  |
| Total                  | 100.00%    |  |

# Sensitivity of the Net OPEB Liability to Changes in the Discount Rate

The following presents the net OPEB liability of LACERS as of June 30, 2020, calculated using the discount rate of 7.00%, as well as what LACERS net OPEB liability would be if it were calculated using a discount rate that is one percentage point lower (6.00%) or one percentage point higher (8.00%) than the current rate (dollar in thousands):

|             | Current    |            |
|-------------|------------|------------|
| 1%          | Discount   | 1%         |
| Decrease    | Rate       | Increase   |
| (6.00%)     | (7.00%)    | (8.00%)    |
| \$1,137,842 | \$ 635,326 | \$ 225,113 |

#### **Net OPEB Liability (Continued)**

# Sensitivity of the Net OPEB Liability to Changes in the Healthcare Cost Trend Rates

The following presents the net OPEB liability of LACERS as of June 30, 2020, calculated using the healthcare cost trend rates as well as what LACERS net OPEB liability would be if it were calculated using trend rates that are one percentage point lower or one percentage point higher than the current rates (dollar in thousands):

|            | Current              |             |
|------------|----------------------|-------------|
|            | Healthcare           |             |
| 1%         | Cost Trend           | 1%          |
| Decrease   | Rates <sup>(1)</sup> | Increase    |
| \$ 187,139 | \$ 635,326           | \$1,195,159 |

(1) Current healthcare cost trend rates: 6.62% graded down to 4.50% over 9 years for Non-Medicare medical plan costs, and 6.12% graded down to 4.50% over 7 years for Medicare medical plan costs. 4.00% for all years for Dental and 4.50% for all years for Medicare Part B subsidy cost.

# 4. Contributions Required and Contributions Made

LACERS uses the Entry Age cost method to determine the required annual contribution amount for the Retirement Plan and the Postemployment Health Care Plan. The required annual contribution amount is composed of two components: normal cost, which is the cost of the portion of the benefit that is allocated to a given year, and the payment to amortize the Unfunded Actuarial Accrued Liability (UAAL) which is the difference between LACERS actuarial liabilities and actuarial assets. The components of the UAAL are amortized as a level percent of pay. Based on LACERS funding policy, increases or decreases in the UAAL due to assumption changes are amortized over 20 years, except that healthcare cost trend and premium assumption changes are amortized over 15 years. Plan changes and experience gains and losses are amortized over 15 years, subject to adjustments to comply with GASB requirements on maximum amortization period of 30 years for all layers combined. The amortization periods are "closed" as each layer of the UAAL is systematically amortized over a "fixed" period.

The total contributions to LACERS for the fiscal year ended June 30, 2020, in the amount of \$929,294,000 (\$817,158,000 for the Retirement Plan and \$112,136,000 for the Postemployment Health Care Plan), consisted of the following (in thousands):

|                          | Retirement<br>Plan |         | P  | ostemployment<br>Health Care<br>Plan |
|--------------------------|--------------------|---------|----|--------------------------------------|
| City Contributions:      |                    |         |    |                                      |
| Required Contributions   | \$                 | 553,118 | \$ | 112,136                              |
| FDBP                     |                    | 104     |    | =_                                   |
| Total City Contributions |                    | 553,222 |    | 112,136                              |
| Member Contributions     |                    | 263,936 |    | -                                    |
| Total Contributions      | \$                 | 817,158 | \$ | 112,136                              |

The City contributions made for the Retirement Plan under the Required Contributions category in the amount of \$553,118,000 were equal to 100% of the actuarially determined contribution of the employer. The City contributions made for the Postemployment Health Care Plan, in the amount of \$112,136,000, represents 100% of the actuarially determined contribution of the employer as defined by GASB Statement No. 74. Member contributions in the amount of \$263,936,000 were made toward the Retirement Plan, the voluntary Larger Annuity Plan and Family Death Benefit Plan.

#### **5. Historical Trend Information**

Historical trend information, designed to provide information about LACERS progress made in accumulating sufficient assets to pay benefits when due, is presented on pages 52 - 57 for the Retirement Plan and pages 58 - 62 for the Postemployment Health Care Plan.

# 6. Cash and Short-Term Investments and Investments

The Board has the responsibility for the investment of LACERS funds, and should discharge its duties with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with these matters would use in the conduct of an enterprise of a like character and with like aims, as prescribed by Article XI Section 1106(c) of the City Charter.

LACERS considers investments with a maturity of 12 months or less to be short-term investments. The carrying value of cash and short-term investments at June 30, 2020, for the Retirement Plan and Postemployment Health Care Plan included approximately \$4,853,000 held in LACERS general operating accounts with the City Treasurer and shortterm investments funds (STIF) of \$660,195,000 for a total of \$665,048,000. The amounts held by the City Treasurer are pooled with the monies of other City agencies and invested by the City Treasurer's office. These assets are not individually identifiable. At June 30, 2020, short-term investments included collective STIF of \$324,917,000, international STIF of \$149,075,000, and future contracts initial margin and collaterals of \$186,203,000.

The fair value of derivative instruments, including equity index, commodity, currency, and interest rate future contracts, currency forward contracts and options, rights and warrants and swaps, are recorded in the Statement of Fiduciary Net Position with a net value of \$2,124,000. The changes in fair value of the derivative instruments during the fiscal year are recorded in the Statement of Changes in Fiduciary Net Position as Investment Income. LACERS enters into derivative contracts for investment purposes and to manage risks associated with its investment portfolio. For financial reporting purposes, all of LACERS derivatives for the current and previous fiscal years are classified as investment derivatives.

The notional amount and the fair value of derivative instruments as of June 30, 2020, are as follows (in thousands):

| Derivative Type      | Notional<br>Amount | Fair<br>Value | i  | Change<br>in Fair<br>Value |
|----------------------|--------------------|---------------|----|----------------------------|
| Future Contracts -   |                    |               |    |                            |
| Commodities          | \$ 180,392         | \$ 2,076      | \$ | 3,077                      |
| Equity Index         | 26,890             | 73            |    | 15                         |
| Foreign Exchange     | 2,344              | 1             |    | 3                          |
| Interest Rate        | (39,540)           | 171           |    | 133                        |
| Currency Forward     |                    |               |    |                            |
| Contracts            | 2,344              | (587)         |    | (501)                      |
| Right / Warrants     | N/A                | 238           |    | 41                         |
| Swaps –Interest Rate | N/A                | 152           |    | 151                        |
| Total Value          |                    | \$ 2,124      | \$ | 2,919                      |

#### Credit Risk - Investments

Credit risk is the risk that an issuer or other counterparty to an investment will not fulfill its obligations. LACERS seeks to maintain a diversified portfolio of fixed income instruments in order to obtain the highest total return for the fund at an acceptable level of risk within this asset class. The credit quality ratings of investments in fixed income securities by Standard and Poor's (S&P), a nationally-recognized statistical rating organization, as of June 30, 2020, are as follows (dollars in thousands):

| S & P Ratings   | Fair Value     | Percentage  |
|---|----------------|-------------|
| AAA   | \$ 51,548      | 1.99%       |
| AA+   | 45,690         | 1.76        |
| AA  | 555,575        | 21.45       |
| AA-   | 44,207         | 1.71        |
| A+  | 45,871         | 1.77        |
| A   | 64,074         | 2.47        |
| A-  | 173,544        | 6.70        |
| BBB+  | 242,534        | 9.36        |
| BBB   | 228,559        | 8.82        |
| BBB-  | 223,646        | 8.63        |
| BB+   | 60,006         | 2.32        |
| BB  | 72,074         | 2.78        |
| BB-   | 145,134        | 5.60        |
| B+  | 64,777         | 2.50        |
| В   | 280,125        | 10.82       |
| B-  | 63,422         | 2.45        |
| CCC+  | 23,990         | 0.93        |
| CCC   | 6,377          | 0.25        |
| CCC-  | 3,288          | 0.13        |
| CC  | 5,590          | 0.22        |
| C   | 146            | 0.00        |
| D   | 8,472          | 0.33        |
| Not Rated   | <u>181,464</u> | <u>7.01</u> |
|   | \$ 2,590,113   | 100.00%     |
| U.S. Government<br>Guaranteed Securities <sup>(1)</sup> | 2,094,563      |             |
| Total Fixed Income<br>Securities                        | \$ 4,684,676   |             |

 Consists of U.S. Government Bonds and GNMA Mortgage-Backed Securities which had the AA+ rating.

#### Credit Risk - Derivatives

Derivatives are subject to credit risk that the counterparty to a contract will default. LACERS is exposed to credit risk on reported assets of the investment derivatives that are traded over the counter. The credit risk of exchange traded derivatives for future contracts is considered minimal because the exchange clearing house is the counterparty and guarantees the performance.

LACERS permits investment managers, under the terms of individual guidelines, to use derivative instruments as set forth in each manager's investment guidelines to control portfolio risk. It is the responsibility of these investment managers to actively monitor counterparties on their financial safety and ensure compliance with the investment restrictions. LACERS has no general investment policy with respect to netting arrangements or collateral requirements. However, these individual investment managers have set up the arrangements with the counterparties to net off the positive and negative contracts with the same counterparty in case of the counterparty's default.

As of June 30, 2020, without respect to netting arrangements, LACERS maximum loss on derivative instruments subject to credit risk, namely currency forward contracts, is \$1,458,000. All counterparties of these investment derivatives had the credit rating of "A" or "AA" assigned by S&P.

#### **Custodial Credit Risk**

Custodial credit risk for deposits is the risk that, in the event of a financial institution's failure of depository financial institution, LACERS would not be able to recover its deposits or would not be able to recover collateral securities that are in the possession of an outside party. Deposits are exposed to custodial credit risk if they are not insured or not collateralized. As of June 30, 2020, LACERS has exposure to such risk in the amount of \$21,757,000 or 0.4% of the fair value of total international investments. The amount represents non-invested cash denominated in foreign currencies, managed by 14 different investment managers, and held outside of LACERS custodial bank. LACERS policy requires each individual publicly traded equities investment manager to hold no more than 10% of their portfolios in the form of cash. LACERS is in compliance with the policy.

# **Custodial Credit Risk (Continued)**

Investment securities are exposed to custodial credit risk if the securities are not insured, are not registered in LACERS name, and are held by the counterparty, or the counterparty's trust department or agent but not in LACERS name. As of June 30, 2020, LACERS investments were not exposed to custodial credit risk because all securities were registered in the name of the System.

#### **Concentration of Credit Risk**

The investment portfolio as of June 30, 2020, contained no concentration of investments in any one entity that represented 5% or more of the total investment portfolio.

#### **Interest Rate Risk**

Interest rate risk is the risk that changes in market interest rates will adversely affect the fair value of an investment. One of the ways LACERS manages its exposure to interest rate risk is by requiring the fixed income investment managers to maintain their portfolio effective duration within a specified range of the BC U.S. High Yield 2% Capped Index, the BC Intermediate Government Credit Index, the BC Aggregate Bond Index, or the J.P. Morgan EMBI Global Diversified Index, depending on the Board's mandates. The effective duration is a measure, in years, of interest-rate sensitivity in debt investments. The longer the effective duration, the greater the sensitivity to interest rate changes. Information about the sensitivity of the fair values of LACERS investments to market interest rate fluctuations as of June 30, 2020 is provided by the following table that shows the weighted average effective duration of LACERS fixed income securities by investment type (dollars in thousands):

| Investment Type                                  | Fa | ir Value  | Weighted<br>Average<br>Duration<br>(in Years) |
|--|----|-----------|---|
| my estiment Type                                 |    | iii varac | (III Tears)                                   |
| Asset-Backed Securities                          | \$ | 28,360    | 1.43  |
| Bank Loans                                       |    | 4,205     | 1.89  |
| Commercial Mortgage-<br>Backed Securities        |    | 81,021    | 4.68  |
| Corporate Bonds                                  |    | 1,353,654 | 7.09  |
| Government Agencies                              |    | 69,978    | 7.27  |
| Government Bonds                                 |    | 1,057,895 | 7.31  |
| Government Mortgage-<br>Backed Securities        |    | 483,830   | 3.09  |
| Index Linked Government<br>Bonds                 |    | 836,253   | 5.17  |
| Municipal/Provincial Bonds                       |    | 3,296     | 3.00  |
| Non-Government Backed<br>Collateralized Mortgage |    | 20.520    | 2.45  |
| Obligations (C.M.O.s)                            |    | 20,538    | 2.46  |
| Opportunistic Debts                              |    | 223,375   | 0.42  |
| Other Fixed Income (Funds)                       |    | 522,272   | 6.08  |
| Total Fixed Income<br>Securities                 | \$ | 4,684,677 |   |

# **Highly-Sensitive Investments**

Highly-sensitive investments are certain debt investments whose terms may cause their fair value to be highly-sensitive to market interest rate changes. Terms include embedded options, coupon multipliers, benchmark indexes, and reset dates. LACERS asset-backed investments have embedded prepayment options that will typically cause prepayments by the obligees of the underlying investments when interest rates fall. Prepayments eliminate the stream of future interest payments and, therefore, diminish the fair value of the asset-backed investment. The following table shows the fair value of LACERS asset-backed investments by investment type (in thousands):

| Investment Type                       | Fair Value |         |  |
|---------------------------------------|------------|---------|--|
| Asset-Backed Securities               | \$         | 28,360  |  |
| Commercial Mortgage-Backed Securities |            | 81,021  |  |
| Government Agencies                   |            | 69,978  |  |
| Government Mortgage-Backed Securities |            | 483,830 |  |
| Non-Government Backed C.M.O.s         |            | 20,538  |  |
| Total Asset-Backed Investments        | \$         | 683,727 |  |

### **Foreign Currency Risk**

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or deposit. LACERS Asset Allocation policy sets a target of 27% of the total portfolio for non-U.S. investments in equities. In addition, fixed income, real estate, and private equity managers may hold non-U.S. investments depending on their individual mandates. Forward currency contracts are permitted primarily to reduce the foreign currency risk.

# Foreign Currency Risk (Continued)

LACERS non-U.S. currency investment holdings as of June 30, 2020, which represent 27.3% of the fair value of total investments, are as follows (in thousands):

| Foreign Currency Type     | Cash and Adjustments to Cash | Equity       | Fixed<br>Income | Derivatives<br>Instruments | Other<br>Investments | Total<br>Fair Value<br>in USD |  |
|---------------------------|------------------------------|--------------|-----------------|----------------------------|----------------------|-------------------------------|--|
| Australian dollar         | (2,571)                      | 152,234      | _               | (171)                      | -                    | 149,492                       |  |
| Brazilian real            | (1,146)                      | 64,630       | 150             | 118                        | -                    | 63,752                        |  |
| British pound sterling    | 1,590                        | 503,563      | 3,827           | (44)                       | -                    | 508,936                       |  |
| Canadian dollar           | 1,605                        | 219,404      | -               | 2                          | -                    | 221,011                       |  |
| Chilean peso              | (4,913)                      | 3,774        | _               | 74                         | -                    | (1,065)                       |  |
| Chinese yuan renminbi     | 10,726                       | 45,911       | -               | (71)                       | (126)                | 56,440                        |  |
| Colombian peso            | (3,214)                      | 4,080        | -               | 108                        | -                    | 974                           |  |
| Czech koruna              | 853                          | 695          | _               | (115)                      | _                    | 1,433                         |  |
| Danish krone              | 48                           | 83,440       | -               | -                          | -                    | 83,488                        |  |
| Egyptian pound            | _                            | 367          | -               | -                          | -                    | 367                           |  |
| Euro                      | (4,471)                      | 1,153,528    | 18,235          | (47)                       | 106,486              | 1,273,731                     |  |
| Hong Kong dollar          | 1,954                        | 470,392      | -               | 12                         | -                    | 472,358                       |  |
| Hungarian forint          | (820)                        | 4,999        | _               | (59)                       | -                    | 4,120                         |  |
| Indian rupee              | (7,585)                      | 111,906      | _               | (51)                       | -                    | 104,270                       |  |
| Indonesian rupiah         | 1,589                        | 20,118       | -               | 44                         | -                    | 21,751                        |  |
| Japanese yen              | 4,575                        | 768,265      | -               | 26                         | -                    | 772,866                       |  |
| M alay sian ringgit       | 98                           | 12,522       | -               | -                          | -                    | 12,620                        |  |
| Mexican peso              | 1,568                        | 35,076       | -               | 299                        | 278                  | 37,221                        |  |
| New Israeli shekel        | 1,658                        | 19,226       | -               | 2                          | -                    | 20,886                        |  |
| New Taiwan dollar         | (2,804)                      | 169,225      | _               | (37)                       | -                    | 166,384                       |  |
| New Zealand dollar        | 44                           | 6,111        | -               | (109)                      | -                    | 6,046                         |  |
| Norwegian krone           | 448                          | 25,797       | -               | -                          | -                    | 26,245                        |  |
| Peruvian nuevo sol        | (3,820)                      | -            | -               | 59                         | -                    | (3,761)                       |  |
| Philippine peso           | (2,542)                      | 10,440       | -               | (40)                       | -                    | 7,858                         |  |
| Polish zloty              | 1,147                        | 5,909        | -               | (208)                      | -                    | 6,848                         |  |
| Qatari riyal              | -                            | 1,712        | -               | -                          | -                    | 1,712                         |  |
| Russian ruble             | 4,076                        | 14,490       | -               | 16                         | -                    | 18,582                        |  |
| Singapore dollar          | 8,642                        | 42,335       | -               | -                          | -                    | 50,977                        |  |
| South African rand        | (2,665)                      | 51,743       | 670             | 110                        | -                    | 49,858                        |  |
| South Korean won          | 7,322                        | 166,080      | -               | 7                          | -                    | 173,409                       |  |
| Swedish krona             | 83                           | 118,687      | -               | -                          | -                    | 118,770                       |  |
| Swiss franc               | 136                          | 335,919      | -               | -                          | -                    | 336,055                       |  |
| Thai baht                 | 6,721                        | 14,678       | -               | -                          | -                    | 21,399                        |  |
| Turkish lira              | (5,570)                      | 8,385        | -               | (24)                       | -                    | 2,791                         |  |
| Total Investments Held in |                              |              |                 |                            |                      |                               |  |
| Foreign Currency          | \$ 12,762                    | \$ 4,645,641 | \$ 22,882       | \$ (99)                    | \$ 106,638           | \$ 4,787,824                  |  |

#### **Fair Value Measurements**

LACERS follows GASB Statement No. 72 (GASB 72), Fair Value Measurements and Application. GASB 72 addresses accounting and financial reporting issues related to fair value measurements and disclosures. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants in either a government's principal or the most advantageous market at the measurement date.

The System's investments are measured and reported within the fair value hierarchy established by US GAAP. The fair value hierarchy, which has three levels, is based on the valuation inputs used to measure an asset's fair value and gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are as follows:

Level 1 inputs are quoted prices (unadjusted) for identical assets or liabilities in active markets.

Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for an asset or liability, either directly or indirectly. Inputs to the valuation include: 1) quoted prices for similar assets or liabilities in active markets; 2) quoted prices for identical or similar assets or liabilities in markets that are not active; 3) inputs other than quoted prices that are observable for the asset or liability; and 4) market-corroborated inputs.

Level 3 inputs are unobservable inputs for an asset or liability where there are little market activities. The inputs into the determination of fair value are based upon the best information in the circumstances and may require management judgment or estimation.

#### Schedule of Investments by Fair Value Hierarchy

Equity securities classified in Level 1 of the fair value hierarchy are valued using prices quoted in active markets for those securities. Debt and equity securities classified in Level 2 or 3 of the fair value hierarchy are valued using a matrix pricing technique based on the availability of the market price, the pricing source and type, and the country of incorporation of the securities. The hierarchy levels are determined based on the level of corroborative information obtained from other market sources to assert that the prices provided represent observable data.

The exchange traded Future Contracts classified in Level 1 of the fair value hierarchy are valued using a daily settlement when available or as a daily mark to market. The Foreign Exchange Contracts (liabilities) classified in Level 2 of the fair value hierarchy are valued using independent pricing services including London Close Midevaluation, WM/Reuters Company, Bloomberg, and Thomson Reuters.

Real estate funds classified in Level 3 of the fair value hierarchy are valued based on periodic appraisals in accordance with industry practice, or other valuation methods and techniques including models.

The System's remaining investments not categorized under the fair value hierarchy, such as private equity partnerships, real estate comingled funds and other investments which do not have a readily determinable fair value have been valued at the Net Asset Value (NAV). NAV is calculated and used as a practical expedient to estimate fair value of LACERS' interest, unless it is probable that all or a portion of the investments will be sold for an amount different from the NAV. As of June 30, 2020, LACERS had no specific plans to sell investments at amounts different from NAV. These investments are disclosed in the Investments Measured at the NAV on page 48

# **6.** Cash and Short-Term Investments and Investments (Continued)

# **Fair Value Measurements (Continued)**

# **Schedule of Investments by Fair Value Hierarchy (Continued)**

The System has the following recurring fair value measurements as of June 30, 2020 (in thousands):

| The System has the following recurring rain va |    |            | Fair Value Measurements Using |  |          |                                  |           |                                  |  |  |
|--|----|------------|-------------------------------|--|----------|----------------------------------|-----------|----------------------------------|--|--|
|  |    |            | Ac                            | oted Prices in<br>tive Markets<br>or Identical | S        | ignificant<br>Other<br>bservable | Si        | gnificant<br>Other<br>observable |  |  |
|  |    |            |                               | Assets   |          | Inputs                           |           | Inputs                           |  |  |
|  |    | Total      |                               | (Level 1)                                      | (        | Level 2)                         | (         | Level 3)                         |  |  |
| Investments by Fair Value Level:               |    |            |                               |  |          |                                  |           |                                  |  |  |
| Debt securities:                               |    |            |                               |  |          |                                  |           |                                  |  |  |
| Government Bonds                               | \$ | 1,894,148  | \$                            | -  | \$       | 1,894,148                        | \$        | -                                |  |  |
| Government Agencies                            |    | 69,978     |                               | -  |          | 69,978                           |           | -                                |  |  |
| Municipal/Provincial Bonds                     |    | 3,296      |                               | -  |          | 3,296                            |           | -                                |  |  |
| Corporate Bonds                                |    | 1,402,552  |                               | -  |          | 1,402,402                        |           | 150                              |  |  |
| Bank Loans                                     |    | 4,206      |                               | -  |          | 4,206                            |           | -                                |  |  |
| Government Mortgage Bonds                      |    | 483,830    |                               | -  |          | 483,830                          |           | -                                |  |  |
| Commercial Mortgage Bonds                      |    | 81,020     |                               | -  |          | 81,020                           |           |                                  |  |  |
| Opportunistic Debts                            |    | 13,872     |                               | <u>-</u>                                       |          | <u> </u>                         |           | 13,872                           |  |  |
| Total Debt Securities                          |    | 3,952,902  |                               |  |          | 3,938,880                        |           | 14,022                           |  |  |
| Equity Securities:                             |    |            |                               |  |          |                                  |           |                                  |  |  |
| Common Stock:                                  |    |            |                               |  |          |                                  |           |                                  |  |  |
| Basic Industries                               |    | 1,098,198  |                               | 1,097,962                                      |          | 32                               |           | 204                              |  |  |
| Capital Goods Industries                       |    | 505,702    |                               | 505,514  |          | 180                              |           | 8                                |  |  |
| Consumer & Services                            |    | 2,621,797  |                               | 2,620,932                                      |          | 3                                |           | 862                              |  |  |
| Energy   |    | 599,100    |                               | 599,027  |          | _                                |           | 73                               |  |  |
| Financial Services                             |    | 1,238,692  |                               | 1,238,631                                      |          | _                                |           | 61                               |  |  |
| Health Care                                    |    | 1,150,242  |                               | 1,149,985                                      |          | _                                |           | 257                              |  |  |
| Information Technology                         |    | 1,702,392  |                               | 1,698,359                                      |          | _                                |           | 4,033                            |  |  |
| Real Estate                                    |    | 539,134    |                               | 538,491  |          | _                                |           | 643                              |  |  |
| Miscellaneous                                  |    | 23,363     |                               | 21,660   |          | _                                |           | 1,703                            |  |  |
| Total Common Stock                             |    | 9,478,620  |                               | 9,470,561                                      |          | 215                              |           | 7,844                            |  |  |
| Preferred Stock                                |    | 37,760     |                               | 37,683   |          | _                                |           | 77                               |  |  |
| Stapled Securities                             |    | 10,867     |                               | 10,867   |          | _                                |           | _                                |  |  |
| Unit Trust Equity                              |    | 86         |                               | 86   |          | _                                |           | _                                |  |  |
| Total Equity Securities                        |    | 9,527,333  |                               | 9,519,197                                      |          | 215                              |           | 7,921                            |  |  |
| D 15 ( ) E 1                                   |    | 101 157    |                               |  |          |                                  |           | 101 157                          |  |  |
| Real Estate Funds                              | Φ  | 101,157    | \$                            | 9,519,197                                      | \$       | 3,939,095                        | Φ.        | 101,157                          |  |  |
| Total Investments by Fair Value Level          | \$ | 13,581,392 | <b>3</b>                      | 9,519,197                                      | <b>3</b> | 3,939,095                        | \$        | 123,100                          |  |  |
| Investments Measured at the NAV:               |    |            |                               |  |          |                                  |           |                                  |  |  |
| Common Fund Assets                             |    | 522,272    |                               |  |          |                                  |           |                                  |  |  |
| Private Equity Funds                           |    | 2,242,578  |                               |  |          |                                  |           |                                  |  |  |
| Real Estate Funds                              |    | 647,777    |                               |  |          |                                  |           |                                  |  |  |
| Opportunistic Debts                            |    | 209,503    |                               |  |          |                                  |           |                                  |  |  |
| Total Investments Measured at the NAV          | -  | 3,622,130  |                               |  |          |                                  |           |                                  |  |  |
| Total Investments Measured at Fair Value(1)    | \$ | 17,203,522 |                               |  |          |                                  |           |                                  |  |  |
|  |    |            |                               |  |          |                                  |           |                                  |  |  |
| Investment Derivative Instruments:             | ф  | 2.222      | Ф                             | 2 222  | ф        |                                  | Ф         |                                  |  |  |
| Future Contracts (liabilities)                 | \$ | 2,322      | \$                            | 2,322  | \$       | -<br>(500)                       | \$        | -                                |  |  |
| Foreign Exchange Contracts (liabilities)       |    | (588)      |                               | -  |          | (588)                            |           | - 22                             |  |  |
| Rights/Warrants                                | _  | 390        | Φ.                            | 367  | Φ.       | (500)                            | Φ.        | 23                               |  |  |
| Total Investment Derivative Instruments        | \$ | 2,124      | \$                            | 2,689  | \$       | (588)                            | <u>\$</u> | 23                               |  |  |

<sup>(1)</sup> Excluded \$2,124,000 of investment derivative instruments (shown separately) and \$325,263,000 of securities lending collateral.

# **6.** Cash and Short-Term Investments and Investments (Continued)

### **Fair Value Measurements (Continued)**

| <b>Investments Measured at the NAV:</b> (in thousands) | Fair Value |           | Jnfunded<br>mmitments | Redemption<br>Frequency | Redemption<br>Notice<br>Period |
|--|------------|-----------|-----------------------|-------------------------|--------------------------------|
| Common Fund Assets (1)                                 | \$         | 522,272   | \$<br>-               | Daily                   | 2 days                         |
| Private Equity Funds (2)                               |            | 2,242,578 | 1,132,761             | N/A                     | N/A                            |
| Real Estate Funds (3)                                  |            | 647,777   | 9,119                 | Daily, Quarterly        | 1-90 days                      |
| Opportunistic Debts (4) Total Investments Measured     | _          | 209,503   | <br>                  | Monthly                 | 30 days                        |
| at the NAV   | \$         | 3,622,130 | \$<br>1,141,880       |                         |                                |

- (1) Common fund assets This investment type includes one fund that primarily invests in U.S. bonds. The fair value of the investment has been determined using a practical expedient based on the investments' NAV per share (or its equivalent). This investment can be redeemed daily, with a two-day advance redemption notice period.
- (2) Private equity funds This investment type includes 234 closed-end commingled private equity funds that invest primarily in securities of privately held U.S. and non-U.S. companies. The fair values of these investments have been determined using a practical expedient based on the investments' NAV per share (or its equivalent). These investments are not redeemable. It is expected that these investments will be held for the entire lives of the funds and will not be sold in the secondary market. Distributions from each fund will be received as the underlying assets are liquidated by the fund managers. It is expected that the underlying assets of these funds will be liquidated over the next one to 13 years, depending on the vintage year of each fund.
- (3) Real estate funds This investment type includes 37 commingled real estate funds that invest primarily in U.S. commercial real estate. The fair values of these investments have been determined using a practical expedient based on the investments' NAV per share (or its equivalent). Ten investments, representing approximately 77.1% of the value of this investment type, are in open-end funds, which may be redeemed according to terms specific to each fund. Redemptions generally are subject to the funds' available cash and redemption queues. One of the open-end funds informed LACERS of an additional restriction above the original investment agreement beginning in January 2020. The fund expects this additional restriction to persist into calendar year 2021. LACERS has no intention to redeem any of this investment or the other nine investments in the near future. Twenty-seven investments, representing approximately 22.9% of the value of this investment type, are in closed-end funds and are not redeemable. It is expected that these investments will be held for the entire lives of the funds and will not be sold in the secondary market. Distributions from each fund will be received as underlying assets are liquidated by the fund managers. It is expected that the underlying assets of these funds will be liquidated over the next one to 12 years, depending on the vintage year of each fund.
- (4) Opportunistic debts This investment type includes two commingled funds: one that invests primarily in senior loans of non-investment grade companies (senior loan fund) and another one invests primarily in the securities and obligations of companies experiencing operational or financial distress (distressed investment fund). The fair values of these investments have been determined using a practical expedient based on the investments' NAV per share (or its equivalent). The senior loan fund, representing approximately 96% of the value of this investment type, can be redeemed monthly. The distressed investment fund, representing approximately 4% of the value of this investment type, is being dissolved and is no longer making new underlying investments. Distributions from this fund will be received as underlying investments are liquidated by the fund manager. It is expected that this fund will be liquidated fully over the next two years.

# 7. Securities Lending Agreement

Under authority granted by the City Charter, LACERS has entered into various short-term arrangements with its custodian to lend securities to various brokers. There are no restrictions on the amount of securities that may be lent, and the custodian determines which lenders' accounts to lend securities from by using an impartial sequential system that matches loan requests with various lenders' accounts. All lenders are deemed to have relatively equal opportunity to profit from the lending of securities. Therefore, should a collateral deficiency occur beyond the custodian's responsibilities, the deficiency is allocated pro rata among all lenders.

Minimum collateralization is 102% of the fair value of the borrowed U.S. securities and 105% for international securities. Collateral consists of cash. government and corporate securities, and commercial bank obligations. Cash collateral is invested in a separate account comprised of money market or high quality short-term investments. It is the responsibility of the custodian to monitor the collateralization on a daily basis. If the collateral is below the minimum collateralization level, additional collateral will be requested from the borrower to meet the requirement. Collateral requested each morning is required to be received on the same day. If the borrower fails to deliver additional collateral, the custodian would notify the borrower that they are in default under the securities lending agreement. If the borrower does not provide the necessary collateral after receiving notification, the legal agreement allows the custodian to close the contract with the borrower and buy-in the securities on behalf of LACERS.

The borrower has all incidents of ownership with respect to borrowed securities and collateral, including the right to vote and transfer or loan borrowed securities to others. LACERS is entitled to receive all distributions, which are made by the issuer of the borrowed securities, directly from the borrower. Under the agreement, the custodian will indemnify LACERS as a result of the custodian's failure to: 1) make a reasoned determination of the creditworthiness of a potential borrower before lending and, during the term of the loan or loans, the borrower files a petition of bankruptcy or similar action; 2) demand adequate collateral; or 3) otherwise maintain the securities lending program in compliance with the Federal Financial Institutions Examination Council Supervisory Policy on Securities Lending.

As of June 30, 2020, the fair value of the securities on loan was \$1,147,198,000. The fair value of associated collateral was \$1,202,872,000 (\$325,263,000 of cash collateral and \$877,609,000 of non-cash collateral).

These agreements provide for the return of the securities and revenue determined by the type of collateral received. The cash collateral values of securities on loan to brokers are shown at their fair values on the Statement of Fiduciary Net Position.

During the reporting period, LACERS had no losses on securities lending transactions resulting from default of a borrower or lending agent. Due to the nature of the securities lending program and the custodian bank's collateralization of loans at amounts greater than the fair value of the loaned securities, it is deemed that there were no material credit risks to LACERS as defined in GASB Statement No. 28 and GASB Statement No. 40 by its participation in the securities lending program. However, similar to any other investment portfolio, there is risk associated with investing cash collateral in securities. The value of the invested collateral may fall below the value of the cash collateral pledged by the borrowers, and may impair LACERS ability to return cash collateral to the borrowers upon the redemption of loans. If this scenario were to occur, LACERS would be required to make up the deficiency in collateral and would incur a loss.

All securities loans can be terminated on demand by either LACERS or the borrower. Because of this nature, their duration did not generally match the duration of the investment made with the cash collateral. LACERS cannot pledge or sell non-cash collateral unless the borrower defaults.

The following table represents the fair value of securities on loan, and corresponding cash collateral received and cash reinvestment value, as of June 30, 2020 (in thousands):

| Securities on Loan                  | Fair Value o<br>Underlying<br>Securities on<br>Loan |         | Cash<br>Collateral<br>Received | R  | Collateral<br>einvestment<br>Value |
|-------------------------------------|---|---------|--------------------------------|----|------------------------------------|
| U.S. Government & Agency Securities | \$  | 105,349 | \$ 107,647                     | \$ | 107,647                            |
| Domestic Corporate Fixed Income     |   |         |                                |    |                                    |
| Securities                          |   | 52,261  | 53,458                         |    | 53,458                             |
| International Fixed                 |   |         |                                |    |                                    |
| Income Securities                   |   | 2,764   | 2,796                          |    | 2,796                              |
| Domestic Stocks                     |   | 134,771 | 137,344                        |    | 137,344                            |
| International Stocks                |   | 22,671  | 24,018                         |    | 24,018                             |
| Total                               | \$  | 317,816 | \$ 325,263                     | \$ | 325,263                            |

# 7. Securities Lending Agreement (Continued)

Non-cash collateral, which LACERS does not have the ability to sell unless the borrower defaults, is not reported in the Statement of Fiduciary Net Position. LACERS income and expenses related to securities lending were \$7,421,000 and \$1,111,000, respectively, for the fiscal year ended June 30, 2020.

On April 28, 2020, the Board adopted several temporary Security Lending Program risk-reducing strategies to minimize potential losses due to unusual and more volatile market conditions as a result of COVID pandemic. These strategies include; (1) temporarily reducing the volume of loans in order to reduce LACERS overall exposure; (2) shorten the duration and maturity of individual investments to 60 days; and (3) require a non-U.S. country to hold a sovereign credit rating of AA- or higher (or the equivalent) by at least two Nationally Recognized Statistical Rating Organizations (NRSRO) in order for non-U.S. government or corporate debt to be eligible for investment. Because these strategies were implemented closer to the end of this reporting period, they had minimal impact on the program's income and expenses for the reporting period. However, future securities lending income will likely decrease as a result of reduced loan volumes due to more restrictive collateral and investment guidelines.

### **8. Future and Forward Contracts**

LACERS uses derivative financial instruments, primarily to manage portfolio risk. Future and forward contracts are marked to market and are recorded in the Statement of Fiduciary Net Position at fair value. Future contracts have little credit risk, as organized exchanges are the guarantors. Forward agreements are subject to the creditworthiness of the counterparties, which are principally large financial institutions (refer to Note 6 – Credit Risk - Derivatives on page 42).

As of June 30, 2020, LACERS had outstanding commodities, equity index, and interest rate future contracts with an aggregate notional amount of \$167,742,000, and foreign exchange future contract with a notional amount of \$2,344,000. In addition, at June 30, 2020, LACERS had outstanding forward purchase commitments with a notional amount of \$214.800.000 and offsetting forward sales commitments with notional amounts of \$214,800,000, which expire in September 2020. LACERS maintains margin collateral on the positions with brokers, consisting of cash and U.S. Treasury Bills. The total collateral margin was \$186,203,000 as of June 30, 2020.

# 9. Operating Lease

The System leases building facilities under a noncancelable operating lease that expires in March 2023, at which time a three-year renewal option is available.

The future minimum lease commitments are as follows as of June 30, 2020:

| Fiscal Year 2021 | \$ 1,003,000 |
|------------------|--------------|
| Fiscal Year 2022 | 1,043,000    |
| Fiscal Year 2023 | 813,000      |
|                  | \$ 2,859,000 |

# 10. Commitments and Contingencies

As of June 30, 2020, LACERS was committed to future purchases of real estate and private equity investments at an aggregate cost of approximately \$1,691,480,000, including agreements for acquisition not yet initiated.

# 11. Subsequent Events

# **City and LAWA's Separation Incentive Program**

From June 2020 to September 2020, the City negotiated with various labor organizations, the implementation of Separation Incentive Program (SIP). The program is intended to address the City's significant financial challenges while minimizing the impact on City services, by incentivizing eligible employees to retire. SIP enrollment was closed on September 22, 2020. As of October 21, 2020, there were 1,379 employees who applied and were approved to retire under the program.

Los Angeles World Airport (LAWA) also offered its own SIP. As of October 21, 2020, there are 333 who applied and were approved to retire under LAWA's SIP program.



# **Required Supplementary Information Retirement Plan**

The schedules included in the Required Supplementary Information for the Retirement Plan are intended to show information for 10 years. However, the following schedules do not have a full 10-year trend, and therefore, Los Angeles City Employees' Retirement System (LACERS or the System) presented information only for those years for which information is available:

- 1) Schedule of Net Pension Liability
- 2) Schedule of Changes in Net Pension Liability and Related Ratios
- 3) Schedule of Investment Returns

Additional years will be displayed in the future as they become available.

# Schedule of Net Pension Liability (1) As of June 30 (Dollars in Thousands)

|  | 2020         | 2019         | 2018         | 2017         | 2016         | 2015         | 2014         | 2013         |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Total Pension Liability  | \$22,527,195 | \$20,793,421 | \$19,944,578 | \$18,458,188 | \$17,424,996 | \$16,909,996 | \$16,248,853 | \$14,881,663 |
| Plan Fiduciary Net Position  | 14,932,404   | 14,815,593   | 14,235,230   | 13,180,516   | 11,809,329   | 11,920,570   | 11,791,079   | 10,154,486   |
| Plan's Net Pension Liability   | \$ 7,594,791 | \$ 5,977,828 | \$ 5,709,348 | \$ 5,277,672 | \$ 5,615,667 | \$ 4,989,426 | \$ 4,457,774 | \$ 4,727,177 |
| Plan Fiduciary Net Position<br>as a percentage of the<br>Total Pension Liability | 66.3%        | 71.3%        | 71.4%        | 71.4%        | 67.8%        | 70.5%        | 72.6%        | 68.2%        |

(1) In calculating the Plan's net pension liability, the total pension liability and the Plan fiduciary net position, amounts associated with non-pension related benefits (Family Death and Larger Annuity Benefits) were excluded. For fiscal years 2020 and 2019, Plan Fiduciary Net Position are calculated as follows:

|  | 2020                      | 2019                      |
|--|---------------------------|---------------------------|
| Plan Fiduciary Net Position, per Financial Statements  | \$ 15,012,120             | \$ 14,895,812             |
| Less Non-Pension Reserves:  Larger Annuity Contributions  Larger Annuity Benefit  Family Death Benefit | 7,268<br>56,316<br>16,132 | 7,101<br>56,435<br>16,683 |
| Subtotal   | \$ 79,716                 | \$ 80,219                 |
| Plan Fiduciary Net Position, for NPL calculation   | \$ 14,932,404             | \$ 14,815,593             |

# **Note to Schedule:**

Refer to the notes to the Schedule of Changes in Net Pension Liability and Related Ratios.

# Schedule of Changes in Net Pension Liability and Related Ratios (1) For the Fiscal Years Ended June 30 (Dollars in Thousands)

|  | 2020 |            | <br>2019         | 2018 |            | 2017             |
|--|------|------------|------------------|------|------------|------------------|
| <b>Total Pension Liability</b>   |      |            |                  |      |            |                  |
| Service cost (2)   | \$   | 374,967    | \$<br>370,409    | \$   | 352,283    | \$<br>340,759    |
| Interest   |      | 1,499,208  | 1,439,661        |      | 1,332,878  | 1,302,278        |
| Changes of benefit terms   |      | -          | -                |      | 25,173     | -                |
| Differences of expected and actual experience                                      |      | 308,184    | (46,035)         |      | 144,224    | (146,474)        |
| Changes of assumptions   |      | 530,720    | -                |      | 483,717    | 340,718          |
| Benefit payments, including refunds of Member contributions                        |      | (979,305)  | (915,192)        |      | (851,885)  | (804,089)        |
| Net change in total pension liability  |      | 1,733,774  | <br>848,843      |      | 1,486,390  | <br>1,033,192    |
| Total pension liability-beginning  |      | 20,793,421 | 19,944,578       |      | 18,458,188 | 17,424,996       |
| Total pension liability-ending (a)   | \$   | 22,527,195 | \$<br>20,793,421 | \$   | 19,944,578 | \$<br>18,458,188 |
| Plan fiduciary net position  |      |            |                  |      |            |                  |
| Contributions-employer   | \$   | 553,118    | \$<br>478,717    | \$   | 450,195    | \$<br>453,356    |
| Contributions-Member   |      | 259,817    | 237,087          |      | 230,757    | 221,829          |
| Net investment income <sup>(4)</sup>   |      | 306,712    | 799,351          |      | 1,243,817  | 1,517,545        |
| Benefit payments, including refunds of Member contributions                        |      | (979,305)  | (915,192)        |      | (851,885)  | (804,089)        |
| Administrative expenses  |      | (23,531)   | (19,600)         |      | (17,699)   | (17,454)         |
| Others (3)   |      | -          | _                |      | (471)      | -                |
| Net change in Plan fiduciary net position  |      | 116,811    | <br>580,363      |      | 1,054,714  | <br>1,371,187    |
| Plan fiduciary net position-beginning  |      | 14,815,593 | 14,235,230       |      | 13,180,516 | 11,809,329       |
| Plan fiduciary net position-ending (b)   | \$   | 14,932,404 | \$<br>14,815,593 | \$   | 14,235,230 | \$<br>13,180,516 |
| Plan's net pension liability-ending (a)-(b)  | \$   | 7,594,791  | \$<br>5,977,828  | \$   | 5,709,348  | \$<br>5,277,672  |
| Plan fiduciary net position as a percentage of the total pension liability (b)/(a) |      | 66.3%      | 71.3%            |      | 71.4%      | 71.4%            |
| Covered payroll  | \$   | 2,271,039  | \$<br>2,108,171  | \$   | 2,057,565  | \$<br>1,973,049  |
| Plan's net pension liability as a percentage of covered payroll                    |      | 334.4%     | 283.6%           |      | 277.5%     | 267.5%           |

<sup>(1)</sup> In calculating the Plan's net pension liability, the total pension liability and the Plan fiduciary net position, amounts associated with non-pension related benefits (Family Death and Larger Annuity Benefits) were excluded. See page 52 for components of fiduciary net position for fiscal years 2020 and 2019.

<sup>(2)</sup> The service cost is based on the previous year's valuation.

<sup>(3)</sup> On July 1, 2015, the System segregated Members' voluntary larger annuity contributions into the (non-pension related) Reserve for Larger Annuity Contributions pursuant to a suggestion made by the System's actuarial consultant. The Reserve balance for Larger Annuity Contributions as of June 30, 2015 was \$5,200,000. On July 1, 2017, the System reallocated \$471,000 of interest from the Reserve for Mandatory Member Contributions into the Reserve for Voluntary Member Contributions.

<sup>(4)</sup> Building Lease and Other Income were included in the Net investment income (loss) starting in fiscal year 2020. Investment related administrative expenses is part of Administrative expenses and excluded from Net investment Income.

# Schedule of Changes in Net Pension Liability and Related Ratios (1) (Continued) For the Fiscal Years Ended June 30 (Dollars in Thousands)

|   |         | 2016       |    | 2015       | 2014             | 2013             |  |
|---|---------|------------|----|------------|------------------|------------------|--|
| <b>Total Pension Liability</b>                                  | <u></u> |            |    |            | <br>             | <br>_            |  |
| Service cost (2)  | \$      | 322,574    | \$ | 322,380    | \$<br>317,185    | \$<br>312,372    |  |
| Interest  |         | 1,263,556  |    | 1,215,151  | 1,149,966        | 1,112,561        |  |
| Changes of benefit terms  |         | -          |    | -          | -                | -                |  |
| Differences of expected and actual experience                   |         | (300,813)  |    | (135,821)  | (164,247)        | (235,829)        |  |
| Changes of assumptions  |         | -          |    | -          | 785,439          | -                |  |
| Benefit payments, including refunds of Member                   |         |            |    |            |                  |                  |  |
| contributions   |         | (770,317)  |    | (740,567)  | <br>(721,153)    | <br>(701,400)    |  |
| Net change in total pension liability                           |         | 515,000    |    | 661,143    | 1,367,190        | 487,704          |  |
| Total pension liability-beginning                               |         | 16,909,996 |    | 16,248,853 | <br>14,881,663   | <br>14,393,959   |  |
| Total pension liability-ending (a)                              | \$      | 17,424,996 | \$ | 16,909,996 | \$<br>16,248,853 | \$<br>14,881,663 |  |
| Plan fiduciary net position                                     |         |            |    |            |                  |                  |  |
| Contributions-employer  | \$      | 440,546    | \$ | 381,141    | \$<br>357,649    | \$<br>346,181    |  |
| Contributions-Member  |         | 206,377    |    | 202,463    | 203,975          | 197,722          |  |
| Net investment income <sup>(4)</sup>                            |         | 29,358     |    | 306,980    | 1,810,782        | 1,268,939        |  |
| Benefit payments, including refunds of Member                   |         |            |    |            |                  |                  |  |
| contributions   |         | (770,318)  |    | (740,567)  | (721,153)        | (701,400)        |  |
| Administrative expenses   |         | (17,204)   |    | (15,860)   | (12,372)         | (13,281)         |  |
| Others (3)  |         |            |    | (4,666)    | <br>(2,288)      | (2,514)          |  |
| Net change in Plan fiduciary net position                       |         | (111,241)  |    | 129,491    | 1,636,593        | 1,095,647        |  |
| Plan fiduciary net position-beginning                           |         | 11,920,570 |    | 11,791,079 | <br>10,154,486   | 9,058,839        |  |
| Plan fiduciary net position-ending (b)                          | \$      | 11,809,329 | \$ | 11,920,570 | \$<br>11,791,079 | \$<br>10,154,486 |  |
| Plan's net pension liability-ending (a)-(b)                     | \$      | 5,615,667  | \$ | 4,989,426  | \$<br>4,457,774  | \$<br>4,727,177  |  |
| Plan fiduciary net position as a percentage                     |         |            |    |            |                  |                  |  |
| of the total pension liability (b)/(a)                          |         | 67.8%      |    | 70.5%      | 72.6%            | 68.2%            |  |
| Covered payroll   | \$      | 1,876,946  | \$ | 1,835,637  | \$<br>1,802,931  | \$<br>1,736,113  |  |
| Plan's net pension liability as a percentage of covered payroll |         | 299.2%     |    | 271.8%     | 247.3%           | 272.3%           |  |

<sup>(1)</sup> In calculating the Plan's net pension liability, the total pension liability and the Plan fiduciary net position exclude amounts associated with non-pension related benefits (Family Death and Larger Annuity Benefits). See page 52 for components of fiduciary net position for fiscal years 2020 and 2019.

<sup>(2)</sup> The service cost is based on the previous year's valuation.

<sup>(3)</sup> On July 1, 2015, the System segregated Members' voluntary larger annuity contributions into the (non-pension related) Reserve for Larger Annuity Contributions pursuant to a suggestion made by the System's actuarial consultant. The Reserve balance for Larger Annuity Contributions as of June 30, 2015 was \$5,200,000. On July 1, 2017, the System reallocated \$471,000 of interest from the Reserve for Mandatory Member Contributions into the Reserve for Voluntary Member Contributions.

<sup>(4)</sup> Building Lease and Other Income were included in the Net investment income (loss) starting in fiscal year 2020. Investment-related administrative expenses is part of Administrative expenses and excluded from Net investment Income.

# **Schedule of Changes in Net Pension Liability and Related Ratios (Continued)**

#### **Notes to Schedule:**

**Changes of Benefit Terms:** The June 30, 2018 calculation reflected the newly adopted enhanced benefits for Airport Peace Officers (APO) who elected to stay at LACERS Plan (refer to Note 2 – Retirement Plan Description, Tier 1 – Enhanced Benefits on page 30). Enhanced benefits became effective as of January 7, 2018.

**Change of Assumptions:** The June 30, 2014 calculations reflected various assumption changes based on the triennial experience study for the period from July 1, 2011 through June 30, 2014. The increase of total pension liability for fiscal years ended on June 30, 2014 is primarily due to the lowered assumed investment rate of return from 7.75% to 7.50%, and longer assumed life expectancies for Members and beneficiaries while the June 30, 2017 increase is primarily due to the lowered assumed investment rate of return from 7.50% to 7.25%.

The June 30, 2018 calculations reflected changes in the actuarial assumptions adopted by the Board on August 14, 2018 based on the triennial experience study for the period from July 1, 2014 through June 30, 2017, including revising the mortality tables from static to generational to reflect future mortality improvement, contributing to increased total pension liability.

The June 30, 2020 calculations reflected changes in the actuarial assumptions based on the actuarial experience study covering the period from July 1, 2016 to June 30, 2019, and adopted by the Board on June 23, 2020. The changes included lowered assumed investment rate of return from 7.25% to 7.00% along with an Inflation Rate reduction from 3.00% to 2.75%, changes in various demographic assumptions such as adjustments on retirement, termination, disability and mortality rates.

# Schedule of Contribution History (Dollars in Thousands)

| Fiscal<br>Year | Actuarially Determined Contributions (ADC) | Contributions in Relation to ADC <sup>(1)</sup> | Contribution<br>Deficiency | Covered<br>Payroll | Contributions as a<br>Percentage of Covered<br>Payroll |
|----------------|--|---|----------------------------|--------------------|--|
| 2011           | \$ 303,561                                 | \$ 303,561                                      | \$ -                       | \$ 1,678,059       | 18.1%  |
| 2012           | 308,540                                    | 308,540   | -                          | 1,715,197          | 18.0   |
| 2013           | 346,181                                    | 346,181   | -                          | 1,736,113          | 19.9   |
| 2014           | 357,649                                    | 357,649   | -                          | 1,802,931          | 19.8   |
| 2015           | 381,141                                    | 381,141   | -                          | 1,835,637          | 20.8   |
| 2016           | 440,546                                    | 440,546   | -                          | 1,876,946          | 23.5   |
| 2017           | 453,356                                    | 453,356   | -                          | 1,973,049          | 23.0   |
| 2018           | 450,195                                    | 450,195   | -                          | 2,057,565          | 21.9   |
| 2019           | 478,717                                    | 478,717   | -                          | 2,108,171          | 22.7   |
| 2020           | 553,118                                    | 553,118   | -                          | 2,271,039          | 24.4   |
|                |  |   |                            |                    |  |

<sup>(1)</sup> Contributions received excluded \$104,000 in contributions to the Family Death Benefit plan for fiscal year 2020.

#### **Notes to Schedule:**

**Valuation Date** Actuarially determined contribution rates are calculated as of June 30, two years prior to

the end of the fiscal year in which the contributions are reported.

### Methods and Assumptions Used to Determine Contribution Rates:

Actuarial Cost Method Entry Age Actuarial Cost Method (individual basis).

Amortization Method Level Percent of Payroll.

# **Schedule of Contribution History (Continued)**

### **Notes to Schedule (Continued)**

#### Methods and Assumptions Used to Determine Contribution Rates (Continued)

Amortization Period Multiple layers – closed amortization period.

Actuarial gains/losses are amortized over 15 years. Assumption or method changes are amortized over 20 years. Plan changes, including the 2009 Early Retirement Incentive Program (ERIP), are amortized over 15 years. Future ERIPs will be amortized over five years. Any actuarial surplus is amortized over 30 years. The existing layers on June 30, 2012, except those arising from the 2009 ERIP and the two Governmental Accounting Standards Board (GASB) Statements No. 25/27 layers, were combined and amortized over 30 years.

Asset Valuation Method

Fair value of assets less unrecognized returns in each of the last seven years. Unrecognized return is equal to the difference between the actual market return and the expected return on the fair value, and is recognized over a seven-year period. The actuarial value of assets cannot be less than 60% or greater than 140% of the fair value of assets.

**Actuarial Assumptions:** 

Investment Rate of Return 7.00% Inflation 2.75%

Real Across-the-Board

Salary Increase 0.50%

Projected Salary Increases<sup>(1)</sup> Ranges from 4.25% to 9.95% based on years of service.

Cost of Living Adjustment<sup>(2)</sup> Tier 1: 2.75%

Tier 3: 2.00%

Mortality

Healthy: Pub-2010 General Health Retiree Amount-Weighted Above-Median Mortality Tables (separate tables for males and females) with rates increased by 10% for males, projected generationally with the two-dimensional mortality improvement scale MP-2019.

Disabled: Pub-2010 Non-Safety Disabled Retiree Amount-Weighted Mortality Tables with rates increased by 10% for males and decreased by 5% for females, projected generationally with the two dimensional mortality improvement scale MP-2019.

Beneficiaries: Pub-2010 Contingent Survivor Amount-Weighted Above Meridian Mortality Tables with rates increased by 10% for males and females, projected generationally with the two dimensional mortality improvement scale MP-2019.

- Includes inflation at 2.75% as of June 30, 2020, plus across-the-board salary increase of 0.50% plus merit and promotional increases.
- (2) Actual increases are contingent upon Consumer Price Index (CPI) increases with a 2.75% maximum for Tier 1 and a 2.00% maximum for Tier 3. For Tier 1 members with sufficient COLA bank, withdrawals from the bank can be made to increase retiree COLA up to 3% per year.

# Schedule of Investment Returns For the Fiscal Years Ended June 30

|                                       | 2020 | 2019 | 2018 | 2017  | 2016 | 2015 | 2014  |
|---------------------------------------|------|------|------|-------|------|------|-------|
|                                       |      |      |      |       |      |      |       |
| Annual money-weighted rate of return, |      |      |      |       |      |      |       |
| net of investment expenses            | 2.0% | 5.5% | 9.3% | 12.6% | 0.2% | 2.6% | 18.2% |

# **Note to Schedule:**

The rates of investment returns for the fiscal years 2020, 2015 and 2016 were much lower compared to other fiscal years. It reflected the impact of divergent and volatile global markets on LACERS investment portfolio over these reporting periods. Specifically for fiscal year 2020, investment return was impacted by the recent spread of COVID-19 which has continued to adversely impact global commercial activity and volatility in the global financial markets.

# **Required Supplementary Information Postemployment Health Care Plan**

The schedules included in the Required Supplementary Information for the Postemployment Health Care Plan are intended to show information for 10 years. However, the following schedules do not have a full 10-year trend, and therefore, Los Angeles City Employees' Retirement System (LACERS or the System) presented information only for those years for which information is available:

- 1) Schedule of Net OPEB Liability
- 2) Schedule of Changes in Net OPEB Liability and Related Ratios
- 3) Schedule of Investment Returns

Additional years will be displayed in the future as they become available.

# Schedule of Net OPEB Liability As of June 30 (Dollars in Thousands)

|   | 2020         | 2019         | 2018         | 2017         | 2016         |
|---|--------------|--------------|--------------|--------------|--------------|
| Total OPEB Liability  | \$ 3,486,530 | \$ 3,334,299 | \$ 3,256,827 | \$ 3,005,806 | \$ 2,793,689 |
| Plan Fiduciary Net Position   | 2,851,204    | 2,812,098    | 2,676,371    | 2,438,862    | 2,134,877    |
| Plan's Net OPEB Liability   | \$ 635,326   | \$ 522,201   | \$ 580,456   | \$ 566,944   | \$ 658,812   |
| Plan Fiduciary Net Position<br>as a percentage of the<br>Total OPEB Liability | 81.8%        | 84.3%        | 82.2%        | 81.1%        | 76.4%        |

### **Note to Schedule:**

Refer to the notes to the Schedule of Changes in Net OPEB Liability and Related Ratios.

# Schedule of Changes in Net OPEB Liability and Related Ratios For the Fiscal Years Ended June 30 (Dollars in Thousands)

|  |    | 2020      |    | 2019      | 2018 |           | 2017 |           |    | 2016      |
|--|----|-----------|----|-----------|------|-----------|------|-----------|----|-----------|
| Total OPEB Liability                           |    |           |    |           |      |           |      |           |    |           |
| Service cost <sup>(1)</sup>                    | \$ | 76,423    | \$ | 74,478    | \$   | 74,611    | \$   | 68,385    | \$ | 62,360    |
| Interest                                       |    | 242,666   |    | 236,678   |      | 218,686   |      | 210,170   |    | 199,078   |
| Changes of benefit terms                       |    | -         |    | -         |      | 948       |      | -         |    | 17,215    |
| Differences between expected and actual        |    | /         |    |           |      |           |      |           |    | (22.04.0) |
| experience <sup>(2)</sup>                      |    | (135,720) |    | (134,053) |      | (7,321)   |      | 19,666    |    | (22,013)  |
| Changes of assumptions                         |    | 96,076    |    | 33,940    |      | 92,178    |      | 33,512    |    | -         |
| Benefit payments <sup>(3)</sup>                | _  | (127,214) | _  | (133,571) | _    | (128,081) |      | (119,616) |    | (109,940) |
| Net change in total OPEB liability             |    | 152,231   |    | 77,472    |      | 251,021   |      | 212,117   |    | 146,700   |
| Total OPEB liability-beginning                 |    | 3,334,299 |    | 3,256,827 |      | 3,005,806 |      | 2,793,689 |    | 2,646,989 |
| Total OPEB liability-ending (a)                | \$ | 3,486,530 | \$ | 3,334,299 | \$   | 3,256,827 | \$   | 3,005,806 | \$ | 2,793,689 |
|  |    |           |    |           |      |           |      |           |    |           |
| Plan fiduciary net position                    |    |           |    |           |      |           |      |           |    |           |
| Contributions-employer                         | \$ | 112,136   | \$ | 107,927   | \$   | 100,909   | \$   | 97,457    |    | 105,983   |
| Net investment income (loss) <sup>(4)</sup>    |    | 60,899    |    | 166,470   |      | 269,380   |      | 330,708   |    | (344)     |
| Benefit payments <sup>(3)</sup>                |    | (127,214) |    | (133,571) |      | (128,081) |      | (119,616) |    | (109,940) |
| Administrative expense                         |    | (6,715)   |    | (5,099)   |      | (4,699)   |      | (4,564)   |    | (4,528)   |
| Net change in Plan fiduciary net position      |    | 39,106    |    | 135,727   |      | 237,509   |      | 303,985   |    | (8,829)   |
|  |    |           |    |           |      |           |      |           |    |           |
| Plan fiduciary net position-beginning          |    | 2,812,098 |    | 2,676,371 |      | 2,438,862 |      | 2,134,877 |    | 2,143,706 |
| Plan fiduciary net position-ending (b)         | \$ | 2,851,204 | \$ | 2,812,098 | \$   | 2,676,371 | \$   | 2,438,862 | \$ | 2,134,877 |
|  | -  |           | _  |           |      |           |      |           |    |           |
| Plan's net OPEB liability-ending (a)-(b)       | \$ | 635,326   | \$ | 522,201   | \$   | 580,456   | \$   | 566,944   | \$ | 658,812   |
| Time since of 22 massing chang (a)             | Ψ  | 300,020   | 4  | 022,201   | 4    | 200,.20   | Ψ    | 200,7     | Ψ  | 000,012   |
| Plan fiduciary net position as a percentage of | f  |           |    |           |      |           |      |           |    |           |
| the total OPEB liability (b)/(a)               |    | 81.8%     |    | 84.3%     |      | 82.2%     |      | 81.1%     |    | 76.4%     |
| •        |    |           |    |           |      |           |      |           |    |           |
| Covered payroll                                | \$ | 2,271,039 | \$ | 2,108,171 | \$   | 2,057,565 | \$   | 1,973,049 | \$ | 1,876,946 |
| Plan's net OPEB liability as a percentage of   |    |           |    |           |      |           |      |           |    |           |
| covered payroll                                |    | 28.0%     |    | 24.8%     |      | 28.2%     |      | 28.7%     |    | 35.1%     |
| 2 0  |    |           |    |           |      |           |      |           |    |           |

- (1) The service cost is based on the previous year's valuation.
- (2) After the GASB Statement No. 74 valuation report was issued for the fiscal year June 30, 2017, the System's consulting actuary reclassified \$12,450,000 of OPEB liability from the *Changes of Assumption* (revised from \$45,962,000 to \$33,512,000) to the *Differences Between Expected and Actual Experience* (revised from \$7,216,000 to \$19,666,000). However, this reclassification did not affect the recommended employer contribution rates or results of the OPEB valuation in total.
- (3) Benefit payments associated with the self-funded insurance premium and Member's health insurance premium reserve that were reported as both additions and deductions in fiduciary net position beginning fiscal year 2019 were excluded from the above schedule.
- (4) Building Lease and Other Income were included in the Net investment income (loss) starting in fiscal year 2020. Investment related administrative expenses is part of Administrative expenses and excluded from Net investment Income.

# Required Supplementary Information Postemployment Health Care Plan

# **Schedule of Changes in Net OPEB Liability and Related Ratios (Continued)**

### **Notes to Schedule:**

Changes of Benefit Terms: The OPEB liability from the changes of benefit terms for the fiscal year ended June 30, 2016 is primarily due to providing retiree healthcare benefits to part-time employees who retired with 10 years of service but less than 10 years of service credit (refer to Note 3 – Postemployment Health Care Plan Description, Eligibility Requirement and Benefits Provided on pages 35 - 36) while the June 30, 2018 increase is primarily as a result of the newly adopted enhanced benefits for Airport Peace Officers (APO) who elected to stay at LACERS Plan (refer to Note 2 – Retirement Plan Description, Tier 1 – Enhanced Benefits on page 30) as some APO Members may retire earlier than expected. Enhanced benefits became effective as of January 7, 2018.

Changes of Assumptions: The OPEB liability from the changes of assumptions for the fiscal year ended June 30, 2017 is primarily due to the lowered assumed investment rate of return, from 7.50% to 7.25%, and the June 30, 2018 increase is primarily due to the new actuarial assumptions adopted in the triennial experience study (July 1, 2014 through June 30, 2017), including revising the mortality tables from static to generational. The June 30, 2019 increase is mainly due to the increased Medicare Part B Premium Trend Rate from 4.0% to 4.5% while the June 30, 2020 is due to the new actuarial assumptions adopted as a result of actuarial experience study covering the period July 1, 2016 to June 30, 2019 which included a lowered investment rate of returns from 7.25% to 7.00% as well as using revised mortality tables.

# Schedule of Contribution History (Dollars in Thousands)

| Fiscal<br>Year | Actuarially Determined Contributions (ADC) | Contribution<br>s in Relation<br>to ADC | Contribution<br>Deficiency | Covered<br>Payroll | Contributions as a<br>Percentage of<br>Covered Payroll |
|----------------|--|---|----------------------------|--------------------|--|
| 2011           | \$ 107,396                                 | \$ 107,396                              | \$ -                       | \$ 1,678,059       | 6.4%   |
| 2012           | 115,209                                    | 115,209                                 | -                          | 1,715,197          | 6.7  |
| 2013           | 72,916                                     | 72,916                                  | -                          | 1,736,113          | 4.2  |
| 2014           | 97,841                                     | 97,841                                  | -                          | 1,802,931          | 5.4  |
| 2015           | 100,467                                    | 100,467                                 | -                          | 1,835,637          | 5.5  |
| 2016           | 105,983                                    | 105,983                                 | -                          | 1,876,946          | 5.7  |
| 2017           | 97,457                                     | 97,457                                  | -                          | 1,973,049          | 4.9  |
| 2018           | 100,909                                    | 100,909                                 | -                          | 2,057,565          | 4.9  |
| 2019           | 107,927                                    | 107,927                                 | -                          | 2,108,171          | 5.1  |
| 2020           | 112,136                                    | 112,136                                 | -                          | 2,271,039          | 4.9  |

### **Notes to Schedule:**

**Valuation Date** Actuarially determined contribution rates are calculated as of June 30, two years

prior to the end of the fiscal year in which the contributions are reported.

# **Methods and Assumptions Used to Determine Contribution Rates:**

Actuarial Cost Method Entry Age Actuarial Cost Method (level percent of payroll).

Amortization Method Level Percent of Payroll.

Amortization Period Multiple layers – closed amortization period.

Actuarial gains/losses are amortized over 15 years. Non-health related assumptions or method changes are amortized over 20 years. Health related assumptions or method changes are amortized over 15 years. Plan changes, including the 2009 Early Retirement Incentive Program (ERIP), are amortized over 15 years. Future ERIPs will be amortized over five years. Any actuarial surplus is amortized over 30 years. The existing layers on June 30, 2012, except those arising from the 2009 ERIP and the two Governmental Accounting Standards Board (GASB) Statements No. 25/27 layers, were combined and amortized over 30 years.

Asset Valuation Method

Fair value of assets less unrecognized returns in each of the last seven years. Unrecognized return is equal to the difference between the actual market return and the expected return on the fair value, and is recognized over a seven-year period. The actuarial value of assets cannot be less than 60% or greater than 140% of the fair value of assets.

**Actuarial Assumptions:** 

Investment Rate of Return 7.00%
Inflation 2.75%

Real Across-the-Board Salary Increase 0.50%

# **Required Supplementary Information Postemployment Health Care Plan**

# **Schedule of Contribution History (Continued)**

#### **Notes to Schedule (Continued)**

# **Methods and Assumptions Used to Determine Contribution Rates (Continued)**

Projected Salary

Increases<sup>(1)</sup> Ranges from 4.25% to 9.95% based on years of service.

Mortality Healthy: Pub-2010 General Health Retiree Amount-Weighted Above-Median

Mortality Tables (separate tables for males and females) with rates increased by 10% for males, projected generationally with the two-dimensional mortality improvement

scale MP-2019

Disabled: Pub-2010 Non-Safety Disabled Retiree Amount-Weighted Mortality Tables with rates increased by 10% for males and decreased by 5% for females, projected generationally with the two dimensional mortality improvement scale MP-

2019.

Beneficiaries: Pub-2010 Contingent Survivor Amount-Weighted Above Meridian Mortality Tables with rates increased by 10% for males and females, projected generationally with the two dimensional mortality improvement scale MP-2019.

(1) Includes inflation at 2.75% as of June 30, 2020, plus across-the-board salary increase of 0.50% plus merit and promotional increases.

# Schedule of Investment Returns For the Fiscal Years Ended June 30

|                                       | 2020 | 2019 | 2018  | 2017  |
|---------------------------------------|------|------|-------|-------|
| Annual money-weighted rate of return, |      |      |       |       |
| net of investment expenses            | 2.1% | 6.1% | 10.8% | 15.2% |

#### Note to Schedule:

The required disclosure about factors that significantly affect trends in the money-weighted rate of return is not provided as only four years' rates are available. As additional years' money-weighted rate of return become available, the System will disclose factors that significantly affect trends in the rate of return.



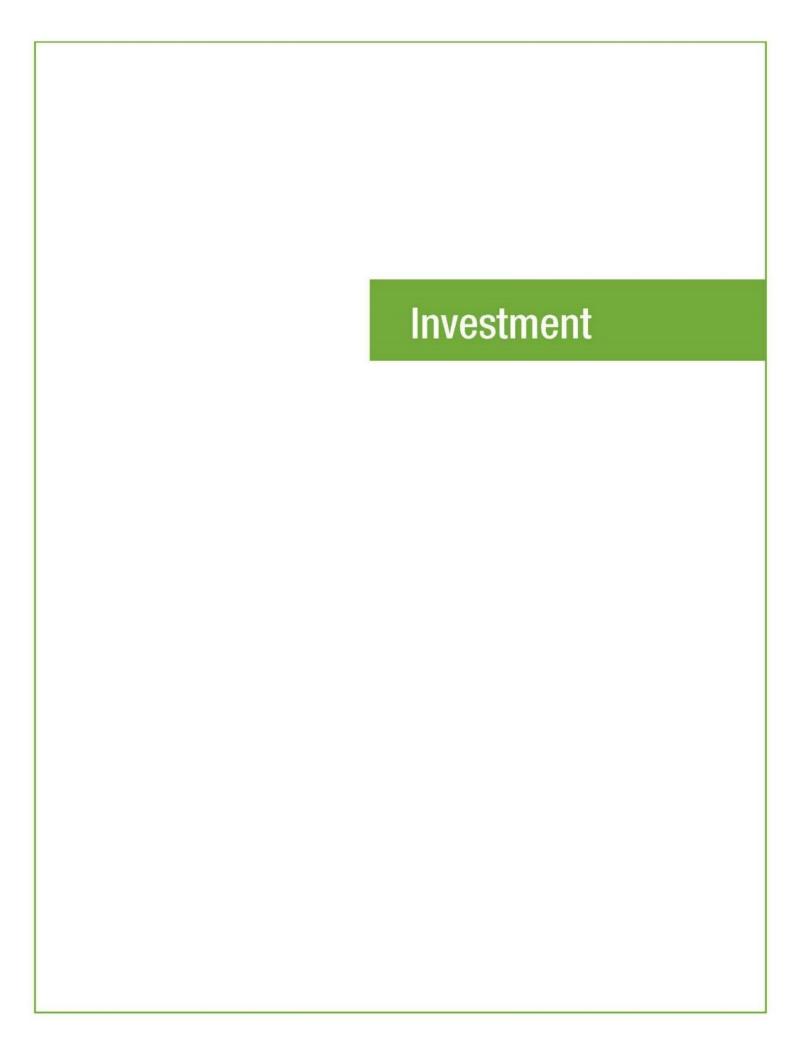
# Schedule of Administrative Expenses For the Fiscal Year Ended June 30, 2020 (In Thousands)

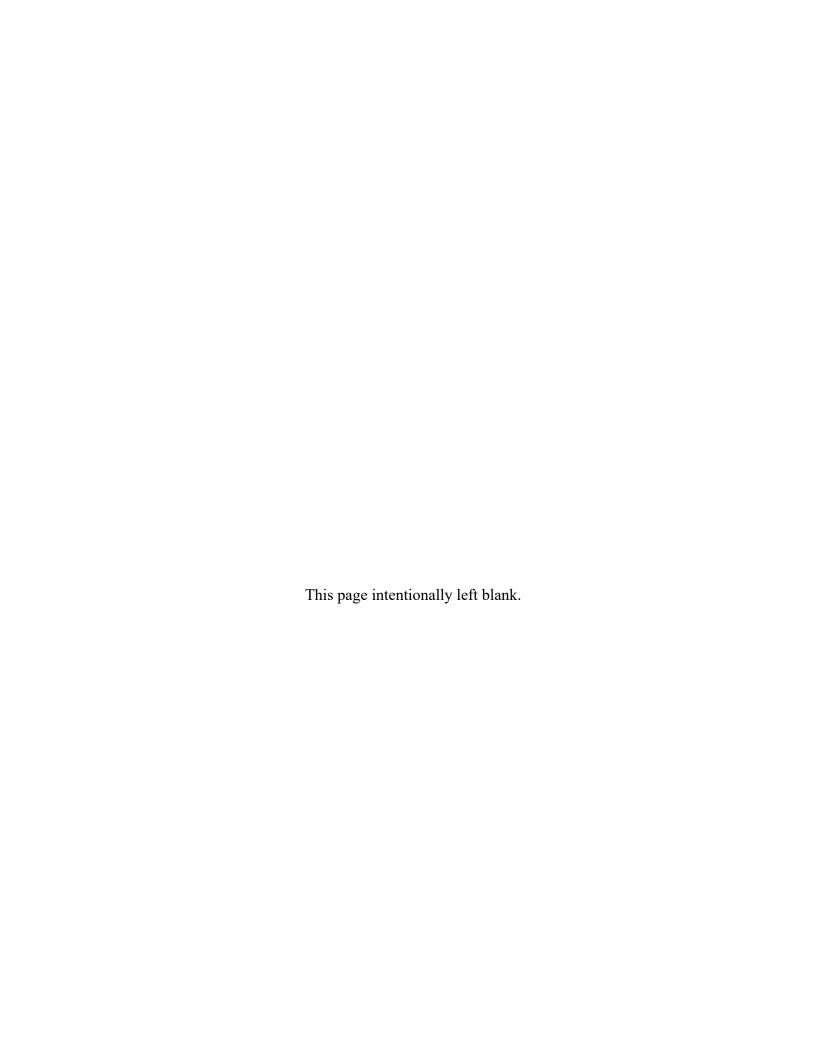
|   | Retirement Plan | Postemployment<br>Health Care Plan | Total      |
|---|-----------------|------------------------------------|------------|
| Personnel Services:   |                 |                                    |            |
| Salaries  | \$ 11,148       | \$ 2,547                           | \$ 13,695  |
| Employee Benefits and Development   | 4,516           | 1,031                              | 5,547      |
| Total Personnel Services  | 15,664          | 3,578                              | 19,242     |
| Professional Services:  |                 |                                    |            |
| Actuarial   | 372             | 85                                 | 457        |
| Audit   | 69              | 22                                 | 91         |
| Legal Counsel   | 667             | 155                                | 822        |
| Disability Evaluation   | 131             | 30                                 | 161        |
| Retirees' Health Admin Consulting   | -               | 550                                | 550        |
| Benefit Payroll Processing  | 140             | 32                                 | 172        |
| Self-Funded Dental Plan Admin Fees  | -               | 751                                | 751        |
| Other Consulting  | 54              | 12                                 | 66         |
| Total Professional Services   | 1,433           | 1,637                              | 3,070      |
| Information Technology:  Computer Hardware and Software  Computer Maintenance and Support | 571<br>497      | 130<br>113                         | 701<br>610 |
| Total Information Technology  | 1,068           | 243                                | 1,311      |
| Leases:   |                 |                                    |            |
| Office Space  | 791             | 181                                | 972        |
| Office Equipment  | 30              | 7                                  | 37         |
| Total Leases  | 821             | 188                                | 1,009      |
| Other Expenses:   |                 |                                    |            |
| Fiduciary Insurance   | 27              | 6                                  | 33         |
| Educational and Due Diligence Travel  | 51              | 12                                 | 63         |
| Office Expenses   | 532             | 122                                | 654        |
| Building Operating Expense  | 1,082           | 247                                | 1,329      |
| Depreciation and Amortization   | 579             | 132                                | 711        |
| Total Other Expenses  | 2,271           | 519                                | 2,790      |
| Total Administrative Expenses   | \$ 21,257       | \$ 6,165                           | \$ 27,422  |

# Schedule of Investment Fees and Expenses For the Fiscal Year Ended June 30, 2020 (In Thousands)

|   |               | Assets Under Management   |    | Fees and<br>Expenses |  |
|---|---------------|---------------------------|----|----------------------|--|
| Retirement Plan   |               |                           |    |                      |  |
| Investment Management Fees: Fixed Income Managers Equity Managers | \$            | 3,936,979<br>8,008,405    | \$ | 5,255<br>18,555      |  |
| Subtotal  |               | 11,945,384                |    | 23,810               |  |
| Other Investment Fees and Expenses:                               |               |                           |    |                      |  |
| Private Equity Consulting Fees                                    |               | N/A                       |    | 600                  |  |
| Real Estate Consulting Fees                                       |               | N/A                       |    | 175                  |  |
| Other Consulting Fees   |               | N/A                       |    | 366                  |  |
| Investment Related Administrative Expenses                        |               | N/A                       |    | 2,409                |  |
| Subtotal  |               | N/A                       |    | 3,550                |  |
| Postemployment Health Care Plan                                   |               |                           |    |                      |  |
| Investment Management Fees:                                       |               |                           |    |                      |  |
| Fixed Income Managers   |               | 747,738                   |    | 1,200                |  |
| Equity Managers   |               | 1,521,012                 |    | 4,238                |  |
| Subtotal  |               | 2,268,750                 |    | 5,438                |  |
| Other Investment Fees and Expenses:                               |               |                           |    |                      |  |
| Private Equity Consulting Fees                                    |               | N/A                       |    | 137                  |  |
| Real Estate Consulting Fees                                       |               | N/A                       |    | 40                   |  |
| Other Consulting Fees   |               | N/A                       |    | 84                   |  |
| Investment Related Administrative Expenses                        |               | N/A                       |    | 550                  |  |
| Subtotal  |               | N/A                       |    | 811                  |  |
| Total Investment Fees and Expenses excluding                      |               |                           |    |                      |  |
| Private Equity and Real Estate                                    | \$            | 14,214,134                | \$ | 33,609               |  |
| Private Equity Managers' Fees and Expenses:                       |               |                           |    |                      |  |
| Retirement Plan   | \$            | 1,884,636                 | \$ | 34,923               |  |
| Postemployment Health Care Plan                                   | •             | 357,943                   | т  | 7,977                |  |
| Total Private Equity Managers' Fees and Expenses                  | \$            | 2,242,579                 | \$ | 42,900               |  |
| Real Estate Managers' Fees and Expenses:                          |               |                           |    |                      |  |
| Retirement Plan   | \$            | 629,395                   | \$ | 8,972                |  |
| Postemployment Health Care Plan                                   | Ψ             | 119,539                   | Ψ  | 2,049                |  |
| Fotal Real Estate Managers' Fees and Expenses                     | \$            | 748,934                   | \$ | 11,021               |  |
| Fotal Assets Under Management and Fees and                        | <del>**</del> |                           | Τ' |                      |  |
| Expenses  | \$            | $17,\!205,\!647^{^{(1)}}$ | \$ | 87,530               |  |

Excludes Security Lending Collateral assets of \$325,263,000.
 Includes Investment Related Administrative Expenses of \$2,959,000.







202 W. First Street, Suite 500 Los Angeles, CA 90012-4401 (800) 779-8328 TDD (888) 349-3996 www.lacers.org

# **Report on Investment Activity**

December 11, 2020



Dear Members of the Board:

Presented below is a summary report of the System's investment activities for the fiscal year 2019-2020.

### Market Overview

Fiscal year 2019-2020 was an especially volatile period for financial markets due to the COVID-19 pandemic and unprecedented shutdown of the U.S. economy in an attempt to contain the virus. Consequently, the LACERS' investment portfolio returned 1.24% (gross of fees) for the one-year period ending June 30, 2020.

The pandemic hit financial markets quickly and forcefully in the spring of 2020, with the S&P 500 Index plunging about 35% within six weeks. It was the fastest-ever fall

from record levels into a bear market, and investors felt a repeat of a "black swan" event only 12 years after the beginning of the Great Financial Crisis of 2008.

This crisis was different from past crises as its cause was a health issue outside of the financial system, and it had farreaching implications including grave illnesses, wearing of masks, social distancing, and a health-related mortality rate unseen since the Spanish Flu of 1918.

Although the virus continued to spread, the monetary response of central banks and fiscal response of governments around the world was of historical proportions. In March 2020, the U.S. Congress passed a \$2.2 trillion economic stimulus package, more than double the amount of stimulus enacted in the Great Financial Crisis of 2008. The Federal Reserve responded with a broad array of actions to limit the economic fallout, including near-zero interest rates and up to \$2.3 trillion in lending to support households, employers, financial markets, and state and local governments.

To the surprise of many investors, the months that followed saw U.S. stocks embark on a winning streak unprecedented in the modern era of financial markets. The S&P 500's journey from record high to a bear market to a new record high took just 126 trading days, the fastest-ever such recovery. In previous downturns going back to 1928, it took an average of more than 1,500 trading days for the index to return to record levels, equivalent to about six years.

This remarkable rally in U.S. stocks stood in stark contrast to the real economy, which shed a record 22.2 million jobs in March and April after large swaths of the U.S. were shut down to curb the viral spread. U.S. unemployment jumped from 4.5% in March to 14.7% in April, the highest level since the Great Depression. During the 15 weeks from mid-March to the end of June, Americans filed nearly 49 million new claims for unemployment benefits. Unemployment improved slightly to 11.1% as stimulus checks, extended unemployment benefits, and eviction moratoriums provided much needed relief to many Americans. Nonetheless, economists announced in June that the U.S. had officially entered a recession.

While markets have mostly recovered from the pandemic-induced bear market, serious questions remain about the real economy, as many job losses and business closures could be permanent. The research and development of a vaccine by private pharmaceutical companies will be key to restoring the economy. Government officials have announced that COVID-19 vaccines could be available at the end of 2020, and more widely available beginning in

early 2021, which should provide grounds for cautious optimism and welcomed relief. As we reflect on the unprecedented events of fiscal year 2019-2020, you should be reassured that the LACERS' investment portfolio is designed and constructed to weather such volatile periods and the challenges ahead.

### **Investment Performance**

LACERS' primary investment objective is to maximize the return of the portfolio at a prudent level of risk to meet the obligations of the System. The System's investment portfolio is managed on a total return basis over a long-term investment horizon. While the System recognizes the importance of capital preservation, it also recognizes that varying degrees of investment risk are generally rewarded with commensurate returns. Consequently, prudent risk-taking is warranted within the context of overall portfolio diversification, which is achieved through the System's strategic asset allocation policy.

LACERS investments are reported at fair value. The total portfolio, comprised of investments, cash, and accrued dividends and income, was valued at \$17.7 billion as of June 30, 2020, the same valuation as reported in the prior fiscal year. The total portfolio realized a 1.2% (gross of fees) return for the fiscal year. Individual asset class returns (gross of fees) were: U.S. equity, 4.7%; non-U.S. equity, -3.6%; core fixed income, 9.4%; credit opportunities, -1.1%; private equity, -4.2%; and real assets, 0.8%.

The total portfolio underperformed its policy benchmark by 277 basis points (gross of fees) for the fiscal year, mainly attributed to the relative underperformance of the credit opportunities, U.S. equity, real assets, and private equity asset classes, which underperformed their benchmarks by 132, 180, 486, and 1,389 basis points, respectively.

The Investment Results table presented on page 72 provides a summary of time-weighted rates of return based on fair value of assets by asset class and for the total portfolio.

# Policies, Procedures and Guidelines

In fiscal year 2019-2020, the Board approved several temporary modifications to its Investment Policy (Policy) to protect the System's assets from the extreme market volatility created by the COVID-19 pandemic. During the early months of the pandemic, the Board authorized a temporary increase in cash

balances from a maximum of 2% of the total portfolio to a maximum of 5% in order to enhance operational liquidity. The Board also authorized a temporary deferral of rebalancing of the asset allocation to avoid rebalancing during periods of extreme market volatility and incurring related transaction costs. Further, the Board authorized temporary risk reducing modifications to the Securities Lending Program to ensure receipt of the highest quality collateral from borrowers of LACERS' securities and to improve the liquidity and quality of investments made with cash collateral received from borrowers. These temporary modifications to the Policy are effective through fiscal year ending 2020-2021.

# Responsible Investment Program

On September 3, 2019, LACERS became an official signatory to the Principles for Responsible Investment (PRI), committing to the incorporation of environmental, social, and governance (ESG) factors into LACERS' investment process to better manage risks and generate sustainable long-term performance.

Subsequently during the fiscal year, the Board approved a multi-year action plan that addresses administrative, operational, and policy initiatives for developing a responsible investment program in support of the PRI Principles. The execution of this plan is currently in progress.

# Public Investment Manager Contract Awards, Renewals, and Terminations

As presented in the table on page 73, contracts with 19 investment managers of publicly traded securities were awarded or renewed during the fiscal year: five U.S. equity managers, eight non-U.S. equity managers, one core fixed income manager, three credit opportunities managers, one public real assets manager, and one manager that provides multiple passive strategies across several asset classes. In addition, contracts with two investment managers of publicly traded securities were terminated during the fiscal year: one active U.S. large cap equity manager and one active U.S. small cap equity manager.

# **Private Investments**

LACERS approved 20 private equity, four private credit (with one of these contracts being rescinded), and three private real estate partnerships totaling \$802.7 million of capital commitments during the fiscal year, as presented in the table on page 74.

The pages that follow provide further details about the LACERS investment portfolio and investment activity for the fiscal year 2019-2020.

Respectfully submitted,

Rodney L. June

Chief Investment Officer

# Outline of Investment Policies Fiscal Year 2019-2020

The Los Angeles City Employees' Retirement System's (LACERS, or the System) general investment goals are consistent with the City Charter citations and State Constitution and are stated below:

- The overall goal of the System's investment assets is to provide plan participants with post-retirement benefits as set forth in the System documents. This will be accomplished through a carefully planned and executed investment program.
- The System's investment program shall comply, at all times, with existing and future applicable City, state and federal regulations. Investment performance data is calculated in conformance with Global Investment Performance Standards (GIPS).
- All transactions undertaken will be for the sole benefit of the System's participants and beneficiaries and for the exclusive purpose of providing benefits to them and defraying reasonable administrative expenses associated with the System.
- The System has a long-term investment horizon, and utilizes an asset allocation that encompasses a strategic, long run perspective of capital markets. It is recognized that a strategic long-run asset allocation plan implemented in a consistent and disciplined manner will be the major determinant of the System's investment performance.
- Investment actions are expected to comply with "prudent person" standards as described: "...with the care, skill, prudence, and diligence under the circumstances then prevailing that a prudent man acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character and with like aims."

# **Investment Results**

# Schedule of Annualized Asset Class Investment Returns (Compared to Policy Benchmarks)

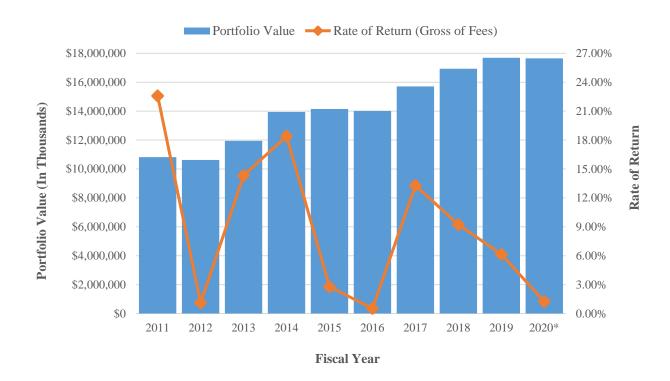
| Asset Class / Benchmark                   | Annualized Rates of Return <sup>(1)</sup><br>(Gross of Fees) |            |             |  |
|---|--|------------|-------------|--|
|   | 1 Yr. (%)  | 3 Yrs. (%) | 5 Yrs. (%)  |  |
| U.S. Equity                               | 4.73   | 9.36       | 9.56        |  |
| Russell 3000                              | 6.53   | 10.04      | 10.03       |  |
| Non-U.S. Equity                           | -3.57  | 2.08       | 3.44        |  |
| MSCI ACWI ex U.S.                         | -4.80  | 1.13       | 2.26        |  |
| Private Equity                            | -4.18  | 7.36       | <b>7.97</b> |  |
| Russell 3000 plus 300 bps                 | 9.71   | 13.32      | 13.31       |  |
| Core Fixed Income <sup>(2)</sup>          | 9.38   | 5.64       | 4.69        |  |
| Bloomberg Barclays U.S. Aggregate         | 8.74   | 5.32       | 4.30        |  |
| Credit Opportunities                      | -1.12  | 3.19       | 4.45        |  |
| Credit Opportunities Blend <sup>(2)</sup> | 0.20   | 3.44       | 4.99        |  |
| Real Assets                               | 0.82   | 4.16       | 5.02        |  |
| CPI plus 5%                               | 5.68   | 6.80       | 6.63        |  |
| LACERS Total Fund                         | 1.24   | 5.49       | 5.98        |  |
| LACERS Policy Benchmark                   | 4.01   | 6.51       | 6.64        |  |

- (1) Time-weighted rate of return based on fair value of assets for all asset classes.
- (2) 65% Bloomberg Barclays U.S. Corp High Yield 2% Capped and 35% JP Morgan EMBI-Global Diversified.

# **Schedule of Investment Result History**

For the Fiscal Years Ended June 30 (Dollars in Thousands)

|        | Total Investment         | Time-Weighted   |
|--------|--------------------------|-----------------|
| Fiscal | Portfolio <sup>(1)</sup> | Rate of Return  |
| Year   | (Fair Value)             | (Gross of Fees) |
| 2011   | \$ 10,816,393            | 22.59%          |
| 2012   | 10,623,740               | 1.11            |
| 2013   | 11,946,264               | 14.32           |
| 2014   | 13,941,866               | 18.41           |
| 2015   | 14,148,849               | 2.78            |
| 2016   | 14,014,772               | 0.53            |
| 2017   | 15,708,981               | 13.29           |
| 2018   | 16,935,458               | 9.23            |
| 2019   | 17,693,115               | 6.15            |
| 2020   | 17,654,460               | 1.24            |



<sup>(1)</sup> The total investment portfolio is comprised of investments, cash, and accrued dividends and income. It excludes LACERS' new headquarters property purchased in fiscal year 2019-2020. It also excludes \$665 million held by the City Treasurer (\$4.8 million in LACERS general operating account and \$660.2 million invested in short term investment funds).

# **Investment Contract Activity**

Contracts with investment managers of publicly traded securities awarded/renewed/extended:

|   | • |   |   |   |
|---|---|---|---|---|
| н | 1 | r | m | C |
|   |   |   |   |   |

Aegon USA Investment Management, LLC

AQR Capital Management, LLC

Axiom International Investors, LLC

Barrow, Hanley, Mewhinney & Strauss, LLC

Bernzott Capital Advisors

Blackrock Institutional Trust Company, N.A.

Copeland Capital Management, LLC

Dimensional Fund Advisors, LP

Dimensional Fund Advisors, LP

Granahan Investment Management, Inc.

Lazard Asset Management, LLC

MFS Institutional Advisors, Inc.

Neuberger Berman Investment Advisers LLC

Oberweis Asset Management, Inc.

PGIM, Inc.

Principal Global Investors, LLC

Quantitative Management Associates, LLC

Segall Bryant & Hamill, LLC

Sun Life Capital Management (U.S.) LLC

# Mandate

Active U.S. High Yield Fixed Income

Active Non-U.S. Small Cap Equities

Active Growth Emerging Markets Equities

Active Non-U.S. Equities Developed Markets Value

Active U.S. Small Cap Value Equities

Multi Passive Index Portfolio Management

Active U.S. Small Cap Core Equities

Active U.S. Treasury Inflation Protected Securities

Active Non-U.S. Emerging Markets Value

Active U.S. Small Cap Growth Equities

Active Non-U.S. Equities Developed Markets Core Active Non-U.S. Equities Developed Markets Growth

Active Core Fixed Income

Active Non-U.S. Small Cap Equities

Active Emerging Market Debt

Active Mid Cap Core Equities

Active Emerging Markets Core Equities

Active U.S. Small Cap Value Equities

SLC Management TALF Partners Fund 2, LP

Terminated contracts with investment managers of publicly traded securities:

Firms

AJO, LP

PanAgora Asset Management, Inc.

Mandate

Active U.S. Large Cap Value Equities Active U.S. Small Cap Value Equities

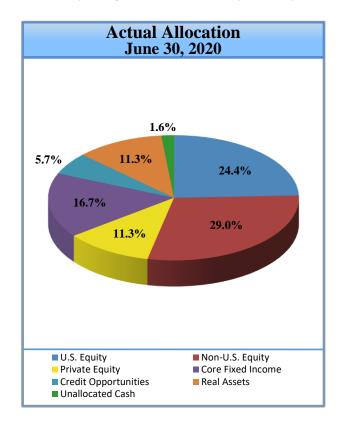
# **Investment Contract Activity**

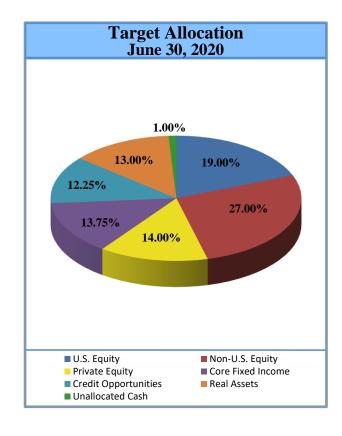
New private equity, private credit, and real estate partnerships and contracts:

| Investment Funds   | Mandate                          |
|--|----------------------------------|
| Alcentra Limited   | Private Credit                   |
| Benefits Street Partners, LLC                                    | Private Credit                   |
| Clearlake Capital Partners VI, L.P.                              | Private Equity – Credit/Distress |
| Crescent Capital Group LP  | Private Credit                   |
| CVC Capital Partners VIII, L.P.                                  | Private Equity – Buyout          |
| General Catalyst Group X - Early Venture, L.P.                   | Private Equity – Venture         |
| General Catalyst Group X - Endurance, L.P.                       | Private Equity – Venture         |
| General Catalyst Group X - Growth Venture, L.P.                  | Private Equity – Venture         |
| Hg Genesis 9 A, L.P.   | Private Equity – Buyout          |
| Hg Saturn 2 A L.P.   | Private Equity – Buyout          |
| KPS Special Situations Fund V, L.P.                              | Private Equity – Buyout          |
| KPS Special Situations Mid-Cap Fund L.P.                         | Private Equity – Buyout          |
| MBK Partners Fund V, L.P.  | Private Equity – Buyout          |
| Monroe Capital, LLC  | Private Credit                   |
| Montagu Fund VI, L.P.  | Private Equity – Buyout          |
| Oak HC/FT Partners III, L.P.                                     | Private Equity – Venture         |
| OceanSound Partners Fund, L.P.                                   | Private Equity – Buyout          |
| P4G Capital Partners I, L.P.                                     | Private Equity – Buyout          |
| Sunstone Partners II, L.P.                                       | Private Equity – Growth Equity   |
| Thoma Bravo Discover Fund III, L.P.                              | Private Equity – Buyout          |
| Thoma Bravo Explore Fund, L.P.                                   | Private Equity – Buyout          |
| Thoma Bravo Fund XIV, L.P.                                       | Private Equity – Buyout          |
| Vista Foundation Fund IV, L.P.                                   | Private Equity – Buyout          |
| Vitruvian IV, L.P.   | Private Equity – Buyout          |
| LBA Logistics Value Fund VII, L.P.                               | Real Estate – Value Added        |
| NREP Nordic Strategies Fund IV                                   | Real Estate – Value Added        |
| Waterton Residential Property Venture XIV, L.P.                  | Real Estate – Value Added        |
| Rescinded private credit contracts:                              |                                  |
| Firms  | Mandate                          |
| Alcentra Limited   | Private Credit                   |
| Contracts with consultants and vendors awarded/renewed/e.  Firms | xtended:  Mandate                |
| Bloomberg Finance, L.P.  | Investment Research Database     |
| PitchBook  | Private Markets Database         |

|                               | Actual <sup>(1)</sup> |                      | Target <sup>(2)</sup> |
|-------------------------------|-----------------------|----------------------|-----------------------|
| U.S. Equity                   | 24.40%                | U.S. Equity          | 19.00%                |
| Non-U.S. Equity               | 28.98                 | Non-U.S. Equity      | 27.00                 |
| Private Equity <sup>(3)</sup> | 11.25                 | Private Equity       | 14.00                 |
| Core Fixed Income             | 16.73                 | Core Fixed Income    | 13.75                 |
| Credit Opportunities          | 5.70                  | Credit Opportunities | 12.25                 |
| Real Assets                   | 11.33                 | Real Assets          | 13.00                 |
| Unallocated Cash              | 1.61                  | Unallocated Cash     | 1.00                  |
| Total                         | 100.00%               | Total                | 100.00%               |

- (1) Implementation of the most recently adopted Target Asset Allocation Policy is in progress and explains the difference in actual versus target allocations.
- (2) Target Asset Allocation Policy was adopted on April 10, 2018.
- (3) The underweight to Private Equity is allocated to U.S. Equity. Private Equity cannot be rebalanced on demand since the general partners control the timing of funding and distributions.





# List of Largest Assets Held by Fair Value

Displayed below are the ten largest holdings in each asset class along with their fair and share/par values as of June 30, 2020.

**Largest U.S. Equity Holdings** 

|     | Shares    | Asset Description          |         | Fair Value<br>(in US\$) |
|-----|-----------|----------------------------|---------|-------------------------|
| 1   | 1 006 907 | Missassift Cour            | ¢       | 204 012 609             |
| 1.  | 1,006,897 | Microsoft Corp.            | \$      | 204,913,608             |
| 2.  | 541,188   | Apple Inc. Class A         |         | 197,425,382             |
| 3.  | 55,653    | Amazon Inc.                |         | 153,536,609             |
| 4.  | 319,398   | Facebook Inc.              |         | 72,525,704              |
| 5.  | 39,856    | Alphabet Inc. Class A      |         | 56,517,801              |
| 6.  | 38,848    | Alphabet Inc. Class C      |         | 54,915,921              |
| 7.  | 349,954   | Johnson & Johnson          |         | 49,214,031              |
| 8.  | 258,528   | Berkshire Hathaway Class B |         | 46,149,833              |
| 9.  | 224,100   | Visa Inc. Class A          |         | 43,289,397              |
| 10. | 328,706   | Procter & Gamble           |         | 39,303,376              |
|     |           | 7                          | Total\$ | 917,791,662             |

# **Largest Non-U.S. Equity Holdings**

| _   | Shares    | Asset Description          | Fair Value<br>(in US\$) |
|-----|-----------|----------------------------|-------------------------|
|     |           |                            |                         |
| 1.  | 607,657   | Nestle SA                  | \$<br>67,169,008        |
| 2.  | 297,986   | Alibaba Group Holding Ltd. | 64,275,580              |
| 3.  | 983,900   | Tencent Holdings Ltd.      | 63,296,007              |
| 4.  | 674,093   | Novartis AG                | 58,634,104              |
| 5.  | 391,404   | SAP SE                     | 54,651,745              |
| 6.  | 151,376   | Roche Holdings AG          | 52,455,606              |
| 7.  | 295,154   | Air Liquide                | 42,564,886              |
| 8.  | 4,494,703 | AIA Group Ltd.             | 41,928,795              |
| 9.  | 846,767   | Samsung Electronics        | 37,169,470              |
| 10. | 79,967    | LVMH                       | 35,072,733              |
|     |           | Total                      | \$<br>517,217,934       |

# List of Largest Assets Held by Fair Value

# **Largest U.S. Fixed Income Holdings**

|     | Par Value   | Asset Description  | Fair Value<br>(in US\$) |
|-----|-------------|--|-------------------------|
|     |             |  |                         |
| 1.  | 15,018,167  | SSgA US Aggregate Bond Fund <sup>(1)</sup>                     | \$ 522,271,774          |
| 2.  | 196,000,000 | Bain Capital Senior Loan Fund, L.P. <sup>(1)</sup>             | 209,503,384             |
| 3.  | 64,900,000  | United States Treas Notes Inflation Index 0.5% Tb 01/15/2028   | 73,947,767              |
| 4.  | 59,600,000  | United States Treas Notes 0.375% due 07/15/2025                | 68,813,247              |
| 5.  | 51,400,000  | United States Treas Notes Inflation Index 0.625% Tb 01/15/2026 | 60,047,595              |
| 6.  | 50,700,000  | United States Treas Notes Inflation Index 0.75% Tb 07/15/2028  | 58,382,835              |
| 7.  | 50,700,000  | TSY Inflation Index N/B U.S. Govt National 0.375% 01/15/2027   | 57,982,606              |
| 8.  | 50,850,000  | TSY Inflation Index 0.375% 01/15/2027                          | 57,922,158              |
| 9.  | 50,750,000  | United States Treas Notes 0.125% Inflation Index 07/15/2026    | 57,636,429              |
| 10. | 54,830,000  | United States Treas Notes 2.375% due 03/15/2022                | 56,881,841              |
|     |             | Total _  | \$ 1,223,389,636        |

# **Largest Non-U.S. Fixed Income Holdings**

| -   | Par Value<br>(in local<br>currency) | Asset Description  |     | Fair Value<br>(in US\$) |  |  |
|-----|-------------------------------------|--|-----|-------------------------|--|--|
| 1.  | 6,590,000                           | Anheuser-Busch 4.9% Due 02/01/2046                       | \$  | 8,064,086               |  |  |
| 2.  | 4,630,000                           | State of Qatar Bond 5.103% Due 04/23/2048                |     | 6,309,912               |  |  |
| 3.  | 5,014,000                           | Petrobras Global Finance 5.093% Due 1/15/2030            |     | 4,993,944               |  |  |
| 4.  | 4,395,000                           | Mitsubishi UFJ Financial Group Inc. 2.623% Due 7/18/2022 |     | 4,564,993               |  |  |
| 5.  | 3,475,000                           | Brazil Federative Republic Bond 8.25% Due 1/20/2034      |     | 4,504,503               |  |  |
| 6.  | 3,150,000                           | Colombia Republic Bond 7.375% Due 9/18/2037              |     | 4,315,500               |  |  |
| 7.  | 2,568,000                           | Hungary Republic Note 7.625% Due 3/29/2041               |     | 4,294,477               |  |  |
| 8.  | 2,805,000                           | Panama Republic Amortizing Bond 6.7% Due 1/26/2036       |     | 4,035,722               |  |  |
| 9.  | 3,090,000                           | Saudi Arabia 5.25% Due 1/16/50                           |     | 3,981,595               |  |  |
| 10. | 2,635,000                           | Republic of Philippines Bond 7.75% Due 1/14/2031         |     | 3,935,455               |  |  |
|     |                                     | Total  | I\$ | 49,000,187              |  |  |

<sup>(1)</sup> Investment in a commingled fund that holds publicly traded fixed income securities. The par value represents LACERS ownership interest in the commingled fund.

# **Schedule of Fees**

(In Thousands)

|   | 2020 Assets<br>Under |                          | 2019 Assets<br>Under |    |                          |    |        |
|---|----------------------|--------------------------|----------------------|----|--------------------------|----|--------|
|   | N                    | <b>Ianagement</b>        | Fees                 | N  | <b>Ianagement</b>        | ]  | Fees   |
| Investment Manager Fees:                  |                      |                          |                      |    |                          |    |        |
| Fixed Income Managers                     | \$                   | 4,684,717 <sup>(1)</sup> | \$<br>6,455          | \$ | $4,571,967^{(2)}$        | \$ | 6,206  |
| Equity Managers                           |                      | $9,529,417^{(1)}$        | 22,793               |    | 9,911,638 <sup>(2)</sup> |    | 24,570 |
| Real Estate Managers                      |                      | 748,934                  | 11,021               |    | 792,516                  |    | 9,821  |
| Private Equity Managers                   |                      | 2,242,579                | 42,900               |    | 2,008,558                |    | 39,586 |
| Total                                     | \$                   | 17,205,647               | \$<br>83,169         | \$ | 17,284,679               | \$ | 80,183 |
|   |                      |                          |                      |    |                          |    |        |
| Investment Consulting Fees                |                      | N/A                      | \$<br>1,402          |    | N/A                      | \$ | 1,399  |
| Investment Related Administrative Expense |                      | N/A                      | 2,959                |    | N/A                      |    | 2,340  |
| Total                                     |                      | N/A                      | \$<br>4,361          |    | N/A                      | \$ | 3,739  |

<sup>(1)</sup> Includes \$171,000 of fixed income derivatives and \$1,953,000 of equity derivatives. This is combined in the Statement of Fiduciary Net Position as \$2,124,000.

# **Schedule of Top Ten Brokerage Commissions**

|     | Broker   | Shares        | Commission   | \$/Share |  |
|-----|--|---------------|--------------|----------|--|
| 1.  | Morgan Stanley & Co., LLC                        | 126,480,765   | \$ 250,910   | \$ 0.002 |  |
| 2.  | J.P. Morgan Securities PLC                       | 40,770,715    | 217,478      | 0.005    |  |
| 3.  | Merrill Lynch International Limited              | 36,334,316    | 153,046      | 0.004    |  |
| 4.  | Credit Suisse Securities (USA) LLC               | 88,654,832    | 144,214      | 0.002    |  |
| 5.  | Goldman, Sachs and Co.                           | 76,076,926    | 132,779      | 0.002    |  |
| 6.  | HSBC Securities (USA) Inc. Daiwa Capital Markets | 47,140,910    | 119,930      | 0.003    |  |
| 7.  | Liquidnet Inc                                    | 7,497,625     | 112,875      | 0.015    |  |
| 8.  | BofA Securities, Inc                             | 11,259,734    | 110,309      | 0.010    |  |
| 9.  | CL King  | 5,287,035     | 105,741      | 0.020    |  |
| 10. | Societe Generale London Branch                   | 21,541,795    | 105,138      | 0.005    |  |
|     | Total  | 461,044,653   | 1,452,420    | 0.003    |  |
|     | Total - Other Brokers (1)                        | 638,931,252   | 2,451,322    | 0.004    |  |
|     | Grand Total                                      | 1,099,975,905 | \$ 3,903,742 | \$ 0.004 |  |
|     |  | ·             | <del></del>  |          |  |

<sup>(1)</sup> Over-the-counter (OTC) Brokers excluded because there is no stated commission.

LACERS has commission recapture arrangements with brokerage firms. For the current fiscal year, LACERS recaptured a total of \$3,455 commission credit from Cowen, which was rebated to LACERS in cash.

<sup>(2)</sup> Includes \$38,000 of fixed income derivatives and \$(835,000) of equity derivatives. This is combined in the Statement of Fiduciary Net Position as \$(797,000).

| Type of investment                       |    | Fair Value     | % of Total<br>Fair Value | Domestic<br>Fair Value | Foreign<br>Fair Value |
|--|----|----------------|--------------------------|------------------------|-----------------------|
| Fixed Income                             |    |                |                          |                        |                       |
| Government bonds                         | \$ | 1,894,147,626  | 10.80%                   | \$ 1,598,245,825       | \$ 295,901,801        |
| Government agencies                      |    | 69,977,688     | 0.40                     | 37,568,666             | 32,409,022            |
| Municipal / provincial bonds             |    | 3,295,860      | 0.02                     | -                      | 3,295,860             |
| Corporate bonds                          |    | 1,402,552,399  | 8.00                     | 1,082,238,876          | 320,313,523           |
| Bank loans                               |    | 4,205,734      | 0.02                     | 2,841,360              | 1,364,374             |
| Government mortgage bonds                |    | 483,829,725    | 2.76                     | 483,829,725            | -                     |
| Commercial mortgage bonds                |    | 81,020,953     | 0.46                     | 81,020,953             | -                     |
| Opportunistic debts                      |    | 223,375,302    | 1.27                     | 209,503,384            | 13,871,918            |
| Other fixed income (Common Funds Assets) |    | 522,271,774    | 2.98                     | 522,271,774            | -                     |
| Derivative Instruments                   |    | -              | -                        | -                      | -                     |
| <b>Total Fixed Income</b>                |    | 4,684,677,061  | 26.71                    | 4,017,520,563          | 667,156,498           |
| Equities                                 |    |                |                          |                        |                       |
| Common stock                             |    |                |                          |                        |                       |
| Basic industries                         |    | 1,098,196,780  | 6.26                     | 411,366,308            | 686,830,472           |
| Capital goods industries                 |    | 505,702,018    | 2.88                     | 117,439,583            | 388,262,435           |
| Consumer & services                      |    | 2,621,797,691  | 14.96                    | 1,160,116,804          | 1,461,680,887         |
| Energy                                   |    | 599,100,901    | 3.42                     | 233,050,322            | 366,050,579           |
| Financial services                       |    | 1,238,692,295  | 7.07                     | 490,898,084            | 747,794,211           |
| Health care                              |    | 1,150,241,971  | 6.56                     | 664,456,924            | 485,785,047           |
| Information technology                   |    | 1,702,391,935  | 9.71                     | 1,102,004,743          | 600,387,192           |
| Real Estate                              |    | 539,133,919    | 3.08                     | 367,345,143            | 171,788,776           |
| Miscellaneous                            |    | 23,362,666     | 0.13                     | 5,940,537              | 17,422,129            |
| <b>Total Common Stock</b>                |    | 9,478,620,176  | 54.07                    | 4,552,618,448          | 4,926,001,728         |
| Preferred stock                          |    | 37,759,551     | 0.22                     | 6                      | 37,759,545            |
| Stapled securities                       |    | 10,866,943     | 0.06                     | -                      | 10,866,943            |
| Derivative Instruments                   |    | 2,124,127      | 0.01                     | 2,222,710              | (98,583)              |
| Unit Trust Equity                        |    | 85,662         | -                        | -                      | 85,662                |
| <b>Total Equities</b>                    | _  | 9,529,456,459  | 54.36                    | 4,554,841,164          | 4,974,615,295         |
| Real Estate                              |    | 748,934,212    | 4.27                     | 748,329,796            | 604,416               |
| Private Equity                           |    |                |                          |                        |                       |
| Buyout                                   |    | 1,212,641,937  | 6.92                     | 905,062,239            | 307,579,698           |
| Distressed debt                          |    | 83,504,560     | 0.48                     | 80,627,673             | 2,876,887             |
| Mezzanine                                |    | 5,688,647      | 0.03                     | 5,688,647              | -                     |
| Special Situations                       |    | 226,155,897    | 1.29                     | 180,542,815            | 45,613,082            |
| Venture capital                          |    | 714,588,241    | 4.08                     | 658,588,443            | 55,999,798            |
| Total Private Equity                     |    | 2,242,579,282  | 12.80                    | 1,830,509,817          | 412,069,465           |
| Security Lending Collateral              |    | 325,262,979    | 1.86                     | 298,448,855            | 26,814,124            |
| Total Fund <sup>(1)</sup>                | •  | 17,530,909,993 | 100.00%                  | \$11,449,650,195       |                       |
| i viai i unu                             | Ψ  | 11,330,707,773 | 100.00 /0                | Ψ11, ττ2, 030, 193     | Ψυ,υσ1,239,190        |

<sup>(1)</sup> Total Fund includes securities lending, but excludes cash and cash equivalents and adjustments to cash.

#### **Investment Advisors**

#### U.S. Equity

EAM Investors, LLC

Principal Global Investors, LLC

RhumbLine Advisers Limited Partnership

### Non-U.S. Equity

AQR Capital Management, LLC Axiom International Investors, LLC

Barrow, Hanley, Mewhinney & Strauss, LLC

Dimensional Fund Advisors, LP Lazard Asset Management, LLC MFS Institutional Advisors, Inc. Oberweis Asset Management, Inc.

Quantitative Management Associates, LLC State Street Global Advisors Trust Company

# **Fixed Income**

LM Capital Group, LLC

Loomis, Sayles & Company, L.P.

Neuberger Berman Investment Advisers LLC

Robert W. Baird & Co., Incorporated

State Street Global Advisors Trust Company

### **Credit Opportunities**

Aegon USA Investment Management, LLC Bain Capital Credit, L.P.

PGIM. Inc.

Sun Life Capital Management (U.S.) LLC

# **Public Real Assets**

CenterSquare Investment Management LLC CoreCommodity Management, LLC Dimensional Fund Advisors, LP

# Cash & Short-Term

The Northern Trust Company

#### **Real Estate**

Almanac Realty Partners, LLC Apollo Global Management, LLC Asana Partners, LP Berkshire Group Bristol Group, Inc.

Broadview Real Estate Partners Bryanston Realty Partners

Canyon Partner, LLC

CIM Group LLC

**Clarion Partners** 

Colony Capital, Inc.

DLJ Real Estate Capital Partners

DRA Advisors LLC Gerrity Group, LLC

Hancock Timber Resource Group, Inc.

Heitman LLC

Hunt Realty Investments Integrated Capital, LLC

Invesco Advisors, Inc.

Jamestown L.P.

JP Morgan Chase & Co.

Kayne Anderson Capital Advisors, L.P.

LBA Logistics Lone Star Funds

Mesa West Capital, LLC

Morgan Stanley & Co., LLC

NREP Logistics AB

PCCP, LLC

Paladin Realty Partners, LLC Principal Global Investors LLC Standard Life Investments Limited

Stockbridge Capital Group Torchlight Investors, LLC Walton Street Capital Waterton Associates L.L.C.

# Private Equity

1315 Capital LLC

ABRY Partners LLC

ACON Investments, L.L.C.

Advent International Corp.

AION Capital Partners

American Securities LLC

Angeleno Group LLC

Angeles Equity Partners, LLC

Apollo Global Management, LLC

Ascribe Capital, LLC

Astorg Group, LLC

Astra Capital Management LLC

Austin Ventures

Bain Capital

Baring Private Equity Asia Limited

# **Investment Advisors (Continued)**

# **Private Equity (Continued)**

**BC** Partners

Black Diamond Capital Management

Blackstone Group Inc. Blue Sea Capital LLC Brentwood Associates, Inc.

Cardinal Partners
Carlyle Group Inc.
CenterGate Capital, L.P.

Charterhouse Capital Partners LLP

CHS Capital LLC Clearlake Capital Group Coller Capital Limited CVC Capital Partners

Defy Partners Management, LLC EIG Global Energy Partners Element Management LP Encap Investments L.P. Energy Capital Partners

Essex Woodland Health Ventures

FIMI Ltd.

First Reserve Corporation Freeman Spogli & Co. Inc. Frontier Venture Capital General Catalyst Partners

Genstar Capital

Gilde Buy Out Partners BV Glendon Capital Management LP

GTCR LLC

The Halifax Group, LLC

Harvest Partners

Hellman & Friedman LLC

Hg Capital, LLC

High Road Capital Partners, LLC

Hony Capital

Incline Equity Partners
Insight Partners

**Institutional Venture Partners** 

JH Whitney & Co. Kelso & Company Khosla Ventures KKR & Co., Inc. KPS Capital Partners

Leonard Green & Partners LP

Levine Leichtman Capital Partners, LLC

Lindsay Goldberg, LLC Longitude Capital

Madison Dearborn Partners, LLC

MBK Partners L.P. Menlo Ventures L.P. Mill Point Capital, LLC Montagu Private Equity LLP Nautic Partners, LLC

New Enteprise Associates, LLC New Mountain Capital, LLC New Water Capital, L.P. Newbridge Asia, L.P. NGEN Partners, LLC

NGP Energy Capital Management, LLC

New MainStream Capital
Nordic Capital, L.P.
Oak HC/FT Partners, LLC
Oak Investment Partners, L.P.
Oaktree Capital Management, L.P.
OceanSound Partners Fund, L.P.
Onex Partners Manager, L.P.
P4G Capital Management, LLC
Palladium Equity Partners, L.P.

Permira, L.P.

Pharos Capital Group, LLC Platinum Equity, LLC Polaris Partners, L.P.

Providence Equity Partners, LLC

Roark Capital Group Rustic Canyon Partners Saybrook Capital, LLC

Searchlight Capital Partners, L.P.

Spark Capital

Spire Capital Management, LLC SSG Capital Partners, L.P. St. Cloud Capital Partners, L.P.

StarVest Partners StepStone Group, L.P. Sterling Partners Stripes Group, LLC Sunstone Partners

TA Associates Management, L.P.

TCW Group, Inc.

Technology Crossover Ventures, LLC

Thoma Bravo, LLC

Threshold Ventures Inc. (formerly DFJ Venture)

TPG Capital Advisors, LLC

Trident Capital Upfront Ventures

VantagePoint Venture Partners, L.P. Vestar Capital Partners, LLC Vicente Capital Partners, LLC

Vista Equity Partners Management, LLC

Vitruvian Partners, LLP

# **Investment Advisors (Continued)**

# **Private Equity (Continued)**

Wynnchurch Capital, L.P. Yucaipa Alliance Management, LLC

### **Consultants**

NEPC, LLC Aksia TorreyCove Partners LLC Townsend Holdings, LLC

# Custodian

The Northern Trust Company

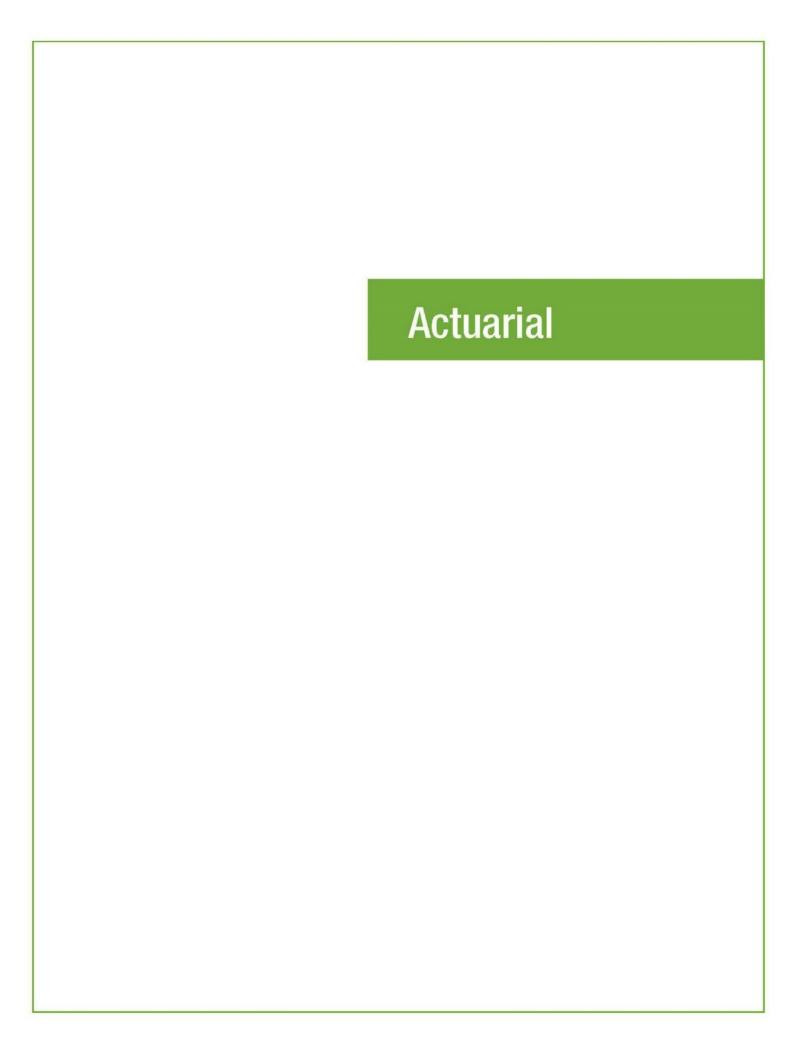
# **Transition Managers**

Abel Noser, LLC
Blackrock Institutional Trust Company, N.A.
Citigroup Global Markets Inc.
Loop Capital Markets, LLC
Macquarie Capital (USA) Inc.
Penserra Transition Management, LLC

# **Proxy Voting Services**

Institutional Shareholder Services Inc. (ISS)

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## **Actuarial Valuation Summary**

## **Summary of Significant Valuation Results**

|      | _  | Jι | ine 30, 2020                     | Ju | ine 30, 2019                     | ( | Change          |
|------|--|----|----------------------------------|----|----------------------------------|---|-----------------|
| l.   | Total Membership<br>a. Active Members<br>b. Pensioners and Beneficiaries   |    | 27,490<br>20,423                 |    | 26,632<br>20,034                 |   | 3.2%<br>1.9%    |
| II.  | Valuation Salary<br>a. Total Annual Projected Payroll<br>b. Average Projected Monthly Salary                             | \$ | 2,445,016,587<br>7,412           | \$ | 2,225,412,831<br>6,963           |   | 9.9%<br>6.4%    |
| III. | Benefits to Current Retirees and Beneficiaries <sup>(1)</sup> a. Total Annual Benefits b. Average Monthly Benefit Amount | \$ | 1,004,730,961<br>4,100           | \$ | 947,588,609<br>3,942             |   | 6.0%<br>4.0%    |
| IV.  | Total System Assets <sup>(2)</sup><br>a. Actuarial Value<br>b. Fair Value  | \$ | 18,697,966,253<br>17,863,324,366 |    | 17,711,461,636<br>17,707,909,933 |   | 5.6%<br>0.9%    |
| V.   | Unfunded Actuarial Accrued Liability (UAAL) a. Retirement Benefits b. Health Subsidy Benefits                            | \$ | 6,897,092,748<br>502,106,823     | \$ | 5,974,856,716<br>521,636,655     |   | 15.4%<br>(3.7)% |

<sup>(1)</sup> Includes July COLA.

<sup>(2)</sup> Includes assets for Retirement, Health, Family Death, and Larger Annuity Benefits.

|  | FY 2021-22 <sup>(1)</sup> |        | _ | FY 2020-21 <sup>(1)</sup> |        |  | Difference |         |  |
|--|---------------------------|--------|---|---------------------------|--------|--|------------|---------|--|
| VI. Budget Items (as a Percent of Pay) | Tier 1                    | Tier 3 | _ | Tier 1                    | Tier 3 |  | Tier 1     | Tier 3  |  |
| a. Retirement Benefits                 |                           |        |   |                           |        |  |            |         |  |
| 1. Normal Cost                         | 8.53%                     | 5.32%  |   | 6.70%                     | 3.82%  |  | 1.83 %     | 1.50%   |  |
| 2. Amortization of UAAL                | 20.11%                    | 20.11% |   | 18.38%                    | 18.38% |  | 1.73 %     | 1.73%   |  |
| 3. Total Retirement Contribution       | 28.64%                    | 25.43% |   | 25.08%                    | 22.20% |  | 3.56 %     | 3.23%   |  |
| b. Health Subsidy Benefits             |                           |        |   |                           |        |  |            |         |  |
| 1. Normal Cost                         | 3.36%                     | 3.92%  |   | 3.31%                     | 4.21%  |  | 0.05 %     | (0.29)% |  |
| <ol><li>Amortization of UAAL</li></ol> | 0.81%                     | 0.81%  |   | 1.04%                     | 1.04%  |  | (0.23)%    | (0.23)% |  |
| 3. Total Health Subsidy Contribution   | 4.17%                     | 4.73%  | _ | 4.35%                     | 5.25%  |  | (0.18)%    | (0.52)% |  |
| c. Total Contribution (a+b)            | 32.81%                    | 30.16% | _ | 29.43%                    | 27.45% |  | 3.38 %     | 2.71%   |  |

<sup>(1)</sup> Contributions are assumed to be received by LACERS on July 15.

|      |                                      | June 30, 2020 | June 30, 2019 | Difference |
|------|--------------------------------------|---------------|---------------|------------|
| VII. | Funded Ratio                         |               |               |            |
|      | (Based on Valuation Value of Assets) |               |               |            |
|      | a. Retirement Benefits               | 69.4%         | 71.3%         | (1.9)%     |
|      | b. Health Subsidy Benefits           | 85.6%         | 84.4%         | 1.2%       |
|      | c. Total                             | 71.6%         | 73.1%         | (1.5)%     |
|      | (Based on Fair Value of Assets)      |               |               |            |
|      | d. Retirement Benefits               | 66.3%         | 71.3%         | (5.0)%     |
|      | e. Health Subsidy Benefits           | 81.8%         | 84.3%         | (2.5)%     |
|      | f. Total                             | 68.4%         | 73.1%         | (4.7)%     |

## **Actuarial Valuation Summary**

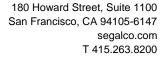
## **Summary of Significant Valuation Results (Continued)**

|  | June 30, 2020     | June 30, 2019     | Change |
|--|-------------------|-------------------|--------|
| VIII. Net Pension Liability <sup>(1)</sup>     |                   |                   |        |
| Total Pension Liability                        | \$ 22,527,195,295 | \$ 20,793,421,143 | 8.3 %  |
| Plan Fiduciary Net Position                    | (14,932,404,300)  | (14,815,592,841)  | 0.8 %  |
| Net Pension Liability                          | \$ 7,594,790,995  | \$ 5,977,828,302  | 27.0%  |
| Plan Fiduciary Net Position as a Percentage of |                   |                   |        |
| the Total Pension Liability                    | 66.3%             | 71.3%             | (5.0)% |

<sup>(1)</sup> Refer to the Schedule of Changes in Net Pension Liability and Related Ratios on page 93 -94.

|   | J  | lune 30, 2020   | <br>lune 30, 2019   | Change |
|---|----|-----------------|---------------------|--------|
| IX. Net OPEB Liability(1)   |    |                 |                     |        |
| Total OPEB Liability  | \$ | 3,486,530,510   | \$<br>3,334,298,548 | 4.6 %  |
| Plan Fiduciary Net Position   |    | (2,851,204,652) | (2,812,097,867)     | 1.4 %  |
| Net OPEB Liability  | \$ | 635,325,858     | \$<br>522,200,681   | 21.7 % |
| Plan Fiduciary Net Position as a Percentage of the Total OPEB Liability |    | 81.8%           | 84.3%               | (2.5)% |

 $<sup>^{(1)}</sup>$  Refer to the Schedule of Changes in Net OPEB Liability and Related Ratios on page 114





## **Actuarial Certification**

November 3, 2020

This is to certify that Segal has conducted an actuarial valuation of the Los Angeles City Employees' Retirement System (LACERS or the System) retirement program as of June 30, 2020, in accordance with generally accepted actuarial principles and practices. In particular, it is our understanding that the assumptions and methods used for funding purposes meet the parameters set by the Actuarial Standards of Practice (ASOPs). Actuarial valuations are performed annually for this retirement program with the last valuation completed on June 30, 2019. The actuarial calculations presented in this report have been made on a basis consistent with our understanding of the historical funding methods used in determination of the liability for retirement benefits.

The actuarial valuation is based on the plan of benefits verified by LACERS and on participant and financial data provided by LACERS. Segal did not audit LACERS' financial statements, but we conducted an examination of all participant data for reasonableness and we concluded that it was reasonable and consistent with the prior year's data.

One of the general goals of an actuarial valuation is to establish contributions that fully fund the System's liabilities, and that, as a percentage of payroll, remain as level as possible for each generation of active members. Both the Normal Cost and the Actuarial Accrued Liability are determined under the Entry Age cost method.

The actuarial computations made are for funding plan benefits. Accordingly, additional determinations will be needed for other purposes, such as satisfying financial accounting requirements under Governmental Accounting Standards Board (GASB) Statements No. 67 and No. 68 and judging benefit security at termination of the plan.

Segal prepared all of the supporting schedules in the Actuarial Section of the Comprehensive Annual Financial Report (CAFR) and certain supporting schedules in the Financial Section, based on the results of the June 30, 2020 actuarial valuation. A listing of the supporting schedules Segal prepared for inclusion in the Financial Section as Required Supplementary Information prescribed by GASB, and in the Actuarial Section, is provided below:

#### **Financial Section**

- 1. Schedule of Net Pension Liability<sup>1</sup>
- 2. Schedule of Changes in Net Pension Liability and Related Ratios<sup>1</sup>
- 3. Schedule of Contribution History<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> Source: Segal's GASB Statement No. 67 valuation report as of June 30, 2020.

## **Actuarial Certification (continued)**

November 3, 2020

#### **Actuarial Section**

- 4. Summary of Significant Valuation Results
- 5. Active Member Valuation Data
- 6. Retirees and Beneficiaries Added to and Removed from Retiree Payroll
- 7. Schedule of Funded Liabilities by Type
- 8. Schedule of Funding Progress
- 9. Actuarial Analysis of Financial Experience
- 10. Actuarial Balance Sheet
- 11. Schedule of Changes in Net Pension Liability and Related Ratios<sup>1</sup>
- 12. Projection of Pension Plan's Fiduciary Net Position for Use in Calculation of Discount Rate of 7.00% and Preparation of GASB 67 Report as of June 30, 20201

LACERS' staff prepared other trend data schedules in the Statistical Section based on information supplied in Segal's valuation report.

To the best of our knowledge, this report is complete and accurate and in our opinion presents the plan's current funding information. The undersigned is a member of the American Academy of Actuaries and is qualified to render the actuarial opinion contained herein.

Andy Yeung, ASA, MAAA, FCA, EA

Vice President and Actuary

<sup>&</sup>lt;sup>1</sup> Source: Segal's GASB Statement No. 67 valuation report as of June 30, 2020.

#### **Active Member Valuation Data**

### Member Population

| <br>Valuation Date | Active Members <sup>(1)</sup> | Covered Payroll <sup>(2)</sup> | Annual Average Pay <sup>(2)</sup> | Change in Annual<br>Average Pay (%) |
|--------------------|-------------------------------|--------------------------------|-----------------------------------|-------------------------------------|
| 06/30/2011         | 25,449                        | \$1,833,392,381                | \$72,042                          | 4.0%                                |
| 06/30/2012         | 24,917                        | 1,819,269,630                  | 73,013                            | 1.3                                 |
| 06/30/2013         | 24,441                        | 1,846,970,474                  | 75,569                            | 3.5                                 |
| 06/30/2014         | 24,009                        | 1,898,064,175                  | 79,056                            | 4.6                                 |
| 06/30/2015         | 23,895                        | 1,907,664,598                  | 79,835                            | 1.0                                 |
| 06/30/2016         | 24,446                        | 1,968,702,630                  | 80,533                            | 0.9                                 |
| 06/30/2017         | 25,457                        | 2,062,316,129                  | 81,012                            | 0.6                                 |
| 06/30/2018         | 26,042                        | 2,177,687,102                  | 83,622                            | 3.2                                 |
| 06/30/2019         | 26,632                        | 2,225,412,831                  | 83,562                            | (0.1)                               |
| 06/30/2020         | 27,490                        | 2,445,016,587                  | 88,942                            | 6.4                                 |

<sup>(1)</sup> Includes non-vested Members.

## Retirees and Beneficiaries Added to and Removed from Retiree Payroll<sup>(1)</sup>

| Valuation<br>Date | No. of New<br>Retirees/<br>Beneficiaries | Annual<br>Allowances<br>Added <sup>(2)</sup> | No. of<br>Retirees/<br>Beneficiaries<br>Removed | Annual<br>Allowances<br>Removed | No. of<br>Retirees/<br>Beneficiaries<br>at 6/30 | Annual<br>Allowances<br>at 6/30 | Percent<br>Increase<br>in Annual<br>Allowances | Average<br>Annual<br>Allowance |
|-------------------|--|--|---|---------------------------------|---|---------------------------------|--|--------------------------------|
| 06/30/2011        | 528                                      | \$24,282,965                                 | 595   | \$16,585,589                    | 17,197  | \$656,547,204                   | 1.2%   | \$38,178                       |
| 06/30/2012        | 620                                      | 38,314,256                                   | 594   | 17,986,700                      | 17,223  | 676,874,760                     | 3.1  | 39,301                         |
| 06/30/2013        | 772                                      | 40,966,952                                   | 633   | 18,776,770                      | 17,362  | 699,064,942                     | 3.3  | 40,264                         |
| 06/30/2014        | 831                                      | 38,666,905                                   | 661   | 21,175,777                      | 17,532  | 716,556,070                     | 2.5  | 40,871                         |
| 06/30/2015        | 1,083                                    | 55,849,106                                   | 683   | 22,013,426                      | 17,932  | 750,391,750                     | 4.7  | 41,847                         |
| 06/30/2016        | 1,082                                    | 51,056,286                                   | 657   | 23,092,610                      | 18,357  | 778,355,426                     | 3.7  | 42,401                         |
| 06/30/2017        | 1,142                                    | 65,583,105                                   | 694   | 24,422,619                      | 18,805  | 819,515,912                     | 5.3  | 43,580                         |
| 06/30/2018        | 1,312                                    | 86,917,553                                   | 738   | 26,361,758                      | 19,379  | 880,071,707                     | 7.4  | 45,414                         |
| 06/30/2019        | 1,341                                    | 93,946,126                                   | 686   | 26,429,224                      | 20,034  | 947,588,609                     | 7.7  | 47,299                         |
| 06/30/2020        | 1,134                                    | 85,268,880                                   | 745   | 28,126,528                      | 20,423  | 1,004,730,961                   | 6.0  | 49,196                         |

 $<sup>^{(1)}</sup>$  Does not include Family Death Benefit Plan beneficiaries. Table is based on valuation data.  $^{(2)}$  Includes the COLA granted in July.

<sup>(2)</sup> Reflects annualized salaries for part-time Members.

#### Schedule of Funded Liabilities by Type

For Years Ended June 30 (Dollars in Thousands)

Portion of Aggregate Accrued Liabilities Covered by Reported Assets Aggregate Actuarial Accrued Liabilities For Retirees, Valuation Retirees, Beneficiaries, & Valuation Member Active Value Member Beneficiaries, & Active Date Contributions Inactive/Vested Members of Assets Contributions Inactive/Vested Members 06/30/2011 \$1,474,824 \$7,765,071 \$4,151,809 \$9,691,011 100.0% 100.0% 10.9% 06/30/2012 1,625,207 7,893,684 4,875,068 9,934,959 100.0 100.0 8.5 7.9 06/30/2013 1,757,195 8,066,564 5,057,904 10,223,961 100.0 100.0 8,700,896 10,944,751 100.0 6.1 06/30/2014 1,900,068 5,647,889 100.0 06/30/2015 2,012,378 9,118,166 5,779,452 11,727,161 100.0 100.0 10.3 06/30/2016 2,137,269 9,439,001 5,848,726 12,439,250 100.0 100.0 14.8 06/30/2017 2,255,048 10,164,403 6,038,737 13,178,334 100.0 100.0 12.6 11,079,053 100.0 06/30/2018 2,354,026 6,511,500 13,982,435 100.0 8.4 06/30/2019 2,469,761 11,933,703 6,389,957 14,818,564 100.0 100.0 6.5 06/30/2020 2,584,851 12,740,109 7,202,235 15,630,102 100.0 100.0 4.2

#### **Schedule of Funding Progress**

For Years Ended June 30 (Dollars in Thousands)

| Valuation<br>Date | Valuation<br>Value of<br>Assets<br>(a) | Actuarial<br>Accrued<br>Liability<br>(AAL)<br>(b) | Unfunded<br>AAL<br>(UAAL)<br>(b)-(a) | Funded<br>Ratio<br>(a)/(b) | Covered<br>Payroll<br>(c) | UAAL as a Percentage of Covered Payroll [(b)-(a)]/(c) |
|-------------------|--|---|--------------------------------------|----------------------------|---------------------------|---|
| 06/30/2011        | \$9,691,011                            | \$13,391,704                                      | \$3,700,693                          | 72.4%                      | \$1,833,392               | 201.9%  |
| 06/30/2012        | 9,934,959                              | 14,393,959  | 4,459,000                            | 69.0                       | 1,819,270                 | 245.1   |
| 06/30/2013        | 10,223,961                             | 14,881,663  | 4,657,702                            | 68.7                       | 1,846,970                 | 252.2   |
| 06/30/2014        | 10,944,751                             | 16,248,853  | 5,304,102                            | 67.4                       | 1,898,064                 | 279.5   |
| 06/30/2015        | 11,727,161                             | 16,909,996  | 5,182,835                            | 69.4                       | 1,907,665                 | 271.7   |
| 06/30/2016        | 12,439,250                             | 17,424,996  | 4,985,746                            | 71.4                       | 1,968,703                 | 253.3   |
| 06/30/2017        | 13,178,334                             | 18,458,188  | 5,279,854                            | 71.4                       | 2,062,316                 | 256.0   |
| 06/30/2018        | 13,982,435                             | 19,944,579  | 5,962,144                            | 70.1                       | 2,177,687                 | 273.8   |
| 06/30/2019        | 14,818,564                             | 20,793,421  | 5,974,857                            | 71.3                       | 2,225,413                 | 268.5   |
| 06/30/2020        | 15,630,102                             | 22,527,195  | 6,897,093                            | 69.4                       | 2,445,017                 | 282.1   |

### **Actuarial Analysis of Financial Experience**

Development of Unfunded Actuarial Accrued Liability for Year Ended June 30, 2020

| 1. | Unfunded actuarial accrued liability at beginning of year                          | \$     | 5,974,856,716 |
|----|--|--------|---------------|
| 2. | Total normal cost at beginning of year   |        | 374,967,243   |
| 3. | Expected employer and member contributions at beginning of year <sup>(1)</sup>     |        | (780,978,713) |
| 4. | Interest   | _      | 403,741,280   |
| 5. | Expected unfunded actuarial accrued liability at end of year                       | \$     | 5,972,586,526 |
| 6. | Changes due to:  |        |               |
|    | a) Investment loss on smoothed value of assets \$ 108,78                           | 5,905  |               |
|    | b) Gain due to actual contributions more than expected (23,18                      | 3,704) |               |
|    | c) Loss due to higher than expected salary increases for continuing actives 311,80 | 18,252 |               |
|    | d) Other gains on demographic experience (3,62                                     | 4,456) |               |
|    | e) Increase due to new actuarial assumptions 530,72                                | 0,225  |               |
|    | Total loss   | _      | 924,506,222   |
| 7. | Unfunded actuarial accrued liability at end of year                                | \$     | 6,897,092,748 |

Net of the additional expected employer contributions due to the application of the 40-year minimum amortization required for the remaining GASB 25/27 layer, since the beginning of year UAAL was developed without the liability associated with this layer. These additional contributions served to slightly increase the contribution gain (if any) from the scheduled one-year delay in implementing the lower contribution rates calculated in the prior valuation.

#### **Actuarial Balance Sheet**

For Year Ended June 30, 2020

#### **Actuarial Present Value of Future Benefits**

| 1.                        | Present value of benefits for retired members and beneficiaries | \$ 12,377,357,430 |  |  |  |
|---------------------------|---|-------------------|--|--|--|
| 2.                        | Present value of benefits for inactive vested members           | 562,921,724       |  |  |  |
| 3.                        | Present value of benefits for active members                    | 13,316,127,323    |  |  |  |
| 4.                        | Total actuarial present value of future benefits                | \$ 26,256,406,477 |  |  |  |
| Current and Future Assets |   |                   |  |  |  |
| 5.                        | Total valuation value of assets                                 | \$ 15,630,102,547 |  |  |  |
| 6.                        | Present value of future contributions by members                | 2,139,920,447     |  |  |  |
| 7.                        | Present value of future employer contributions for:             |                   |  |  |  |
|                           | a) Entry age normal cost  | 1,589,290,735     |  |  |  |
|                           | b) Unfunded actuarial accrued liability                         | 6,897,092,748     |  |  |  |
| 8.                        | Present value of current and future assets                      | \$ 26,256,406,477 |  |  |  |

# Schedule of Changes in Net Pension Liability and Related Ratios<sup>(1)</sup> For the Fiscal Years Ended June 30 (Dollars in Thousands)

|  |    | 2020       |    | 2019       | <br>2018         | <br>2017         |
|--|----|------------|----|------------|------------------|------------------|
| Total Pension Liability  |    |            |    |            |                  |                  |
| Service cost <sup>(2)</sup>  | \$ | 374,967    | \$ | 370,409    | \$<br>352,283    | \$<br>340,759    |
| Interest   |    | 1,499,208  |    | 1,439,661  | 1,332,878        | 1,302,278        |
| Changes of benefit terms   |    | -          |    | -          | 25,173           | -                |
| Differences between expected and actual experience                                 |    | 308,184    |    | (46,035)   | 144,224          | (146,474)        |
| Changes of assumptions   |    | 530,720    |    | -          | 483,717          | 340,718          |
| Benefit payments, including refunds of Member                                      |    | (0=0 00=)  |    | (0.17.100) | (0=1 00=)        | (001.000)        |
| contributions  | -  | (979,305)  | -  | (915,192)  | <br>(851,885)    | <br>(804,089)    |
| Net change in total pension liability  |    | 1,733,774  |    | 848,843    | 1,486,390        | 1,033,192        |
| Total pension liability-beginning  |    | 20,793,421 |    | 19,944,578 | <br>18,458,188   | <br>17,424,996   |
| Total pension liability-ending (a)   | \$ | 22,527,195 | \$ | 20,793,421 | \$<br>19,944,578 | \$<br>18,458,188 |
| Plan fiduciary net position  |    |            |    |            |                  |                  |
| Contributions-employer   | \$ | 553,118    | \$ | 478,717    | \$<br>450,195    | \$<br>453,356    |
| Contributions-Member   |    | 259,817    |    | 237,087    | 230,757          | 221,829          |
| Net investment income <sup>(4)</sup>   |    | 306,712    |    | 799,351    | 1,243,817        | 1,517,545        |
| Benefit payments, including refunds of Member                                      |    |            |    |            |                  |                  |
| contributions  |    | (979,305)  |    | (915,192)  | (851,885)        | (804,089)        |
| Administrative expenses  |    | (23,531)   |    | (19,600)   | (17,699)         | (17,454)         |
| Others <sup>(3)</sup>  |    | -          |    | <u>-</u>   | <br>(471)        | <br><u>-</u>     |
| Net change in Plan fiduciary net position  |    | 116,811    |    | 580,363    | 1,054,714        | 1,371,187        |
| Plan fiduciary net position-beginning  |    | 14,815,593 |    | 14,235,230 | 13,180,516       | <br>11,809,329   |
| Plan fiduciary net position-ending (b)   | \$ | 14,932,404 | \$ | 14,815,593 | \$<br>14,235,230 | \$<br>13,180,516 |
| Plan's net pension liability-ending (a)-(b)  | \$ | 7,594,791  | \$ | 5,977,828  | \$<br>5,709,348  | \$<br>5,277,672  |
| Plan fiduciary net position as a percentage of the total pension liability (b)/(a) |    | 66.3%      |    | 71.3%      | 71.4%            | 71.4%            |
| Covered payroll  | \$ | 2,271,039  | \$ | 2,108,171  | \$<br>2,057,565  | \$<br>1,973,049  |
| Plan's net pension liability as a percentage of covered payroll                    |    | 334.4%     |    | 283.6%     | 277.5%           | 267.5%           |

<sup>(1)</sup> In calculating the Plan's net pension liability, the total pension liability and the Plan fiduciary net position amounts associated with non-pension related benefits (Family Death and Larger Annuity Benefits) were excluded.

<sup>(2)</sup> The service cost is based on the previous year's valuation.

<sup>(3)</sup> On July 1, 2015, the System segregated Members' voluntary larger annuity contributions into the (non-pension related) Reserve for Larger Annuity Contributions pursuant to a suggestion made by the System's actuarial consultant. The Reserve balance for Larger Annuity Contributions as of June 30, 2015 was \$5,200,000. On July 1, 2017, the System reallocated \$471,000 of interest from the Reserve for Mandatory Member Contributions into the Reserve for Voluntary Member Contributions.

Building Lease and Other Income were included in the Net investment income (loss) starting in fiscal year 2020. Investment related administrative expenses is part of Administrative expenses and excluded from Net investment Income.

# Schedule of Changes in Net Pension Liability and Related Ratios<sup>(1)</sup> (Continued) For the Fiscal Years Ended June 30 (Dollars in Thousands)

|   | 2016             | 2015             | <br>2014         | 2013             |
|---|------------------|------------------|------------------|------------------|
| Total Pension Liability   |                  | <br>             | <br>             | <br>             |
| Service cost <sup>(2)</sup>                                     | \$<br>322,574    | \$<br>322,380    | \$<br>317,185    | \$<br>312,372    |
| Interest  | 1,263,556        | 1,215,151        | 1,149,966        | 1,112,561        |
| Changes of benefit terms  | -                | -                | -                | -                |
| Differences between expected and actual experience              | (300,813)        | (135,821)        | (164,247)        | (235,829)        |
| Changes of assumptions  | -                | -                | 785,439          | -                |
| Benefit payments, including refunds of Member                   | (770.017)        | (7.40.5.(7)      | (704.450)        | (704 400)        |
| contributions   | <br>(770,317)    | <br>(740,567)    | (721,153)        | (701,400)        |
| Net change in total pension liability                           | 515,000          | 661,143          | 1,367,190        | 487,704          |
| Total pension liability-beginning                               | <br>16,909,996   | <br>16,248,853   | <br>14,881,663   | <br>14,393,959   |
| Total pension liability-ending (a)                              | \$<br>17,424,996 | \$<br>16,909,996 | \$<br>16,248,853 | \$<br>14,881,663 |
| Plan fiduciary net position                                     |                  |                  |                  |                  |
| Contributions-employer  | \$<br>440,546    | \$<br>381,141    | \$<br>357,649    | \$<br>346,181    |
| Contributions-Member  | 206,377          | 202,463          | 203,975          | 197,722          |
| Net investment income <sup>(4)</sup>                            | 29,358           | 306,980          | 1,810,782        | 1,268,939        |
| Benefit payments, including refunds of Member                   |                  |                  |                  |                  |
| contributions   | (770,318)        | (740,567)        | (721,153)        | (701,400)        |
| Administrative expenses   | (17,204)         | (15,860)         | (12,372)         | (13,281)         |
| Others <sup>(3)</sup>   | <br><u>-</u>     | <br>(4,666)      | <br>(2,288)      | <br>(2,514)      |
| Net change in Plan fiduciary net position                       | (111,241)        | 129,491          | 1,636,593        | 1,095,647        |
| Plan fiduciary net position-beginning                           | <br>11,920,570   | <br>11,791,079   | <br>10,154,486   | <br>9,058,839    |
| Plan fiduciary net position-ending (b)                          | \$<br>11,809,329 | \$<br>11,920,570 | \$<br>11,791,079 | \$<br>10,154,486 |
| Plan's net pension liability-ending (a)-(b)                     | \$<br>5,615,667  | \$<br>4,989,426  | \$<br>4,457,774  | \$<br>4,727,177  |
| Plan fiduciary net position as a percentage                     |                  |                  |                  |                  |
| of the total pension liability (b)/(a)                          | 67.8%            | 70.5%            | 72.6%            | 68.2%            |
| Covered payroll   | \$<br>1,876,946  | \$<br>1,835,637  | \$<br>1,802,931  | \$<br>1,736,113  |
| Plan's net pension liability as a percentage of covered payroll | 299.2%           | 271.8%           | 247.3%           | 272.3%           |

<sup>(1)</sup> In calculating the Plan's net pension liability, the total pension liability and the Plan fiduciary net position amounts associated with non-pension related benefits (Family Death and Larger Annuity Benefits) were excluded.

<sup>(2)</sup> The service cost is based on the previous year's valuation.

<sup>(3)</sup> On July 1, 2015, the System segregated Members' voluntary larger annuity contributions into the (non-pension related) Reserve for Larger Annuity Contributions pursuant to a suggestion made by the System's actuarial consultant. The Reserve balance for Larger Annuity Contributions as of June 30, 2015 was \$5,200,000. On July 1, 2017, the System reallocated \$471,000 of interest from the Reserve for Mandatory Member Contributions into the Reserve for Voluntary Member Contributions.

Building Lease and Other Income were included in the Net investment income (loss) starting in fiscal year 2020. Investment related administrative expenses is part of Administrative expenses and excluded from Net investment Income.

#### Schedule of Changes in Net Pension Liability and Related Ratios (Continued)

#### Notes to Schedule:

Changes of Benefit Terms: The June 30, 2018 calculation reflected the newly adopted enhanced benefits for Airport Peace Officers (APO) who elected to stay at LACERS Plan (refer to Note 2 – Retirement Plan Description, Tier 1 – Enhanced Benefits on page 30). Enhanced benefits became effective as of January 7, 2018.

Change of Assumptions: The June 30, 2014 calculations reflected various assumption changes based on the triennial experience study for the period from July 1, 2011 through June 30, 2014. The increase of total pension liability for fiscal years ended on June 30, 2014 is primarily due to the lowered assumed investment rate of return from 7.75% to 7.50%, and longer assumed life expectancies for Members and beneficiaries while the June 30, 2017 increase is primarily due to the lowered assumed investment rate of return from 7.50% to 7.25%.

The June 30, 2018 calculations reflected changes in the actuarial assumptions adopted by the Board on August 14, 2018 based on the triennial experience study for the period from July 1, 2014 through June 30, 2017, including revising the mortality tables from static to generational to reflect future mortality improvement, contributing to increased total pension liability.

The June 30, 2020 calculations reflected changes in the actuarial assumptions adopted by the Board on June 23, 2020 based on the triennial experience study for the period from July 1, 2016 through June 30, 2019. These assumption changes included lowering of the investment return assumption from 7.25% to 7.00% (which was largely offset by the effect of the change in the inflation assumption from 3.00% to 2.75%), changes in the merit and promotion salary increase assumption, and changes in the mortality assumption, which contributed to increased total pension liability.

### Projection of Pension Plan's Fiduciary Net Position for Use in Calculation of Discount Rate of 7.00% and Preparation of GASB 67 Report as of June 30, 2020

(Dollars in Millions)

|                              | Projected                                 | (50  | iidi 3 iii iviiiioii3)                  |  |  | Projected  |
|------------------------------|---|--|---|--|--|--|
| Year<br>Beginning<br>July 1, | Beginning Plan Fiduciary Net Position (a) | Projected<br>Total<br>Contributions<br>(b) | Projected<br>Benefit<br>Payments<br>(c) | Projected<br>Admin.<br>Expenses<br>(d) | Projected<br>Investment<br>Earnings<br>(e) | Ending Plan Fiduciary Net Position (a)+(b)-(c)-(d)+(e) |
| 2019                         | \$14,816                                  | \$813                                      | \$979                                   | \$24                                   | \$307                                      | \$14,932   |
| 2020                         | 14,932                                    | 925  | 1,141                                   | 24                                     | 1,032                                      | 15,725   |
| 2021                         | 15,725                                    | 945  | 1,168                                   | 25                                     | 1,088                                      | 16,565   |
| 2022                         | 16,565                                    | 965  | 1,236                                   | 26                                     | 1,144                                      | 17,412   |
| 2023                         | 17,412                                    | 985  | 1,304                                   | 28                                     | 1,202                                      | 18,268   |
| 2024                         | 18,268                                    | 961  | 1,370                                   | 29                                     | 1,258                                      | 19,089   |
| 2025                         | 19,089                                    | 986  | 1,433                                   | 30                                     | 1,314                                      | 19,926   |
| 2026                         | 19,926                                    | 1,007                                      | 1,501                                   | 32                                     | 1,371                                      | 20,771   |
| 2027                         | 20,771                                    | 1,018                                      | 1,570                                   | 33                                     | 1,427                                      | 21,613   |
| 2046                         | 30,722                                    | 166  | 2,592                                   | 49                                     | 2,054                                      | 30,301   |
| 2047                         | 30,301                                    | 157 <sup>(1)</sup>                         | 2,612                                   | 48                                     | 2,023                                      | 29,821   |
| 2048                         | 29,821                                    | 148 (1)                                    | 2,630                                   | 47                                     | 1,989                                      | 29,281   |
| 2049                         | 29,281                                    | 139 <sup>(1)</sup>                         | 2,648                                   | 47                                     | 1,950                                      | 28,675   |
| 2050                         | 28,675                                    | 129 (1)                                    | 2,664                                   | 46                                     | 1,907                                      | 28,001   |
| 2083                         | 2,947                                     | 22 (1)                                     | 589                                     | 5                                      | 184  | 2,559  |
| 2084                         | 2,559                                     | 20 (1)                                     | 529                                     | 4                                      | 159  | 2,205  |
| 2085                         | 2,205                                     | 18 <sup>(1)</sup>                          | 471                                     | 4                                      | 137  | 1,886  |
| 2086                         | 1,886                                     | 17 (1)                                     | 417                                     | 3                                      | 116  | 1,598  |
| 2087                         | 1,598                                     | 15 <sup>(1)</sup>                          | 366                                     | 3                                      | 98   | 1,343  |
| 2103                         | 23  | 1 (1)                                      | 9                                       | 0                                      | 1  | 16   |
| 2104                         | 16  | 1 (1)                                      | 7                                       | 0                                      | 1  | 11   |
| 2105                         | 11  | 1 (1)                                      | 5                                       | 0                                      | 1  | 8  |
| 2106                         | 8   | 1 (1)                                      | 3                                       | 0                                      | 0  | 6  |
| 2107                         | 6   | 1 (1)                                      | 2                                       | 0                                      | 0  | 4  |
| 2108                         | 4   | 0 (1),(2)                                  | 2                                       | 0                                      | 0  | 3  |
| 2109                         | 3   | 0 (1),(2)                                  | 1                                       | 0                                      | 0  | 2  |
| 2110                         | 2   | 0 (1),(2)                                  | 1                                       | 0                                      | 0  | 2  |
| 2111                         | 2   | 0 (1),(2)                                  | 1                                       | 0                                      | 0  | 1  |
| 2112                         | 1   | 0 (1),(2)                                  | 1                                       | 0                                      | 0  | 1  |
| 2113                         | 1   | 0 (1),(2)                                  | 0 <sup>(2)</sup>                        | 0                                      | 0  | 0  |
| 2114                         | 0   | 0 (1),(2)                                  | 0 <sup>(2)</sup>                        | 0                                      | 0  | 0  |
| 2115                         | 0   | 0 (1),(2)                                  | 0(2)                                    | 0                                      | 0  | 0  |
| 2116                         | 0   | 0 (1),(2)                                  | 0(2)                                    | 0                                      | 0  | 0  |
| 2117                         | 0   | 0 (1),(2)                                  | 0(2)                                    | 0                                      | 0  | 0  |
| 2118                         | 0   | 0 (1),(2)                                  | 0 <sup>(2)</sup>                        | 0                                      | 0  | 0  |

<sup>(1)</sup> Mainly attributable to employer contributions to fund each year's annual administrative expenses.

Note that in preparing the above projections, we have not taken into consideration the one-year delay between the date of the contribution rate calculation and the implementation.

<sup>(2)</sup> Less than \$1 million when rounded.

### Projection of Pension Plan's Fiduciary Net Position for Use in Calculation of Discount Rate of 7.00% and Preparation of GASB 67 Report as of June 30, 2020 (Continued)

#### Notes to Schedule:

- 1. Amounts may not total exactly due to rounding.
- 2. Amounts shown for the year beginning July 1, 2019 row are actual amounts, based on the unaudited financial statements provided by LACERS.
- 3. Years 2028-2045, 2051-2082, and 2088-2102 have been omitted from this table.
- 4. Column (a): None of the projected beginning Plan Fiduciary Net Position amounts shown have been adjusted for the time value of money.
- 5. Column (b): Projected total contributions include employee and employer normal cost contributions based on closed group projections (based on covered active Members as of June 30, 2020); plus employer contributions to the unfunded actuarial accrued liability; plus contributions to fund each year's annual administrative expenses reflecting a 15-year amortization schedule. Contributions are assumed to occur halfway through the year, on average.
- 6. Column (c): Projected benefit payments have been determined in accordance with paragraph 39 of GASB Statement No. 67, and are based on the closed group of active, inactive vested, retired Members, and beneficiaries as of June 30, 2020. The projected benefit payments reflect the cost of living increase assumptions used in the June 30, 2020 funding valuation report. Benefit payments are assumed to occur halfway through the year, on average. In accordance with paragraph 31.b.(1)(e) of GASB Statement No. 67, the long-term expected rate of return on Plan investments of 7.00% was applied to all periods of projected benefit payments to determine the discount rate.
- 7. Column (d): Projected administrative expenses are calculated as approximately 0.16% of the projected beginning Plan Fiduciary Net Position amount. The 0.16% portion was based on the actual fiscal year 2019-20 administrative expenses as a percentage of the beginning Plan Fiduciary Net Position amount as of July 1, 2019. Administrative expenses are assumed to occur halfway through the year, on average.
- 8. Column (e): Projected investment earnings are based on the assumed investment rate of return of 7.00% per annum.
- 9. As illustrated in this Schedule, the Plan Fiduciary Net Position was projected to be available to make all projected future benefit payments for current Plan Members. In other words, there is no projected 'cross-over date' when projected benefits are not covered by projected assets. Therefore, the long-term expected rate of return on Plan investments of 7.00% per annum was applied to all periods of projected benefit payments to determine the Total Pension Liability as of June 30, 2020 shown in the GAS 67 report, pursuant to paragraph 44 of GASB Statement No. 67.
- 10. This projection is based on a model developed by Segal's Actuarial Technology and Systems unit, comprised of both actuaries and programmers. The model allows the client team, under the supervision of the responsible actuary, control over the entry of future expected contribution income, benefit payments and administrative expenses. The projection of fiduciary net position and the discounting of benefits is part of the model.

#### **Rationale for Assumptions**

The information and analysis used in selecting each assumption that has a significant effect on this actuarial valuation is shown in the July 1, 2016 through June 30, 2019 Actuarial Experience Study dated June 17, 2020. Unless otherwise noted, all actuarial assumptions and methods shown below apply to both Tier 1 and Tier 3 Members. The following assumptions used to value the Plan liabilities for funding purposes and for financial reporting purposes have been adopted by the Board.

#### **Net Investment Return**

 $7.00\%^{(1)}$ 

Based on the Actuarial Experience Study report referenced above, expected administrative and investment expenses represent about 0.40% of the Actuarial Value of Assets.

(1) Net of investment and administrative expenses for funding purposes, and net of investment expenses only for financial reporting purposes.

#### **Discount Rate**

7.00%

#### **Employee Contribution Crediting Rate**

Based on average of 5-year Treasury note rate. An assumption of 2.75% is used to approximate that crediting rate in this valuation.

#### **Consumer Price Index (CPI)**

Increase of 2.75% per year; benefit increases due to CPI subject to 2.75% maximum for Tier 1 and 2.00% maximum for Tier 3. (For Tier 1 members with a sufficient COLA bank, withdrawals from the bank can be made to increase the retiree COLA up to 3% per year.)

#### **Payroll Growth**

Inflation of 2.75% per year plus real "across the board" salary increases of 0.50% per year, used to amortize the UAAL as a level percentage of payroll.

#### Increase in Internal Revenue Code Section 401(a)(17) Compensation Limit

Increase of 2.75% per year from the valuation date.

#### **Salary Increases**

The annual rate of compensation increase includes: inflation at 2.75%, plus "across the board" salary increases of 0.50% per year, plus the following merit and promotion increases:

| Years of<br>Service | Percentage Increase |  |
|---------------------|---------------------|--|
| Less than 1         | 6.70%               |  |
| 1 – 2               | 6.50%               |  |
| 2 – 3               | 5.80%               |  |
| 3 – 4               | 4.00%               |  |
| 4 – 5               | 3.00%               |  |
| 5 – 6               | 2.20%               |  |
| 6 – 7               | 2.00%               |  |
| 7 – 8               | 1.80%               |  |
| 8 – 9               | 1.60%               |  |
| 9 – 10              | 1.40%               |  |
| 10 & Over           | 1.00%               |  |

#### **Post-Retirement Mortality Rates**

#### Healthy Members

Pub-2010 General Healthy Retiree Amount-Weighted Above-Median Mortality Tables with rates increased by 10% for males, projected generationally with the two-dimensional mortality improvement scale MP-2019.

#### Disabled Members

Pub-2010 Non-Safety Disabled Retiree Amount-Weighted Mortality Tables with rates increased by 10% for males and decreased by 5% for females, projected generationally with the two-dimensional mortality improvement scale MP-2019.

#### Beneficiaries

Pub-2010 Contingent Survivor Amount-Weighted Above-Median Mortality Tables with rates increased by 10% for males and females, projected generationally with the two-dimensional mortality improvement scale MP-2019.

The Pub-2010 mortality tables and adjustments as shown above reasonably reflect the mortality experience as of the measurement date. These mortality tables were adjusted to future years using the generational projection to reflect future mortality improvement between the measurement date and those years.

#### **Pre-Retirement Mortality Rates**

Pub-2010 General Employee Amount-Weighted Above-Median Mortality Tables with rates increased by 10%, projected generationally with the two-dimensional mortality improvement scale MP-2019.

#### **Pre-Retirement Mortality Rates (Continued)**

|     | Rate (%) |        |  |
|-----|----------|--------|--|
| Age | Male     | Female |  |
| 20  | 0.04     | 0.01   |  |
| 25  | 0.03     | 0.01   |  |
| 30  | 0.03     | 0.01   |  |
| 35  | 0.05     | 0.02   |  |
| 40  | 0.06     | 0.04   |  |
| 45  | 0.09     | 0.06   |  |
| 50  | 0.14     | 0.08   |  |
| 55  | 0.21     | 0.12   |  |
| 60  | 0.30     | 0.19   |  |
| 65  | 0.45     | 0.30   |  |

Generational projections beyond the base year (2010) are not reflected in the above mortality rates.

For Tier 1 Enhanced, 100% of pre-retirement death benefits are assumed to be service-connected.

#### **Disability Incidence**

Years of

| Age | Rate (%) |
|-----|----------|
| 25  | 0.01     |
| 30  | 0.02     |
| 35  | 0.04     |
| 40  | 0.06     |
| 45  | 0.12     |
| 50  | 0.16     |
| 55  | 0.18     |
| 60  | 0.18     |
| 65  | 0.22     |

For Tier 1 Enhanced, 90% of disability retirements are assumed to be service-connected with service-connected disability benefits based on years of service, as follows:

| Service      | Benefit                                   |
|--------------|---|
| Less than 20 | 55% of Final Average Monthly Compensation |
| 20 - 30      | 65% of Final Average Monthly Compensation |

More than 30 75% of Final Average Monthly Compensation

For Tier 1 Enhanced, 10% of disability retirements are assumed to be nonservice-connected with nonservice-connected disability benefits equal to 40% of Final Average Monthly Compensation.

#### **Termination**

| Termination (< 5 Y | ears of Service) |
|--------------------|------------------|
| Years of Service   | Rate (%)         |
| Less than 1        | 11.50            |
| 1 – 2              | 10.00            |
| 2 – 3              | 8.50             |
| 3 – 4              | 7.75             |
| 4 – 5              | 7.00             |

| Termination (5+ | Years of Service) |
|-----------------|-------------------|
| Age             | Rate (%)          |
| 25              | 7.00              |
| 30              | 6.70              |
| 35              | 5.30              |
| 40              | 3.75              |
| 45              | 3.10              |
| 50              | 3.00              |
| 55              | 3.00              |
| 60              | 3.00              |

No termination is assumed after a member is eligible for retirement (as long as a retirement rate is present).

#### **Retirement Rates**

|      |       |       | Rate (9   | %)      |             |       |
|------|-------|-------|-----------|---------|-------------|-------|
|      | Tie   | er 1  | Tier Enha | anced 1 | Tie         | r 3   |
|      | Non-  |       | Non-      |         | Non-        |       |
| Age  | 55/30 | 55/30 | 55/30     | 55/30   | 55/30       | 55/30 |
| 50   | 5.0   | 0.0   | 7.0       | 0.0     | 5.0         | 0.0   |
| 51   | 3.0   | 0.0   | 5.0       | 0.0     | 3.0         | 0.0   |
| 52   | 3.0   | 0.0   | 5.0       | 0.0     | 3.0         | 0.0   |
| 53   | 3.0   | 0.0   | 5.0       | 0.0     | 3.0         | 0.0   |
| 54   | 18.0  | 0.0   | 20.0      | 0.0     | 17.0        | 0.0   |
| 55   | 6.0   | 27.0  | 8.0       | 30.0    | $0.0^{(1)}$ | 26.0  |
| 56   | 6.0   | 18.0  | 8.0       | 22.0    | $0.0^{(1)}$ | 17.0  |
| 57   | 6.0   | 18.0  | 8.0       | 22.0    | $0.0^{(1)}$ | 17.0  |
| 58   | 6.0   | 18.0  | 8.0       | 22.0    | $0.0^{(1)}$ | 17.0  |
| 59   | 6.0   | 18.0  | 8.0       | 22.0    | $0.0^{(1)}$ | 17.0  |
| 60   | 7.0   | 18.0  | 9.0       | 22.0    | 6.0         | 17.0  |
| 61   | 7.0   | 18.0  | 9.0       | 22.0    | 6.0         | 17.0  |
| 62   | 7.0   | 18.0  | 9.0       | 22.0    | 6.0         | 17.0  |
| 63   | 7.0   | 18.0  | 9.0       | 22.0    | 6.0         | 17.0  |
| 64   | 7.0   | 18.0  | 9.0       | 22.0    | 6.0         | 17.0  |
| 65   | 14.0  | 21.0  | 16.0      | 26.0    | 13.0        | 20.0  |
| 66   | 14.0  | 21.0  | 16.0      | 26.0    | 13.0        | 20.0  |
| 67   | 14.0  | 21.0  | 16.0      | 26.0    | 13.0        | 20.0  |
| 68   | 14.0  | 21.0  | 16.0      | 26.0    | 13.0        | 20.0  |
| 69   | 14.0  | 21.0  | 16.0      | 26.0    | 13.0        | 20.0  |
| 70 & |       |       |           |         |             |       |
| Over | 100.0 | 100.0 | 100.0     | 100.0   | 100.0       | 100.0 |

(1) Not eligible to retire under the provisions of the Tier 3 plan at these ages with less than 30 years of service. If a member has at least 30 years of service at these ages, they would be subject to the "55/30" rates.

## Retirement Age and Benefit for Inactive Vested Members

Pension benefit will be paid at the later of age 59 or the current attained age. For reciprocals, 4.25% compensation increases per annum.

#### **Other Reciprocal Service**

5% of future inactive vested Members will work at a reciprocal system.

#### **Service**

Employment service is used for eligibility determination purposes. Benefit service is used for benefit calculation purposes.

#### **Future Benefit Accruals**

1.0 year of service credit per year.

#### Unknown Data for Members

Same as those exhibited by Members with similar known characteristics. If not specified, Members are assumed to be male.

#### **Form of Payment**

All active and inactive Tier 1 and Tier 3 members who are assumed to be married or with domestic partners at retirement are assumed to elect the 50% Joint and Survivor Cash Refund Annuity. For Tier 1 Enhanced, the continuance percentage is 70% for service retirement and nonservice-connected disability, and 80% for service-connected disability. Those members who are assumed to be un-married or without domestic partners are assumed to elect the Single Cash Refund Annuity.

#### **Percent Married/Domestic Partner**

For all active and inactive Members, 76% of male participants and 52% of female participants are assumed to be married or with domestic partner at pre-retirement death or retirement.

#### Age and Gender of Spouse

For all active and inactive Members, male Members are assumed to have a female spouse who is 3 years younger than the Member, and female Members are assumed to have a male spouse who is 2 years older than the Member.

#### **Actuarial Cost Method**

Entry Age Cost Method, level percent of salary. Entry age is calculated as age on the valuation date minus years of employment service. Both the normal cost and the actuarial accrued liability are calculated on an individual basis.

#### **Actuarial Value of Assets**

Fair value of assets less unrecognized returns in each of the last seven years. Unrecognized return is equal to the difference between the actual fair value return and the expected return on the fair value, and is recognized over a seven-year period. The actuarial value of assets (AVA) is limited by a 40% corridor; the AVA cannot be less than 60% of fair value of assets, nor greater than 140% of fair value of assets.

#### **Valuation Value of Assets**

The portion of the total actuarial value of assets allocated for retirement benefits, based on a prorated share of fair value.

#### **Amortization Policy**

The amortization method for the UAAL is a level percent of payroll, assuming annual increases in total covered payroll equal to inflation plus across the board increases (other than inflation).

Changes in the UAAL due to actuarial gains/losses are amortized over separate 15-year periods. Changes in the UAAL due to assumption or method changes are amortized over separate 20-year periods. Plan changes, including the 2009 ERIP, are amortized over separate 15-year periods. Future ERIPs will be amortized over 5 years. Any actuarial surplus is amortized over 30 years. All the bases on or before June 30, 2012, except those arising from the 2009 ERIP and the two (at that time) GASB 25/27 layers, were combined and amortized over 30 years effective June 30, 2012.

#### **Employer Contributions**

Employer contributions consist of two components:

#### Normal Cost

The annual contribution rate that, if paid annually from a member's first year of membership through the year of retirement, would accumulate to the amount necessary to fully fund the member's retirement-related benefits. Accumulation includes annual crediting of interest at the assumed investment earnings rate. The contribution rate is expressed as a level percentage of the member's compensation.

#### **Employer Contributions (Continued)**

Contribution to the Unfunded Actuarial Accrued Liability (UAAL)

The annual contribution rate that, if paid annually over the UAAL amortization period, would accumulate to the amount necessary to fully fund the UAAL. Accumulation includes annual crediting of interest at the assumed investment earnings rate. The contribution (or rate credit in the case of a negative UAAL) is calculated to remain as a level percentage of future active member payroll (including payroll for new members as they enter the System) assuming a constant number of active members. In order to remain as a level percentage of payroll, amortization payments (credits) are scheduled to increase at the annual rate of 3.25% (i.e., 2.75% inflation plus 0.50% across-the-board salary increase).

The amortization policy is described above.

#### **Internal Revenue Code Section 415**

Section 415 of the Internal Revenue Code (IRC) specifies the maximum benefits that may be paid to an individual from a defined benefit plan and the maximum amounts that may be allocated each year to an individual's account in a defined contribution plan.

A qualified pension plan may not pay benefits in excess of the Section 415 limits. The ultimate penalty for non-compliance is disqualification: active members could be taxed on their vested benefits and the IRS may see to tax the income earned on the plan's

In particular, Section 415(b) of the IRC limits the maximum annual benefit payable at the Normal Retirement Age to a dollar limit of \$160,000 indexed for inflation. That limit is \$230,000 for 2020. Normal Retirement Age for these purposes is age 62. These are the limits in simplified terms. They must be adjusted based on each participant's circumstances, for such things as age at retirement, form of benefits chosen and after tax contributions.

Benefits in excess of the limits may be paid through a qualified governmental excess plan that meets the requirements of Section 415(m).

Legal counsel's review and interpretation of the law and regulations should be sought on any questions in this regard.

Contribution rates determined in this valuation have not been reduced for the Section 415 limitations. Actual limitations will result in gains as they occur.

#### **Changes in Actuarial Assumptions**

Based on the July 1, 2016 through June 30, 2019 Actuarial Experience Study, the following actuarial assumptions were changed. Previously, these assumptions were:

#### **Net Investment Return**

7.25%(1)

Based on the June 30, 2017 Review of Economic Actuarial Assumptions dated June 30, 2017, expected administrative and investment expenses represent about 0.60% of the Fair Value of Assets.

(1) Net of investment and administrative expenses for funding purposes, and net of investment expenses only for financial reporting purposes.

#### **Discount Rate**

7.25%

#### **Employee Contribution Crediting Rate**

Based on average of 5-year Treasury note rate. An assumption of 3.00% is used to approximate that crediting rate in this valuation.

#### **Consumer Price Index (CPI)**

Increase of 3.00% per year; benefit increases due to CPI subject to 3.00% maximum for Tier 1 and 2.00% maximum for Tier 3.

#### **Payroll Growth**

Inflation of 3.00% per year plus real "across the board" salary increases of 0.50% per year, used to amortize the UAAL as a level percentage of payroll.

#### **Increase in Internal Revenue Code Section 401(a)(17) Compensation Limit**

Increase of 3.00% per year from the valuation date.

#### **Salary Increases**

The annual rate of compensation increase includes: inflation at 3.00%, plus "across the board" salary increases of 0.50% per year, plus the following merit and promotion increases:

| Years of Service | Percentage Increase |
|------------------|---------------------|
| Less than 1      | 6.50%               |
| 1 – 2            | 6.20%               |
| 2 – 3            | 5.10%               |
| 3 – 4            | 3.10%               |
| 4 – 5            | 2.10%               |
| 5 – 6            | 1.10%               |
| 6 – 7            | 1.00%               |
| 7 – 8            | 0.90%               |
| 8 – 9            | 0.70%               |
| 9 – 10           | 0.60%               |
| 10 & Over        | 0.40%               |

#### **Post-Retirement Mortality Rates**

Healthy Members and all Beneficiaries

Headcount-Weighted RP-2014 Healthy Annuitant Mortality Tables (separate tables for males and females), with no setback for males and females, projected generationally with the two-dimensional mortality improvement scale MP-2017.

#### **Disabled Members**

Headcount-Weighted RP-2014 Disabled Retiree Mortality Tables (separate tables for males and females), with no setback for males and females, projected generationally with the two-dimensional mortality improvement scale MP-2017.

The RP-2014 mortality tables and adjustments as shown above reasonably reflect the mortality experience as of the measurement date. The generational projection is a provision for future mortality improvement.

#### **Pre-Retirement Mortality Rates**

Headcount-Weighted RP-2014 Employee Mortality Tables (separate tables for males and females), with no setback for males and females, multiplied by 90%, projected generationally with the two-dimensional mortality improvement scale MP-2017.

| <u>.</u> | Rate (%) <sup>(1)</sup> |        |  |
|----------|-------------------------|--------|--|
| Age      | Male                    | Female |  |
| 20       | 0.05                    | 0.02   |  |
| 25       | 0.06                    | 0.02   |  |
| 30       | 0.05                    | 0.02   |  |
| 35       | 0.06                    | 0.03   |  |
| 40       | 0.07                    | 0.04   |  |
| 45       | 0.11                    | 0.07   |  |
| 50       | 0.19                    | 0.12   |  |
| 55       | 0.31                    | 0.19   |  |
| 60       | 0.51                    | 0.27   |  |
| 65       | 0.88                    | 0.40   |  |

For Tier 1 Enhanced, 100% of pre-retirement death benefits are assumed to be service-connected.

#### **Disability Incidence**

| _ | Age | Rate (%) |
|---|-----|----------|
|   | 25  | 0.01     |
|   | 30  | 0.02     |
|   | 35  | 0.05     |
|   | 40  | 0.07     |
|   | 45  | 0.13     |
|   | 50  | 0.19     |
|   | 55  | 0.20     |
|   | 60  | 0.20     |

For Tier 1 Enhanced, 90% of disability retirements are assumed to be service-connected with service-connected disability benefits based on years of service, as follows:

| Years of |         |
|----------|---------|
| Service  | Benefit |

Less than 20 55% of Final Average Monthly Compensation 20 – 30 65% of Final Average Monthly Compensation More than 30 75% of Final Average Monthly Compensation

For Tier 1 Enhanced, 10% of disability retirements are assumed to be nonservice-connected with nonservice-connected disability benefits equal to 40% of Final Average Monthly Compensation.

#### **Termination**

Termination (< 5 Years of Service)

| Years of Service | Rate (%) |
|------------------|----------|
| Less than 1      | 12.00    |
| 1 – 2            | 10.00    |
| 2 – 3            | 9.00     |
| 3 – 4            | 8.25     |
| 4 – 5            | 7.75     |
|                  |          |

Termination (5+ Years of Service) Rate (%) Age 25 7.00 30 7.00 35 5.50 40 3.90 45 3.20 50 2.70 55 2.50 2.50

No termination is assumed after a member is eligible for retirement (as long as a retirement rate is present).

<sup>(1)</sup> Generational projections beyond the base year (2014) are not reflected in the above mortality rates.

#### **Retirement Rates**

|      | Tier 1 Tier 1 Enhanced <sup>(1)</sup> |       |       | Tie   | r 3         |       |
|------|---------------------------------------|-------|-------|-------|-------------|-------|
|      | Non-                                  |       | Non-  |       | Non-        |       |
| Age  | 55/30                                 | 55/30 | 55/30 | 55/30 | 55/30       | 55/30 |
| 50   | 6.0                                   | 0.0   | 7.0   | 0.0   | 6.0         | 0.0   |
| 51   | 3.0                                   | 0.0   | 4.0   | 0.0   | 3.0         | 0.0   |
| 52   | 3.0                                   | 0.0   | 4.0   | 0.0   | 3.0         | 0.0   |
| 53   | 3.0                                   | 0.0   | 4.0   | 0.0   | 3.0         | 0.0   |
| 54   | 17.0                                  | 0.0   | 18.0  | 0.0   | 16.0        | 0.0   |
| 55   | 6.0                                   | 24.0  | 7.0   | 25.0  | $0.0^{(2)}$ | 23.0  |
| 56   | 6.0                                   | 16.0  | 7.0   | 17.0  | $0.0^{(2)}$ | 15.0  |
| 57   | 6.0                                   | 16.0  | 7.0   | 17.0  | $0.0^{(2)}$ | 15.0  |
| 58   | 6.0                                   | 16.0  | 7.0   | 17.0  | $0.0^{(2)}$ | 15.0  |
| 59   | 6.0                                   | 16.0  | 7.0   | 17.0  | $0.0^{(2)}$ | 15.0  |
| 60   | 7.0                                   | 16.0  | 8.0   | 17.0  | 6.0         | 15.0  |
| 61   | 7.0                                   | 16.0  | 8.0   | 17.0  | 6.0         | 15.0  |
| 62   | 7.0                                   | 16.0  | 8.0   | 17.0  | 6.0         | 15.0  |
| 63   | 7.0                                   | 16.0  | 8.0   | 17.0  | 6.0         | 15.0  |
| 64   | 7.0                                   | 16.0  | 8.0   | 17.0  | 6.0         | 15.0  |
| 65   | 13.0                                  | 20.0  | 14.0  | 21.0  | 12.0        | 19.0  |
| 66   | 13.0                                  | 20.0  | 14.0  | 21.0  | 12.0        | 19.0  |
| 67   | 13.0                                  | 20.0  | 14.0  | 21.0  | 12.0        | 19.0  |
| 68   | 13.0                                  | 20.0  | 14.0  | 21.0  | 12.0        | 19.0  |
| 69   | 13.0                                  | 20.0  | 14.0  | 21.0  | 12.0        | 19.0  |
| 70 & |                                       |       |       |       |             |       |
| Over | 100.0                                 | 100.0 | 100.0 | 100.0 | 100.0       | 100.0 |

<sup>(1)</sup> Consistent with the cost study prepared for the adoption of enhanced Tier 1 benefits, the rates above are estimated by increasing the retirement rates for Tier 1 by a flat 1%.

## Retirement Age and Benefit for Inactive Vested Members

Pension benefit will be paid at the later of age 59 or the current attained age. For reciprocals, 3.90% compensation increases per annum.

#### **Percent Married/Domestic Partner**

For all active and inactive Members, 76% of male participants and 50% of female participants are assumed to be married or with domestic partner at pre-retirement death or retirement.

#### **Summary of Plan Provisions**

LACERS administers a single-employer defined benefit Retirement Plan. The following summarizes the major provisions of LACERS Retirement Plan included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

#### Plan Year

July 1 through June 30

#### **Census Date**

June 30

#### **Membership Eligibility**

Tier 1 (§ 4.1002(a), § 4.1002.1)

All employees who became Members of LACERS before July 1, 2013, and certain employees who became Members of LACERS on or after July 1, 2013. In addition, pursuant to Ordinance No. 184134, all Tier 2 employees who became Members of LACERS between July 1, 2013 and February 21, 2016 were transferred to Tier 1 effective February 21, 2016 (refer to Note 2 – Retirement Plan Description on pages 30 - 31 regarding the Membership). Includes Airport Peace Officers who did not pay for enhanced benefits.

#### Tier 1 Enhanced (§ 4.1002(e))

All Tier 1 Airport Peace Officers (including certain fire fighters) appointed to their positions before January 7, 2018 who elected to remain at LACERS after January 6, 2018, and who paid their mandatory additional contribution of \$5,700 to LACERS before January 8, 2019, or prior to their retirement date, whichever was earlier.

#### Tier 3 (§ 4.1080.2(a))

All employees who became Members of LACERS on or after February 21, 2016, except as provided otherwise in Section 4.1080.2(b) of the Los Angeles Administrative Code.

#### **Normal Retirement Benefit**

Tier 1 & Tier 1 Enhanced

Age & Service Requirement (§ 4.1005(a))

- Age 70; or
- Age 60 with 10 years of continuous City service; or
- Age 55 with at least 30 years of City service.

#### Tier 1

Amount (§ 4.1007(a))

2.16% per year of service credit (not greater than 100%) of the Final Average Monthly Compensation.

#### Tier 1 Enhanced

Amount (§ 4.1007(a))

2.30% per year of service credit (not greater than 100%) of the Final Average Monthly Compensation.

<sup>(2)</sup> Not eligible to retire under the provisions of the Tier 3 plan.

#### **Normal Retirement Benefit (continued)**

#### Tier 3

With less than 30 Years of Service  $(\S 4.1080.5(a)(2)(i))$ 

#### Age & Service Requirement

Age 60 with 10 years of service, including 5 years of continuous City service.

#### Amount

1.50% per year of service credit at age 60 (not greater than 80%<sup>(1)</sup>) of the Final Average Monthly Compensation.

With 30 or more Years of Service (§ 4.1080.5(a)(2)(ii))

Age & Service Requirement

Age 60 with 30 years of service, including 5 years of continuous City service.

#### Amount

2.00% per year of service credit at age 60 (not greater than 80%<sup>(1)</sup>) of the Final Average Monthly Compensation.

(1) Except when benefit is based solely on the annuity component funded by the Member's contributions.

#### **Early Retirement Benefit**

Tier 1 & Tier 1 Enhanced

Age & Service Requirement (§ 4.1005(b))

- Age 55 with 10 years of continuous City service; or
- Any age with 30 years of City service.

#### Amount (§ 4.1007(a) & (b))

2.16% and 2.30% per year of service credit for Tier 1 and Tier 1 Enhanced, respectively, (not greater than 100%) of the Final Average Monthly Compensation, reduced for retirement ages below age 60 using the following Early Retirement benefit adjustment factors:

| Age | Factor | Age | Factor |
|-----|--------|-----|--------|
| 45  | 0.6250 | 53  | 0.8650 |
| 46  | 0.6550 | 54  | 0.8950 |
| 47  | 0.6850 | 55  | 0.9250 |
| 48  | 0.7150 | 56  | 0.9400 |
| 49  | 0.7450 | 57  | 0.9550 |
| 50  | 0.7750 | 58  | 0.9700 |
| 51  | 0.8050 | 59  | 0.9850 |
| 52  | 0.8350 | 60  | 1.0000 |

#### Tier 3

Age & Service Requirement (§ 4.1080.5(a)(1))
Prior to age 60 with 30 years of service, including 5 years of continuous City service.

#### Amount (§ 4.1080.5(a)(1))

2.00% per year of service credit (not greater than 80%<sup>(1)</sup>) of the Final Average Monthly Compensation, reduced for retirement ages below age 55 using the following Early Retirement benefit adjustment factors:

| Age | Factor | Age     | Factor |
|-----|--------|---------|--------|
| 45  | 0.6250 | 50      | 0.7750 |
| 46  | 0.6550 | 51      | 0.8050 |
| 47  | 0.6850 | 52      | 0.8350 |
| 48  | 0.7150 | 53      | 0.8650 |
| 49  | 0.7450 | 54      | 0.8950 |
|     |        | 55 - 60 | 1.0000 |

(1) Except when benefit is based solely on the annuity component funded by the Member's contributions.

#### **Enhanced Retirement Benefit**

Tier 1 & Tier 1 Enhanced

Age & Service Requirement

Not applicable – see Normal Retirement age and service requirement.

#### Amount

Not applicable – see Normal Retirement amount.

#### Tier 3

With less than 30 Years of Service (§ 4.1080.5(a)(3)(i))

Age & Service Requirement

Age 63 with 10 years of service, including 5 years of continuous City service.

#### Amount

2.00% per year of service credit at age 63 (not greater than 80%<sup>(1)</sup>) of the Final Average Monthly Compensation.

With 30 or more Years of Service (§ 4.1080.5(a)(3)(ii))

#### Age & Service Requirement

Age 63 with 30 years of service, including 5 years of continuous City service.

#### Amount

2.10% per year of service credit at age 63 (not greater than 80%<sup>(1)</sup>) of the Final Average Monthly Compensation.

<sup>(1)</sup> Except when benefit is based solely on the annuity component funded by the Member's contributions.

#### **Service Credit**

Tier 1, Tier 1 Enhanced, & Tier 3 (§ 4.1001(a) & § 4.1080.1(a))

The time component of the formula used by LACERS for purposes of calculating benefits.

#### **Final Average Monthly Compensation**

Tier 1 & Tier 1 Enhanced (§ 4.1001(b))
Equivalent of monthly average salary of highest continuous 12 months (one year); includes base salary plus regularly assigned pensionable bonuses or premium pay.<sup>(1)</sup>

Tier 3 (§ 4.1080.1(b))

Equivalent of monthly average salary of highest continuous 36 months (three years); limited to base salary and any items of compensation that are designated as pension based.<sup>(1)</sup>

(1) IRC Section 401(a)(17) compensation limit would apply to all employees who began membership in LACERS after June 30, 1996.

#### **Post-Retirement Cost-of-Living Benefits**

Tier 1 & Tier 1 Enhanced (§ 4.1022)

Based on changes to Los Angeles area<sup>(1)</sup> Consumer Price Index, to a maximum of 3% per year; excess banked.

Tier 3 (§ 4.1080.17)

Based on changes to Los Angeles area<sup>(1)</sup> Consumer Price Index, to a maximum of 2% per year; excess not banked.

(1) Currently referred to as the Los Angeles-Long Beach-Anaheim Area, by the Bureau of Labor Statistics.

#### **Death after Retirement**

Tier 1 & Tier 3

(§ 4.1010(c), § 4.1080.10(c), & § 4.1012(c))

- 50% of retiree's unmodified allowance continued to an eligible spouse or a domestic partner; or a modified continuance to an eligible spouse or a domestic partner at the time of Member's death (or a designated beneficiary selected by Member at the time of retirement)<sup>(1)</sup>; and
- \$2,500 lump sum death benefit paid to a designated beneficiary; and
- Any unused contributions if the Member has elected the cash refund annuity option.
- (1) The retiree may elect at the time of retirement to take a reduced allowance in order to provide for a higher continuance percentage pursuant to the provisions of either Section 4.1015 (Tier 1) or Section 4.1080.14 (Tier 3).

Tier 1 Enhanced (§ 4.1010.1(b), § 4.1010.1(i), & § 4.1010.1(j))

While on service-connected disability

- 80% of retiree's unmodified allowance continued to an eligible spouse or a domestic partner; or a modified continuance to an eligible spouse or a domestic partner at the time of Member's death (or a designated beneficiary selected by Member at the time of retirement)<sup>(1), (2)</sup>; and
- \$2,500 lump sum death benefit paid to a designated beneficiary; and
- Any unused contributions if the Member has elected the cash refund annuity option.
- (1) If the death occurs within three years of the retiree's retirement, the eligible survivor shall receive 80% of the Final Average Monthly Compensation (adjusted with Cost of Living benefit).
- (2) The retiree may elect at the time of retirement to take a reduced allowance in order to provide for a higher continuance percentage pursuant to the provisions of Section 4.1010.1(c).

While on nonservice-connected disability or service retirement

- 70% of retiree's unmodified allowance continued to an eligible spouse or a domestic partner; or a modified continuance to an eligible spouse or a domestic partner at the time of Member's death (or a designated beneficiary selected by Member at the time of retirement)<sup>(3)</sup> and
- \$2,500 lump sum death benefit paid to a designated beneficiary; and
- Any unused contributions if the Member has elected the cash refund annuity option.
- (3) The retiree may elect at the time of retirement to take a reduced allowance in order to provide for a higher continuance percentage pursuant to the provisions of Section 4.1010.1(c).

#### **Death before Retirement**

Tier 1, Tier 1 Enhanced, & Tier 3 (§ 4.1010(a), § 4.1010.1(b), & § 4.1080.10(a)) Greater of:

Option #1:

- Eligibility None.
- Benefit Refund of employee contributions plus a limited pension benefit equal to 50% of monthly salary paid, according to the following schedule: (1)

<sup>(1)</sup> Refund only if less than one year of service credit.

#### **Death before Retirement (Continued)**

Tier 1, Tier 1 Enhanced, & Tier 3 (Continued)

| Service Credit   | Total Number of Monthly Payments |
|------------------|----------------------------------|
| Less than 1 year | 0                                |
| 1 year           | 2                                |
| 2 years          | 4                                |
| 3 years          | 6                                |
| 4 years          | 8                                |
| 5 years          | 10                               |
| 6+ years         | 12                               |
|                  |                                  |

## Tier 1 & Tier 3

Option #2:

- Eligibility Duty-related death or after five years of continuous service.
- Benefit Deferred, service, optional, or disability survivorship benefit payable under 100% joint and survivor option to an eligible spouse or qualified domestic partner. (Limited pension waived.)
- Refund of accumulated contributions. No survivorship benefit payable with refund.

#### Tier 1 Enhanced

Service-Connected Death

Option #2:

- Eligibility None.
- Benefit 80% of Member's Final Average Monthly Compensation.

Nonservice-Connected Death

Option #2:

- Eligibility 5 years of service (unless on military leave and killed while on military duties).
- Benefit 50% of Member's Final Average Monthly Compensation.
- Eligibility Less than 5 years of service.
- Benefit The Basic Death Benefit shall consist of: (1) the return of a deceased Member's accumulated contributions to the Retirement System with accrued interest thereon, subject to the rights created by virtue of the Member's designation of a beneficiary as otherwise provided in the Retirement System; and (2) if the deceased Member had at least one year of service, the deceased Member's Final Compensation multiplied by the number of completed years of Service, not to exceed six years, provided that said amount shall be paid in monthly installments of one-half of the deceased Member's Final Compensation.

#### **Member Contributions**

Tier 1 & Tier 1 Enhanced (§ 4.1003)

Effective July 1, 2011, the Member contribution rate became 7% for all employees. Of the 7% rate, 0.5% is the survivor contribution portion and 6.5% is the normal contribution. The 7% Member rate shall be paid until June 30, 2026 or until the ERIP Cost Obligation (defined in ERIP Ordinance No. 180926) is fully paid, whichever comes first<sup>(1)</sup>.

Beginning January 1, 2013, all non-represented Members and Members in certain bargaining groups are required to pay an additional 4% Member contribution rate to defray the cost of providing a Retiree Medical Plan premium subsidy (this additional rate has increased to 4.5% for certain Members).

For Tier 1 (excluding Tier 1 Enhanced), members with no eligible spouse or domestic partner at retirement can request a refund of the survivor portion of the Member contributions (i.e., generally based on a contribution rate of 0.5% of pay).

(1) The Member contribution rate will drop down to 6% afterwards.

#### Tier 3 (§ 4.1080.3)

The Member contribution rate is 7% for all employees. Of the 7% rate, 0.5% is the survivor contribution portion and 6.5% is the normal contribution.

All Members are required to pay an additional 4% Member contribution rate to defray the cost of providing a Retiree Medical Plan premium subsidy.

Members with no eligible spouse or domestic partner at retirement can request a refund of the survivor portion of the Member contributions (i.e., generally based on a contribution rate of 0.5% of pay).

#### **Disability**

Tier 1 & Tier 3

Service Requirement (§ 4.1008(a) & § 4.1080.8(a)) 5 years of continuous service.

 $Amount^{(1)} \ (\S \ 4.1008(c) \ \& \ \S \ 4.1080.8(c))$ 

1/70 (1.43%) of the Final Average Monthly Compensation per year of service or 1/3 of the Final Average Monthly Compensation, if greater.

(1) The benefit calculated using the service retirement formula will be paid if the Member is eligible and that benefit is greater than that calculated under the disability retirement formula.

#### **Disability (Continued)**

#### Tier 1 Enhanced

Service Requirement (§ 4.1008.1)

Service-Connected Disability: None.

Nonservice-Connected Disability: 5 years of continuous service.

#### Amount<sup>(1)</sup> (§ 4.1008.1)

Service-Connected Disability: 30% to 90% of the Final Average Monthly Compensation depending on severity of disability, with a minimum of 2% of the Final Average Monthly Compensation per year of service.

Nonservice-Connected Disability: 30% to 50% of the Final Average Monthly Compensation depending on severity of disability.

#### **Deferred Retirement Benefit (Vested)**

Tier 1 & Tier 1 Enhanced (§ 4.1006)

Age & Service Requirement

- Age 70 with 5 years of continuous City service; or
- Age 60 with 5 years of continuous City service and at least 10 years elapsed from first date of membership; or
- Age 55 with at least 30 years of service.
- Deferred employee who meets part-time eligibility: age 60 and at least 10 years elapsed from first date of membership.

#### Amount

Normal Retirement Benefit (or refund of contributions and accumulated interest).

#### Age & Service Requirement

- A former Member who is not yet age 60 may retire for early retirement with an age-based reduced retirement allowance at age 55 or older with 5 years of continuous City service provided at least 10 years have elapsed from first date of membership; or
- Deferred employee who meets part-time eligibility: age 55 and at least 10 years elapsed from first date of membership.

#### Amount

Early Retirement Benefit (or refund of contributions and accumulated interest), using the following Early Retirement benefit adjustment factors:

| Age | Factor |
|-----|--------|
| 55  | 0.9250 |
| 56  | 0.9400 |
| 57  | 0.9550 |
| 58  | 0.9700 |
| 59  | 0.9850 |

#### Tier 3 (§ 4.1080.6)

Age & Service Requirement

- Age 60 with 5 years of continuous City service and at least 10 years elapsed from first date of membership; or
- Age 70 with 5 years of continuous City service, regardless of the number of years that have elapsed from first date of membership.

#### Amount

Normal retirement benefit (based on a Retirement Factor of 1.50%; or refund of contributions and accumulated interest).

#### Age & Service Requirement

- Age 60 with 30 years of continuous City service and at least 10 years elapsed from first date of membership; or
- Age 63 with 10 years of service, including 5 years of continuous City Service.

#### Amount

Normal retirement benefit (based on a Retirement Factor of 2.00%; or refund of contributions and accumulated interest).

#### Age & Service Requirement

Age 63 with 30 years of continuous City service and at least 10 years elapsed from first date of membership.

#### Amount

Enhanced retirement (benefit based on a Retirement Factor of 2.10%; or refund of contributions and accumulated interest).

<sup>(1)</sup> The benefit calculated using the service retirement formula will be paid if the Member is eligible and that benefit is greater than that calculated under the disability retirement formula.

#### **Summary of Plan Provisions (Continued)**

#### **Deferred Retirement Benefit (Vested) (Continued)**

Tier 3 (§ 4.1080.6)

Age & Service Requirement

Age 55 (but not yet 60) with 5 years of continuous City service and at least 10 years elapsed from first date of membership.

#### Amount

Early retirement benefit (based on a Retirement Factor of 1.50% and using the following Early Retirement benefit adjustment factors; or refund of contributions and accumulated interest):

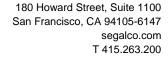
| Age | Factor |
|-----|--------|
| 55  | 0.9250 |
| 56  | 0.9400 |
| 57  | 0.9550 |
| 58  | 0.9700 |
| 59  | 0.9850 |

## Withdrawal of Contributions Benefit (Ordinary Withdrawal)

Refund of employee contributions with interest.

#### **Changes in Plan Provisions**

There have been no changes in plan provisions since the last valuation.





## **Actuarial Certification**

November 3, 2020

This is to certify that Segal has conducted an actuarial valuation of certain benefit obligations of Los Angeles City Employees' Retirement System's other postemployment benefit programs as of June 30, 2020, in accordance with generally accepted actuarial principles and practices. In particular, it is our understanding that the assumptions and methods used for funding purposes meet the parameters set by the Actuarial Standards of Practice (ASOPs). Actuarial valuations are performed annually for this other postemployment benefit program with the last valuation completed as of June 30, 2019.

The actuarial valuation is based on the plan of benefits verified by LACERS and on participant, premium, claims and financial data provided by LACERS. Segal did not audit LACERS' financial statements, but conducted an examination of all participant data for reasonableness and we concluded that it was reasonable and consistent with the prior year's data.

One of the general goals of an actuarial valuation is to establish contributions that fully fund the System's liabilities, and that, as a percentage of payroll, remain as level as possible for each generation of active members. Both the Normal Cost and the Actuarial Accrued Liability are determined under the Entry Age cost method.

The actuarial computations made are for purposes of funding plan benefits. Accordingly, additional determinations will be needed for other purposes, such as satisfying financial accounting requirements under Governmental Accounting Standards Board (GASB) Statements No. 74 and No. 75 and judging benefit security at termination of the plan.

Segal prepared all of the supporting schedules in the Actuarial Section of the Comprehensive Annual Financial Report (CAFR) and certain supporting schedules in the Financial Section, based on the results of the June 30, 2020 actuarial valuation. A listing of the supporting schedules Segal prepared for inclusion in the Financial Section, and in the Actuarial Section, is provided below:

#### **Financial Section**

- 1. Schedule of Net Other Postemployment Benefits (OPEB) Liability<sup>1</sup>
- 2. Schedule of Changes in Net OPEB Liability and Related Ratios<sup>1</sup>
- 3. Schedule of Contribution History<sup>1</sup>

<sup>&</sup>lt;sup>1</sup> Source: Segal's GASB Statement No. 74 valuation report as of June 30, 2020.

## **Actuarial Certification (Continued)**

November 3, 2020

#### **Actuarial Section**

- 4. Summary of Significant Valuation Results
- 5. Active Member Valuation Data
- 6. Retirees and Beneficiaries Added to and Removed from Health Benefits
- 7. Member Benefit Coverage Information
- 8. Schedule of Funding Progress
- 9. Actuarial Analysis of Financial Experience
- 10. Actuarial Balance Sheet
- 11. Schedule of Changes in Net OPEB Liability and Related Ratios<sup>1</sup>
- 12. Projection of OPEB Plan's Fiduciary Net Position for Use in Calculation of Discount Rate of 7.00% and Preparation of GASB 74 Report as of June 30, 2020

LACERS' staff prepared other trend data schedules in the Statistical Section based on information supplied in Segal's valuation report.

To the best of our knowledge, this report is complete and accurate and in our opinion presents the plan's current funding information. The signing actuaries are members of the American Academy of Actuaries and collectively are qualified to render the actuarial opinion contained herein.

Johns Bergmin Thomas Bergman, ASA, MAAA, EA

Andy Yeung, ASA, MAAA, FCA, EA Retiree Health Actuary

Vice President and Actuary

Paul Sadro, ASA, MAAA Senior Actuary

<sup>&</sup>lt;sup>1</sup> Source: Segal's GASB Statement No. 74 valuation report as of June 30, 2020.

## **Health Benefits Valuation**

#### **Active Member Valuation Data**

#### Member Population

| Valuation Date | Active Members <sup>(1)</sup> | Covered Payroll | Annual Average Pay <sup>(2)</sup> | Change in Annual Average Pay (%) |
|----------------|-------------------------------|-----------------|-----------------------------------|----------------------------------|
| 06/30/2011     | 25,449                        | \$1,833,392,381 | \$72,042                          | 4.0%                             |
| 06/30/2012     | 24,917                        | 1,819,269,630   | 73,013                            | 1.3                              |
| 06/30/2013     | 24,441                        | 1,846,970,474   | 75,569                            | 3.5                              |
| 06/30/2014     | 24,009                        | 1,898,064,175   | 79,056                            | 4.6                              |
| 06/30/2015     | 23,895                        | 1,907,664,598   | 79,835                            | 1.0                              |
| 06/30/2016     | 24,446                        | 1,968,702,630   | 80,533                            | 0.9                              |
| 06/30/2017     | 25,457                        | 2,062,316,129   | 81,012                            | 0.6                              |
| 06/30/2018     | 26,042                        | 2,177,687,102   | 83,622                            | 3.2                              |
| 06/30/2019     | 26,632                        | 2,225,412,831   | 83,562                            | (0.1)                            |
| 06/30/2020     | 27,490                        | 2,445,016,587   | 88,942                            | 6.4                              |

#### Retirees and Beneficiaries Added to and Removed from Health Benefits

| Valuation<br>Date | No. of New<br>Retirees/<br>Beneficiaries | Annual<br>Subsidies<br>Added <sup>(1)</sup> | No. of<br>Retirees/<br>Beneficiaries<br>Removed | Annual<br>Subsidies<br>Removed | No. of<br>Retirees/<br>Beneficiaries<br>at 6/30 | Annual<br>Subsidies<br>at 6/30 | Percent<br>Increase<br>in Annual<br>Subsidies | Average<br>Annual<br>Subsidy |
|-------------------|--|---|---|--------------------------------|---|--------------------------------|---|------------------------------|
| 06/30/2011        | 431                                      | \$5,670,390                                 | 437   | \$2,774,684                    | 13,436  | \$97,104,061                   | 3.1%  | \$7,227                      |
| 06/30/2012        | 433                                      | (540,583)                                   | 438   | 2,516,835                      | 13,431  | 94,046,643                     | (3.1)   | 7,002                        |
| 06/30/2013        | 635                                      | 9,263,844                                   | 474   | 2,463,967                      | 13,592  | 100,846,520                    | 7.2   | 7,420                        |
| 06/30/2014        | 616                                      | 7,160,148                                   | 522   | 3,047,436                      | 13,686  | 104,959,232                    | 4.1   | 7,669                        |
| 06/30/2015        | 860                                      | 10,844,333                                  | 534   | 3,174,045                      | 14,012  | 112,629,520                    | 7.3   | 8,038                        |
| 06/30/2016        | 837                                      | 2,185,058                                   | 536   | 3,102,492                      | 14,313  | 111,712,086                    | (8.0)   | 7,805                        |
| 06/30/2017        | 913                                      | 13,706,185                                  | 574   | 3,316,380                      | 14,652  | 122,101,891                    | 9.3   | 8,333                        |
| 06/30/2018        | 1,104                                    | 17,413,241                                  | 612   | 3,649,382                      | 15,144  | 135,865,750                    | 11.3  | 8,972                        |
| 06/30/2019        | 1,195                                    | 12,323,187                                  | 548   | 3,780,696                      | 15,791  | 144,408,241                    | 6.3   | 9,145                        |
| 06/30/2020        | 967                                      | 7,878,817                                   | 651   | 3,979,061                      | 16,107(2)                                       | 148,307,997                    | 2.7   | 9,208                        |

<sup>(1)</sup> Also reflects changes in subsidies for continuing retirees and beneficiaries.

<sup>(1)</sup> Includes non-vested Members.(2) Reflects annualized salaries for part-time Members.

<sup>(2)</sup> Total participants including married dependents currently receiving benefits are 21,572.

## **Member Benefit Coverage Information**

For Years Ended June 30 (Dollars in Thousands)

Aggregate Actuarial Accrued Liabilities For

Portion of Aggregate Accrued Liabilities Covered by Reported Assets

| <u>.</u>          | Ayyreyate Actuariai Accided Liabilities Foi |  | LIADIIILIES FUI   |                                 | COVE                           | eu by Reporteu As                          | 2612              |
|-------------------|---|--|-------------------|---------------------------------|--------------------------------|--|-------------------|
| Valuation<br>Date | Inactive/<br>Vested<br>Members              | Retirees,<br>Beneficiaries &<br>Dependents | Active<br>Members | Valuation<br>Value<br>of Assets | Inactive/<br>Vested<br>Members | Retirees,<br>Beneficiaries &<br>Dependents | Active<br>Members |
| 06/30/2011        | \$19,964                                    | \$1,066,351                                | \$882,393         | \$1,546,884                     | 100%                           | 100%                                       | 52%               |
| 06/30/2012        | 24,454                                      | 1,083,168                                  | 1,184,778         | 1,642,374                       | 100                            | 100  | 45                |
| 06/30/2013        | 26,869                                      | 1,104,833                                  | 1,280,783         | 1,734,733                       | 100                            | 100  | 47                |
| 06/30/2014        | 41,188                                      | 1,196,769                                  | 1,424,896         | 1,941,225                       | 100                            | 100  | 49                |
| 06/30/2015        | 42,943                                      | 1,210,067                                  | 1,393,980         | 2,108,925                       | 100                            | 100  | 61                |
| 06/30/2016        | 50,413                                      | 1,275,604                                  | 1,467,671         | 2,248,753                       | 100                            | 100  | 63                |
| 06/30/2017        | 62,252                                      | 1,379,357                                  | 1,564,197         | 2,438,458                       | 100                            | 100  | 64                |
| 06/30/2018        | 67,138                                      | 1,497,370                                  | 1,692,320         | 2,628,844                       | 100                            | 100  | 63                |
| 06/30/2019        | 65,887                                      | 1,600,131                                  | 1,668,281         | 2,812,662                       | 100                            | 100  | 69                |
| 06/30/2020        | 70,327                                      | 1,677,723                                  | 1,738,481         | 2,984,424                       | 100                            | 100  | 71                |

## **Schedule of Funding Progress**

For Years Ended June 30 (Dollars in Thousands)

| Valuation<br>Date | Valuation<br>Value of<br>Assets<br>(a) | Actuarial<br>Accrued<br>Liability<br>(AAL)<br>(b) | Unfunded<br>AAL<br>(UAAL)<br>(b)-(a) | Funded<br>Ratio<br>(a)/(b) | Covered<br>Payroll<br>(c) | UAAL as a<br>Percentage of<br>Covered Payroll<br>[(b)-(a)]/(c) |
|-------------------|--|---|--------------------------------------|----------------------------|---------------------------|--|
| 06/30/2011        | \$1,546,884                            | \$1,968,708                                       | \$421,824                            | 78.6%                      | \$1,833,392               | 23.0 %   |
| 06/30/2012        | 1,642,374                              | 2,292,400   | 650,026                              | 71.6                       | 1,819,270                 | 35.7   |
| 06/30/2013        | 1,734,733                              | 2,412,484   | 677,751                              | 71.9                       | 1,846,970                 | 36.7   |
| 06/30/2014        | 1,941,225                              | 2,662,853   | 721,628                              | 72.9                       | 1,898,064                 | 38.0   |
| 06/30/2015        | 2,108,925                              | 2,646,989   | 538,064                              | 79.7                       | 1,907,665                 | 28.2   |
| 06/30/2016        | 2,248,753                              | 2,793,688   | 544,935                              | 80.5                       | 1,968,703                 | 27.7   |
| 06/30/2017        | 2,438,458                              | 3,005,806   | 567,348                              | 81.1                       | 2,062,316                 | 27.5   |
| 06/30/2018        | 2,628,844                              | 3,256,828   | 627,984                              | 80.7                       | 2,177,687                 | 28.8   |
| 06/30/2019        | 2,812,662                              | 3,334,299   | 521,637                              | 84.4                       | 2,225,413                 | 23.4   |
| 06/30/2020        | 2,984,424                              | 3,486,531   | 502,107                              | 85.6                       | 2,445,017                 | 20.5   |

## **Actuarial Analysis of Financial Experience**

Development of Unfunded Actuarial Accrued Liability for Year Ended June 30, 2020

| 1.  | Unfunded actuarial accrued liability as of June 30, 2019                                    | \$<br>521,636,655 |
|-----|---|-------------------|
| 2.  | Employer normal cost as of June 30, 2019  | 76,422,769        |
| 3.  | Expected employer contributions during 2019-20 fiscal year                                  | (99,659,691)      |
| 4.  | Interest  | <br>36,133,979    |
| 5.  | Expected unfunded actuarial accrued liability as of June 30, 2020 (1 + 2 + 3 + 4)           | \$<br>534,533,712 |
| 6.  | Change due to investment loss, after smoothing  | 20,258,878        |
| 7.  | Change due to actual contributions more than expected                                       | (13,042,556)      |
| 8.  | Change due to miscellaneous demographic gains and losses                                    | 8,576,854         |
| 9.  | Change due to repeal of excise tax on certain high-cost health plans ("Cadillac Tax")       | (37,656,237)      |
| 10. | Change due to reflecting assumptions based on the triennial experience study                | 95,917,476        |
| 11. | Change due to updated 2020-21 premium and subsidy levels                                    | (144,296,543)     |
| 12. | Change due to updating trend assumption to project future medical premiums                  | 27 015 220        |
|     | after 2020/2021   | <br>37,815,239    |
| 13. | Unfunded actuarial accrued liability as of June 30, 2020 (5 + 6 + 7 + 8 + 9 + 10 + 11 + 12) | \$<br>502,106,823 |

#### **Actuarial Balance Sheet**

For Year Ended June 30, 2020

#### **Assets**

5. Actuarial present value of total projected benefits

| Actuarial value of assets                     | \$ 2,984,423,687 |
|---|------------------|
| 2. Present value of future normal costs       | 744,974,218      |
| 3. Unfunded actuarial accrued liability       | 502,106,823      |
| 4. Present value of current and future assets | \$ 4,231,504,728 |
| Liabilities                                   |                  |

\$ 4,231,504,728

### **Health Benefits Valuation**

#### Schedule of Changes in Net OPEB Liability and Related Ratios For the Fiscal Years Ended June 30 (Dollars in Thousands)

|   |          | 2020      |    | 2019      |          | 2018      |    | 2017      |          | 2016      |
|---|----------|-----------|----|-----------|----------|-----------|----|-----------|----------|-----------|
| Total OPEB Liability                                  |          |           |    |           |          |           |    |           |          |           |
| Service cost <sup>(1)</sup>                           | \$       | 76,423    | \$ | 74,478    | \$       | 74,611    | \$ | 68,385    | \$       | 62,360    |
| Interest  |          | 242,666   |    | 236,678   |          | 218,686   |    | 210,170   |          | 199,078   |
| Changes of benefit terms                              |          | -         |    | -         |          | 948       |    | -         |          | 17,215    |
| Differences between expected and actual experience(2) |          | (135,720) |    | (134,053) |          | (7,321)   |    | 19,666    |          | (22,013)  |
| Changes of assumptions <sup>(2)</sup>                 |          | 96,076    |    | 33,940    |          | 92,178    |    | 33,512    |          | -         |
| Benefit payments <sup>(3)</sup>                       | _        | (127,214) | _  | (133,571) | _        | (128,081) | _  | (119,616) | _        | (109,940) |
| Net change in total OPEB liability                    |          | 152,231   |    | 77,472    |          | 251,021   |    | 212,117   |          | 146,700   |
| Total OPEB liability-beginning                        | _        | 3,334,299 | _  | 3,256,827 | _        | 3,005,806 | _  | 2,793,689 | _        | 2,646,989 |
| Total OPEB liability-ending (a)                       | \$       | 3,486,530 | \$ | 3,334,299 | \$       | 3,256,827 | \$ | 3,005,806 | \$       | 2,793,689 |
|   |          |           |    |           |          |           |    |           |          |           |
| Plan fiduciary net position                           |          |           |    |           |          |           |    |           |          |           |
| Contributions-employer                                | \$       | 112,136   | \$ | 107,927   | \$       | 100,909   | \$ | 97,457    |          | 105,983   |
| Net investment income (loss)(4)                       |          | 60,899    |    | 166,470   |          | 269,380   |    | 330,708   |          | (344)     |
| Benefit payments <sup>(3)</sup>                       |          | (127,214) |    | (133,571) |          | (128,081) |    | (119,616) |          | (109,940) |
| Administrative expense                                |          | (6,715)   |    | (5,099)   |          | (4,699)   |    | (4,564)   |          | (4,528)   |
| Net change in Plan fiduciary net position             |          | 39,106    |    | 135,727   |          | 237,509   |    | 303,985   |          | (8,829)   |
| 3 7 1   |          | ·         |    |           |          | •         |    |           |          | , ,       |
| Plan fiduciary net position-beginning                 |          | 2,812,098 |    | 2,676,371 |          | 2,438,862 |    | 2,134,877 |          | 2,143,706 |
| Plan fiduciary net position-ending (b)                | \$       | 2,851,204 | \$ | 2,812,098 | \$       | 2,676,371 | \$ | 2,438,862 | \$       | 2,134,877 |
|   |          |           |    |           |          |           |    |           |          |           |
| Plan's net OPEB liability-ending (a)-(b)              | \$       | 635,326   | \$ | 522,201   | \$       | 580,456   | \$ | 566,944   | \$       | 658,812   |
| 3(7(4)  | <u> </u> |           | ÷  |           | <u> </u> |           | ÷  |           | <u> </u> |           |
| Plan fiduciary net position as a percentage of        |          |           |    |           |          |           |    |           |          |           |
| the total OPEB liability (b)/(a)                      |          | 81.8%     |    | 84.3%     |          | 82.2%     |    | 81.1%     |          | 76.4%     |
| •               |          |           |    |           |          |           |    |           |          |           |
| Covered payroll                                       | \$       | 2,271,039 | \$ | 2,108,171 | \$       | 2,057,565 | \$ | 1,973,049 | \$       | 1,876,946 |
| Plan's net OPEB liability as a percentage of          |          |           |    |           |          |           |    |           |          |           |
| covered payroll                                       |          | 28.0%     |    | 24.8%     |          | 28.2%     |    | 28.7%     |          | 35.1%     |
|   |          |           |    |           |          |           |    |           |          |           |

<sup>(1)</sup> The service cost is based on the previous year's valuation.

After the GASB Statement No. 74 valuation report was issued for the fiscal year June 30, 2017, the System's consulting actuary reclassified \$12,450,000 of OPEB liability from the *Changes of Assumption* (revised from \$45,962,000 to \$33,512,000) to the *Differences Between Expected and Actual Experience* (revised from \$7,216,000 to \$19,666,000). However, this reclassification did not affect the recommended employer contribution rates or results of the OPEB valuation in total.

<sup>(3)</sup> Benefit payments associated with the self-funded insurance premium of \$6,090,000 and Member's health insurance premium reserve of \$468,000 that were reported as both additions and deductions in fiduciary net position for the fiscal year 2019 were excluded from the above schedule.

<sup>(4)</sup> Building Lease and Other Income were included in the Net investment income (loss) starting in fiscal year 2020. Investment related administrative expenses is part of Administrative expenses and excluded from Net investment Income.

## **Health Benefits Valuation**

#### Schedule of Changes in Net OPEB Liability and Related Ratios (Continued)

#### Notes to Schedule:

Changes of Benefit Terms: The OPEB liability from the changes of benefit terms for the fiscal year ended June 30, 2016 is primarily due to providing retiree healthcare benefits to part-time employees who retired with 10 years of service but less than 10 years of service credit (refer to Note 3 – Postemployment Health Care Plan Description, Eligibility Requirement and Benefits Provided on pages 35-36) wh35ile the June 30, 2018 increase is primarily as a result of the newly adopted enhanced benefits for Airport Peace Officers (APO) who elected to stay at LACERS Plan (refer to Note 2 – Retirement Plan Description, Tier 1 – Enhanced Benefits on page 30) as some APO Members may retire earlier than expected. Enhanced benefits became effective as of January 7, 2018.

Changes of Assumptions: The OPEB liability from the changes of assumptions for the fiscal year ended June 30, 2017 is primarily due to the lowered assumed investment rate of return, from 7.50% to 7.25%. The June 30, 2018 liability increase is primarily due to the new actuarial assumptions adopted in the triennial experience study (July 1, 2014 through June 30, 2017), including revising the mortality tables from static to generational, while the June 30, 2019 increase is mainly due to the increased Medicare Part B Premium Trend Rate from 4.0% to 4.5%. The June 30, 2020 liability increase is primarily due to the new actuarial assumptions adopted in the triennial experience study (July 1, 2016 through June 30, 2019), including the lowered assumed investment rate of return, from 7.25% to 7.00%.

### Projection of OPEB Plan's Fiduciary Net Position for Use in Calculation of Discount Rate of 7.00% and Preparation of GASB 74 Report as of June 30, 2020

(Dollars in Millions)

| Year<br>Beginning<br>July 1, | Projected<br>Beginning<br>OPEB Plan<br>Fiduciary<br>Net Position<br>(a) | Projected<br>Total<br>Contributions<br>(b) | Projected<br>Benefit<br>Payments<br>(c) | Projected<br>Admin.<br>Expenses<br>(d) | Projected<br>Investment<br>Earnings<br>(e) | Projected Ending OPEB Plan Fiduciary Net Position (a)+(b)-(c)-(d)+(e) |
|------------------------------|---|--|---|--|--|---|
| 2019                         | \$2,812   | \$112                                      | \$127                                   | \$7                                    | \$61                                       | \$2,851   |
| 2020                         | 2,851   | 100  | 154                                     | 7                                      | 198  | 2,988   |
| 2021                         | 2,988   | 101  | 163                                     | 7                                      | 207  | 3,125   |
| 2022                         | 3,125   | 103  | 175                                     | 7                                      | 216  | 3,261   |
| 2023                         | 3,261   | 104  | 188                                     | 8                                      | 225  | 3,395   |
| 2024                         | 3,395   | 98   | 200                                     | 8                                      | 234  | 3,518   |
| 2025                         | 3,518   | 101  | 212                                     | 8                                      | 242  | 3,641   |
| 2026                         | 3,641   | 104  | 224                                     | 9                                      | 251  | 3,764   |
| 2027                         | 3,764   | 104  | 234                                     | 9                                      | 259  | 3,882   |
| 2046                         | 5,992   | 43   | 452                                     | 14                                     | 405  | 5,974   |
| 2047                         | 5,974   | 41   | 460                                     | 14                                     | 403  | 5,944   |
| 2048                         | 5,944   | 39   | 470                                     | 14                                     | 401  | 5,900   |
| 2049                         | 5,900   | 37   | 481                                     | 14                                     | 397  | 5,839   |
| 2050                         | 5,839   | 35   | 492                                     | 14                                     | 393  | 5,761   |
| 2083                         | 1,035   | 9(1)                                       | 188                                     | 2                                      | 66   | 920   |
| 2084                         | 920   | 9(1)                                       | 173                                     | 2                                      | 59   | 812   |
| 2085                         | 812   | 8(1)                                       | 159                                     | 2                                      | 52   | 711   |
| 2086                         | 711   | 8(1)                                       | 144                                     | 2                                      | 45   | 617   |
| 2087                         | 617   | 7(1)                                       | 130                                     | 1                                      | 39   | 532   |
| 2103                         | 11  | 1(1)                                       | 5                                       | 0(2)                                   | 1  | 8   |
| 2104                         | 8   | 1(1)                                       | 4                                       | 0(2)                                   | 0(2)                                       | 5   |
| 2105                         | 5   | 1(1)                                       | 3                                       | 0(2)                                   | 0(2)                                       | 3   |
| 2106                         | 3   | 0(1),(2)                                   | 2                                       | 0(2)                                   | 0(2)                                       | 2   |
| 2107                         | 2   | 0(1),(2)                                   | 1                                       | 0(2)                                   | 0(2)                                       | 1   |
| 2108                         | 1   | 0(1),(2)                                   | 1                                       | 0(2)                                   | 0(2)                                       | 1   |
| 2109                         | 1   | 0(1),(2)                                   | 0(2)                                    | 0(2)                                   | 0(2)                                       | 1   |
| 2110                         | 1   | 0(1),(2)                                   | 0(2)                                    | 0(2)                                   | 0(2)                                       | 0(2)  |

<sup>(1)</sup> Mainly attributable to employer contributions to fund each year's annual administrative expenses.

Note that in preparing the above projections, we have not taken into consideration the one-year delay between the date of the contribution rate calculation and the implementation.

<sup>(2)</sup> Less than \$1 million when rounded.

### Projection of OPEB Plan's Fiduciary Net Position for Use in Calculation of Discount Rate of 7.00% and Preparation of GASB 74 Report as of June 30, 2020 (Continued)

#### Notes to Schedule:

- 1. Amounts may not total exactly due to rounding.
- 2. Amounts shown for the year beginning July 1, 2019 row are actual amounts, based on the unaudited financial statements provided by LACERS.
- 3. Years 2028-2045, 2051-2082, and 2088-2102 have been omitted from this table.
- 4. Column (a): None of the projected beginning OPEB Plan Fiduciary Net Position amounts shown have been adjusted for the time value of money.
- 5. Column (b): Projected total contributions include employer normal cost contributions based on closed group projections (based on covered active Members as of June 30, 2020); plus employer contributions to the unfunded actuarial accrued liability; plus contributions to fund each year's annual administrative expenses reflecting a 15-year amortization schedule. Contributions are assumed to occur halfway through the year, on average.
- 6. Column (c): Projected benefit payments have been determined in accordance with paragraph 43 of GASB Statement No. 74, and are based on the closed group of active, inactive vested, retired Members, and beneficiaries as of June 30, 2020. Benefit payments are assumed to occur halfway through the year, on average. In accordance with paragraph 49 of GASB Statement No. 74, the long-term expected rate of return on Plan investments of 7.00% was applied to all periods of projected benefit payments to determine the discount rate.
- 7. Column (d): Projected administrative expenses are calculated as approximately 0.24% of the projected beginning OPEB Plan Fiduciary Net Position amount. The 0.24% portion was based on the actual fiscal year 2019-20 administrative expenses as a percentage of the beginning OPEB Plan Fiduciary Net Position amount as of July 1, 2019. Administrative expenses are assumed to occur halfway through the year, on average.
- 8. Column (e): Projected investment earnings are based on the assumed investment rate of return of 7.00% per annum.
- 9. As illustrated in this Schedule, the OPEB Plan Fiduciary Net Position was projected to be available to make all projected future benefit payments for current Plan Members. In other words, there is no projected 'cross-over date' when projected benefits are not covered by projected assets. Therefore, the long-term expected rate of return on Plan investments of 7.00% per annum was applied to all periods of projected benefit payments to determine the Total OPEB Liability as of June 30, 2020 shown in the GAS 74 report, pursuant to paragraph 49 of GASB Statement No. 74.
- This projection is based on a model developed by our Actuarial Technology and Systems unit, comprised of both actuaries and programmers. The model allows the client team, under the supervision of the responsible actuary, control over the entry of future expected contribution income, benefit payments and administrative expenses. The projection of fiduciary net position and the discounting of benefits is part of the model.

#### **Rationale for Assumptions**

The information and analysis used in selecting each assumption that has a significant effect on this actuarial valuation is shown in the July 1, 2016 through June 30, 2019 Actuarial Experience Study dated June 17, 2020 and the retiree health assumptions letter dated September 15, 2020. Unless otherwise noted, all actuarial assumptions and methods shown below apply to both Tier 1 and Tier 3 Members. These assumptions have been adopted by the Board.

#### **Measurement Date**

June 30, 2020.

#### Data

LACERS provided detailed census data and financial information for post-employment benefits.

#### **Post-Retirement Mortality Rates**

#### Healthy Members

Pub-2010 General Healthy Retiree Headcount-Weighted Above-Median Mortality Tables with rates increased by 10% for males, projected generationally with the two-dimensional mortality improvement scale MP-2019.

#### **Disabled Members**

Pub-2010 Non-Safety Disabled Retiree Headcount-Weighted Mortality Tables with rates increased by 10% for males and decreased by 5% for females, projected generationally with the two-dimensional mortality improvement scale MP-2019.

#### Beneficiaries

Pub-2010 Contingent Survivor Headcount-Weighted Above-Median Mortality Tables with rates increased by 10% for males and females, projected generationally with the two-dimensional mortality improvement scale MP-2019.

The Pub-2010 mortality tables and adjustments as shown above reasonably reflect the mortality experience as of the measurement date. These mortality tables were adjusted to future years using the generational projection to reflect future mortality improvement between the measurement date and those years.

#### **Pre-Retirement Mortality Rates**

Pub-2010 General Employee Headcount-Weighted Above-Median Mortality Tables with rates increased by 10%, projected generationally with the two-dimensional mortality improvement scale MP-2019.

#### **Disability Incidence**

| Age | Rate (%) |
|-----|----------|
| 25  | 0.01     |
| 30  | 0.02     |
| 35  | 0.04     |
| 40  | 0.06     |
| 45  | 0.12     |
| 50  | 0.16     |
| 55  | 0.18     |
| 60  | 0.18     |
| 65  | 0.22     |

#### **Termination**

| Termination (< 5 Years of Service) |          |  |  |  |
|------------------------------------|----------|--|--|--|
| Years of Service                   | Rate (%) |  |  |  |
| Less than 1                        | 11.50    |  |  |  |
| 1 – 2                              | 10.00    |  |  |  |
|                                    |          |  |  |  |

| 1 – 2 | 10.00 |
|-------|-------|
| 2 – 3 | 8.50  |
| 3 – 4 | 7.75  |
| 4 – 5 | 7.00  |

| Termination (5+ | Years of Service) |
|-----------------|-------------------|
| Age             | Rate (%)          |
| 25              | 7.00              |
| 30              | 6.70              |
| 35              | 5.30              |
| 40              | 3.75              |
| 45              | 3.10              |
| 50              | 3.00              |
| 55              | 3.00              |
| 60              | 3.00              |

No termination is assumed after a member is eligible for retirement (as long as a retirement rate is present).

#### **Retirement Rates**

|      | Rate (%) |        |       |       |             |        |  |
|------|----------|--------|-------|-------|-------------|--------|--|
|      |          | Tier 1 |       |       |             |        |  |
|      | Tie      | er 1   | Enha  | ınced | Tie         | Tier 3 |  |
|      | Non-     |        | Non-  |       | Non-        |        |  |
| Age  | 55/30    | 55/30  | 55/30 | 55/30 | 55/30       | 55/30  |  |
| 50   | 5.0      | 0.0    | 7.0   | 0.0   | 5.0         | 0.0    |  |
| 51   | 3.0      | 0.0    | 5.0   | 0.0   | 3.0         | 0.0    |  |
| 52   | 3.0      | 0.0    | 5.0   | 0.0   | 3.0         | 0.0    |  |
| 53   | 3.0      | 0.0    | 5.0   | 0.0   | 3.0         | 0.0    |  |
| 54   | 18.0     | 0.0    | 20.0  | 0.0   | 17.0        | 0.0    |  |
| 55   | 6.0      | 27.0   | 8.0   | 30.0  | $0.0^{(1)}$ | 26.0   |  |
| 56   | 6.0      | 18.0   | 8.0   | 22.0  | $0.0^{(1)}$ | 17.0   |  |
| 57   | 6.0      | 18.0   | 8.0   | 22.0  | $0.0^{(1)}$ | 17.0   |  |
| 58   | 6.0      | 18.0   | 8.0   | 22.0  | $0.0^{(1)}$ | 17.0   |  |
| 59   | 6.0      | 18.0   | 8.0   | 22.0  | $0.0^{(1)}$ | 17.0   |  |
| 60   | 7.0      | 18.0   | 9.0   | 22.0  | 6.0         | 17.0   |  |
| 61   | 7.0      | 18.0   | 9.0   | 22.0  | 6.0         | 17.0   |  |
| 62   | 7.0      | 18.0   | 9.0   | 22.0  | 6.0         | 17.0   |  |
| 63   | 7.0      | 18.0   | 9.0   | 22.0  | 6.0         | 17.0   |  |
| 64   | 7.0      | 18.0   | 9.0   | 22.0  | 6.0         | 17.0   |  |
| 65   | 14.0     | 21.0   | 16.0  | 26.0  | 13.0        | 20.0   |  |
| 66   | 14.0     | 21.0   | 16.0  | 26.0  | 13.0        | 20.0   |  |
| 67   | 14.0     | 21.0   | 16.0  | 26.0  | 13.0        | 20.0   |  |
| 68   | 14.0     | 21.0   | 16.0  | 26.0  | 13.0        | 20.0   |  |
| 69   | 14.0     | 21.0   | 16.0  | 26.0  | 13.0        | 20.0   |  |
| 70 & |          |        |       |       |             |        |  |
| Over | 100.0    | 100.0  | 100.0 | 100.0 | 100.0       | 100.0  |  |

<sup>(1)</sup> Not eligible to retire under the provisions of the Tier 3 plan at these ages with less than 30 years of service. If a member has at least 30 years of service at these ages, they would be subject to the "55/30" rates.

# Retirement Age and Benefit for Inactive Vested Members

Assume retiree health benefit will be paid at the later of age 59 or the current attained age.

#### **Unknown Data for Members**

Same as those exhibited by Members with similar known characteristics. If not specified, Members are assumed to be male.

#### Service

Employment service is used for eligibility determination purposes. Benefit service is used for benefit calculation purposes.

#### **Future Benefit Accruals**

1.0 year of service credit per year

#### **Net Investment Return**

 $7.00\%^{(1)}$ 

(1) Net of investment and administrative expenses for funding purposes, and net of investment expenses only for financial reporting purposes.

#### **Discount Rate**

7.00%

#### **Payroll Growth**

Inflation of 2.75% per year plus real "across the board" salary increases of 0.50% per year, used to amortize the UAAL as a level percentage of payroll.

#### **Salary Increases**

Inflation: 2.75%; plus additional 0.50% "across the board" salary increases (other than inflation); plus the following merit and promotion increases:

| Years of    |          |
|-------------|----------|
| Service     | Rate (%) |
| Less than 1 | 6.70     |
| 1 – 2       | 6.50     |
| 2 – 3       | 5.80     |
| 3 – 4       | 4.00     |
| 4 – 5       | 3.00     |
| 5 – 6       | 2.20     |
| 6 – 7       | 2.00     |
| 7 – 8       | 1.80     |
| 8 – 9       | 1.60     |
| 9 – 10      | 1.40     |
| 10 & Over   | 1.00     |
|             |          |

#### Per Capita Cost Development

The assumed costs on a composite basis are the future costs of providing postemployment health care benefits at each age. To determine the assumed costs on a composite basis, historical premiums are reviewed and adjusted for increases in the cost of health care services.

#### **Per Capita Cost Development (Continued)**

# Maximum Dental Subsidy 2020-21 Fiscal Year

| <del>_</del>     | 2020 21 110001 1001 |                                   |  |  |
|------------------|---------------------|-----------------------------------|--|--|
| Carrier          | Election<br>Percent | Maximum Monthly<br>Dental Subsidy |  |  |
| Delta Dental PPO | 79.9%               | \$44.60                           |  |  |
| DeltaCare USA    | 20.1%               | \$14.38                           |  |  |

| Medicare Part B Premium Subsidy                           |          |
|---|----------|
| Actual monthly premium for calendar year 2020             | \$144.60 |
| Projected monthly premium for calendar year 2021          | \$153.30 |
| Projected average monthly premium for plan year 2020/2021 | \$148.95 |

LACERS will not reimburse Medicare Part B premiums for spouses/domestic partners, unless they are LACERS retired Members with Medicare Parts A and B enrolled as a dependent in a LACERS medical plan. This valuation does not reflect Medicare Part B reimbursement for any spouses/domestic partners enrolled in Medicare Parts A and B.

For retirees age 65 and over on the valuation date, Segal valued the Medicare Part B premium subsidy as reported in the data. For current and future retirees under age 65, Segal will assume 100% of those electing a medical subsidy will be eligible for the Medicare Part B premium subsidy.

#### Maximum Monthly Medical Subsidy (Tier 1 Members Not Subject to Medical Subsidy Cap and all Tier 3 Members)

Participant Under Age 65 or Not Eligible for Medicare A & B 2020-21 Fiscal Year

|                  | 2020 2 . 1 . 100 41 . 1 04 . |            |              |          |
|------------------|------------------------------|------------|--------------|----------|
|                  | Observed and                 |            | Married/with |          |
| Assumed Single   |                              |            | Domestic     | Eligible |
|                  | Election                     | Party      | Partner      | Survivor |
| Carrier          | Percent                      | Subsidy    | Subsidy      | Subsidy  |
| Kaiser HMO       | 61.5%                        | \$853.39   | \$1,706.78   | \$853.39 |
| Anthem BC<br>PPO | 21.6%                        | \$1,275.68 | \$1,790.80   | \$853.39 |
| Anthem BC<br>HMO | 16.9%                        | \$1,054.59 | \$1,790.80   | \$853.39 |

#### Maximum Monthly Medical Subsidy (Tier 1 Members Not Subject to Medical Subsidy Cap and all Tier 3 Members)

Participant Eligible for Medicare A & B 2020-21 Fiscal Year

| gible |
|-------|
| vivor |
| osidy |
| 2.47  |
| 7.75  |
| 8.98  |
| ):    |

<sup>(1)</sup> Rates for CA plan.

Tier 1 Members who are subject to the retiree medical subsidy cap will have monthly health insurance subsidy maximums capped at the levels in effect at July 1, 2011, as shown in the table below.

# Maximum Monthly Medical Subsidy (Tier 1 Members Subject to Retiree Medical Subsidy Cap)

| (1101 1 Montoors cab)                  | 001 10 110111 0          | o modiodi odio | o.u.j oup, |  |
|--|--------------------------|----------------|------------|--|
|  | Married/With             |                |            |  |
|  | Single Domestic Eligible |                |            |  |
|  | Party                    | Partner        | Survivor   |  |
|  | Subsidy                  | Subsidy        | Subsidy    |  |
| Under Age 65:<br>All Plans             | \$1,190.00               | \$1,190.00     | \$593.62   |  |
| Age 65 and Over:<br>Kaiser Senior Adv. | \$203.27                 | \$406.54       | \$203.27   |  |
| Anthem BC Medicare Supplement          | \$478.43                 | \$478.43(1)    | \$478.43   |  |
| UHC Medicare Adv.<br>HMO               | \$219.09                 | \$433.93       | \$219.09   |  |

<sup>(1)</sup> The reason the subsidy is only at the single-party amount is that there is no excess subsidy to cover a dependent.

These rates only apply to a small number of deferred vested members, retirees and beneficiaries. No active members are subject to the retiree medical subsidy cap.

#### **Per Capita Cost Development (Continued)**

Adjustments to per-capita costs based on age, gender, and status are as follows:

|     | Re     | Retiree     |        | ouse   |
|-----|--------|-------------|--------|--------|
| Age | Male   | Male Female |        | Female |
| 55  | 0.9003 | 0.9295      | 0.7085 | 0.8025 |
| 60  | 1.0692 | 1.0019      | 0.9485 | 0.9308 |
| 64  | 1.2266 | 1.0628      | 1.1974 | 1.0476 |
| 65  | 0.9182 | 0.7805      | 0.9182 | 0.7805 |
| 70  | 1.0642 | 0.8411      | 1.0642 | 0.8411 |
| 75  | 1.1468 | 0.9053      | 1.1468 | 0.9053 |
| +08 | 1.2350 | 0.9760      | 1.2350 | 0.9760 |

#### **Spouse/Domestic Partner Coverage**

For all active and inactive members, 60% of male and 35% of female retirees who receive a retiree health subsidy are assumed to be married or have a qualified domestic partner and elect dependent coverage. Of these covered spouses/domestic partners, 100% are assumed to continue coverage if the retiree predeceases the spouse/domestic partner.

Male retirees are assumed to be four years older than their female spouses/domestic partners. Female retirees are assumed to be two years younger than their male spouses/domestic partners.

#### **Participation**

Retiree Medical and Dental Coverage Participation:

| Years of      |                    |
|---------------|--------------------|
| Service Range | Percent Covered(1) |
| 10 – 14       | 60%                |
| 15 – 19       | 80%                |
| 20 – 24       | 90%                |
| 25 and Over   | 95%                |

<sup>(1)</sup> Deferred vested Members are assumed to elect coverages at 50% of the rates shown above.

100% of retirees becoming eligible for Medicare are assumed to be covered by both Parts A and B.

#### **Health Care Cost Subsidy Trend Rates**

Trends to be applied in following fiscal years, to all health plans.

First Fiscal Year (July 1, 2020 through June 30, 2021):

| Plan                          | Trend to be applied to 2020-21 Fiscal Year premium |
|-------------------------------|--|
| Anthem BC HMO, Under Age 65   | 4.85%  |
| Anthem BC PPO, Under Age 65   | 3.71%  |
| Kaiser HMO, Under Age 65      | 3.37%  |
| Anthem BC Medicare Supplement | 4.45%  |
| Kaiser Senior Advantage       | 3.12%  |
| UHC Medical HMO               | 3.12%  |

The fiscal year trend rates are based on the following calendar year trend rates:

Trand (applied to

|   |           |          |          |          | Trend (a  | ipplied to |
|---|-----------|----------|----------|----------|-----------|------------|
|   | Fiscal    |          |          | Calendar | calculate | following  |
|   | Year      | Trend (A | Approx.) | Year     | year pr   | emium)     |
|   |           | Non-     |          |          | Non-      |            |
| _ |           | Medicare | Medicare |          | Medicare  | Medicare   |
|   | 2021-22   | 6.62%    | 6.12%    | 2021     | 6.75%     | 6.25%      |
|   | 2022-23   | 6.37%    | 5.87%    | 2022     | 6.50%     | 6.00%      |
|   | 2023-24   | 6.12%    | 5.62%    | 2023     | 6.25%     | 5.75%      |
|   | 2024-25   | 5.87%    | 5.37%    | 2024     | 6.00%     | 5.50%      |
|   | 2025-26   | 5.62%    | 5.12%    | 2025     | 5.75%     | 5.25%      |
|   | 2026-27   | 5.37%    | 4.87%    | 2026     | 5.50%     | 5.00%      |
|   | 2027-28   | 5.12%    | 4.62%    | 2027     | 5.25%     | 4.75%      |
|   | 2028-29   | 4.87%    | 4.50%    | 2028     | 5.00%     | 4.50%      |
|   | 2029-30   | 4.62%    | 4.50%    | 2029     | 4.75%     | 4.50%      |
|   | 2030-31   |          |          |          |           |            |
|   | and later | 4.50%    | 4.50%    | 2030     | 4.50%     | 4.50%      |

Dental Premium Trend: 4.00% for all years.

Medicare Part B Premium Trend: 4.50% for all years.

#### **Health Care Reform**

In both the funding valuation and the GASB Statements No. 74 and 75 actuarial valuation for financial reporting purposes as of June 30, 2019, Segal included the impact of the projected excise tax on certain high cost medical plans ("Cadillac Tax") beginning in 2022 as prescribed by the Affordable Care Act (ACA) and related statutes.

Subsequent to the June 30, 2019 valuations, the excise tax was repealed. The excise tax is no longer reflected beginning with the June 30, 2020 valuations for funding and financial reporting purposes.

#### **Administrative Expenses**

No administrative expenses were valued separately from the premium costs.

#### **Actuarial Cost Method**

Entry Age Cost Method, level percent of salary. Entry age is calculated as age on the valuation date minus years of employment service. Both the normal cost and the actuarial accrued liability are calculated on an individual basis.

#### **Actuarial Value of Assets**

Fair value of assets less unrecognized returns in each of the last seven years. Unrecognized return is equal to the difference between the actual and expected returns on a fair value basis, and is recognized over a seven-year period. The actuarial value of assets cannot be less than 60% of fair value of assets nor greater than 140% of fair value of assets.

#### **Valuation Value of Assets**

The portion of the total actuarial value of assets allocated for retiree health benefits, based on a prorated share of fair value.

#### **Amortization Policy**

The amortization method for the UAAL is a level percent of payroll, assuming annual increases in total covered payroll equal to inflation plus across the board increases (other than inflation).

Changes in the UAAL due to actuarial gains/losses are amortized over separate 15-year periods. Changes in the UAAL due to assumption or method changes are amortized over separate 20-year periods. Plan changes, including the 2009 ERIP, are amortized over separate 15-year periods. Future ERIPs will be amortized over 5 years. Any actuarial surplus is amortized over 30 years. All the bases on or before June 30, 2012, except those arising from the 2009 ERIP, were combined and amortized over 30 years effective June 30, 2012. Health trend and premium assumption changes are amortized over 15 years.

#### **Employer Contributions**

Employer contributions consist of two components:

Normal Cost

The annual contribution rate that, if paid annually from a member's first year of membership through the year of retirement, would accumulate to the amount necessary to fully fund the member's retirement-related benefits. Accumulation includes annual crediting of interest at the assumed investment earnings rate. The contribution rate is expressed as a level percentage of the member's compensation.

Contribution to the Unfunded Actuarial Accrued Liability (UAAL)

The annual contribution rate that, if paid annually over the UAAL amortization period, would accumulate to the amount necessary to fully fund the UAAL. Accumulation includes annual crediting of interest at the assumed investment earnings rate. The contribution (or rate credit in the case of a negative UAAL) is calculated to remain as a level percentage of future active member payroll (including payroll for new members as they enter the System) assuming a constant number of active members. In order to remain as a level percentage of payroll, amortization payments (credits) are scheduled to increase at the annual rate of 3.25% (i.e., 2.75% inflation plus 0.50% across-the-board salary increase).

The amortization policy is described above.

#### **Assumption Changes since Prior Valuation**

Starting premium costs and first year trends were updated to reflect 2021 calendar year premium data.

Updated trends to project future medical costs after 2020/2021 were reflected.

The excise tax on high costs health plans ("Cadillac Tax") was removed to reflect the recent repeal effective as of December 20, 2019.

Economic and demographic assumptions have been updated based on the July 1, 2016 through June 30, 2019 Actuarial Experience Study.

#### **Summary of Plan Provisions**

LACERS administers a single-employer postemployment health care plan. The following summarizes the major benefit provisions of the Health Plan as included in the valuation. To the best of our knowledge, the summary represents the substantive plans as of the measurement date. It is not intended to be, nor should it be interpreted as, a complete statement of all benefit provisions.

#### **Membership Eligibility**

Tier 1 (§4.1002(a))

All employees who became Members of LACERS before July 1, 2013, and certain employees who became Members of LACERS on or after July 1, 2013. In addition, pursuant to Ordinance No. 184134, all Tier 2 employees who became Members of LACERS between July 1, 2013 and February 21, 2016 were transferred to Tier 1 effective February 21, 2016 (refer to Note 3 – Postemployment Health Care Plan Description on pages 35-36 regarding the Membership).

#### **Summary of Plan Provisions (Continued)**

#### **Membership Eligibility (Continued)**

Tier 3 (§4.1080.2(a))

All employees who became Members of LACERS on or after February 21, 2016, except as provided otherwise in Section 4.1080.2(b) of the Los Angeles Administrative Code.

#### **Benefit Eligibility**

Tier 1 (§4.1111(a)) and Tier 3 (§4.1126(a))

Retired age 55 or older with at least 10 years of service (including deferred vested Members who terminate employment and receive a retirement benefit from LACERS), or if retirement date is between October 2, 1996 and September 30, 1999 at age 50 or older with at least 30 years of service. Benefits are also payable to spouses, domestic partners, or other qualified dependents while the retiree is alive. The health subsidy is not payable to a disabled retiree before the Member reaches age 55.

#### Medical Subsidy for Members Not Subject to Cap

Under Age 65 or Over Age 65 Without Medicare Part A:

Tier 1 (§4.1111(d)) and Tier 3 (§4.1126(c))

Both Tier 1 and Tier 3 Members will be eligible for 40% of maximum medical plan premium subsidy for 1 – 10 whole years of service credit, and eligible Members earn 4% per year of service credit for their annual medical subsidy accrual after 10 years of service (limited to actual premium). As of July 1, 2020, the maximum monthly health subsidy is \$1,790.80, remaining unchanged in calendar year 2021. This amount includes coverage of dependent premium costs.

Over Age 65 and Enrolled in Both Medicare Parts A and B:

Tier 1 (§4.1111(e)) and Tier 3 (§4.1126(d))

For retirees, a maximum health subsidy shall be paid in the amount of the single-party monthly premium of the approved Medicare supplemental or coordinated plan in which the retiree is enrolled, subject to the following vesting schedule:

| Completed Years   | Vested     |  |  |
|-------------------|------------|--|--|
| of Service Credit | Percentage |  |  |
| 1-14              | 75%        |  |  |
| 15-19             | 90%        |  |  |
| 20+               | 100%       |  |  |

#### **Subsidy Cap for Tier 1**

Tier 1 (§4.1111(b))

As of the June 30, 2011 valuation, the retiree health benefits program was changed to cap the medical subsidy for non-retired Members who do not contribute an additional 4.0% or 4.5% of employee contributions to the System.

The capped subsidy is different for Medicare and non-Medicare retirees. The cap applies to the medical subsidy limits at the 2011 calendar year level. The cap does not apply to the dental subsidy or the Medicare Part B premium reimbursement.

#### **Dependents**

Tier 1 ( $\S4.1111(e)(4)$ ) and Tier 3 ( $\S4.1126(d)(4)$ )

An additional amount is added for coverage of dependents which shall not exceed the amount provided for a dependent of a retiree not enrolled in Medicare Parts A and B and covered by the same medical plan with the same years of service credit. The combined Member and dependent subsidy shall not exceed the actual premium. This refers to dependents of retired Members with Medicare Parts A and B. It does not apply to those without Medicare or with Medicare Part B only.

#### **Dental Subsidy for Members**

Tier 1 (§4.1114(b)) and Tier 3 (§4.1129(b))

The System will pay 4% of the maximum dental subsidy (limited to actual premium) for each year of Service Credit, up to 100% of the maximum dental subsidy. As of July 1, 2020, the maximum dental subsidy is \$44.60 per month; remaining unchanged in calendar year 2021.

There is no subsidy available to dental plan dependents or surviving spouses/domestic partners. There is also no reimbursement for dental plans not sponsored by the System.

#### Medicare Part B Reimbursement for Members

Tier 1 (§4.1113) and Tier 3 (§4.1128)

If a retiree is covered by both Medicare Parts A and B, and enrolled in a LACERS medical plan or participates in the LACERS Retiree Medical Premium Reimbursement Program, LACERS will reimburse the retiree the basic Medicare Part B premium.

#### **Health Benefits Valuation**

#### **Summary of Plan Provisions (Continued)**

#### **Medical Subsidy for Surviving Spouse**

Tier 1 (§4.1115) and Tier 3 (§4.1129.1)

The surviving spouse or domestic partner will be entitled to a health subsidy based on the Member's years of service credit and the surviving dependent's eligibility for Medicare.

Under Age 65 or Over Age 65 Without Medicare Part A

The maximum health subsidy available for survivors is the lowest cost plan available (currently Kaiser) single-party premium (\$853.39 per month as of July 1, 2020, remaining unchanged in calendar year 2021).

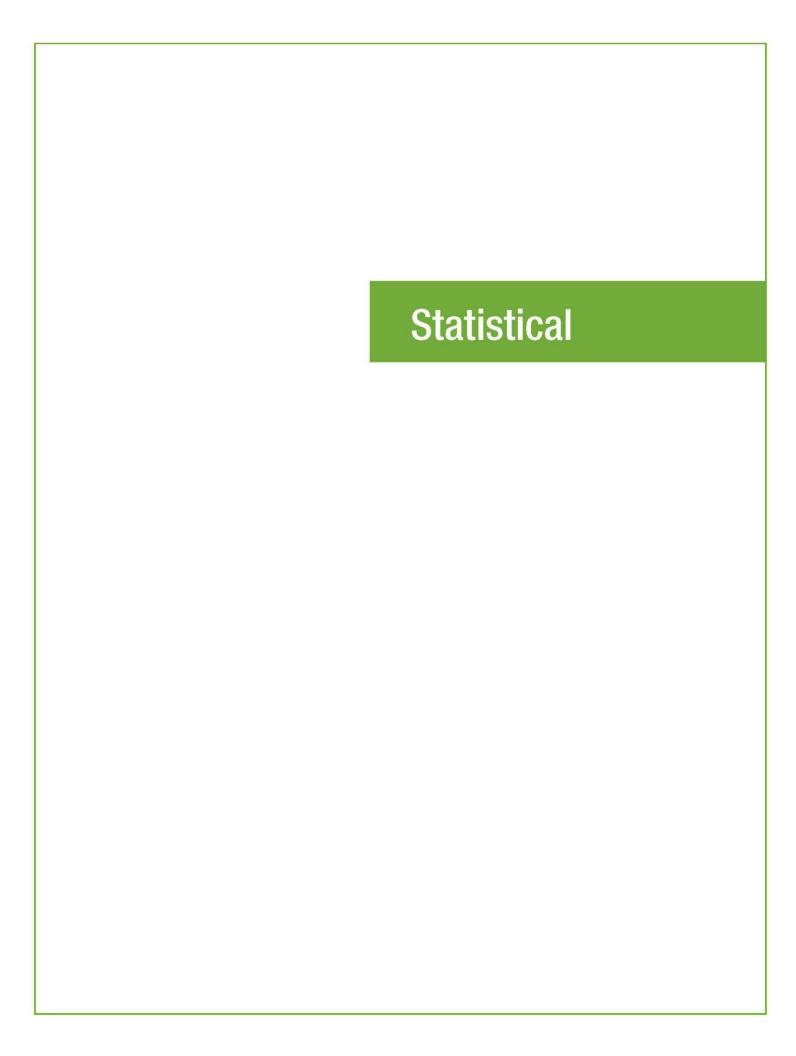
Over Age 65 and Enrolled in Both Medicare Parts A and B:

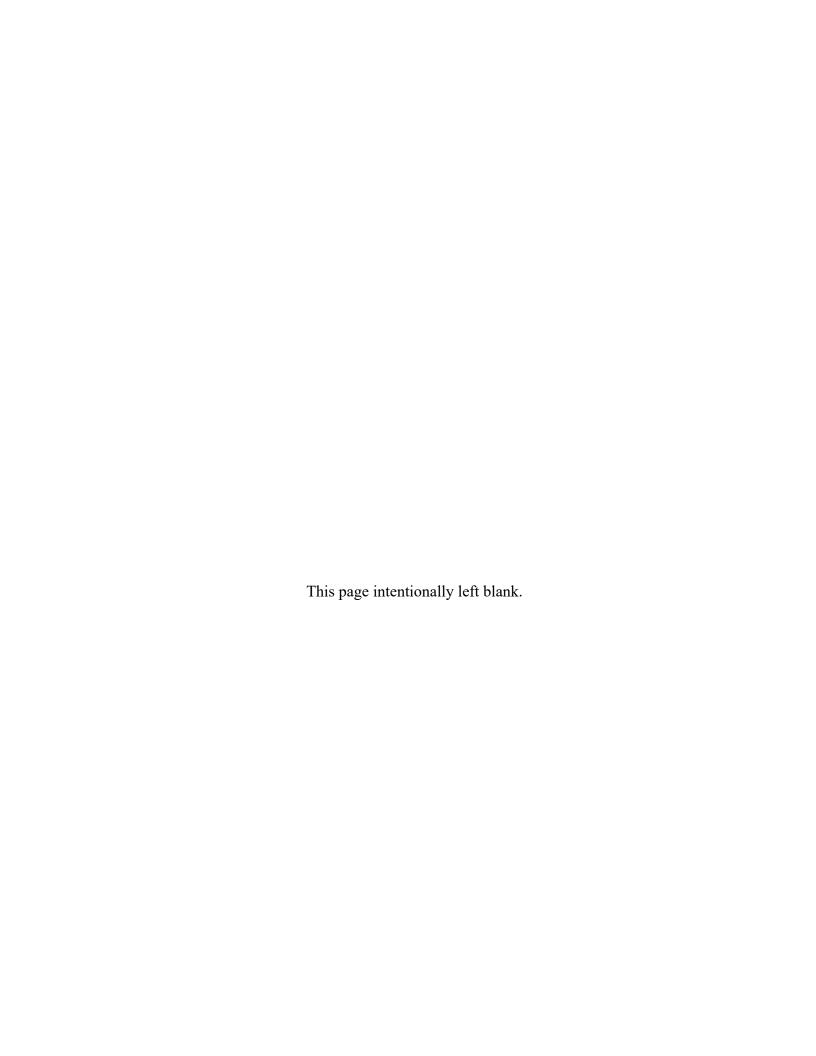
For survivors, a maximum health subsidy limited to the single-party monthly premium of the plan in which the survivor is enrolled, is provided subject to the following vesting schedule:

| Completed Years   | Vested     |
|-------------------|------------|
| of Service Credit | Percentage |
| 1-14              | 75%        |
| 15-19             | 90%        |
| 20+               | 100%       |

#### **Changes in Plan Provisions**

None.





#### **Statistical Section**

The Statistical Section of the System's Comprehensive Annual Financial Report provides additional historical trend information to assist the reader in gaining a more comprehensive understanding of the current fiscal year's financial statements, note disclosures, and required supplementary information, which cover the System's Retirement Plan and the Postemployment Health Care Plan. This section also provides multi-year trending of financial and operating information to facilitate comprehensive understanding of how the System's financial position and performance has changed over time. More specifically, the financial and operating information provides contextual data for the System's revenues (additions), expenses (deductions), net increase or decrease in fiduciary net position, benefit expenses by type, number of retirees by different types of benefits, and average monthly benefit payments. The financial and operating trend information is as follows:

#### Schedule of Additions by Source - Retirement Plan

(Dollars in Thousands)

| Fiscal Year | Member<br>Contributions |    | Employe Amounts | А | Contributions <sup>(1)</sup> As a % of Annual Covered Payroll <sup>(2)</sup> |    | Net Investment Income (Loss) <sup>(3)</sup> |    | ding Lease &<br>er Income <sup>(4)</sup> |    | Total<br>Additions |
|-------------|-------------------------|----|-----------------|---|--|----|---|----|--|----|--------------------|
| 2011        | \$ 114,731              | \$ | 306,737         |   | 18.1   | \$ | 1,654,824                                   | \$ | <u>-</u>                                 | \$ | 2,076,292          |
| 2012        | 178.246                 | Ψ  | 308,712         |   | 18.0   | Ψ  | 72,705                                      | ·  | -  | Ψ  | 559,663            |
| 2013        | 197,881                 |    | 346,350         |   | 19.9   |    | 1,275,612                                   |    | -  |    | 1,819,843          |
| 2014        | 204,136                 |    | 357,818         |   | 19.8   |    | 1,820,266                                   |    | -  |    | 2,382,220          |
| 2015        | 207,564                 |    | 381,299         |   | 20.8   |    | 308,557                                     |    | -  |    | 897,420            |
| 2016        | 211,345                 |    | 440,704         |   | 23.5   |    | 27,638                                      |    | -  |    | 679,687            |
| 2017        | 227,532                 |    | 453,504         |   | 23.0   |    | 1,524,533                                   |    | -  |    | 2,205,569          |
| 2018        | 236,222                 |    | 450,338         |   | 21.9   |    | 1,249,814                                   |    | -  |    | 1,936,374          |
| 2019        | 240,357                 |    | 478,827         |   | 22.7   |    | 802,027                                     |    | -  |    | 1,521,211          |
| 2020        | 263,936                 |    | 553,222         |   | 24.4   |    | 305,291                                     |    | 645                                      |    | 1,123,094          |

- (1) Contributions received on July 15th and included contributions true up adjustments starting fiscal year 2014.
- (2) Starting fiscal year 2014, when a new benefit tier was added, % of Annual Covered Payroll is an aggregate rate for all tiers based on actual covered payroll.
- (3) Includes unrealized gains and losses of investments. Investment related administrative expenses are deducted starting fiscal year 2014 pursuant to GASB Statement No. 67.
- (4) Building Lease and Other Income from System's new Headquarter Building purchased on October 23, 2019.

#### Schedule of Deductions by Type - Retirement Plan

| Fiscal Year | Benefit<br>Payments | Refunds of<br>Contributions | Administrative<br>Expenses <sup>(1)</sup> | Total<br>Deductions |
|-------------|---------------------|-----------------------------|---|---------------------|
| 2011        | \$ 654,384          | \$ 18,215                   | \$ 13,232                                 | \$ 685,831          |
| 2012        | 664,626             | 11,100                      | 12,995                                    | 688,721             |
| 2013        | 687,362             | 17,697                      | 13,352                                    | 718,411             |
| 2014        | 708,956             | 15,982                      | 12,438                                    | 737,376             |
| 2015        | 734,736             | 10,121                      | 15,946                                    | 760,803             |
| 2016        | 767,264             | 7,719                       | 15,576                                    | 790,559             |
| 2017        | 799,221             | 9,803                       | 16,019                                    | 825,043             |
| 2018        | 847,031             | 10,412                      | 16,394                                    | 873,837             |
| 2019        | 909,154             | 11,684                      | 17,806                                    | 938,644             |
| 2020        | 973,197             | 12,332                      | 21,257                                    | 1,006,786           |

<sup>(1)</sup> Excludes investment related administrative expenses starting fiscal year 2014. Starting fiscal year 2015, the System is required to share the employer contribution for its employees' retirement benefits.

#### Schedule of Additions by Source - Postemployment Health Care Plan

(Dollars in Thousands)

|             | Employe    | er Contributions <sup>(1)</sup> | _                      | Health                 |                  |                       |    |           |  |
|-------------|------------|---------------------------------|------------------------|------------------------|------------------|-----------------------|----|-----------|--|
|             |            |                                 | Self-Funded            | Insurance              |                  | Building Lease        | ,  |           |  |
|             |            | As a % of Annual                | Insurance              | Premium                | Net Investment   | & Other               |    | Total     |  |
| Fiscal Year | Amounts    | Covered Payroll <sup>(2)</sup>  | Premium <sup>(3)</sup> | Reserve <sup>(3)</sup> | Income (Loss)(4) | Income <sup>(5)</sup> |    | Additions |  |
|             |            |                                 |                        |                        |                  |                       |    |           |  |
| 2011        | \$ 107,396 | 6.4                             | \$ -                   | \$ -                   | \$ 295,324       | \$ -                  | \$ | 402,720   |  |
| 2012        | 115,209    | 6.7                             | -                      | -                      | 10,314           | -                     |    | 125,523   |  |
| 2013        | 72,916     | 4.2                             | -                      | -                      | 253,632          | -                     |    | 326,548   |  |
| 2014        | 97,841     | 5.4                             | -                      | -                      | 375,504          | -                     |    | 473,345   |  |
| 2015        | 100,467    | 5.5                             | -                      | -                      | 59,435           | -                     |    | 159,902   |  |
| 2016        | 105,983    | 5.7                             | -                      | -                      | (721)            | -                     |    | 105,262   |  |
| 2017        | 97,457     | 4.9                             | -                      | -                      | 330,368          | -                     |    | 427,825   |  |
| 2018        | 100,909    | 4.9                             | -                      | -                      | 269,065          | -                     |    | 369,974   |  |
| 2019        | 107,927    | 5.1                             | 6,090                  | 468                    | 166,470          | -                     |    | 280,955   |  |
| 2020        | 112,136    | 4.9                             | 10,364                 | 2,137                  | 60,201           | 147                   |    | 184,985   |  |

- (1) Contributions received on July 15th and included contributions true up adjustments starting fiscal year 2014.
- (2) Starting fiscal year 2014, when a new benefit tier was added, % of annual covered payroll is an aggregate rate for all tiers and it is based on actual covered payroll.
- (3) Additions related to LACERS Postemployment Health Care 115 Trust fund and the self-funded Dental Plan established in fiscal year 2019.
- (4) Includes unrealized gains and losses of investments. Investment related administrative expenses are deducted starting fiscal year 2014.
- (5) Building Lease and Other Income from System's new Headquarter Building purchased on October 23, 2019.

#### Schedule of Deductions by Type - Postemployment Health Care Plan

| Fiscal Year | Benefit<br>Payments | Administrative<br>Expenses <sup>(1)</sup> | Total<br>Deductions |
|-------------|---------------------|---|---------------------|
|             |                     |   |                     |
| 2011        | \$ 98,156           | \$ 2,786                                  | \$ 100,942          |
| 2012        | 91,437              | 2,931                                     | 94,368              |
| 2013        | 97,946              | 3,197                                     | 101,143             |
| 2014        | 101,628             | 3,327                                     | 104,955             |
| 2015        | 103,599             | 3,932                                     | 107,531             |
| 2016        | 109,940             | 4,151                                     | 114,091             |
| 2017        | 119,616             | 4,224                                     | 123,840             |
| 2018        | 128,081             | 4,384                                     | 132,465             |
| 2019        | 140,129             | 5,099                                     | 145,228             |
| 2020        | 139,714             | 6,165                                     | 145,879             |

<sup>(1)</sup> Excludes investment related administrative expenses starting fiscal year 2014. Starting fiscal year 2015, the System is required to share the employer contribution for its employees' postemployment healthcare benefits. Starting fiscal year 2019, expenses include third party fees paid for the administration of the self-funded Dental Plan.

#### Net Increase (Decrease) in Fiduciary Net Position - Retirement Plan Last Ten Fiscal Years

(In Thousands)

|                |                                      |                         | Addit                                 | ions                                |                    |                     |                          |                                   |                     |   |
|----------------|--------------------------------------|-------------------------|---------------------------------------|-------------------------------------|--------------------|---------------------|--------------------------|-----------------------------------|---------------------|---|
| Fiscal<br>Year | City<br>Contributions <sup>(1)</sup> | Member<br>Contributions | Net<br>Investment<br>Income<br>(Loss) | Building<br>Lease &<br>Other Income | Total<br>Additions | Benefit<br>Payments | Refunds of Contributions | Admin.<br>Expenses <sup>(2)</sup> | Total<br>Deductions | Net<br>In(De)crease in<br>Fiduciary Net<br>Position |
| 2011           | \$ 306,737                           | \$ 114,731              | \$1,654,824                           | \$ -                                | \$ 2,076,292       | \$654,384           | \$18,215                 | \$13,232                          | \$685,831           | \$ 1,390,461  |
| 2012           | 308,712                              | 178,246                 | 72,705                                | -                                   | 559,663            | 664,626             | 11,100                   | 12,995                            | 688,721             | (129,058)   |
| 2013           | 346,350                              | 197,881                 | 1,275,612                             | -                                   | 1,819,843          | 687,362             | 17,697                   | 13,352                            | 718,411             | 1,101,432   |
| 2014           | 357,818                              | 204,136                 | 1,820,266                             | -                                   | 2,382,220          | 708,956             | 15,982                   | 12,438                            | 737,376             | 1,644,844   |
| 2015           | 381,299                              | 207,564                 | 308,557                               | -                                   | 897,420            | 734,736             | 10,121                   | 15,946                            | 760,803             | 136,617   |
| 2016           | 440,704                              | 211,345                 | 27,638                                | -                                   | 679,687            | 767,264             | 7,719                    | 15,576                            | 790,559             | (110,872)   |
| 2017           | 453,504                              | 227,532                 | 1,524,533                             | -                                   | 2,205,569          | 799,221             | 9,803                    | 16,019                            | 825,043             | 1,380,526   |
| 2018           | 450,338                              | 236,222                 | 1,249,814                             | -                                   | 1,936,374          | 847,031             | 10,412                   | 16,394                            | 873,837             | 1,062,537   |
| 2019           | 478,827                              | 240,357                 | 802,027                               | -                                   | 1,521,211          | 909,154             | 11,684                   | 17,806                            | 938,644             | 582,567   |
| 2020           | 553,222                              | 263,936                 | 305,291                               | 645                                 | 1,123,094          | 973,197             | 12,332                   | 21,257                            | 1,006,786           | 116,308   |

<sup>(1)</sup> City's contributions include amounts contributed to the Family Death Benefit plan. For fiscal year 2020, this amount was \$104,000.

#### Net Increase (Decrease) in Fiduciary Net Position - Postemployment Health Care Plan Last Ten Fiscal Years

|   |                |                       |  |  | Additions                             | S                                 |                          |                     | Deductions                        |                     |   |
|---|----------------|-----------------------|--|--|---------------------------------------|-----------------------------------|--------------------------|---------------------|-----------------------------------|---------------------|---|
| _ | Fiscal<br>Year | City<br>Contributions | Self-Funded<br>Insurance<br>Premium <sup>(1)</sup> | Health<br>Insurance<br>Premium<br>Reserve <sup>(1)</sup> | Net<br>Investment<br>Income<br>(Loss) | Building Lea<br>& Other<br>Income | se<br>Total<br>Additions | Benefit<br>Payments | Admin.<br>Expenses <sup>(2)</sup> | Total<br>Deductions | Net<br>In(De)crease<br>in Fiduciary<br>Net Position |
|   | 2011           | \$ 107,396            | \$ -   | \$ -   | \$ 295,324                            | \$ -                              | \$ 402,720               | \$ 98,156           | \$ 2,786                          | \$ 100,942          | \$ 301,778  |
|   | 2012           | 115,209               | -  | -  | 10,314                                | -                                 | 125,523                  | 91,437              | 2,931                             | 94,368              | 31,155  |
|   | 2013           | 72,916                | -  | -  | 253,632                               | -                                 | 326,548                  | 97,946              | 3,197                             | 101,143             | 225,405   |
|   | 2014           | 97,841                | -  | -  | 375,504                               | -                                 | 473,345                  | 101,628             | 3,327                             | 104,955             | 368,390   |
|   | 2015           | 100,467               | -  | -  | 59,435                                | -                                 | 159,902                  | 103,599             | 3,932                             | 107,531             | 52,371  |
|   | 2016           | 105,983               | -  | -  | (721)                                 | -                                 | 105,262                  | 109,940             | 4,151                             | 114,091             | (8,829)   |
|   | 2017           | 97,457                | -  | -  | 330,368                               | -                                 | 427,825                  | 119,616             | 4,224                             | 123,840             | 303,985   |
|   | 2018           | 100,909               | -  | -  | 269,065                               | -                                 | 369,974                  | 128,081             | 4,384                             | 132,465             | 237,509   |
|   | 2019           | 107,927               | 6,090  | 468  | 166,470                               | -                                 | 280,955                  | 140,129             | 5,099                             | 145,228             | 135,727   |
|   | 2020           | 112,136               | 10,364   | 2,137  | 60,201                                | 147                               | 184,985                  | 139,714             | 6,165                             | 145,879             | 39,106  |

<sup>(1)</sup> Additions related to LACERS Postemployment Health Care 115 Trust and the self-funded Dental Plan established in fiscal year 2019.

<sup>(2)</sup> Excludes investment related administrative expenses starting fiscal year 2014. Starting fiscal year 2015, the System is required to share the employer contribution for its employees' retirement benefits.

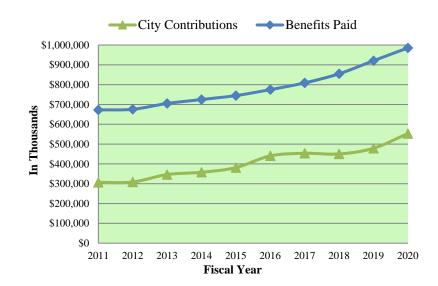
<sup>(2)</sup> Excludes investment related administrative expenses starting fiscal year 2014 but includes third party administrative fees starting in fiscal year 2019. Starting fiscal year 2015, the System is required to share the employer contribution for its employees' postemployment health care benefits.

# Schedule of Benefit Expenses by Type - Retirement Plan (In Thousands)

|        |            |              | Ber      | nefits              |           |            | Refunds of Contributions |          |               |          |           |            |
|--------|------------|--------------|----------|---------------------|-----------|------------|--------------------------|----------|---------------|----------|-----------|------------|
|        | Age & S    | Service      |          |                     |           |            |                          |          |               |          |           |            |
|        | Ben        | <u>efits</u> |          | Disability Benefits |           |            |                          |          | Total         |          |           |            |
| Fiscal |            |              | Death in |                     |           |            |                          | Death in | Unused        |          |           | Benefits   |
| Year   | Retirants  | Survivors    | Service  | Retirants           | Survivors | Sub-total  | Separation               | Service  | Contributions | Misc.    | Sub-Total | Paid       |
| 2011   | \$ 563,254 | \$ 64,160    | \$ 2,674 | \$ 16,544           | \$ 7,752  | \$ 654,384 | \$ 13,951                | \$ 1,640 | \$ 1,281      | \$ 1,343 | \$ 18,215 | \$ 672,599 |
| 2012   | 570,633    | 66,735       | 2,477    | 16,720              | 8,061     | 664,626    | 6,765                    | 2,416    | 965           | 954      | 11,100    | 675,726    |
| 2013   | 588,035    | 70,298       | 2,776    | 17,810              | 8,443     | 687,362    | 13,103                   | 2,515    | 1,006         | 1,073    | 17,697    | 705,059    |
| 2014   | 606,135    | 73,477       | 2,669    | 17,657              | 9,018     | 708,956    | 12,295                   | 1,509    | 1,184         | 994      | 15,982    | 724,938    |
| 2015   | 627,865    | 76,619       | 2,537    | 18,348              | 9,367     | 734,736    | 3,891                    | 1,848    | 1,342         | 3,040    | 10,121    | 744,857    |
| 2016   | 657,810    | 78,441       | 2,315    | 19,001              | 9,697     | 767,264    | 4,241                    | 1,231    | 883           | 1,364    | 7,719     | 774,983    |
| 2017   | 686,172    | 81,250       | 2,738    | 18,810              | 10,251    | 799,221    | 4,213                    | 3,015    | 1,027         | 1,548    | 9,803     | 809,024    |
| 2018   | 731,954    | 83,387       | 2,402    | 18,850              | 10,438    | 847,031    | 5,686                    | 1,653    | 1,588         | 1,485    | 10,412    | 857,443    |
| 2019   | 794,844    | 83,072       | 2,066    | 18,935              | 10,237    | 909,154    | 6,529                    | 3,302    | 1,054         | 799      | 11,684    | 920,838    |
| 2020   | 853,719    | 87,577       | 1,855    | 19,432              | 10,614    | 973,197    | 6,839                    | 2,798    | 1,544         | 1,151    | 12,332    | 985,529    |

#### City Contributions versus Benefits Paid - Retirement Plan

| Fiscal<br>Year | City<br>Contributions | Benefits<br>Paid |
|----------------|-----------------------|------------------|
| 2011           | \$ 306,737            | \$ 672,599       |
| 2012           | 308,712               | 675,726          |
| 2013           | 346,350               | 705,059          |
| 2014           | 357,818               | 724,938          |
| 2015           | 381,299               | 744,857          |
| 2016           | 440,704               | 774,983          |
| 2017           | 453,504               | 809,024          |
| 2018           | 450,338               | 857,443          |
| 2019           | 478,827               | 920,838          |
| 2020           | 553,222               | 985,529          |



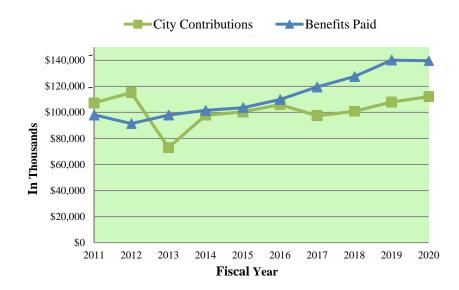
#### Schedule of Benefit Expenses by Type - Postemployment Health Care Plan

(In Thousands)

|             | Age & Service Benefits |           | Death in Service | Disabilit | y Benefits |                     |
|-------------|------------------------|-----------|------------------|-----------|------------|---------------------|
| Fiscal Year | Retirants              | Survivors | Benefits         | Retirants | Survivors  | Total Benefits Paid |
| 2011        | \$ 84,487              | \$ 9,624  | \$ 401           | \$ 2,481  | \$ 1,163   | \$ 98,156           |
| 2012        | 78,506                 | 9,181     | 341              | 2,300     | 1,109      | 91,437              |
| 2013        | 83,792                 | 10,017    | 396              | 2,538     | 1,203      | 97,946              |
| 2014        | 86,889                 | 10,533    | 382              | 2,531     | 1,293      | 101,628             |
| 2015        | 88,530                 | 10,803    | 358              | 2,587     | 1,321      | 103,599             |
| 2016        | 94,256                 | 11,240    | 332              | 2,723     | 1,389      | 109,940             |
| 2017        | 102,697                | 12,160    | 410              | 2,815     | 1,534      | 119,616             |
| 2018        | 110,680                | 12,609    | 363              | 2,851     | 1,578      | 128,081             |
| 2019        | 122,510                | 12,804    | 318              | 2,919     | 1,578      | 140,129             |
| 2020        | 122,562                | 12,573    | 265              | 2,790     | 1,524      | 139,714             |

#### City Contributions versus Benefits Paid - Postemployment Health Care Plan

| Fiscal<br>Year | City<br>Contributions | Benefits<br>Paid |
|----------------|-----------------------|------------------|
| 2011           | \$ 107,396            | \$ 98,156        |
| 2012           | 115,209               | 91,437           |
| 2013           | 72,916                | 97,946           |
| 2014           | 97,841                | 101,628          |
| 2015           | 100,467               | 103,599          |
| 2016           | 105,983               | 109,940          |
| 2017           | 97,457                | 119,616          |
| 2018           | 100,909               | 128,081          |
| 2019           | 107,927               | 140,129          |
| 2020           | 112,136               | 139,714          |
|                |                       |                  |



#### **Statistical Section**

#### Schedule of Retired Members by Type of Benefits - Retirement Plan

|                               |                                    |        | Type of Benefits <sup>(2)</sup> |     |       |     |     |     |     |   |     |    |
|-------------------------------|------------------------------------|--------|---------------------------------|-----|-------|-----|-----|-----|-----|---|-----|----|
| Amount of Monthly<br>Benefits | Number of Retirants <sup>(1)</sup> | 1      | 2                               | 3   | 4     | 5   | 6   | 7   | 8   | 9 | 10  | 11 |
| \$ 1 to \$1,000               | 1,691                              | 363    | 323                             | 7   | 458   | 59  | 148 | 72  | 261 | - | 449 | 16 |
| 1,001 to 2,000                | 3,403                              | 984    | 810                             | 50  | 514   | 558 | 94  | 208 | 185 | - | 82  | 2  |
| 2,001 to 3,000                | 3,096                              | 1,716  | 597                             | 85  | 275   | 243 | 27  | 81  | 72  | - | 20  | 2  |
| 3,001 to 4,000                | 3,040                              | 2,455  | 286                             | 78  | 152   | 17  | 2   | 23  | 27  | - | 4   | -  |
| 4,001 to 5,000                | 2,827                              | 2,523  | 193                             | 35  | 58    | 6   | -   | 3   | 9   | - | 1   | -  |
| 5,001 to 6,000                | 2,242                              | 2,058  | 125                             | 18  | 36    | 1   | -   | -   | 4   | - | -   | -  |
| 6,001 to 7,000                | 1,508                              | 1,406  | 66                              | 10  | 26    | -   | -   | -   | -   | - | -   | -  |
| 7,001 to 8,000                | 968                                | 912    | 36                              | 6   | 13    | -   | -   | -   | 1   | - | -   | -  |
| 8,001 to 9,000                | 563                                | 524    | 21                              | 7   | 11    | -   | -   | -   | -   | - | -   | -  |
| 9,001 to 10,000               | 375                                | 352    | 12                              | 4   | 7     | -   | -   | -   | -   | - | -   | -  |
| Over \$10,000                 | 719                                | 683    | 22                              | 3   | 11    | -   | -   | 1   | -   | - | -   | -  |
| Total                         | 20,432                             | 13,976 | 2,491                           | 303 | 1,561 | 884 | 271 | 387 | 559 | - | 556 | 20 |

<sup>(1)</sup> Larger Annuity and Larger Annuity Continuance type of benefits are not included in counting the total number of retirants since both benefits are voluntary supplementary benefits to the retirants.

#### (2) Type of Benefits

- 1 Service Retirement
- 2 Service Continuance
- 3 Service Survivorship
- 4 Vested Right Retirement
- 5 Disability Retirement6 Disability Continuance
- 7 Disability Survivorship
- 8 DRO Life Time Annuity
- 9 DRO Term Annuity
- 10 Larger Annuity
- 11 Larger Annuity Continuance

#### **Statistical Section**

#### Schedule of Retired Members by Type of Benefits - Postemployment Health Care Plan

|                    |                      |                        | Type of Benefits <sup>(3)</sup> |       |     |     |     |    |     |
|--------------------|----------------------|------------------------|---------------------------------|-------|-----|-----|-----|----|-----|
| Amour<br>Monthly B |                      | Number of<br>Retirants | 1                               | 2     | 3   | 4   | 5   | 6  | 7   |
| Medical S          | Subsidy              |                        |                                 |       |     |     |     |    |     |
| \$ 1 to \$         |                      | 498                    | 340                             | 37    | 4   | 40  | 49  | 15 | 13  |
| 201 to             | 400                  | 4,811                  | 3,499                           | 972   | 79  | 128 | 58  | 24 | 51  |
| 401 to             | 600                  | 5,149                  | 4,371                           | 390   | 48  | 212 | 86  | 16 | 26  |
| 601 to             | 800                  | 177                    | 99                              | 11    | 13  | 27  | 14  | 1  | 12  |
| 801 to             | 1,000                | 1,198                  | 923                             | 94    | 29  | 97  | 46  | 4  | 5   |
| 1,001 to           | 1,200                | 1,969                  | 1,882                           | -     | -   | 71  | 16  | -  | -   |
| 1,201 to           | 1,400                | 930                    | 860                             | -     | -   | 52  | 18  | -  | -   |
| 1,401 to           | 1,791 <sup>(1)</sup> | 1,392                  | 1,331                           | -     | 1   | 55  | 5   | -  |     |
| Total              |                      | 16,124                 | 13,305                          | 1,504 | 174 | 682 | 292 | 60 | 107 |
| Dental Su          | ubsidy               |                        |                                 |       |     |     |     |    |     |
| \$ 1 to \$         | ,                    | 569                    | 413                             | -     | -   | 68  | 88  | -  | -   |
| 11 to              | 20                   | 2,553                  | 2,363                           | -     | -   | 125 | 65  | -  | -   |
| 21 to              | 30                   | 998                    | 743                             | -     | -   | 170 | 85  | -  | -   |
| 31 to              | 40                   | 1,131                  | 940                             | -     | -   | 149 | 42  | -  | -   |
| 41 to              | 45 <sup>(2)</sup> _  | 8,588                  | 8,409                           | -     | -   | 161 | 18  | -  |     |
| To                 | otal _               | 13,839                 | 12,868                          | -     | -   | 673 | 298 | -  | -   |

- (1) Maximum medical subsidy for plan year 2020.
- (2) Maximum dental subsidy for plan year 2020.
- (3) Type of Benefits
- 1 Service Retirement
- 5 Disability Retirement
- 2 Service Continuance
- 6 Disability Continuance
- 3 Service Survivorship
- 7 Disability Survivorship
- 4 Vested Right Retirement

#### **Schedule of Average Benefit Payments - Retirement Plan**

| 5.0   |  | Years of Service Credit                           | _   |
|---|--|---|---|
| Retirement Effective Dates July 1, 2010 to June 30, 2020  | Under 11 yrs 11-15 yrs   | 16-20 yrs 21-25 yrs 2                             | 6-30 yrs Over 30 yrs  |
| Period 7/1/10 to 6/30/11<br>Average Monthly Benefit at Retirement<br>Average Final Monthly Salary <sup>(1)</sup><br>Number of Retirees Added  | \$ 768  \$ 1,414<br>\$ 5,266  \$ 5,175<br>51  42                               |   | 3,721 \$ 5,920<br>6,409 \$ 7,882<br>42 37                                       |
| Period 7/1/11 to 6/30/12 Average Monthly Benefit at Retirement Average Final Monthly Salary <sup>(1)</sup> Number of Retirees Added   | \$ 784 \$ 1,379<br>\$ 4,995 \$ 5,052<br>46 37                                  |   | 4,008 \$ 6,003<br>6,804 \$ 8,238<br>43 48                                       |
| Period 7/1/12 to 6/30/13 Average Monthly Benefit at Retirement Average Final Monthly Salary <sup>(1)</sup> Number of Retirees Added   | \$ 976  \$ 1,888<br>\$ 6,025  \$ 6,713<br>63  57                               |   | 4,101 \$ 5,487<br>7,007 \$ 7,573<br>87 107                                      |
| Period 7/1/13 to 6/30/14 Average Monthly Benefit at Retirement Average Final Monthly Salary <sup>(1)</sup> Number of Retirees Added   | \$ 708  \$ 1,966<br>\$ 4,551  \$ 6,868<br>60  65                               |   | 4,520 \$ 6,204<br>7,482 \$ 8,350<br>120 95                                      |
| Period 7/1/14 to 6/30/15 Average Monthly Benefit at Retirement Average Final Monthly Salary <sup>(1)</sup> Number of Retirees Added   | \$ 969 \$ 1,875<br>\$ 5,309 \$ 6,386<br>66 108                                 |   | 4,707 \$ 6,307<br>7,795 \$ 8,379<br>234 212                                     |
| Period 7/1/15 to 6/30/16  Average Monthly Benefit at Retirement  Average Final Monthly Salary <sup>(1)</sup> Number of Retirees Added  Average Monthly Continuance Benefit <sup>(2)</sup>   | \$ 943 \$ 1,756<br>\$ 5,095 \$ 6,077<br>117 116<br>\$ 886 \$ 1,068             | \$ 6,786 \$ 7,656 \$ 89 77 \$ 1,388 \$ 1,521 \$   | 4,514 \$ 5,498<br>7,731 \$ 7,876<br>255 228<br>1,657 \$ 2,568                   |
| Number of Continuance Benefit Added <sup>(2)</sup> Period 7/1/16 to 6/30/17  Average Monthly Benefit at Retirement  Average Final Monthly Salary <sup>(1)</sup> Number of Retirees Added  Average Monthly Continuance Benefit <sup>(2)</sup>  | 79 29<br>\$ 1,076 \$ 1,764<br>\$ 5,553 \$ 6,326<br>105 99<br>\$ 1,154 \$ 1,022 | \$ 6,974 \$ 7,696 \$ 104 107 \$ 1,360 \$ 1,949 \$ | 32 65<br>4,789 \$ 5,745<br>8,053 \$ 8,204<br>263 271<br>1,869 \$ 2,916          |
| Number of Continuance Benefit Added <sup>(2)</sup> Period 7/1/17 to 6/30/18  Average Monthly Benefit at Retirement  Average Final Monthly Salary <sup>(1)</sup> Number of Retirees Added  Average Monthly Continuance Benefit <sup>(2)</sup> Number of Continuance Benefit Added <sup>(2)</sup> | 70 19 \$ 1,291 \$ 1,913 \$ 5,869 \$ 6,707 115 115 \$ 1,012 \$ 1,411 70 25      | \$ 7,100  \$ 7,896  \$<br>136  85                 | 50 55<br>5,037 \$ 6,348<br>8,292 \$ 8,758<br>247 377<br>2,830 \$ 3,812<br>49 54 |
| Period 7/1/18 to 6/30/19 Average Monthly Benefit at Retirement Average Final Monthly Salary <sup>(1)</sup> Number of Retirees Added Average Monthly Continuance Benefit <sup>(2)</sup> Number of Continuance Benefit Added <sup>(2)</sup>   | \$ 1,003   | \$ 7,103  \$ 7,771  \$<br>147  82                 | 5,395 \$ 6,834<br>8,695 \$ 9,219<br>277 344<br>2,665 \$ 4,184<br>42 82          |

#### **Schedule of Average Benefit Payments - Retirement Plan (Continued)**

|   | Years of Service Credit |           |           |           |           |             |  |  |  |
|---|-------------------------|-----------|-----------|-----------|-----------|-------------|--|--|--|
| Retirement Effective Dates  July 1, 2010 to June 30, 2020 | Under 11 yrs            | 11-15 yrs | 16-20 yrs | 21-25 yrs | 26-30 yrs | Over 30 yrs |  |  |  |
| Period 7/1/19 to 6/30/20                                  |                         |           |           |           |           |             |  |  |  |
| Average Monthly Benefit at Retirement                     | \$ 1,049                | \$ 1,922  | \$ 3,215  | \$ 4,599  | \$ 5,825  | \$ 6,690    |  |  |  |
| Average Final Monthly Salary <sup>(1)</sup>               | \$ 5,079                | \$ 6,449  | \$ 8,189  | \$ 9,195  | \$ 9,267  | \$ 9,073    |  |  |  |
| Number of Retirees Added                                  | 123                     | 94        | 142       | 84        | 192       | 321         |  |  |  |
| Average Monthly Continuance Benefit <sup>(2)</sup>        | \$ 1,459                | \$ 1,412  | \$ 1,882  | \$ 2,219  | \$ 2,747  | \$ 4,398    |  |  |  |
| Number of Continuance Benefit Added <sup>(2)</sup>        | 76                      | 29        | 24        | 29        | 46        | 60          |  |  |  |

<sup>(1)</sup> Average Final Monthly Salary = Average of last or highest 12 consecutive months' salary.(2) Additional information for Continuance Benefit is provided starting fiscal year 2016.

#### Schedule of Average Benefit Payments - Postemployment Health Care Plan

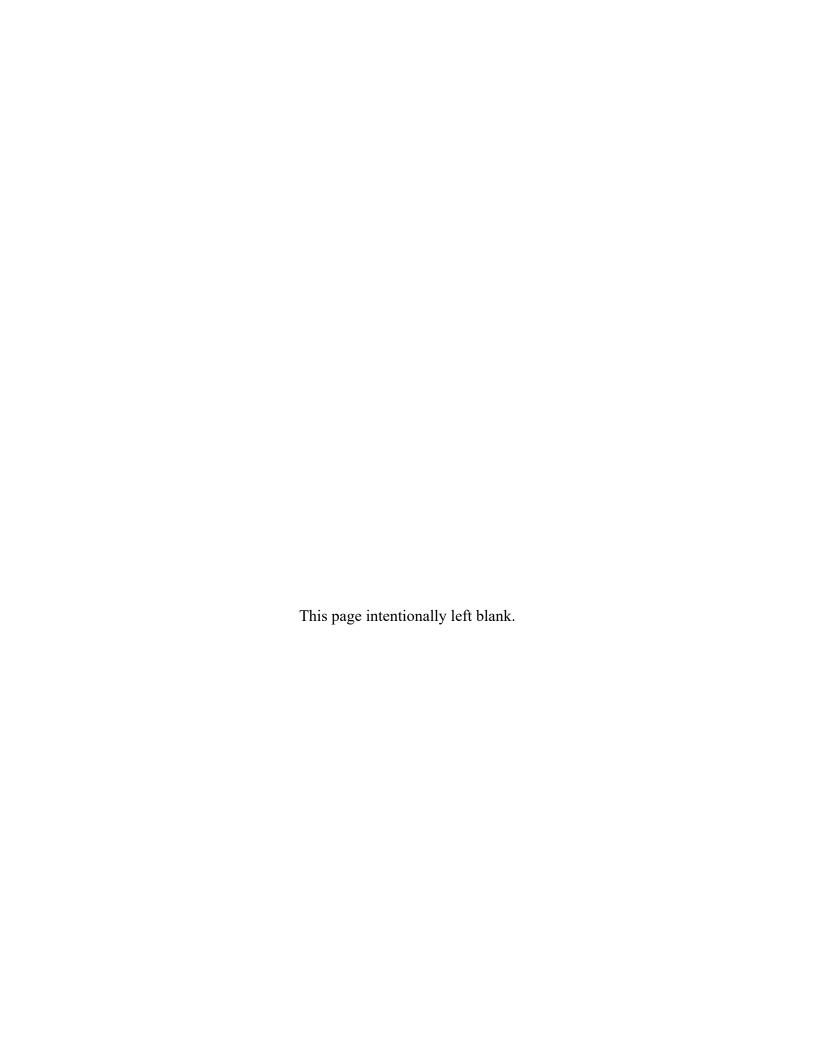
|  | Years of Service Credit |                          |    |                       |    |                       |    |                        |    |                         |
|--|-------------------------|--------------------------|----|-----------------------|----|-----------------------|----|------------------------|----|-------------------------|
| Retirement Effective Dates July 1, 2010 to June 30, 2020   | Unde                    | er 10 yrs <sup>(1)</sup> | 1( | 0-15 yrs              | 1  | 6-20 yrs              | ,  | 21-25 yrs              | O۷ | er 25 yrs               |
| Period 7/1/10 to 6/30/11  Health Insurance Subsidy  Average Monthly Benefit at Retirement  Number of Retirees Added  Dental Insurance Subsidy  Average Monthly Benefit at Retirement  Number of Retirees Added | \$                      | -<br>1<br>-<br>2         | \$ | 465<br>31<br>12<br>26 | \$ | 440<br>31<br>17<br>26 | \$ | 688<br>69<br>22<br>68  | \$ | 648<br>145<br>17<br>130 |
| Period 7/1/11 to 6/30/12  Health Insurance Subsidy  Average Monthly Benefit at Retirement  Number of Retirees Added  Dental Insurance Subsidy  Average Monthly Benefit at Retirement  Number of Retirees Added | \$                      | -<br>-<br>4              | \$ | 372<br>34<br>10<br>25 | \$ | 581<br>27<br>17<br>24 | \$ | 660<br>84<br>28<br>75  | \$ | 642<br>136<br>25<br>131 |
| Period 7/1/12 to 6/30/13  Health Insurance Subsidy  Average Monthly Benefit at Retirement  Number of Retirees Added  Dental Insurance Subsidy  Average Monthly Benefit at Retirement  Number of Retirees Added | \$                      | -<br>1<br>-<br>2         | \$ | 428<br>64<br>14<br>55 | \$ | 596<br>33<br>21<br>27 | \$ | 790<br>102<br>28<br>95 | \$ | 840<br>243<br>26<br>235 |
| Period 7/1/13 to 6/30/14  Health Insurance Subsidy  Average Monthly Benefit at Retirement  Number of Retirees Added  Dental Insurance Subsidy  Average Monthly Benefit at Retirement  Number of Retirees Added | \$                      | 1 2                      | \$ | 447<br>57<br>15<br>53 | \$ | 619<br>41<br>20<br>36 | \$ | 831<br>93<br>30<br>91  | \$ | 876<br>276<br>27<br>266 |

#### **Statistical Section**

#### **Schedule of Average Benefit Payments - Postemployment Health Care Plan (Continued)**

| 5 11 15 11 5 1   | Years of Service Credit |                           |    |                        |    | t                       |    |                         |    |                           |
|--|-------------------------|---------------------------|----|------------------------|----|-------------------------|----|-------------------------|----|---------------------------|
| Retirement Effective Dates July 1, 2010 to June 30, 2020   | Und                     | der 10 yrs <sup>(1)</sup> | 1  | 0-15 yrs               | 1  | 6-20 yrs                | 2  | 1-25 yrs                | (  | Over 25 yrs               |
| Period 7/1/14 to 6/30/15  Health Insurance Subsidy  Average Monthly Benefit at Retirement  Number of Retirees Added  Dental Insurance Subsidy  Average Monthly Benefit at Retirement  Number of Retirees Added | \$                      | -<br>-<br>-<br>1          | \$ | 543<br>85<br>17<br>78  | \$ | 700<br>40<br>26<br>35   | \$ | 914<br>105<br>32<br>102 | \$ | 1,080<br>409<br>36<br>399 |
| Period 7/1/15 to 6/30/16  Health Insurance Subsidy  Average Monthly Benefit at Retirement  Number of Retirees Added  Dental Insurance Subsidy  Average Monthly Benefit at Retirement  Number of Retirees Added | \$                      | 309<br>12<br>11<br>16     | \$ | 515<br>88<br>16<br>89  | \$ | 729<br>62<br>24<br>57   | \$ | 926<br>61<br>34<br>60   | \$ | 1,099<br>447<br>35<br>453 |
| Period 7/1/16 to 6/30/17  Health Insurance Subsidy  Average Monthly Benefit at Retirement  Number of Retirees Added  Dental Insurance Subsidy  Average Monthly Benefit at Retirement  Number of Retirees Added | \$                      | 411<br>17<br>11<br>10     | \$ | 493<br>76<br>18<br>75  | \$ | 717<br>79<br>25<br>78   | \$ | 1,136<br>85<br>34<br>82 | \$ | 1,184<br>487<br>38<br>483 |
| Period 7/1/17 to 6/30/18  Health Insurance Subsidy  Average Monthly Benefit at Retirement  Number of Retirees Added  Dental Insurance Subsidy  Average Monthly Benefit at Retirement  Number of Retirees Added | \$                      | -<br>-<br>5<br>1          | \$ | 547<br>100<br>17<br>80 | \$ | 771<br>115<br>27<br>98  | \$ | 1,082<br>86<br>31<br>68 | \$ | 1,257<br>638<br>36<br>552 |
| Period 7/1/18 to 6/30/19  Health Insurance Subsidy  Average Monthly Benefit at Retirement  Number of Retirees Added  Dental Insurance Subsidy  Average Monthly Benefit at Retirement  Number of Retirees Added | \$                      | 716<br>2<br>12<br>4       | \$ | 560<br>98<br>16<br>75  | \$ | 714<br>127<br>27<br>113 | \$ | 1,012<br>72<br>36<br>62 | \$ | 1,220<br>640<br>37<br>539 |
| Period 7/1/19 to 6/30/20  Health Insurance Subsidy  Average Monthly Benefit at Retirement  Number of Retirees Added  Dental Insurance Subsidy  Average Monthly Benefit at Retirement  Number of Retirees Added | \$                      | 420<br>15<br>12<br>10     | \$ | 533<br>92<br>18<br>60  | \$ | 752<br>117<br>27<br>97  | \$ | 1,129<br>73<br>35<br>66 | \$ | 1,176<br>515<br>36<br>445 |

<sup>(1)</sup> Effective February 21, 2016, retiree health benefits are provided to part-time employees who retired with 10 years of service but less than 10 years of service credit. Previously, they were allowed to enroll in LACERS Health Care Plan at their own cost, but not eligible for health benefits.



Direct questions concerning any of the information provided in this report to:

### **LACERS**

Fiscal Management Division P.O. Box 512218 Los Angeles, Ca. 90051-0218

> PHONE 800-779-8328 TTY 888-349-3996 FAX 213-473-7297 www.lacers.org





BOARD Meeting: 01/26/21 Item V-B Attachment 2

# 2020 POPULAR ANNUAL FINANCIAL REPORT

for the fiscal year ended June 30, 2020

Our Popular Annual Financial Report is a summary of the Los Angeles City Employees' Retirement System's Comprehensive Annual Financial Report.

Enter >>



**NEIL M. GUGLIELMO**General Manager

#### IN OUR 83RD YEAR...

The global COVID-19 pandemic suddenly and unexpectedly accelerated the need for LACERS to transform and digitize our operations while also requiring us to make temporary adjustments in our investment policy to preserve the financial health of our Fund.

It is our mission to serve our Members with excellence and to protect and grow our Fund and it is with immense pride that I can say LACERS has responded to the challenges brought on by this pandemic with vigor. Since the first reported case of COVID-19 in the US, we grew our Fund and modernized our operations by strides, allowing us to create a more immersive experience for our Members and a safe work environment for our employees.

As a different world takes shape, LACERS will continue to respond by finding new and innovative ways to improve our operations, while ensuring the best experience for our Members.

NEIL M. GUGLIELMO

Mir/M. Sangliehno

General Manager

# LACERS



\$4,100

AVERAGE MONTHLY PENSION change from 2011: +28.8%

57,120

TOTAL MEMBERSHIP change from 2011: +18.3%

\$263.9

MILLION IN MEMBER CONTRIBUTIONS

change from 2011: +130.1%

60.4

AVERAGE AGE AT RETIREMENT change from 2011: +0.3%

**72** 

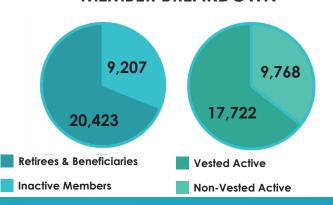
AVERAGE AGE OF RETIREE change from 2011: +1.6%

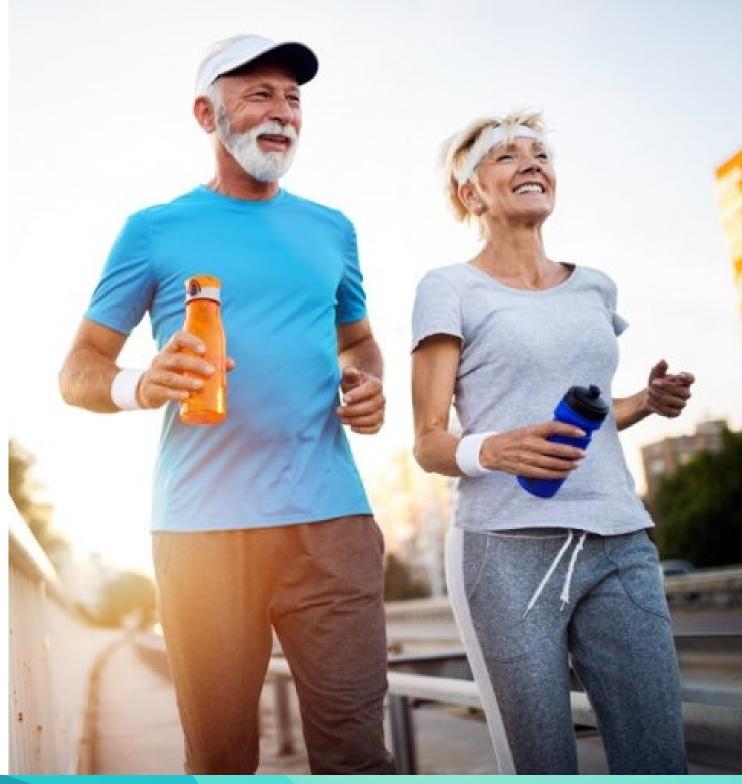
# COMMITTED TO OUR MEMBERS

LACERS is committed to providing the best experience for our Members by improving our outreach and engagement programming. Through maturing our data collection practices, identifying new effective outreach tools and strategies, and promoting an open and transparent environment to engage with Members, we strive to be best-in-class.

From a recently launched modern and mobile responsive website to a YouTube channel providing Member education to the roll-out of video and tele-conference capabilities for remote seminars, counseling, and meetings, we take our commitment to our Members seriously.

#### MEMBER BREAKDOWN





5

# WEATHERING THE STORM OF A GLOBAL PANDEMIC

How we ended net positive during an economic downturn

The COVID-19 pandemic suddenly and unexpectedly disrupted the global and local economies. In order to mitigate the impacts of the COVID-19 pandemic, the Board made several temporary modifications to its Investment Policy.

These modifications, combined with a steady hand, ensured that LACERS mitigated the economic volatility brought on by the pandemic and ended net positive from the year prior.

**NET INCREASE WITHIN THE YEAR** 

\$155,414,000



# FIDUCIARY NET POSITION



#### **Allocation**

The total Fiduciary Net Position is allocated between the Retirement Plan and the Postemployment Health Care Plan.

84%

RETIREMENT

HEALTH

16%

| ADDITIONS and DEDUCTIONS    |    |            | (Dollars in Thousands) |          |  |  |
|-----------------------------|----|------------|------------------------|----------|--|--|
| DEDUCTIONS                  |    | 2020       | 2019                   | % Change |  |  |
| BEGINNING NET POSITION      | \$ | 17,707,910 | \$<br>16,989,616       | 4.2%     |  |  |
| ADDITIONS                   |    |            |                        |          |  |  |
| City Contributions          |    | 665,358    | 586,754                | 13.4%    |  |  |
| Member Contributions        |    | 263,936    | 240,357                | 9.8%     |  |  |
| Insurance Premium & Reserve |    | 12,501     | 6,558                  | 90.6%    |  |  |
| Net Investment Income       |    | 365,492    | 968,497                | (62.3%)  |  |  |
| Other Income                |    | 792        |                        |          |  |  |
| TOTAL ADDITIONS             | \$ | 1,308,079  | \$<br>1,802,166        | (27.4%)  |  |  |
| DEDUCTIONS                  |    |            |                        |          |  |  |
| Benefit Payments            |    | 1,112,911  | 1,049,283              | 6.1%     |  |  |
| Contribution Refunds        |    | 12,332     | 11,684                 | 5.5%     |  |  |
| Administrative Expenses     |    | 27,422     | 22,905                 | 19.7%    |  |  |
| TOTAL DEDUCTIONS            | \$ | 1,152,665  | \$<br>1,083,872        | 6.3%     |  |  |
| NET INCREASE WITHIN YEAR    | \$ | 155,414    | \$<br>718,294          | (78.4%)  |  |  |
| ENDING NET POSITION         | \$ | 17,863,324 | \$<br>17,707,910       | 0.9%     |  |  |

6

ASSETS and LIABILITIES FUNDED STATUS

| 2020 vs 2019           |
|------------------------|
| ASSETS AND LIABILITIES |

(Dollars in Thousands)

| ASSETS   |    | 2020       | 2019             | % Change |  |  |
|--|----|------------|------------------|----------|--|--|
| Cash, Short-term Investments, and Receivables    | \$ | 818,311    | \$<br>752,960    | 8.7%     |  |  |
| Investments, at Fair Value                       |    | 17,530,909 | 17,990,214       | (2.6%)   |  |  |
| Capital Assets, Net of<br>Depreciation           |    | 42,359     | 8,789            | 382.0%   |  |  |
| TOTAL ASSETS                                     | \$ | 18,391,579 | \$<br>18,751,963 | (1.9%)   |  |  |
| LIABILITIES                                      |    |            |                  |          |  |  |
| Securities Lending Collateral and Other Payables | \$ | 528,255    | \$<br>1,044,053  | (49.4%)  |  |  |
| FIDUCIARY NET POSITION                           | \$ | 17,863,324 | \$<br>17,707,910 | 0.9%     |  |  |
|  |    |            |                  |          |  |  |

| FIDUCIARY NET POSITION                           | Ф    | 17,863,324   | Ф  | 17,707,910  | ,  | 0.9%       |
|--|------|--------------|----|-------------|----|------------|
| 2020 RETIREMENT AND HEALTH PLANS                 |      | 2020         |    | 2020        |    | 2020       |
| ASSETS   | Reti | irement Plan |    | Health Plan |    | Total      |
| Cash, Short-term Investments, and Receivables    | \$   | 687,698      | \$ | 130,613     | \$ | 818,311    |
| Investments, at Fair Value                       |      | 14,732,763   |    | 2,798,146   |    | 17,530,909 |
| Capital Assets, Net of Depreciation              |      | 35,598       |    | 6,761       |    | 42,359     |
| TOTAL ASSETS                                     | \$   | 15,456,059   | \$ | 2,935,520   | \$ | 18,391,579 |
| LIABILITIES                                      |      |              |    |             |    |            |
| Securities Lending Collateral and Other Payables | \$   | 443,939      | \$ | 84,316      | \$ | 528,255    |
| FIDUCIARY NET POSITION                           | \$   | 15,012,120   | \$ | 2,851,204   | \$ | 17,863,324 |
|  |      |              |    |             |    |            |

# WHAT IS THE COMBINED FUNDED STATUS OF THE PLAN?

The Combined Funded Status is the ratio of the System's Fiduciary Net Position to Total Pension Liability. This funding ratio represents the percentage of Plan Assets available toward paying expected benefit obligations of LACERS Members.

71.6%

COMBINED PLAN
FUNDED STATUS

# **About the Retirement Plan**

LACERS administers a defined benefit pension plan that provides for service and disability retirement benefits, as well as death benefits.

The Retirement Plan covers all civilian and certain segments of sworn employees of the City who are not exempted due to employment from other proprietary agencies.

Plan Members have a vested right to their own contributions and accumulated interest posted to their accounts.

# RETIREMENT PLAN FUNDED STATUS

66.3%

# **About the Health Plan**

LACERS administers, and provides single-employer postemployment healthcare benefits to eligible retirees and their eligible spouses/domestic partners who participate in the Retirement Plan regardless of their membership tiers.

These benefits consist of subsidies which may also apply to the coverage of other eligible dependent(s).

HEALTH PLAN FUNDED STATUS

81.8%



**RODNEY JUNE** Chief Investment Officer

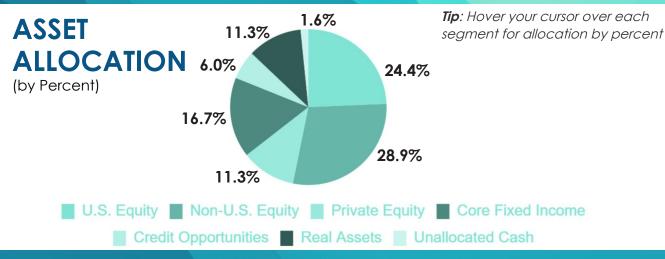
# INVESTMENT PORTFOLIO SUMMARY

Fiscal year 2019-2020 was an especially volatile period for financial markets due to the COVID-19 pandemic and unprecedented shutdown of the U.S. economy in an attempt to contain the virus. Consequently, the LACERS' investment portfolio returned 1.24% (gross of fees) for the one-year period ending June 30, 2020.

While markets have mostly recovered from the pandemic-induced bear market, serious questions remain about the real economy, as many job losses and business closures could be permanent. As we reflect on the unprecedented events of fiscal year 2019-2020, you should be reassured that the LACERS' investment portfolio is designed and constructed to weather such volatile periods and the challenges ahead.

# Read our market synopsis here.





### INVESTMENT PORTFOLIO VALUE

#### HOW DID OUR INVESTMENT PORTFOLIO DO?



6.51

Though the Fiduciary Net Position increased over the previous year, the Investment Portfolio underperformed its policy benchmark by 277 basis points (gross of fees) for the fiscal year, mainly attributed to the relative underperformance of Credit Opportunities, U.S. equities, Real Assets and Private Equity.

TOTAL INVESTMENT PORTFOLIO VALUE

**LACERS Policy Benchmark** 

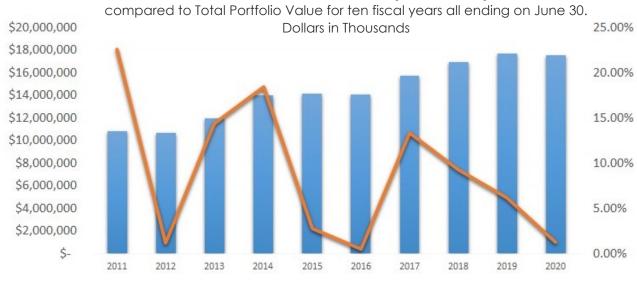
\$ 17,654,460,000

6.64

#### **ANNUALIZED RATES OF RETURN** (GROSS OF FEES) 3 YR (%) 1 YR (%) 5 YR (%) **LACERS Total Fund** 1.24 5.49 5.98

4.01

#### Portfolio Value Rate of Return (Gross of Fees)



Total Investment Portfolio (Fair Value) Time-Weighted Rate of Return (Gross of Fees)

10

#### **EXECUTIVE OFFICERS**

Neil M. Guglielmo General Manager

**Lita Payne** Assistant General Manager

**Todd Bouey** Assistant General Manager

Rodney June
Chief Investment Officer



BOARD OF ADMINISTRATION

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Michael R. Wilkinson Vice President

> Annie Chao Commissioner

> Elizabeth Lee Commissioner

> Sandra Lee Commissioner

Nilza R. Serrano Commissioner

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# ASSET ALLOCATION DISCUSSION



# LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

**January 26, 2021** 



# **AGENDA**

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BOARD Meeting: 1/26/21 Item VII-B

# ASSET LIABILITY MODELING

BOARD Meeting: 1/26/21

### PURPOSE OF THE STUDY

- Review the current and projected financial status of the Plan over multiple time periods
  - Project liabilities and benefit payments
  - Project asset growth and contribution levels
- Assess the appropriateness of the current asset allocation relative to the expected progress of liabilities and cash flows
- Test sensitivity of plan (Assets and Liabilities) to various range of outcomes
  - Market performance across range of economic environments
  - Contribution volatility
  - Range of liquidity environments
- Consider different asset mix and expected return on assets
  - Assess appropriate return target against tradeoff of volatility/range of outcomes



BOARD Meeting: 1/26/21 Item VII-B

# ASSET LIABILITY FRAMEWORK

### Identify Key Issues

- Investment-related themes
- Demographic trends/changes
- Regulatory environment

# Projection of Assets & Liabilities

- Funded status
- Contribution requirements

### Multi-Faceted Risk Assessment

- Mean-variance optimization
- Risk budgeting
- Economic scenario analysis including assessment of non-consensus outcomes
- Liquidity stress test
- Sensitivity to market shocks







#### Asset Allocation Recommendation

- Better risk-adjusted returns
- Better performance in specific economic environments



BOARD Meeting: 1/26/21 Item VII-B

## METHODOLOGY FOR ASSET LIABILITY STUDY

#### Gather information on assets and liabilities

- Assets (information provided by NEPC/LACERS staff)
  - Current Asset Allocation targets
  - Assumptions for Asset Class projections (return/risk/correlation)
  - · Liquidity of underlying investments
- Liabilities (information provided by the Plan's actuary/LACERS staff)
  - Current Valuation of DB and health plan
  - · Current Plan provisions
  - · Assumptions underlying valuation of liabilities
  - · Projection of expected future cash flows
- Determine other asset allocation mixes appropriate for analysis
- Run long-term projections to understand asset-liability dynamics
  - Deterministic Forecasting baseline projections of assets, liabilities and cash flows
  - Stochastic Forecasting projections based on range of forecasts, ranked to understand probabilities/likelihood of different plan outcomes
- Apply multiple perspectives/tools to build robust, objective driven asset allocation solutions
  - Mean-variance optimization
  - Risk budgeting
  - Scenario analysis
  - Liquidity analysis
  - Factor analysis



#### Item VII-B

## **ASSET LIABILITY MODELING PROCESS**

- Capital Market **Assumption** Review
- Asset Mix Discussion

**Board Evaluation** of Input

#### **NEPC Runs** Projections

- Deterministic and Stochastic Forecasting
- Liquidity Analysis
- Scenario Analysis
- Risk Budgeting
- Evaluation of Output

- Review current and projected financial status of Plan
- Assess appropriateness of current asset allocation vs. alternatives
- Determination of strategic asset mix

**Board Evaluation** of Output

#### NEPC/Staff Develop a Work Plan

- Asset Class reviews
- Equity
- Fixed Income
- Real Assets
- Update Investment Policy
- Conduct searches (if necessary)



BOARD Meeting: 1/26/21 Item VII-B

# LACERS ASSET MIX OPTIONS

BOARD Meeting: 1/26/21 Item VII-B

## **OBSERVATIONS FOR LACERS**

- No recommendation for large shift in asset allocation
  - No new asset classes recommended
- Slight increase to Equities at the expense of Real Assets
  - Unattractive return expectations coupled with low inflation outlook
  - Equities are more attractive than fixed income
- In the final stages of implementing strategic mix adopted in 2018
  - Shifted assets from Core Fixed Income to Credit Opportunities
    - Added Private Credit
    - · Added hybrid high yield/bank debt mandate
    - Increased exposure to Emerging Market Debt
  - Added Emerging Markets Small Cap
  - Increased exposure to Private Equity
  - Increased exposure to Real Estate



#### **ASSET MIX FOR CONSIDERATION**

#### **Asset Mixes**

|                                   | Current Policy<br>Mix | Alternative<br>Mix |
|-----------------------------------|-----------------------|--------------------|
| Cash                              | 1.00%                 | 1.00%              |
| Total Cash                        | 1.00%                 | 1.00%              |
| US Large-Cap Equity               | 14.00%                | 16.20%             |
| US Small/Mid-Cap Equity           | 5.00%                 | 7.00%              |
| Non-US Developed Equity           | 17.00%                | 15.00%             |
| Non-US Developed Small-Cap Equity | 3.00%                 | 3.00%              |
| Emerging Market Equity            | 5.67%                 | 5.67%              |
| Emerging Market Small-Cap Equity  | 1.33%                 | 1.33%              |
| Private Equity                    | 14.00%                | 14.00%             |
| Total Equity                      | 60.00%                | 62.20%             |
| Core Bonds                        | 13.75%                | 13.75%             |
| High Yield                        | 2.00%                 | 2.00%              |
| Bank Loans                        | 2.00%                 | 2.00%              |
| EMD (External Currency)           | 2.25%                 | 2.25%              |
| EMD (Local Currency)              | 2.25%                 | 2.25%              |
| Total Fixed Income                | 26.00%                | 26.00%             |
| TIPS                              | 3.60%                 | 2.60%              |
| Commodities                       | 1.20%                 | 0.00%              |
| REITS                             | 1.20%                 | 1.20%              |
| Core Real Estate                  | 4.20%                 | 4.20%              |
| Non-Core Real Estate              | 2.80%                 | 2.80%              |
| Total Real Assets                 | 13.00%                | 10.80%             |
| Expected Return 10 yrs            | 5.83%                 | 5.91%              |
| Expected Return 30 yrs            | 6.83%                 | 6.89%              |
| Standard Dev                      | 13.89%                | 14.14%             |
| Sharpe Ratio (10 years)           | 0.36                  | 0.36               |
| Sharpe Ratio (30 years)           | 0.36                  | 0.35               |

Note: Capital Market Assumptions and MSCI data as of 12/31/2020.

#### **Asset Mix Changes**

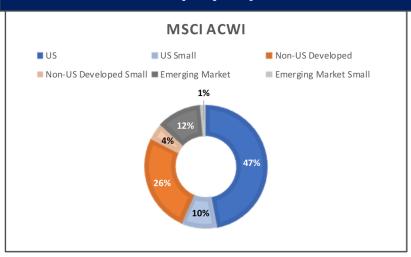
#### **Reduction to Real Assets**

- Elimination of Commodities
- Reduction of TIPS

#### **Increase to Equities**

- Balanced the US/Non-US exposure
- Small cap tilt

#### **Global Equity Exposure**





### KEY MARKET THEMES

NEPC, LLC -

#### **ASSESSING THE KEY MARKET THEMES**

**AS OF 12/31/20** 

|  | Dormant  | Faded   | Neutral  | Prevalent              | Dominant         |
|--|--|---|--|------------------------|------------------|
| Virus Trajectory No Change in Status             | <ul> <li>Market sentiment<br/>logistics, and supp</li> </ul>     | improved with successf<br>ly of the vaccine<br>ns as worsening COVID- | nant force driving global of the control of the con | ough concerns remain a |                  |
|  | Dormant  | Faded   | Neutral  | Prevalent              | Dominant         |
| Permanent Interventions No Change in Status      | <ul> <li>In the US, a fifth co</li> </ul>                        | oronavirus relief package   | the dominant force drivir<br>e worth about \$900 billio<br>gram by €500B and exter   | n was passed. In Europ |                  |
|  |  |   |  |                        |                  |
|  | Dormant  | Faded   | Neutral  | Prevalent              | Dominant         |
| Globalization<br>Backlash<br>No Change in Status | <ul><li>The importance of</li><li>The world will likel</li></ul> | the theme may increas   | e in coming years as the l<br>lified wealth divide given   | asting impact from the | pandemic is seen |
| Backlash   | <ul><li>The importance of</li><li>The world will likel</li></ul> | the theme may increas<br>y be faced with an amp                       | e in coming years as the l<br>lified wealth divide given   | asting impact from the | pandemic is seen |



### VIRUS TRAJECTORY

#### **DEFINING THE THEME**

**KEY MARKET THEME: VIRUS TRAJECTORY** 

### The Virus Trajectory theme reflects the uncertain path of how the pandemic and global economic activity interact

The scope and duration of virus containment efforts severely disrupted the global economy

### Successful distribution of COVID-19 vaccines shortens the timeline of the theme

A significant increase in the pace of vaccinations will be needed to aid a rapid recovery for the global economy

### The lasting influence of the pandemic is uncertain as the extent of the economic scars have yet to be fully realized

Despite relative improvement in economic data, recent data points highlight lingering disruptions in businesses and the labor market

### Plausible economic paths range from a rapid economic recovery, to a K-shaped recovery, to a depression

The Virus Trajectory theme began in 2020 and could conclude in 2021, but broad socio-economic effects will be felt for years



#### **INVESTMENT CONSIDERATIONS**

**KEY MARKET THEME: VIRUS TRAJECTORY** 

The wide range of scenarios pulls investor focus from the extremes of vaccine optimism to a renewed outbreak

The pandemic has amplified our PI theme, fueling fiscal and monetary expansion to the benefit of equity markets

For risky investments, it raises the question "do valuations matter?"

A rapid vaccine rollout can unleash economic exuberance and benefit highly cyclical assets and value stocks

However, the risk of an extended economic downturn and prolonged deflationary environment remain

In such an environment, nominal government bonds offer relief

|             | C 1 / =     |             |          |
|-------------|-------------|-------------|----------|
| Continuum o | t Viriis ai | nd Econom   | nc Paths |
|             |             | IG EGUITUII |          |

**Health Risk** 

Calibration Between Health Risks and Economic Costs

**Economic Cost** 



#### THEMATIC MACROECONOMIC RISKS

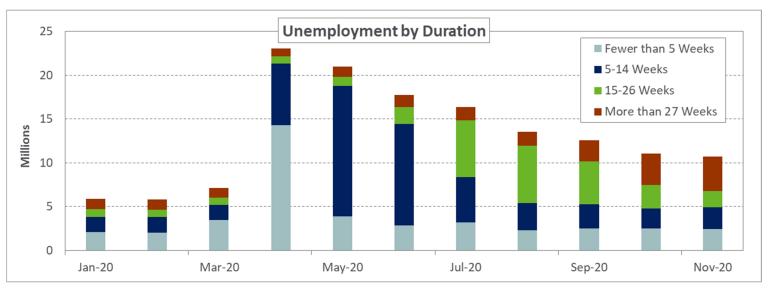
**KEY MARKET THEME: VIRUS TRAJECTORY** 

#### **Economic dislocation from the pandemic is widespread**

The negative consequences vary across the globe but can be found in labor markets, consumer spending, productivity, and imbalances

### The lingering damage from the pandemic is unclear and represents the largest economic disruption of our time

Labor markets are generally slow to recover and the pandemic may leave a lasting impact on the long-term unemployed







### POTENTIAL OUTCOMES AND IMPLICATIONS KEY MARKET THEME: VIRUS TRAJECTORY

|                              | Description  | Market Implications   |
|------------------------------|--|---|
| Base Case                    | Virus containment efforts aimed at slowing the spread of COVID-19 will shape the trajectory of a recovery. Increased monetary and fiscal stimulus offset some of the economic disruption, but economic growth and labor markets are likely to take longer to normalize than historical recessions suggest.   | Market volatility remains at elevated levels. Low interest rates are here to stay but there is increased volatility around the path of inflation.  Large deflationary pressures remain and are paired with a stimulative fiscal response. Opportunities may be available for investors willing to take on greater strategic equity exposure. Impact of Virus Trajectory looks to recede within 12 months.   |
| Economic<br>Depression       | Period of extreme economic disruption characterized by unemployment levels greater than 10% and falling consumer spending levels. Waves of changing containment rules damage consumer confidence, limiting economic activity even during less restrictive times. Massive government fiscal relief measures look to plug holes in GDP but the lack of economic dynamism reduces productivity. | Combined fiscal and monetary policies are MMT-like with outsized volatility in global currency regimes. Relative benefits to the yuan and dollar. Extreme deflationary pressures offer value in nominal local government debt (e.g. US Treasuries). An unprecedented economic disruption across industries and countries. Patience is required as equity markets reprice and the credit default cycle is elevated. Maintaining liquidity is a first order priority, but look to allocate surplus liquidity to distressed investments. |
| Rapid<br>Vaccine<br>Roll-Out | Combination of dynamic containment and expansive distribution of vaccines lead to a rapid path of economic recovery in 2021.  Fiscal policy relief and stimulus fill the economic gap to restore economic normalization.   | Strongly positive for all cyclical assets and a potential catalyst for value-oriented equities. Provides path for moderately higher inflation as fiscal policy expansion drives economic growth. Begins a period of post-pandemic economic exuberance with consumer spending growth across all corners of the economy.  |



# PERMANENT INTERVENTIONS

#### **DEFINING THE THEME**

**KEY MARKET THEME: PERMANENT INTERVENTIONS** 

### Global markets are defined by central bank market interventions and permanent fiscal support

The pandemic has supercharged the Permanent Interventions theme with outsized support and fiscal relief

### Market sentiment is now a key central bank policy pillar of equal standing to inflation and employment mandates

Low interest rates and a fragile economic environment force central banks to grow balance sheets and liquify the global financial system

Without meaningful inflation pressures, the path of monetary policy does not normalize and an environment of low interest rates persists

#### We believe permanent fiscal intervention is the baseline

Weak economic growth trends in the developed world underpin political tensions and motivate a significant fiscal debt expansion

### Permanent Interventions boosts investor sentiment and enhances our long-term return outlook for risk assets

We believe central banks across the globe will continue to expand balance sheet assets to sustain an environment of excess liquidity



#### **DEFINING THE THEME CONTINUED**

**KEY MARKET THEME: PERMANENT INTERVENTIONS** 

### The removal of central bank measures and fiscal stimulus would reveal the global economy's structural weakness

The dynamics of muted inflation pressures and low economic growth drive a combined monetary and political response

### As debt-to-GDP levels rise, the necessity of central bank intervention is reinforced to maintain low interest rates

Nominal economic growth rates must exceed sovereign bond yields to forestall a sovereign debt crisis, as seen in the Eurozone in 2010

### We see the Permanent Interventions theme muting the normal fluctuations of the business cycle

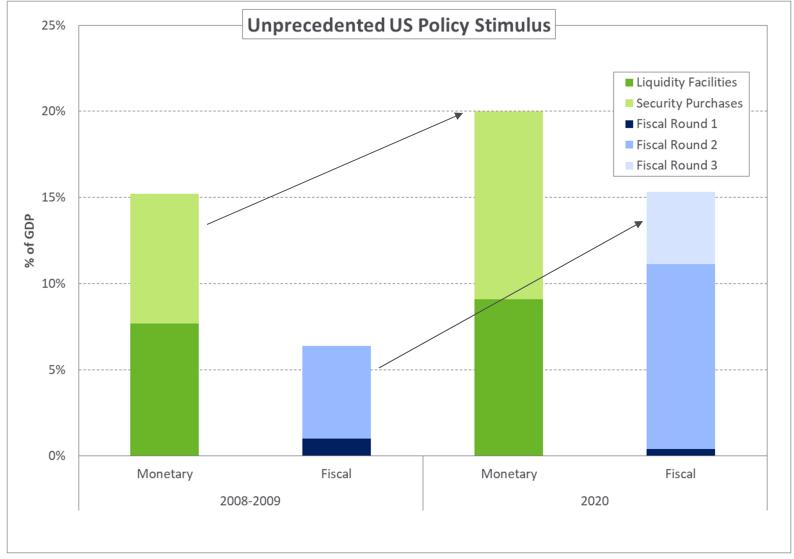
This potentially leaves no safety net in an economic downturn should central bank and fiscal interventions be limited or exhausted

### The new regime reflects permanent easy monetary policy, surplus liquidity, and fiscal debt growth

Investors have yet to fully discount the combined favorable equity market conditions and heightened long-term macro tail-risks



### ELEVATED PERMANENT INTERVENTIONS KEY MARKET THEME: PERMANENT INTERVENTIONS

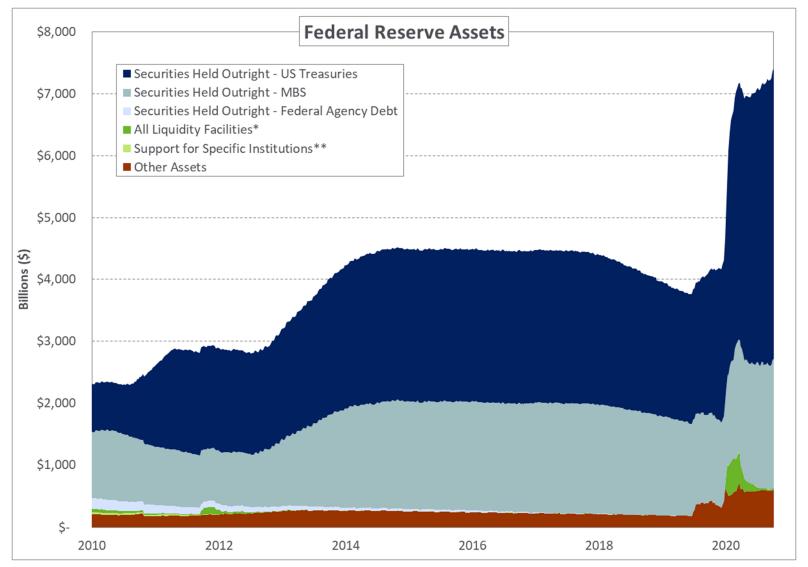




Source: NEPC, Federal Reserve

Fiscal Rd 1: 2008 – Economic Stimulus Act (\$152B); 2020 – CPRSA/Families First (\$91B); Fiscal Rd 2: 2008 – Am. Recovery & Reinv. Act (\$787B); 2020 – CARES Act (\$2.3T); Fiscal Rd 3: 2020 – Consolidated Appropriations Act (\$900B)

### ELEVATED PERMANENT INTERVENTIONS KEY MARKET THEME: PERMANENT INTERVENTIONS





Sources: Federal Reserve, FactSet, NEPC; \*All Liquidity Facilities includes term auction credit, primary credit, secondary credit, seasonal credit, Primary Dealer Credit Facility, Asset-Backed Commercial Paper, Money Market Mutual Fund Liquidity Facility, and central bank liquidity swaps; \*\*Support for Specific Institutions includes credit extended to AIG and Maiden Lane LLCs

#### **INVESTMENT CONSIDERATIONS**

**KEY MARKET THEME: PERMANENT INTERVENTIONS** 

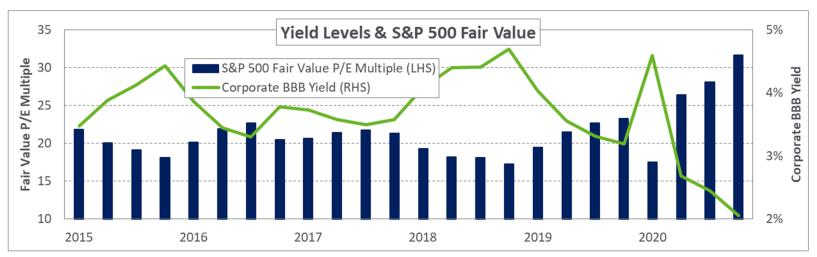
### Permanent Interventions sustains high P/E multiples and equity valuations become a less potent market signal

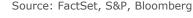
Low interest rates generate higher values when discounting future cash flows and increase valuation levels for equity markets

#### The supportive policy environment is favorable to equity

Investors enjoy high profit margins relative to history as the surplus of central bank liquidity benefits holders of capital relative to labor

However, proactive tightening of monetary policy damages market sentiment and exposes the fragile nature of market dynamics







#### THEMATIC MACROECONOMIC RISKS

#### **KEY MARKET THEME: PERMANENT INTERVENTIONS**

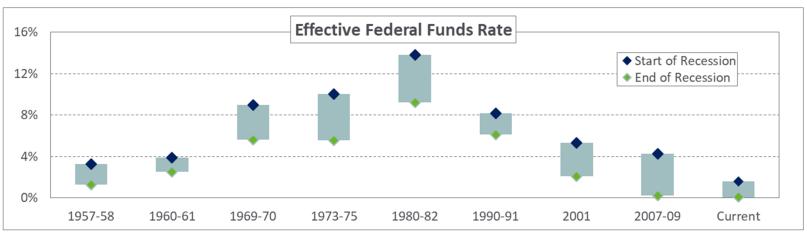
### History shows economic weakness can overwhelm the system in the absence of extraordinary policy measures

In such a deflationary environment, nominal government bonds offer one of the few attractive risk-adjusted returns profiles

### The withdrawal of central bank intervention and fiscal support displaces traditional macroeconomic risks

Permanent Interventions gradually fuels tail-risks as moral hazard is absorbed into the financial system and markets nationalize losses

Actions by central banks and governments to lessen the economic impact of COVID-19 have increased the dominance of the theme





Source: FactSet, Federal Reserve

### POTENTIAL OUTCOMES KEY MARKET THEME: PERMANENT INTERVENTIONS

|                          | Description  | Long-Term Market Implications  |
|--------------------------|--|--|
| The New<br>Normal        | NEPC base case expectation of a permanent regime of easy monetary policy, surplus market liquidity, and fiscal debt growth paired with muted inflation levels  | Favorable to equities relative to safe-haven fixed income, with risk assets benefiting from above average corporate profit margins and low interest rates. The normal fluctuations of a business cycle are subdued but macro tail-risks continue to build  |
| Political<br>Dysfunction | Interconnected with NEPC's<br>Globalization Backlash theme,<br>political conflict disrupts the full<br>intervention of fiscal stimulus   | Economic growth rates are lower as fiscal stimulus lacks permanence. Developed economies are at a greater risk of a downturn and central bank intervention has limits to improve economic growth. Favorable to long duration fixed income and tactically favorable to risks assets following frequent bouts of market volatility   |
| Back to<br>Normal        | Economic trend growth rates and inflation levels normalize along with market and business cycles   | Expected period of low investment returns for all assets classes as real interest rates normalize. Requires a repricing of risk premia to incorporate a neutral fiscal policy and the withdrawal of central bank intervention  |
| Inflation                | A material increase in inflation would<br>be a severe tail-risk outcome for<br>investors as the market discounts<br>almost no probability of above<br>average inflation levels   | Significant repricing of market expectations and risk premia likely generate permanent losses of capital among some segments of equity and fixed income markets. Potential cause and/or effect is a devaluation of developed market currencies and a breakdown of the US dollar's reserve currency status  |
| Japanification           | This outcome is largely driven by a demographic crisis, with Europe being the most severely exposed.  China is at risk, but racing to increase per-capita GDP levels before the population ages. The US demographic profile is relatively positive compared to other nations | Favorable to long duration fixed income with severe deflationary pressures and low growth rates. Fiscal and monetary intervention is not a cure, but mitigates the full economic damage. Central banks control bond prices across the yield curve, severely distorting the cost of capital and corporate capital structures. The impacted regions experience a "lost decade" of investment returns |



# 2021 ASSET CLASS ASSUMPTIONS

#### 2021 ASSET CLASS ASSUMPTIONS OVERVIEW

NEPC's capital market assumptions are available each quarter and currently reflect 12/31/20 market data

Asset class returns are broadly lower and reflect a wide range of outcomes related to the pandemic's economic impact

Maintain a dedicated safe-haven allocation (e.g., core fixed income or TIPS) to serve as a source of liquidity and to provide downside protection

Consider higher strategic equity targets as the longterm return differential relative to fixed income is wide

**NEPC's Key Market Theme of** *Permanent Interventions* **sustains elevated valuations and lift our return outlook** 



#### **BUILDING BLOCKS METHODOLOGY**

Asset class models reflect current and forecasted market data to inform expected returns

Systematic inputs are paired with a long-term trend rate path for terminal values

Model inputs are aggregated to capture key return drivers for each asset class

Building block inputs will differ for equity, fixed income, and real assets

**Illiquidity Premium Valuation** Inflation **Real Growth Yield** 



#### **CORE GEOMETRIC RETURN ASSUMPTIONS**

|                 | Asset Class                          | 10-Year<br>Return | 30-Year<br>Return | Volatility |
|-----------------|--------------------------------------|-------------------|-------------------|------------|
|                 | Cash                                 | 0.8%              | 1.9%              | 0.6%       |
|                 | US Inflation                         | 2.0%              | 2.2%              | -          |
|                 | US Large-Cap Equity                  | 5.4%              | 6.3%              | 16.6%      |
| <b>.</b>        | Non-US Developed Equity              | 5.9%              | 6.5%              | 19.7%      |
| Equity          | Emerging Market Equity               | 7.5%              | 8.4%              | 28.7%      |
| ш               | Global Equity*                       | 6.2%              | 7.0%              | 18.1%      |
|                 | Private Equity*                      | 9.3%              | 10.1%             | 24.8%      |
| пе              | US Treasury Bond                     | 0.9%              | 2.0%              | 5.3%       |
| Income          | US Aggregate Bond*                   | 1.4%              | 2.7%              | 5.7%       |
| Ë               | US TIPS                              | 1.0%              | 2.1%              | 5.8%       |
| Fixed           | US High Yield Corporate Bond         | 2.9%              | 5.0%              | 11.5%      |
| Ê               | Private Debt*                        | 6.1%              | 7.5%              | 11.9%      |
|                 | Commodity Futures                    | 0.9%              | 3.3%              | 18.5%      |
| _ <b>\$</b>     | US REIT                              | 5.5%              | 6.7%              | 21.4%      |
| Real<br>Assets  | Gold                                 | 2.9%              | 3.7%              | 16.4%      |
| H Å             | Core Real Estate                     | 4.4%              | 5.6%              | 15.0%      |
|                 | Private Real Assets - Infrastructure | 5.4%              | 6.6%              | 12.5%      |
| . <u>.</u> #    | 60% S&P 500 & 40% US Aggregate       | 4.1%              | 5.1%              | 10.3%      |
| Multi-<br>Asset | 60% MSCI ACWI & 40% US Aggregate     | 4.6%              | 5.6%              | 11.8%      |
| Σ∢              | Hedge Fund*                          | 4.0%              | 5.2%              | 8.7%       |





### MACRO ASSUMPTIONS

#### INFLATION OVERVIEW

### Inflation is an essential building block for developing asset class return assumptions

### Inflation assumptions are model-driven and informed by multiple inputs for both the US and global assets

Includes forecasts from international organizations (e.g. IMF), local consumer and producer price indices, global interest rate curves, and break-even inflation expectations

### NEPC's US inflation expectation continues to reflect minimal expected inflation pressures over the long-term

We anticipate near-term volatility in our inflation assumptions as market-based inflation expectations discount the full range of economic scenarios associated with the pandemic and response

| Region        | 10-Year Inflation<br>Assumption | 30-Year Inflation<br>Assumption |
|---------------|---------------------------------|---------------------------------|
| United States | 2.0%                            | 2.2%                            |



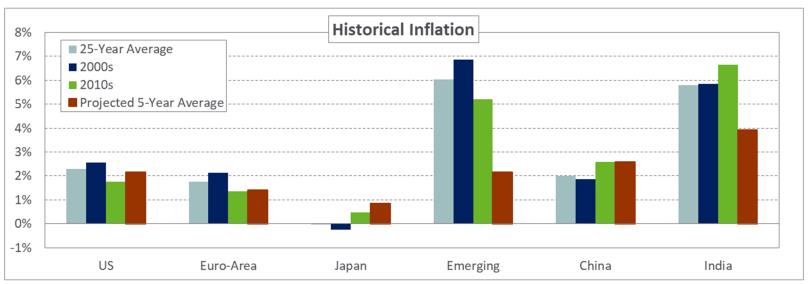
#### **GLOBAL INFLATION**

#### Core inflation remains well below central bank targets

COVID-19, globalization, aging demographics, and deflationary technology trends are inflation headwinds influencing markets

Global inflation break-even expectations suggest inflation will be near current levels for the long-term

### Emerging market inflation remains above the developed world, but is significantly lower than long-term averages







#### **US CASH EXPECTATIONS**

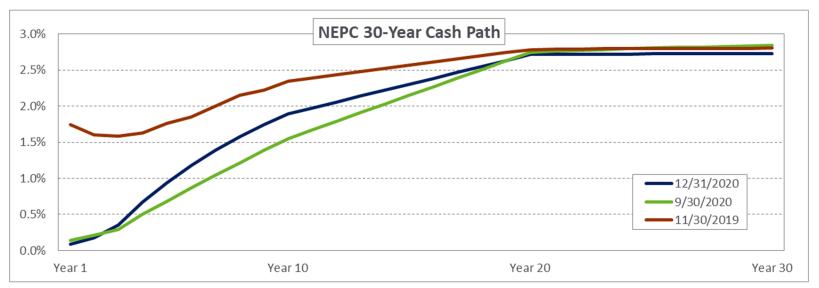
#### Cash is a foundational input for all asset class returns

The assumption is a direct building block input and is a relative value factor (cash + risk premia) in long-term return projections

#### Cash assumptions reflect inflation and real interest rates

#### **US nominal rates are near historic lows for NEPC forecasts**

Market expectations of suppressed real rates and minimal inflation create a slow trending path for cash to reach NEPC's long-term target







#### **GLOBAL INTEREST RATE EXPECTATIONS**

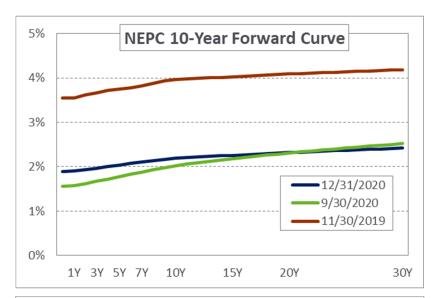
### Negative real yields reflect central bank intervention

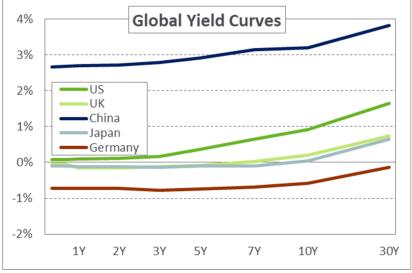
Low real rates depress returns for all assets in the long-term

The Fed's easy policy and low inflation suppress long term yield forecasts

The outlook for Japan and Europe bonds are poor due to negative nominal yields

Emerging market interest rates are higher relative to the developed world





Source: (Top) FactSet, NEPC Source: (Bottom) FactSet, NEPC



# **EQUITY ASSUMPTIONS**

BOARD Meeting: 1/26/21

#### **EQUITY ASSUMPTIONS OVERVIEW**

**Equity return assumptions have declined from the prior quarter as stock prices have rebounded sharply** 

Discounting future earnings with lower interest rates supports higher equity valuation multiples over time

Price-to-earnings and profit margin multiples have been adjusted higher to reflect our Key Market Theme of *Permanent Interventions* 

Consider higher strategic equity targets as the longterm return differential relative to fixed income is wide

We recommend that strategic asset allocation targets for emerging market equity reflect an overweight

The return assumption for emerging equity is highest among public equity and we encourage sourcing from EAFE exposure

**NEPC** encourages a modest strategic bias to small-cap relative to exposure in the MSCI ACWI IMI



#### **EQUITY: ASSUMPTIONS**

| Equity Building Blocks     |  |  |
|----------------------------|--|--|
| Illiquidity<br>Premium     | The return expected for investments with illiquidity risk  |  |
| Valuation                  | Represents P/E multiple contraction or expansion relative to long-term trend                                     |  |
| Inflation                  | Market-specific inflation based on country revenue and region-specific inflation                                 |  |
| Real<br>Earnings<br>Growth | Market-specific real growth based on a weighted-average derived from country revenue contribution and GDP growth |  |
| Dividend<br>Yield          | Income distributed to shareholders adjusted to reflect market trends   |  |

| Asset Class                          | 2021<br>10-Year<br>Return | Change<br>from<br>2020 |
|--------------------------------------|---------------------------|------------------------|
| US Large-Cap Equity                  | 5.4%                      | +0.4%                  |
| US Small/Mid-Cap<br>Equity           | 5.7%                      | +0.2%                  |
| US Microcap Equity                   | 6.6%                      | -0.4%                  |
| Non-US Developed<br>Equity           | 5.9%                      | -0.1%                  |
| Non-US Developed<br>Small-Cap Equity | 6.1%                      | -0.3%                  |
| Emerging Market<br>Equity            | 7.5%                      | -1.5%                  |
| Emerging Market<br>Small-Cap Equity  | 8.1%                      | -1.1%                  |
| China Equity                         | 7.0%                      | -1.8%                  |
| Hedge Fund - Equity                  | 4.0%                      | -0.8%                  |
| Global Equity*                       | 6.2%                      | -                      |
| Private Equity*                      | 9.3%                      | -0.1%                  |



<sup>\*</sup>Calculated as a blend of other asset classes



#### **EQUITY: REAL EARNINGS GROWTH**

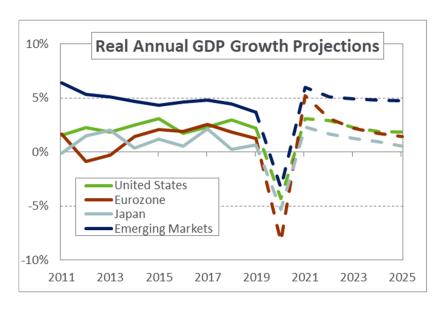
Global growth rates reflect the concerns of COVID-19 and US-China trade tensions

Regions more reliant on EM for revenue generation are forecasted to enjoy higher real earnings growth

Non-US stocks benefit from a greater portion of revenue from EM than US stocks

Small-caps have elevated long-term targets for real earnings growth relative to large-cap equities

This suggests a forward-looking risk premium for small- & mid-caps over large-cap

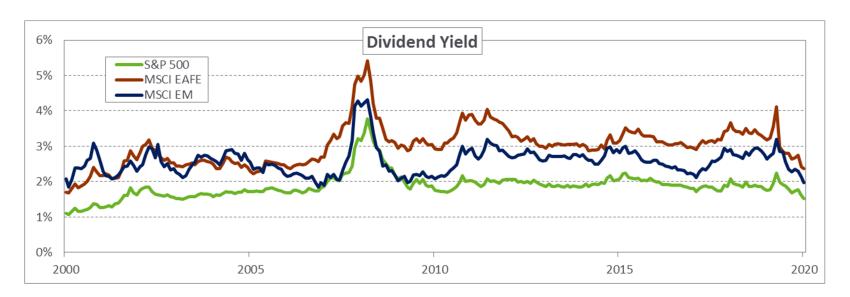




Source: (Bottom) IMF, MSCI, FactSet, NEPC



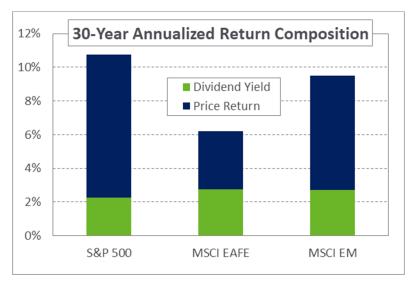
#### **EQUITY: DIVIDEND YIELD**



The 20 year terminal value estimate for the S&P 500 dividend yield is 2.50%

## Non-US stocks offer higher dividend yields relative to the US over the long-term

Terminal value dividend yield inputs for MSCI EM and EAFE are 2.5% and 3.0%



Source: (Top) S&P, MSCI, FactSet, NEPC Source: (Bottom) S&P, MSCI, FactSet, NEPC



#### **EQUITY: VALUATION**

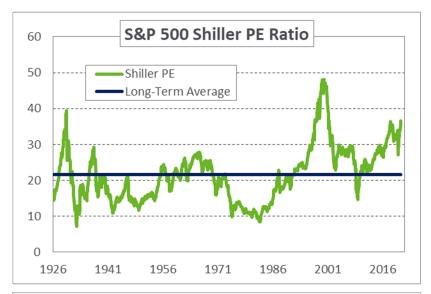
## US large-cap stocks appear overvalued relative to long-term averages

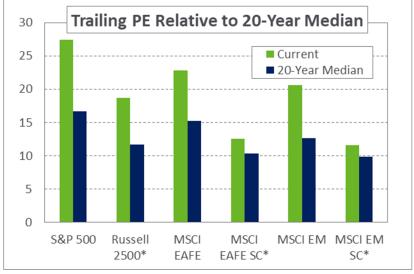
Yet low interest rates and inflation can support higher P/E levels

## P/E terminal value inputs are higher for the US and reflect easy Fed policy and low interest rates levels

EAFE P/E levels reflect a less constructive market outlook

Emerging market equities offer an attractive total return opportunity relative to developed markets

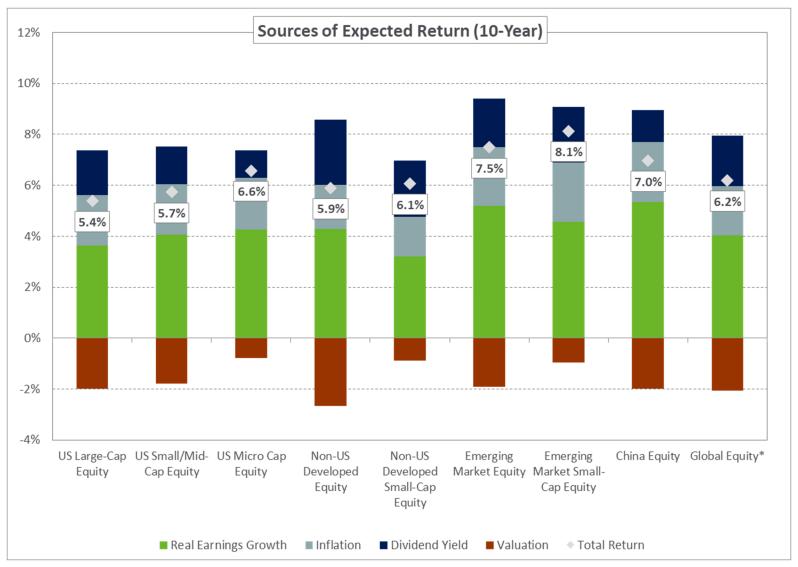






Source: (Top) S&P, Shiller, NEPC; long-term average beginning in 1926 Source: (Bottom) S&P, Russell, MSCI, FactSet, NEPC; \*Small cap indices valuations based on EV/EBITDA multiples; MSCI EM Small Cap median calculated since 3/31/2003

#### **EQUITY: BUILDING BLOCKS**





Source: NEPC \*Calculated as a blend of other classes

### FIXED INCOME ASSUMPTIONS

BOARD Meeting: 1/26/21

#### FIXED INCOME ASSUMPTIONS OVERVIEW

### Credit return assumptions are lower from the prior quarter with credit spreads continuing to tighten

### While return assumptions are low for safe-haven assets, we continue to endorse a dedicated Treasury allocation

We recommend a strategic blend of 50% US Treasuries and 50% TIPS for total return focused investors

#### Safe-haven instruments may differ by investor

The fixed income profile and duration should reflect risk objectives, liability/commitment structure, and desire for capital efficiency

### Return-seeking credit investments look to earn income and exploit shifts in credit spreads and market cycles

We believe a strategic blend of 50% high yield, 25% levered loans, and 25% blended EMD offers an improved beta profile for return-seeking credit relative to US high yield



#### **FIXED INCOME: ASSUMPTIONS**

| Fixed Income Building Blocks        |  |  |
|-------------------------------------|--|--|
| Illiquidity<br>Premium              | The return expected for investments with illiquidity risk                            |  |
| Government<br>Rates Price<br>Change | Valuation change due to shifts in the current yield curve to forecasted rates        |  |
| Credit<br>Deterioration             | The average loss for credit assets due to defaults and recovery rates                |  |
| Spread Price<br>Change              | Valuation change due to shifts in credit spreads over the duration of the investment |  |
| Credit<br>Spread                    | Yield premium provided by securities with credit risk                                |  |
| Government<br>Rates                 | The yield attributed to sovereign bonds that do not have credit risk                 |  |

| Asset Class                            | 2021<br>10-Year<br>Return | Change<br>from<br>2020 |
|--|---------------------------|------------------------|
| US TIPS                                | 1.0%                      | -1.2%                  |
| US Treasury Bond                       | 0.9%                      | -1.0%                  |
| US Corporate Bond                      | 2.2%                      | -1.2%                  |
| US Mortgage-Backed<br>Securities       | 1.2%                      | -1.3%                  |
| US High Yield Corporate<br>Bond        | 2.9%                      | -1.2%                  |
| US Leveraged Loan                      | 3.9%                      | -0.9%                  |
| Emerging Market External<br>Debt       | 3.0%                      | -1.1%                  |
| Emerging Market Local<br>Currency Debt | 5.0%                      | -0.4%                  |
| Non-US Government Bond                 | 0.6%                      | +0.4%                  |
| US Municipal Bond (1-10<br>Year)       | 1.1%                      | -0.8%                  |
| US High Yield Municipal<br>Bond        | 2.8%                      | -0.4%                  |
| Hedge Fund - Credit                    | 3.9%                      | -0.9%                  |
| US Aggregate Bond*                     | 1.4%                      | -1.1%                  |
| Private Debt*                          | 6.1%                      | -0.6%                  |



\*Calculated as a blend of other asset classes



#### **FIXED INCOME: CREDIT SPREADS**

### Credit spreads are broadly below long-term medians

Spreads tightened in the last quarter across credit qualities

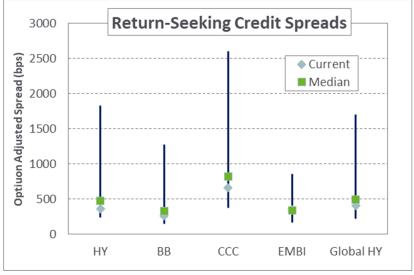
### Lower spread levels reduce future return expectations

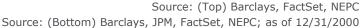
### Credit spread assumptions reflect potential disruption

With a record number of BBB rated corporates, fallen angel downgrades are a greater risk

## Default and recovery rates assumptions are based on long-term history









### **FIXED INCOME: RATES PRICE CHANGE**

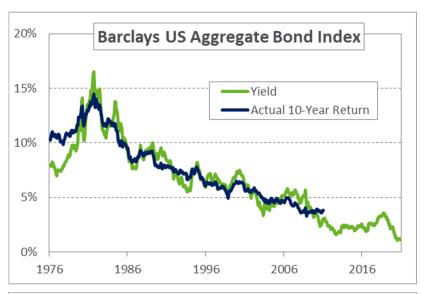
### Rates price change reflects shifts in interest rates, the yield curve, and roll down

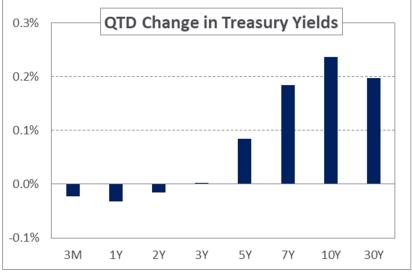
Roll down refers to the price change due to the aging of a bond along the yield curve

# Rates price change is a big component of total return

Interest rate increases are a headwind to future returns

# Roll down offers relief for rising rates when the yield curve is steep

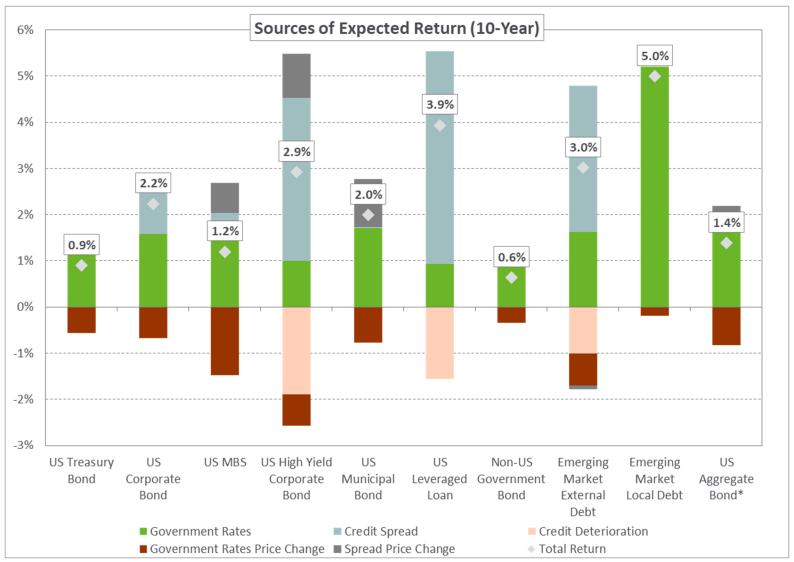








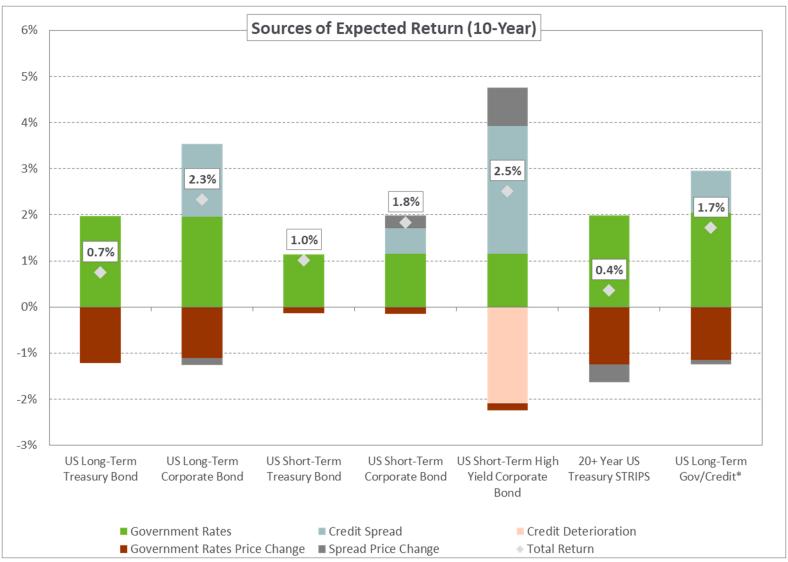
### FIXED INCOME: BUILDING BLOCKS





Source: NEPC \*Calculated as a blend of other classes

### **FIXED INCOME: BUILDING BLOCKS**





Source: NEPC \*Calculated as a blend of other classes

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# REAL ASSET ASSUMPTIONS

BOARD Meeting: 1/26/21 Item VII-B

### **REAL ASSET ASSUMPTIONS OVERVIEW**

# The strategic outlook for real assets reflects a high level of uncertainty due to subdued inflation expectations

Real assets offer a meaningful portfolio diversification benefit, but are exposed to a wide range of potential inflation scenarios

# Real assets exhibit different betas to inflation and each asset class is exposed to various economic factors

Diversification and correlation benefits are helpful to a portfolio but must be carefully considered relative to the expected risk premium

# Inflation-sensitivity and portfolio objectives influence an investor's strategic allocation to real assets

We encourage investors to remove commodity futures from strategic allocation targets due to persistent negative roll yield

# Strategic targets to Gold should be carefully weighed relative to the long-term macroeconomic environment

Gold exposure can be a challenge to investor risk-tolerance given its volatility profile and lack of a consistent risk premium



### **REAL ASSET: ASSUMPTIONS**

| Real Assets Building Blocks |  |  |  |  |
|-----------------------------|--|--|--|--|
| Illiquidity<br>Premium      | The return expected for investments with illiquidity risk  |  |  |  |
| Valuation                   | The change in price of the asset moving to a terminal value or real average level                                |  |  |  |
| Inflation                   | Based on the inflation paths as defined by TIPS breakeven and NEPC assumptions                                   |  |  |  |
| Growth                      | Market-specific real growth based on a weighted-average derived from country revenue contribution and GDP growth |  |  |  |
| Real<br>Income              | The inflation-adjusted income produced by the underlying tangible or physical asset                              |  |  |  |

| Asset Class                                | 2021<br>10-Year<br>Return | Change<br>from<br>2020 |
|--|---------------------------|------------------------|
| Commodity Futures                          | 0.9%                      | -3.1%                  |
| Midstream Energy                           | 7.4%                      | -                      |
| US REIT                                    | 5.5%                      | +0.1%                  |
| Global Infrastructure<br>Equity            | 5.9%                      | +0.6%                  |
| Global Natural Resources<br>Equity         | 6.7%                      | -0.6%                  |
| Gold                                       | 2.9%                      | N/A                    |
| Core Real Estate                           | 4.4%                      | -0.8%                  |
| Non-Core Real Estate                       | 5.5%                      | -0.9%                  |
| Private Debt - Real Estate                 | 4.1%                      | -0.9%                  |
| Private Real Assets -<br>Natural Resources | 8.0%                      | -1.1%                  |
| Private Real Assets -<br>Infrastructure    | 5.4%                      | -0.5%                  |



\*Calculated as a blend of other asset classes



### **REAL ASSET: REAL INCOME**

# **Equity-Like: Real income is inflation-adjusted dividend**

Includes public infrastructure, REITS, midstream energy, and natural resource equity

# Real Estate: Real income is net operating income

NOI growth exhibits a cyclical economic pattern

## Commodities: Real income includes collateral return

Collateral is based on a cash proxy over the time horizon



| Real Assets Yields              | 9/30/20 | 12/31/20 |
|---------------------------------|---------|----------|
| Midstream Energy                | 9.9%    | 7.9%     |
| Core Real Estate                | 4.4%    | 4.3%     |
| US REIT                         | 4.1%    | 3.8%     |
| Global REIT                     | 4.8%    | 4.3%     |
| Global Infrastructure Equity    | 4.1%    | 3.1%     |
| Global Natural Resources Equity | 4.5%    | 3.5%     |
| US 10-Yr Breakeven Inflation    | 1.6%    | 2.0%     |
| Commodity Index Roll Yield*     | -6.7%   | -0.1%    |

Source: (Top) Bloomberg, FactSet, NEPC

Source: (Bottom) NCREIF, Alerian, NAREIT, S&P, FactSet, NEPC

\*Commodity Index Roll Yield represents a proprietary calculation methodology



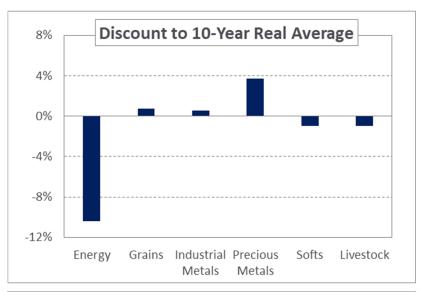
### **REAL ASSET: VALUATION**

# Commodity valuations are based on the long-term real average of spot prices

Energy commodity prices are trading below their long-term real averages

# Valuation assumptions for other real assets are based on various valuation inputs

Cap rates are used for core real estate and price-to-cash flow from operations is used for midstream energy

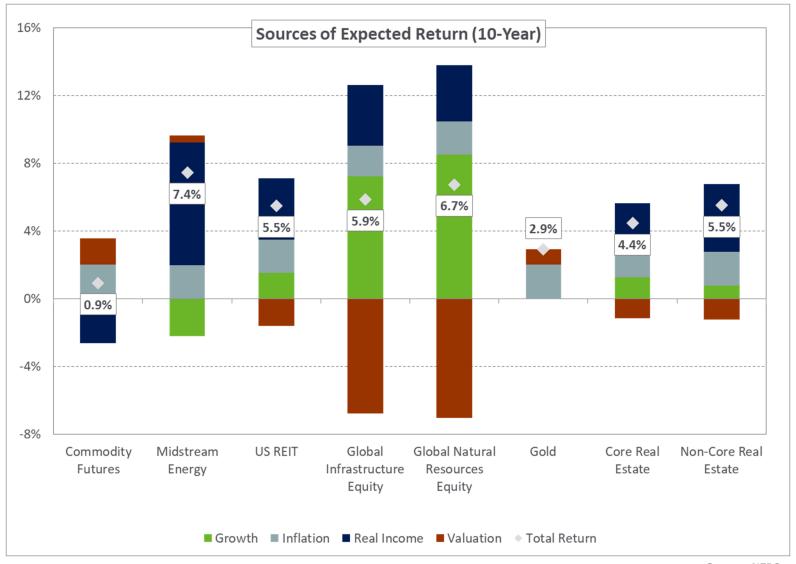




Source: (Top) FactSet, NEPC Source: (Bottom) FactSet, NEPC



### **REAL ASSET: BUILDING BLOCKS**





Source: NEPC

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## **ALTERNATIVES**

NEPC, LLC —

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### **ALTERNATIVES METHODOLOGY**

# Private market assumptions are constructed from betas to public markets with an added illiquidity premia

Historically, the observed illiquidity premium has been a significant component driving private market returns

# Hedge fund assumptions are constructed from betas to public markets with an added alpha assumption

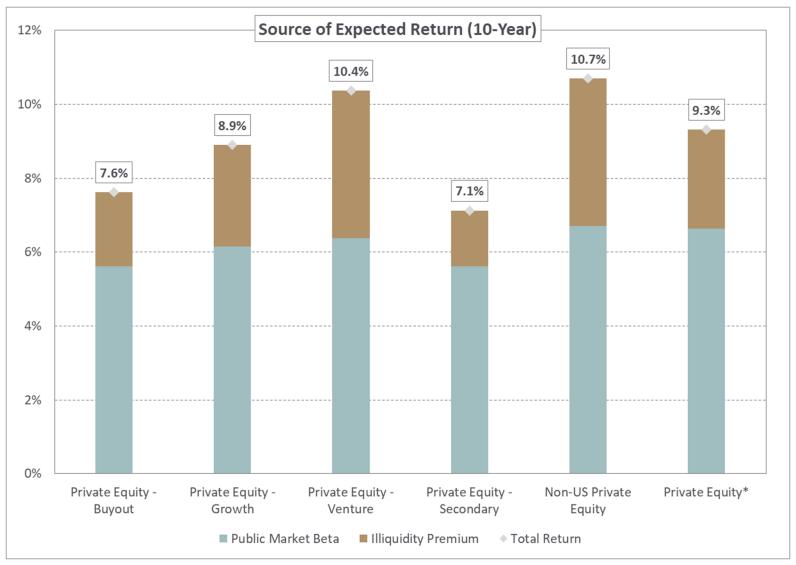
Alpha based on historical manager universe performance relative to a market-based benchmark







### PRIVATE EQUITY BUILDING BLOCKS

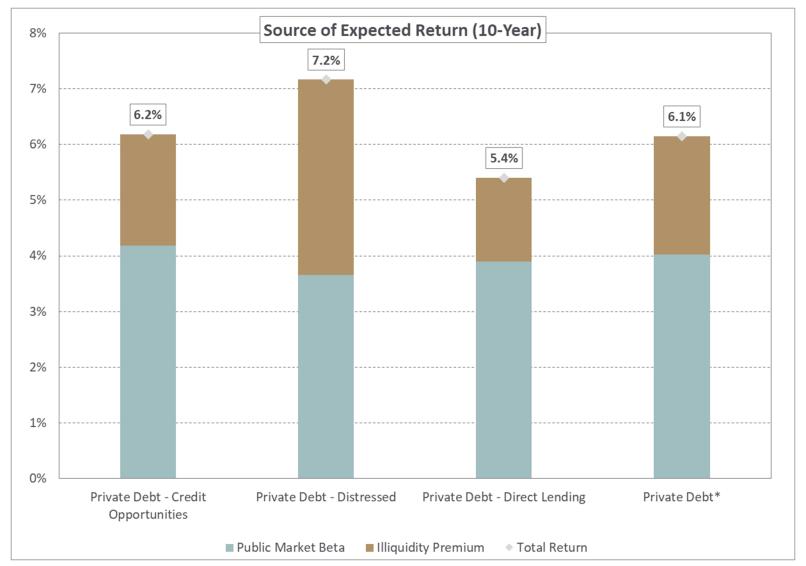








### PRIVATE DEBT BUILDING BLOCKS

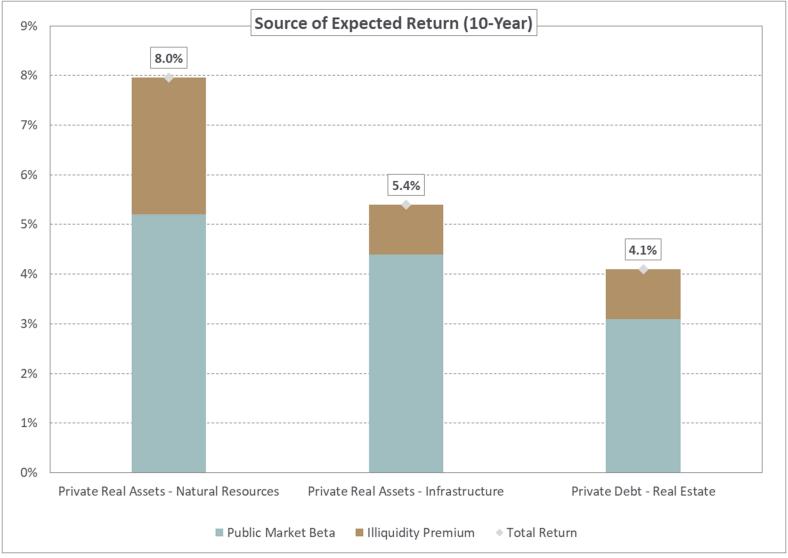








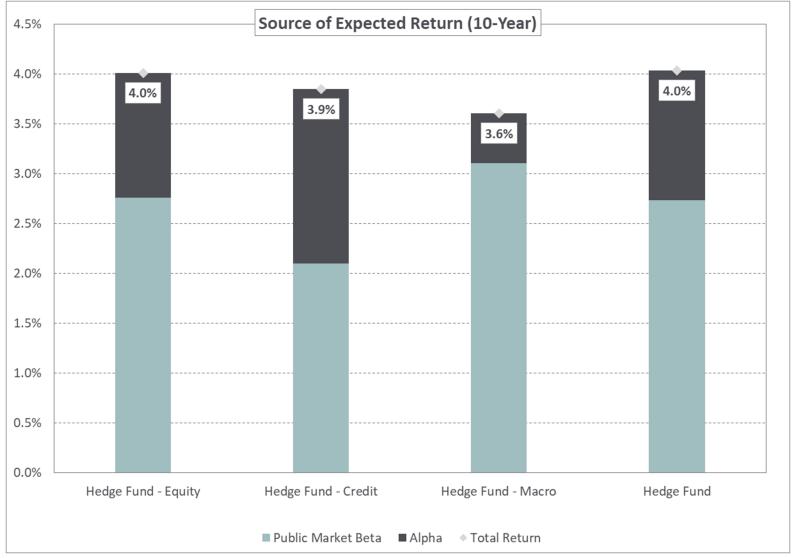
### PRIVATE REAL ASSET BUILDING BLOCKS







### **HEDGE FUND BUILDING BLOCKS**





\*Hedge Funds is a derived composite of 40% Long/Short, 40% Credit, 20% Macro



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# **NEXT STEPS**

### **NEXT STEPS**

- Deterministic and Stochastic Forecasting
- Liquidity Analysis
- Scenario Analysis
- Risk Budgeting

NEPC Runs Projections

## Board Evaluation of Output

- Review current and projected financial status of Plan
- Assess appropriateness of current asset allocation vs. alternatives
- Determination of strategic asset mix

- Asset Class reviews
  - Equity
  - Fixed Income
  - Real Assets
- Update Investment Policy
- Conduct searches (if necessary)

NEPC/Staff Develop a Work Plan



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# **APPENDIX**

NEPC, LLC —

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### PRIVATE MARKETS COMPOSITES

# Assumed public market beta composites for private market return assumptions are detailed below:

### **Private Equity:**

Private Equity – Buyout: 25% US Large Cap, 75% US Small/Mid Cap

Private Equity – Secondary: 25% US Large Cap, 75% US Small/Mid Cap

Private Equity – Growth: 50% US Small/Mid Cap, 50% US Microcap

Private Equity – Venture: 25% US Small/Mid Cap, 75% US Microcap

Private Equity - Non-US: 70% International Small Cap, 30% Emerging Small Cap

PE Composite: 34% Buyout, 34% Growth, 15 % Non-US, 8.5% Secondary, 8.5% Venture

### **Private Debt:**

Private Debt - Direct Lending: 100% Bank Loans

Private Debt - Distressed: 20% US Small/Mid Cap, 60% US High Yield, 20% Bank Loans

Private Debt - Credit Opportunities: 34% US SMID Cap, 33% US High Yield, 33% Bank Loans

Private Debt Composite: 50% Direct Lending, 25% Credit Opportunities, 25% Distressed

### **Private Real Assets:**

Private Real Assets - Energy: 30% Comm., 35% Midstream, 35% Public Resource Equity

Private Real Assets - Infra/Land: 30% Commodities, 70% Public Infrastructure

Private Real Estate Debt: 50% CMBS, 50% Core Real Estate



|          | Asset Class                         | 10-Year<br>Return | 30-Year<br>Return | Standard<br>Deviation |
|----------|-------------------------------------|-------------------|-------------------|-----------------------|
|          | Inflation                           | 2.0%              | 2.2%              | _                     |
| MACRO    | Cash                                | 0.8%              | 1.9%              | 0.6%                  |
| JAK      | US Leverage Cost                    | 1.2%              | 2.2%              | 0.7%                  |
| _        | Non-US Cash                         | 0.0%              | 1.1%              | 0.6%                  |
|          | US Large-Cap Equity                 | 5.4%              | 6.3%              | 16.6%                 |
|          | US Small/Mid-Cap Equity             | 5.7%              | 6.6%              | 20.7%                 |
|          | Non-US Developed Equity             | 5.9%              | 6.5%              | 19.7%                 |
|          | Non-US Developed Equity (USD Hedge) | 6.1%              | 6.7%              | 17.7%                 |
|          | Non-US Developed Small-Cap Equity   | 6.1%              | 6.8%              | 22.5%                 |
|          | Emerging Market Equity              | 7.5%              | 8.4%              | 28.7%                 |
|          | Emerging Market Small-Cap Equity    | 8.1%              | 8.6%              | 31.5%                 |
| <b>≱</b> | Global Equity*                      | 6.2%              | 7.0%              | 18.1%                 |
| EQUITY   | Hedge Fund – Equity                 | 4.0%              | 5.0%              | 11.5%                 |
| EQ       | Private Equity - Buyout             | 7.6%              | 8.5%              | 18.5%                 |
|          | Private Equity - Growth             | 8.9%              | 9.8%              | 31.0%                 |
|          | Private Equity - Venture            | 10.4%             | 10.7%             | 45.0%                 |
|          | Private Equity – Secondary          | 7.1%              | 8.0%              | 19.5%                 |
|          | Non-US Private Equity               | 10.7%             | 10.7%             | 32.0%                 |
|          | Private Equity*                     | 9.3%              | 10.1%             | 24.8%                 |
|          | China Equity                        | 7.0%              | 7.8%              | 29.5%                 |
|          | US Microcap Equity                  | 6.6%              | 7.4%              | 25.0%                 |



|        | Asset Class                                | 10-Year<br>Return | 30-Year<br>Return | Standard<br>Deviation |
|--------|--|-------------------|-------------------|-----------------------|
|        | US TIPS                                    | 1.0%              | 2.1%              | 5.8%                  |
|        | US Treasury Bond                           | 0.9%              | 2.0%              | 5.3%                  |
|        | US Corporate Bond                          | 2.2%              | 3.7%              | 7.3%                  |
|        | US Mortgage-Backed Securities              | 1.2%              | 2.3%              | 6.5%                  |
|        | US Aggregate Bond*                         | 1.4%              | 2.7%              | 5.7%                  |
|        | US High Yield Corporate Bond               | 2.9%              | 5.0%              | 11.5%                 |
|        | US Leveraged Loan                          | 3.9%              | 4.8%              | 9.2%                  |
|        | Emerging Market External Debt              | 3.0%              | 4.5%              | 13.0%                 |
|        | <b>Emerging Market Local Currency Debt</b> | 5.0%              | 5.1%              | 13.0%                 |
|        | Non-US Government Bond                     | 0.6%              | 1.7%              | 9.5%                  |
|        | Non-US Government Bond (USD Hedge)         | 0.8%              | 1.9%              | 3.9%                  |
| Ė      | Global Government Bond*                    | 0.7%              | 1.8%              | 7.9%                  |
| CREDIT | Global Government Bond (USD Hedge)*        | 0.9%              | 2.0%              | 4.0%                  |
| S      | Non-US Inflation-Linked Bond (USD Hedge)   | 0.1%              | 1.1%              | 5.9%                  |
|        | Diversified Fixed Income*                  | 2.8%              | 4.1%              | 7.5%                  |
|        | Global Multi-Sector Fixed Income*          | 2.8%              | 4.1%              | 7.5%                  |
|        | Absolute Return Fixed Income*              | 2.3%              | 3.5%              | 3.8%                  |
|        | US Municipal Bond                          | 2.0%              | 2.3%              | 6.0%                  |
|        | US Municipal Bond (1-10 Year)              | 1.1%              | 1.9%              | 4.5%                  |
|        | US High Yield Municipal Bond               | 2.8%              | 3.9%              | 12.0%                 |
|        | Hedge Fund - Credit                        | 3.9%              | 5.3%              | 10.4%                 |
|        | Private Debt - Credit Opportunities        | 6.2%              | 7.0%              | 14.0%                 |
|        | Private Debt - Distressed                  | 7.2%              | 7.8%              | 14.0%                 |
|        | Private Debt - Direct Lending              | 5.4%              | 7.4%              | 11.5%                 |
|        | Private Debt*                              | 6.1%              | 7.5%              | 11.9%                 |



|        | Asset Class   | 10-Year<br>Return | 30-Year<br>Return | Standard<br>Deviation |
|--------|---|-------------------|-------------------|-----------------------|
|        | US Short-Term TIPS (1-3 Year)                             | 1.1%              | 2.0%              | 3.2%                  |
|        | US Short-Term Treasury Bond (1-3 Year)                    | 1.0%              | 2.0%              | 2.1%                  |
|        | US Short-Term Corporate Bond (1-3 Year)                   | 1.8%              | 3.7%              | 3.0%                  |
|        | <b>US Short-Term High Yield Corporate Bond (1-3 Year)</b> | 2.5%              | 3.5%              | 8.6%                  |
|        | US Intermediate-Term TIPS (3-10 Year)                     | 0.9%              | 2.1%              | 5.4%                  |
|        | US Intermediate-Term Treasury Bond (3-10 Year)            | 1.0%              | 2.1%              | 5.4%                  |
|        | US Intermediate-Term Corporate Bond (3-10 Year)           | 2.3%              | 3.8%              | 7.6%                  |
|        | US Long-Term Treasury Bond (10-30 Year)                   | 0.7%              | 1.9%              | 11.5%                 |
|        | US Long-Term TIPS (10-30 Year)                            | 1.0%              | 2.0%              | 10.9%                 |
|        | US Long-Term Corporate Bond (10-30 Year)                  | 2.3%              | 3.8%              | 11.5%                 |
|        | 20+ Year US Treasury STRIPS                               | 0.4%              | 1.7%              | 21.2%                 |
| H      | US Long-Term Government/Credit*                           | 1.7%              | 3.1%              | 10.6%                 |
|        | US Corporate Bond - AAA                                   | 1.5%              | 2.8%              | 5.9%                  |
| CREDIT | US Corporate Bond – AA                                    | 1.6%              | 2.9%              | 5.9%                  |
| O      | US Corporate Bond – A                                     | 1.9%              | 3.3%              | 7.2%                  |
|        | US Corporate Bond - BBB                                   | 2.5%              | 3.9%              | 8.0%                  |
|        | US Corporate Bond – BB                                    | 3.9%              | 5.6%              | 9.9%                  |
|        | US Corporate Bond – B                                     | 3.0%              | 4.9%              | 12.1%                 |
|        | US Corporate Bond - CCC/Below                             | -3.4%             | -0.8%             | 21.7%                 |
|        | US Securitized Bond                                       | 1.8%              | 3.1%              | 9.0%                  |
|        | US Collateralized Loan Obligation                         | 2.3%              | 3.3%              | 7.5%                  |
|        | US High Yield Securitized Bond                            | 2.3%              | 4.5%              | 11.0%                 |
|        | US High Yield Collateralized Loan Obligation              | 4.6%              | 5.7%              | 11.0%                 |
|        | US Taxable Municipal Bond                                 | 2.5%              | 3.9%              | 7.5%                  |
|        | 10 Year US Treasury Bond                                  | 0.9%              | 2.3%              | 7.4%                  |
|        | 10 Year Non-US Government Bond (USD Hedge)                | -0.1%             | 1.1%              | 5.1%                  |



|             | Asset Class                              | 10-Year<br>Return | 30-Year<br>Return | Standard<br>Deviation |
|-------------|--|-------------------|-------------------|-----------------------|
|             | Commodity Futures                        | 0.9%              | 3.3%              | 18.5%                 |
|             | Midstream Energy                         | 7.4%              | 7.3%              | 27.0%                 |
|             | Public Real Assets (Multi-Asset)*        | 3.6%              | 5.2%              | 12.2%                 |
|             | US REIT                                  | 5.5%              | 6.7%              | 21.4%                 |
| SL          | Global Infrastructure Equity             | 5.9%              | 6.6%              | 20.4%                 |
| ASSETS      | Global Natural Resources Equity          | 6.7%              | 7.0%              | 22.8%                 |
| REAL A      | Gold                                     | 2.9%              | 3.7%              | 16.4%                 |
| RE          | Core Real Estate                         | 4.4%              | 5.6%              | 15.0%                 |
|             | Non-Core Real Estate                     | 5.5%              | 7.0%              | 21.0%                 |
|             | Private Debt - Real Estate*              | 4.1%              | 5.2%              | 11.0%                 |
|             | Private Real Assets - Natural Resources* | 8.0%              | 8.5%              | 32.0%                 |
|             | Private Real Assets – Infrastructure*    | 5.4%              | 6.6%              | 12.5%                 |
| SET         | Hedge Fund - Macro                       | 3.6%              | 4.7%              | 9.2%                  |
| MULTI-ASSET | Hedge Fund*                              | 4.0%              | 5.2%              | 8.7%                  |
| Ė           | 60% S&P 500 & 40% US Aggregate Bond*     | 4.1%              | 5.1%              | 10.3%                 |
| Σ           | 60% MSCI ACWI & 40% US Aggregate Bond*   | 4.6%              | 5.6%              | 11.8%                 |



### **INFORMATION DISCLAIMER**

Past performance is no guarantee of future results.

The goal of this report is to provide a basis for substantiating asset allocation recommendations. The opinions presented herein represent the good faith views of NEPC as of the date of this report and are subject to change at any time.

Information on market indices was provided by sources external to NEPC. While NEPC has exercised reasonable professional care in preparing this report, we cannot guarantee the accuracy of all source information contained within.

All investments carry some level of risk. Diversification and other asset allocation techniques do not ensure profit or protect against losses.

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#### REPORT TO BOARD OF ADMINISTRATION

From: Investment Committee MEETING: JANUARY 26, 2021

Sung Won Sohn, Chair ITEM: VII – C

Elizabeth Lee Nilza R. Serrano

SUBJECT: INVESTMENT MANAGER CONTRACT WITH CORECOMMODITY MANAGEMENT,

LLC REGARDING THE MANAGEMENT OF AN ACTIVE LONG-ONLY COMMODITIES

PORTFOLIO AND POSSIBLE BOARD ACTION

| ACTION: 🛛 | CLOSED: | CONSENT: $\square$ | RECEIVE & FILE: |  |
|-----------|---------|--------------------|-----------------|--|
|-----------|---------|--------------------|-----------------|--|

#### Recommendation

That the Board:

- 1. Approve termination of the contract with CoreCommodity Management, LLC for management of an active long-only commodities portfolio.
- 2. Authorize staff to redeploy the assets to the unallocated cash account.

### **Executive Summary**

On January 12, 2021, the Committee considered and concurred with the staff recommendation to terminate the contract with CoreCommodity Management, LLC (CoreCommodity) and redeploy the assets to the unallocated cash account.

#### **Discussion**

On January 12, 2021, the Committee considered the attached staff report (Attachment 1) recommending a termination of the contract with CoreCommodity. The firm manages an active long-only commodities portfolio for LACERS valued at approximately \$215 million as of December 31, 2020. The initial three-year contract became effective on June 1, 2015 and was renewed for a subsequent three-year period effective June 1, 2018; the current contract expires on May 31, 2021.

The Committee discussed the organization, management, investment strategy, and fees with staff. CoreCommodity was placed on watch status for an initial one-year period effective September 15, 2020 due to underperformance as of June 30, 2020, pursuant to the LACERS Manager Monitoring Policy (Policy). Staff provided a verbal update of unaudited performance as of December 31, 2020, as

presented in the following tables, and discussed CoreCommodity's underperformance since inception of the account.

| Annualized Performance as of 12/31/20 (Unaudited Net-of-Fees) |       |       |       |      |       |  |
|---|-------|-------|-------|------|-------|--|
| 3-Month 1-Year 3-Year 5-Year                                  |       |       |       |      |       |  |
| CoreCommodity   | 10.31 | -2.86 | -2.61 | 1.07 | -3.79 |  |
| Bloomberg Commodity Index                                     | 10.19 | -3.12 | -2.53 | 1.03 | -3.69 |  |
| % of Excess Return  | 0.12  | 0.26  | -0.08 | 0.04 | -0.10 |  |

<sup>&</sup>lt;sup>1</sup>Inception date: 6/02/2015

| Calendar Year Performance as of 12/31/20 (Net-of-Fees) |       |       |        |      |       |        |
|--|-------|-------|--------|------|-------|--------|
| 2020 <sup>2</sup> 2019 2018 2017 2016 6/02/            |       |       |        |      |       |        |
| CoreCommodity  | -2.86 | 6.62  | -10.82 | 2.16 | 11.78 | -23.58 |
| Bloomberg Commodity Index                              | -3.12 | 7.69  | -11.25 | 1.70 | 11.77 | -23.00 |
| % of Excess Return                                     | 0.26  | -1.07 | 0.43   | 0.46 | 0.01  | -0.58  |

<sup>&</sup>lt;sup>2</sup>Unaudited

Additionally, staff and NEPC, LLC (NEPC), LACERS' General Fund Consultant, discussed the low expected return outlook for commodities strategies according to NEPC's capital markets research. Based on this outlook, staff and NEPC anticipate making a recommendation to eliminate the commodities allocation from the LACERS portfolio as part of the asset liability study to be completed in the current calendar year (2021).

Based on the discussion and responses by staff and NEPC, the Committee concurs with the staff recommendation to terminate the contract with CoreCommodity and redeploy the assets to the unallocated cash account for operational liquidity needs. Should the Board approve these recommendations, staff would initiate the 30-day written notice of termination clause and liquidate the assets to cash as soon as practicable.

#### Strategic Alignment

A contract termination with CoreCommodity and redeployment of the assets aligns with the Strategic Plan Goal to optimize long-term risk adjusted investment returns (Goal IV). The discussion of the investment manager's organization, strategy, performance, and management fee structure aligns with the Strategic Plan Goal to uphold good governance practices which affirm transparency, accountability, and fiduciary duty (Goal V).

Prepared By: Barbara Sandoval, Investment Officer II, Investment Division

### NMG/RJ/BF/BS:rm

 Investment Committee Recommendation Report dated January 12, 2021
 Proposed Resolution Attachments:





REPORT TO INVESTMENT COMMITTEE MEETING: JANUARY 12, 2021

From: Neil M. Guglielmo, General Manager ITEM: IV

Mifm. Duglishus

SUBJECT: INVESTMENT MANAGER CONTRACT WITH CORECOMMODITY MANAGEMENT,

LLC REGARDING THE MANAGEMENT OF AN ACTIVE LONG-ONLY COMMODITIES

PORTFOLIO AND POSSIBLE COMMITTEE ACTION

| ACTION. M. CLOSED. M. CONSENT. M. RECEIVE & FILE. | ACTION: 🛛 | CLOSED: | CONSENT: | RECEIVE & FILE: |
|---|-----------|---------|----------|-----------------|
|---|-----------|---------|----------|-----------------|

### **Recommendation**

That the Committee recommend to the Board:

- 1. Termination of the contract with CoreCommodity Management, LLC for management of an active long-only commodities portfolio.
- 2. Redeployment of the assets to the unallocated cash account.

### **Executive Summary**

CoreCommodity Management, LLC (CoreCommodity) has managed an active long-only commodities portfolio for LACERS since June 2015. LACERS' portfolio was valued at approximately \$215 million as of December 31, 2020. CoreCommodity's current contract expires on May 31, 2021. Staff and NEPC, LLC (NEPC), recommend contract termination with CoreCommodity due to underperformance of the manager and a low expected return outlook for commodities strategies in general.

#### **Discussion**

#### Background

The Board hired CoreCommodity in 2014 to manage an active long-only commodities strategy benchmarked against the Bloomberg Commodity Index. CoreCommodity's strategy, named the Diversified I Program, seeks to generate excess returns through commodity yield enhancement techniques including forward futures contract selection, discretionary timing of execution, active and opportunistic trading, and risk monitoring. CoreCommodity's portfolio management team is led by Adam De Chiara, who is the Co-President and Co-Founder of CoreCommodity. Mr. De Chiara has 29 years of commodities experience, which includes his previous roles at Jeffries, AIG, and Goldman Sachs. Mr. De Chiara originally designed and launched the Dow Jones—AIG Commodity Index in 1997 (now known as the Bloomberg Commodity Index). LACERS' portfolio was valued at approximately \$215 million as of December 31, 2020. CoreCommodity's current contract expires on May 31, 2021.

### Organization

CoreCommodity was founded in 2003 and is owned by senior management and LAM Holdings LLC, which is a subsidiary of Leucadia National Corporation (NYSE: LUK). The firm has 25 employees and is based in Stamford, Connecticut. As of December 31, 2020, CoreCommodity managed approximately \$4.2 billion of total firm assets, with approximately \$1.4 billion of assets in the Diversified I Program and related strategies.

#### Due Diligence

CoreCommodity's organization, investment philosophy, strategy, and process have not changed over the contract period.

#### Performance

As of December 31, 2020, CoreCommodity has underperformed the benchmark (unaudited and net of fees) across all time periods, as presented in the table below.

| Annualized Performance as of 12/31/20 (Unaudited Net-of-Fees) |        |        |                                 |       |       |
|---|--------|--------|---------------------------------|-------|-------|
|   | 3-Year | 5-Year | Since<br>Inception <sup>1</sup> |       |       |
| CoreCommodity   | 9.70   | -3.39  | -2.79                           | 0.96  | -3.88 |
| Bloomberg Commodity Index                                     | 10.19  | -3.12  | -2.53                           | 1.03  | -3.69 |
| % of Excess Return  | -0.49  | -0.27  | -0.26                           | -0.07 | -0.19 |

<sup>&</sup>lt;sup>1</sup>Inception date 4/15/15

Calendar year performance is presented in the table below as supplemental information.

| Calendar Year Performance as of 12/31/20 (Net-of-Fees) |                   |       |        |      |       |                      |
|--|-------------------|-------|--------|------|-------|----------------------|
|  | 2020 <sup>2</sup> | 2019  | 2018   | 2017 | 2016  | 4/14/15-<br>12/31/15 |
| CoreCommodity  | -3.39             | 6.62  | -10.82 | 2.16 | 11.78 | -22.19               |
| Bloomberg Commodity Index                              | -3.12             | 7.69  | -11.25 | 1.70 | 11.77 | -20.54               |
| % of Excess Return                                     | -0.27             | -1.07 | 0.43   | 0.46 | 0.01  | -1.65                |

<sup>&</sup>lt;sup>2</sup>Unaudited

Pursuant to the LACERS Manager Monitoring Policy, CoreCommodity was placed "On Watch" for an initial one-year period effective September 15, 2020 for triggering the following Policy watch list criteria as of June 30, 2020:

- 1. Annualized net performance is below benchmark for trailing 5 years
- 2. Annualized net Information Ratio trailing 5 years relative to its benchmark is below 0.20

In light of CoreCommodity's underperformance since inception and a low expected return outlook for commodities strategies in general according to NEPC's capital markets research (as discussed in

Attachment 1), staff and NEPC recommend termination of the contract and redeployment of the assets to LACERS unallocated cash account for operational liquidity needs. Additionally, staff and NEPC anticipate making a recommendation to eliminate the commodities allocation from the LACERS portfolio as part of the asset liability study to be completed in the current calendar year (2021).

#### Fees

LACERS pays CoreCommodity an effective fee of 60 basis points (0.60%), which is approximately \$1,290,000 annually based on the value of LACERS' assets as of December 31, 2020. The fee ranks in the 67<sup>th</sup> percentile of fees charged by similar managers in the eVestment database (i.e., 66% of likemanagers have lower fees).

General Fund Consultant Opinion
NEPC concurs with this recommendation.

#### **Strategic Alignment**

A contract termination with CoreCommodity and reallocation of the assets aligns with the Strategic Plan Goal to optimize long-term risk adjusted investment returns (Goal IV). The discussion of the investment manager's profile, strategy, performance, and management fee structure aligns with the Strategic Plan Goal to uphold good governance practices which affirm transparency, accountability, and fiduciary duty (Goal V).

Prepared By: Barbara Sandoval, Investment Officer II, Investment Division

NMG/RJ/BF/BS:jp

Attachment: 1. Consultant Recommendation – NEPC

IC Meeting: 1/12/21 Item IV Attachment 1



**To:** Los Angeles City Employees' Retirement System Investment Committee

From: NEPC, LLC

**Date:** January 12, 2021

**Subject:** CoreCommodity Management, LLC – Contract Renewal

#### Recommendation

NEPC recommends Los Angeles City Employees' Retirement System (LACERS) terminate its contract with CoreCommodity Management, LLC ('CoreCommodity'). NEPC is currently working on an Asset Liability Modeling study for LACERS. Within this context, we have evaluated the use of commodities in the Public Real Asset class and will not be recommending an allocation to commodities going forward. Our shorter-term (10 year) and longer-term (30 year) inflation assumptions are quite modest and therefore, we will be recommending a reduction to the Real Asset component of LACERS portfolio. With a very modest allocation to commodities currently (i.e., 1% of total plan assets) and a low expected return for the asset class, we want to take this opportunity to simplify LACERS' Real Asset portfolio. Further, we recommend that the assets currently with CoreCommodity be placed in the cash account.

#### **Background**

CoreCommodity was hired to manage an allocation to commodities on June 2, 2015 within the Public Real Assets allocation. The portfolio provides the Plan with exposure across 23 commodities found in the Bloomberg Barclays Commodity Index against which the portfolio's strategy is benchmarked. The performance objective is to outperform the Bloomberg Commodity Index over a full market cycle (normally three-to-five years). Performance of the CoreCommodity Diversified I strategy is currently on watch due to performance pursuant to the LACERS' Manager Monitoring Policy. As of November 30, 2020, CoreCommodity managed \$206.0 million, or 1.0% of Plan assets.

The firm was founded in 2003 by executives from Jeffries Asset Management ('JAM') and currently has 25 employees based in Stamford Connecticut with \$3.8 billion in assets under management as of October 31, 2020. In 2012, JAM rebranded the commodities business under the name CoreCommodity Management, LLC. CoreCommodity Management, LLC (the 'firm') is a wholly-owned subsidiary of CoreCommodity Capital, LLC. CoreCommodity Capital, LLC is owned by employees of CoreCommodity Management, LLC. Additionally, LAM Holding LLC, a wholly owned subsidiary of Leucadia National Corp., holds an economic interest in CoreCommodity Capital, LLC. The firm has not had any significant personnel turnover in the past year and has been stable over the past several years in positions of investment portfolio management and investment strategy.

The firm's Diversified I product has approximately \$1.2 billion in total AUM. The investment objective of Diversified I is to provide investors with long exposure to commodities as an asset class and outperform the Bloomberg Commodity index. In order to gain exposure to

IC Meeting: 1/12/21 Item IV Attachment 1



commodities, the firm can purchase commodity futures contracts of the 23 global commodities included in the Bloomberg Commodity index. The firm invests directly in commodity futures contracts and does not use OTC swaps, structured notes or other OTC derivatives when managing portfolios. Portfolio weightings are rebalanced monthly in order to reduce directional basis risk and tracking error to the benchmark. They do manage the yield associated with the forward term structure of commodity futures markets in order to seek sustainable outperformance uncorrelated to market direction relative to the Bloomberg Commodity Index over time. The techniques utilized by the team are intended to mitigate the negative effects of roll yield on investors in both rising and falling commodity markets. Additionally, whereas passive strategies and benchmark indexes rely on end-of-day settlements as pricing inputs, active strategies like the Diversified I incorporate live execution, which provides for a wider opportunity set to add value via trade execution. The investment team additionally may consider such factors as the degree of liquidity and tradability of the underlying markets, technical perspectives, market fundamentals, volatility analysis, market perception of geopolitical risk/events, macroeconomic trends and indicators, among others, in selecting specific commodity futures contracts (i.e., selected calendar months) for inclusion in the portfolio. The investment approach is ultimately an iterative process between qualitative inputs from the investment management team and signals derived from the proprietary systems.

The portfolio does not employ the use of leverage except for the leverage inherent in trading futures contracts. The final portfolio will closely mirror the Bloomberg Commodity Index and be comprised of futures contracts along the forward curve. Forward curves and little or no spread volatility provide less opportunity for outperformance by yield management. Additionally, markets in which forward curves shift continuously and rapidly between contango / backwardation and backwardation / contango may be disadvantageous to the outperformance of the fund.

The LACERS portfolio is managed on an unleveraged basis, meaning, the notional value of exposures taken in the commodities futures markets is matched by a cash position held in the trust account. The cash position is swept into a Short-term Investment Fund ('STIF') and earns a short-term treasury-like yield.

#### **Performance**

Referring to Exhibit 1, as of November 30, 2020, the portfolio has underperformed the benchmark since inception by 0.09% (-4.86% vs. -4.77%). In the past year, ended November 30, 2020, the portfolio outperformed the benchmark by 0.32% (-2.74% vs. -3.06%). Referring to Exhibit 2, historical cumulative performance turned positive for approximately four quarters ending in the first quarter of 2019 when compared to the benchmark the portfolio has been underperforming. Active risk, as measured by tracking error, since inception ended November 30, 2020 has been 1.09% and the information ratio since inception has been 0.10.

#### **Fees**

The portfolio has an asset-based fee of 0.60% (60 basis points) annually. This fee ranks the 67<sup>th</sup> percentile in eVestment All Commodities universe. That is, 67% of the 14 portfolios within the universe are less expensive.

IC Meeting: 1/12/21 Item IV Attachment 1



#### **Conclusion**

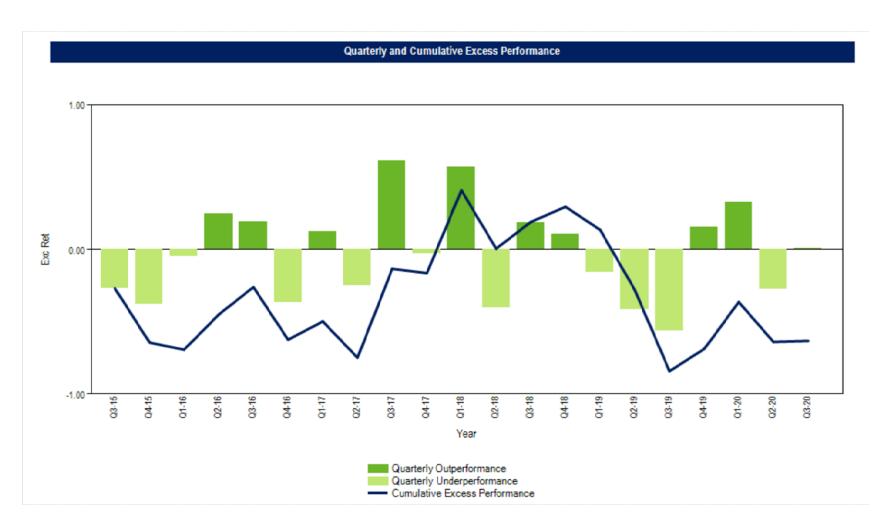
CoreCommodity Diversified I has performed in line with expectations, though underperforming its benchmark since inception. The team has been stable and has a sound investment process strategy that can lead to positive outcomes in certain market environments. Including a commodity portfolio provides: 1) diversification to traditional stock and bond exposure; 2) potential for return as demand for raw materials increases; and 3) can provide a potential hedge against inflation. However, based on our view of a low inflationary environment for the coming years and a low return assumption for commodities, NEPC will be recommending the elimination of the commodity portfolio and a reduction to LACERS' public Real Assets allocation. In anticipation of this, NEPC recommends that the contract extension not be granted for CoreCommodity.

The following tables provide specific performance information, net of fees referenced above.

Exhibit 1

|                                     | Ending November 30,<br>2020 |            |        |            |             |             |              |
|-------------------------------------|-----------------------------|------------|--------|------------|-------------|-------------|--------------|
|                                     | Market Value(\$)            | 3<br>Mo(%) | YTD(%) | 1<br>Yr(%) | 3<br>Yrs(%) | 5<br>Yrs(%) | Inception(%) |
| CoreCommodity Mgmt                  | 205,988,940                 | 1.67       | -7.46  | -2.74      | -3.32       | -0.27       | -4.86        |
| Bloomberg Commodity Index TR<br>USD |                             | 1.45       | -7.71  | -3.06      | -3.15       | -0.57       | -4.77        |
| Excess                              |                             | 0.22       | 0.25   | 0.32       | -0.17       | 0.3         | -0.09        |

Exhibit 2





# CONTRACT TERMINATION CORECOMMODITY MANAGEMENT, LLC ACTIVE LONG-ONLY COMMODITIES PORTFOLIO MANAGEMENT

#### PROPOSED RESOLUTION

WHEREAS, LACERS' current contract with CoreCommodity Management, LLC (CoreCommodity) for active long-only commodities portfolio management expires on May 31, 2021; and,

WHEREAS, CoreCommodity was placed "On-Watch" for an initial one-year period effective September 15, 2020 due to underperformance, pursuant to the LACERS Manager Monitoring Policy; and,

WHEREAS, as of December 31, 2020, the strategy has underperformed the benchmark since inception; and,

WHEREAS, commodities strategies have a low expected return outlook based on research by LACERS' General Fund Consultant, NEPC, LLC; and

WHEREAS, on January 26, 2021, the Board approved the Investment Committee's recommendation to terminate the contract with CoreCommodity and redeploy the assets to the unallocated cash account.

NOW, THEREFORE, BE IT RESOLVED, that the Board hereby approves the termination of the contract with CoreCommodity and redeployment of the assets to the unallocated cash account.

January 26, 2021





#### REPORT TO BOARD OF ADMINISTRATION

From: Investment Committee MEETING: JANUARY 26, 2021

Sung Won Sohn, Chair ITEM: VII – D

Elizabeth Lee Nilza R. Serrano

SUBJECT: INVESTMENT MANAGER CONTRACT WITH BAIN CAPITAL SENIOR LOAN FUND,

L.P. REGARDING THE MANAGEMENT OF AN ACTIVE U.S. BANK LOANS FUND

AND POSSIBLE BOARD ACTION

| ACTION: 🛛 | CLOSED: | CONSENT: | RECEIVE & FILE: |  |
|-----------|---------|----------|-----------------|--|
|-----------|---------|----------|-----------------|--|

#### Recommendation

#### That the Board:

- 1. Approve a three-year contract renewal with Bain Capital Senior Loan Fund, L.P. for management of an active U.S. bank loans portfolio.
- 2. Authorize the General Manager to approve and execute the necessary documents, subject to satisfactory business and legal terms.

#### **Executive Summary**

On January 12, 2021, the Committee considered and concurred with the staff recommendation for a three-year contract renewal with Bain Capital Senior Loan Fund, L.P. (Bain) for management of an active U.S. bank loans portfolio.

#### **Discussion**

On January 12, 2021, the Committee considered the attached staff report (Attachment 1) recommending a three-year contract renewal with Bain, an active U.S. bank loan commingled fund managed by Bain Capital Credit, LP. The initial three-year contract became effective on July 1, 2015 and was renewed for a subsequent three-year period effective July 1, 2018; the current contract expires on June 30, 2021. As of December 31, 2020, LACERS' portfolio was valued at approximately \$228.6 million.

The Committee discussed the organization, management, investment strategy, and fees with staff. Bain was placed on watch status for an initial one-year period effective July 28, 2020 due to

underperformance as of June 30, 2020, pursuant to the LACERS Manager Monitoring Policy (Policy). Staff indicated that performance through the period ending November 30, 2020 no longer triggers watch list criteria of the Policy; staff will continue to monitor the manager's performance through the expiration of the one-year watch status period. Staff is also in process of negotiating lower fees with the manager. Based on the discussion and responses by staff and NEPC, the Committee concurs with the staff recommendation for a three-year contract renewal with Bain.

### **Strategic Alignment**

A contract renewal with Bain will allow the fund to maintain a diversified exposure to the U.S. bank loans markets, and aligns with the Strategic Plan Goal to optimize long-term risk adjusted investment returns (Goal IV). The discussion of the investment manager's organization, strategy, performance, and management fee structure aligns with the Strategic Plan Goal to uphold good governance practices which affirm transparency, accountability, and fiduciary duty (Goal V).

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

NMG/RJ/BF/JP:rm

Attachments: 1. Investment Committee Recommendation Report dated January 12, 2021

2. Proposed Resolution





REPORT TO INVESTMENT COMMITTEE MEETING: JANUARY 12, 2021

From: Neil M. Guglielmo, General Manager ITEM: V

Milm. Duglishuro

SUBJECT: INVESTMENT MANAGER CONTRACT WITH BAIN CAPITAL CREDIT, LP

REGARDING THE MANAGEMENT OF AN ACTIVE U.S. BANK LOANS PORTFOLIO

AND POSSIBLE COMMITTEE ACTION

ACTION: ☐ CLOSED: ☐ CONSENT: ☐ RECEIVE & FILE: ☐

### Recommendation

That the Committee recommend to the Board a three-year contract renewal with Bain Capital Credit, LP for management of an active U.S. bank loans portfolio.

### **Executive Summary**

Bain Capital Credit, LP (Bain) has managed an active U.S. bank loans portfolio for LACERS since June 2015. LACERS' portfolio was valued at approximately \$225.4 million as of November 30, 2020. Bain's current contract expires on June 30, 2021. Staff and NEPC, LLC (NEPC), LACERS' General Fund Consultant, recommend a three-year contract renewal with Bain.

### **Discussion**

### Background

The Board hired Bain, formerly known as Sankaty Advisors, LLC (Sankaty Advisors), in February 2015 to manage an active U.S. bank loans portfolio via a commingled fund vehicle called the Bain Capital Senior Loan Fund, L.P. (SLF). The strategy is benchmarked against the Credit Suisse Leveraged Loan Index and seeks to outperform its benchmark by utilizing proprietary research and analytics to identify mispriced bank loans. The portfolio management team is led by Andrew Carlino and John Wright, who are the co-heads of the firm's Liquid and Structured Credit business. Messrs. Carlino and Wright have 25 and 21 years of industry experience, respectively. The team overseeing the SLF consists of four additional portfolio managers: Kimberly Harris, Gauthier Reymondier, Nathaniel Whittier and Viva Hyatt. LACERS' portfolio was valued at \$225.4 million as of November 30, 2020. The current contract expires on June 30, 2021.

### Organization

Bain was founded as Sankaty Advisors in 1998 and is the credit-focused subsidiary of Bain Capital, LP, a global private equity firm. Bain is 100% employee-owned and is headquartered in Boston. As of September 30, 2020, the firm had 349 employees worldwide and managed \$43.7 billion in credit with approximately \$13.4 billion in bank loans and multi-asset credit, \$12.6 billion in structured credit, \$7.0

billion in private credit, and \$10.7 billion in distressed and special situations. The SLF currently has approximately \$1.0 billion in total assets.

### Due Diligence

Bain's investment philosophy, strategy, and process have not changed over the contract period. In June 2019, Jon DeSimone, the head of the firm's Liquid Credit business and an SLF portfolio manager team retired from the firm after a seven-month transition period. As part of the transition, Andrew Carlino and John Wright, existing members of the SLF portfolio management team, were promoted as coheads of the firm's Liquid and Structured Credit business while maintaining their SLF portfolio management responsibilities. Messrs. Carlino and Wright are long tenured Bain professionals who have been with the firm since 2002 and 2000, respectively. Staff and NEPC deem these planned organizational changes to have no material impact to Bain's management of the SLF.

#### Performance

As of November 30, 2020, Bain outperformed its benchmark across all time periods, as presented in the table below.

| Annualized Performance as of 11/30/20 (Net-of-Fees) |         |        |        |        |                                 |  |  |  |  |  |
|---|---------|--------|--------|--------|---------------------------------|--|--|--|--|--|
|   | 3-Month | 1-Year | 3-Year | 5-Year | Since<br>Inception <sup>1</sup> |  |  |  |  |  |
| Bain Capital Senior Loan Fund, L.P.                 | 3.93    | 4.98   | 4.03   | 4.93   | 4.02                            |  |  |  |  |  |
| Credit Suisse Leveraged Loan Index                  | 3.01    | 3.10   | 3.68   | 4.72   | 3.92                            |  |  |  |  |  |
| % of Excess Return                                  | 0.92    | 1.88   | 0.35   | 0.21   | 0.10                            |  |  |  |  |  |

<sup>&</sup>lt;sup>1</sup>Performance inception date 6/30/15.

Calendar year performance is presented in the table below as supplemental information.

| Calendar Year Performance as of 11/30/20 (Net-of-Fees) |                      |       |       |      |       |                      |  |  |  |  |
|--|----------------------|-------|-------|------|-------|----------------------|--|--|--|--|
|  | 1/1/20 -<br>11/30/20 | 2019  | 2018  | 2017 | 2016  | 7/1/15 -<br>12/31/15 |  |  |  |  |
| Bain Capital Senior Loan Fund, L.P.                    | 3.49                 | 7.75  | 0.68  | 4.62 | 9.46  | -3.70                |  |  |  |  |
| Credit Suisse Leveraged Loan Index                     | 1.46                 | 8.17  | 1.14  | 4.25 | 9.88  | -3.16                |  |  |  |  |
| % of Excess Return                                     | 2.03                 | -0.42 | -0.46 | 0.37 | -0.42 | -0.54                |  |  |  |  |

Pursuant to the LACERS Manager Monitoring Policy, Bain was placed "On Watch" for an initial oneyear period effective July 28, 2020 for triggering the following Policy watch list criteria as of June 30, 2020:

- 1. Annualized net performance is below benchmark for trailing 5 years
- 2. Annualized net Information Ratio trailing 5 years relative to its benchmark is below 0.20

As of November 30, 2020, Bain's unaudited performance no longer breaches these Policy criteria. In addition, as of the most recent quarter ending September 30, 2020, Bain's performance is compliant

with the recently revised Policy criteria approved by the Board on November 24, 2020. However, staff will continue to monitor the manager's performance through the expiration of the one-year watch status period.

#### Fees

LACERS pays Bain Capital Credit an effective fee of 43 basis points (0.43%), which is approximately \$969,000 annually based on the value of LACERS' assets as of November 30, 2020. The fee ranks in the 25th percentile of fees charged by similar managers in the eVestment database (i.e., 75% of likemanagers have higher fees).

General Fund Consultant Opinion
NEPC concurs with this recommendation.

### **Strategic Alignment**

A contract renewal with Bain Capital Credit, LP will allow the fund to maintain a diversified exposure to the U.S. bank loans markets, and aligns with the Strategic Plan Goal to optimize long-term risk adjusted investment returns (Goal IV). The discussion of the investment manager's profile, strategy, performance, and management fee structure aligns with the Strategic Plan Goal to uphold good governance practices which affirm transparency, accountability, and fiduciary duty (Goal V).

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

NMG/RJ/BF/JP:rm

Attachment: 1. Consultant Recommendation – NEPC

IC Meeting: 1/12/21 Item V Attachment 1



**To:** Los Angeles City Employees' Retirement System Investment Committee

From: NEPC, LLC

**Date:** January 12, 2021

**Subject:** Bain Capital Credit – Contract Renewal

### Recommendation

NEPC recommends Los Angeles City Employees' Retirement System (LACERS) renew the contract that is currently in place with Bain Capital Credit ('Bain') for a period of three years from the date of contract expiry.

#### **Background**

The Board approved Bain Capital Credit as a manager within Credit Opportunities on February 24, 2015 and the performance inception date is July 1, 2015. As of November 30, 2020, Bain managed \$225.4 million, or 1.1% of Plan assets in the Senior Loan Fund product. The performance objective is to outperform the Credit Suisse Leveraged Loans index annualized over a full market cycle (normally three-to-five years). Bain is currently on watch pursuant to the LACERS Manager Monitoring Policy due to performance.

Bain Capital Credit, LP was founded in 1998 as Sankaty Advisors ('Sankaty') by Jonathan Lavine, Co-Managing Partner of Bain Capital and Chief Investment Officer of Bain Capital Credit, LP as the credit investing arm of Bain Capital. In April of 2016, Sankaty was rebranded to Bain Capital Credit, LP (the 'firm') as part of a larger effort to rebrand their business lines under the Bain name. The firm is 100% employee owned and has approximately \$42 billion in assets under management with \$1 billion of that comprising the Senior Loan Fund product. The firm is a credit specialist managing roughly \$13 billion in bank loans and multi-asset credit, \$11 billion in structured credit, \$7 billion in direct lending and \$11 billion in distressed and special situations. Bain Capital Credit, LP's ultimate owner is Bain Capital Holdings, LP. The limited partners of Bain Capital Holdings, LP are its U.S. Managing Directors. As of July 1, 2020, Bain has 337 employees, 153 of whom are investment professionals.

IC Meeting: 1/12/21 Item V Attachment 1



Bain seeks to construct diversified portfolios of high quality companies and to add value through superior security selection and default avoidance. By employing a very large team of industry experts, Bain can add value by investing in issues and issuers that peer firms choose not to follow due to: 1) a lack of resources; or 2) firm size being so large such that the position would not have a meaningful impact on the portfolio. Bain employs a bottomup approach to credit investing. Bain differentiates itself in its investment process by heavily emphasizing industry level research, where most peers begin at the company level. Portfolio positioning will tilt towards industries with attractive characteristics, such as high barriers to entry, low cyclicality, and diverse profit drivers. Within industries, analysts seek to identify the top companies by assessing product, pricing, customers, and costs with the goal of answering the simple question - "Does anyone care if this company goes away?" A thorough credit analysis is performed on companies where there is a potential investment opportunity. Analysts evaluate credits via a multi-factor assessment of leverage, free cash flow relative to debt, enterprise/liquidation value, and covenant structure. Creditor agreements also undergo a third-party legal assessment, which provides an independent evaluation of security structure.

In June 2019, Jonathan DeSimone, a Portfolio Manager and Managing Director in the Liquid & Structured Credit business, retired from Bain Capital Credit. Bain takes a team-based approach to managing the Senior Loan Strategy. The primary individuals involved with overseeing the comingled funds and related separate accounts in the senior loan strategy are Andy Carlino (CoHead of Liquid Credit), Kim Harris, Viva Hyatt, and Nate Whittier. John Wright (Co-Head of Liquid Credit), Stephanie Walsh, and Dom Debonis are primarily responsible for managing US CLO's and Structured Credit funds/SMA's. Gauthier Reymondier oversees European CLO's and European Loan funds. The teams work collaboratively together however, which provides critical redundancies and back up in the event of departures and/or retirements. John Wright and Andy Carlino assumed the roles of co-Heads after Mr. DeSimone's departure.

#### **Performance**

Referring to Exhibit 1, as of November 30, 2020, the portfolio has outperformed the benchmark since inception by 0.10% (4.02% vs. 3.92%). In the past year, ended November 30, 2020 the portfolio outperformed the benchmark by 1.88% (4.98% vs. 3.10%). Referring to Exhibit 2, since inception ended September 30, 2020, the Bain Senior Loan Fund, LP has underperformed the Credit Suisse Leveraged Loan Index by 0.06%, returning 3.53%, net of fees, and ranked in the 20<sup>th</sup> percentile its peer group. The portfolio has an information ratio of -0.06 and active risk, as measured by tracking error of 0.91%. In the one-year period ended September 30, 2020, the portfolio outperformed the index by 0.71% (1.55% vs. 0.84%) and ranked 15<sup>th</sup> in its peer group. Outperformance in the past one-year was driven by security selection in Energy, Telecom and Consumer Cyclicals.

Referring to Exhibit 3, much of the historical underperformance is a result of a drawdown in the fourth quarter of 2015 which was primarily due to security selection in Energy and Gaming & Leisure names. Positions in Energy, Consumer Cyclical, and Telecom have been net positive contributors to performance.

IC Meeting: 1/12/21 Item V Attachment 1



### **Fees**

The portfolio has an asset-based fee of .43% (43 basis points) annually. This fee ranks in the 25<sup>th</sup> percentile of its peers in the eVestment Floating-Rate Bank Loan Universe. In other words, 75% of the 80 products included in the peer universe have a higher fee than the LACERS account.

### **Conclusion**

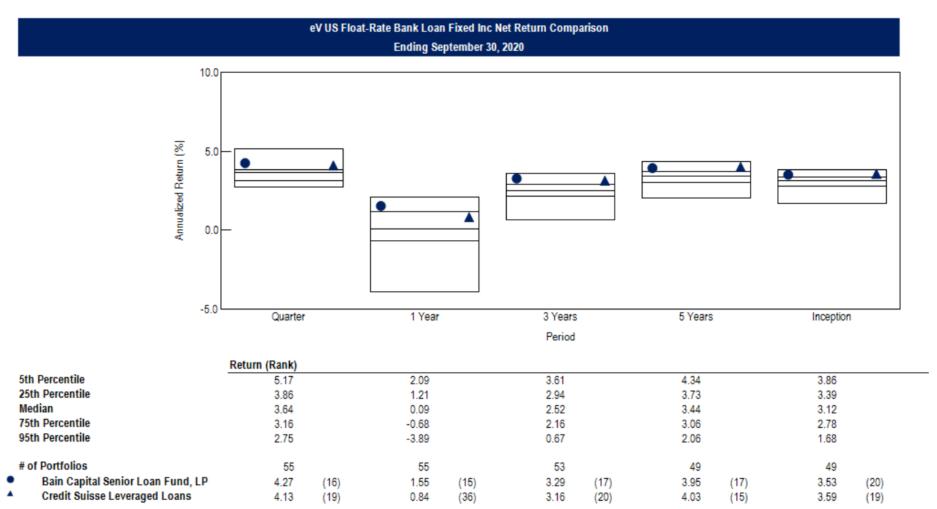
The Bain Senior Loan Fund, LP has outperformed the index since inception ended November 30, 2020 as well as outperforming over shorter periods of time. The Bain portfolio is a diversified, bottom-up fundamental bank loan strategy with flexibility to invest across the capital structure and geographies. NEPC recommends a contract extension for a period of three years from the period of contract expiry.

The following tables provide specific performance information, net of fees referenced above.

Exhibit 1

|                                   | Ending November 30,<br>2020<br>Market Value(\$) | 3<br>Mo(%) | YTD(%) | 1<br>Yr(%) | 3<br>Yrs(%) | 5<br>Yrs(%) | Inception(%) |
|-----------------------------------|---|------------|--------|------------|-------------|-------------|--------------|
| Bain Capital Senior Loan Fund, LP | 225,374,840                                     | 3.93       | 3.49   | 4.98       | 4.03        | 4.93        | 4.02         |
| Credit Suisse Leveraged Loans     |   |            |        |            |             |             |              |
| Index                             |   | 3.01       | 1.46   | 3.10       | 3.68        | 4.72        | 3.92         |
| Excess                            |   | 0.92       | 2.03   | 1.88       | 0.35        | 0.21        | 0.10         |





BOARD Meeting: 1/26/21

Item VII-D
Attachment 1

IC Meeting: 1/12/21 Item V Attachment 1



Exhibit 3

### **Quarterly and Cumulative Excess Performance**



# CONTRACT RENEWAL BAIN CAPITAL SENIOR LOAN FUND, L.P. ACTIVE U.S. BANK LOANS PORTFOLIO MANAGEMENT

### PROPOSED RESOLUTION

WHEREAS, LACERS' current three-year contract with Bain Capital Senior Loan Fund, L.P. (Bain) for management of an active U.S. bank loans portfolio expires on June 30, 2021; and,

WHEREAS, a contract renewal with Bain will allow the fund to maintain a diversified exposure to the U.S. bank loans markets; and,

WHEREAS, on January 26, 2021, the Board approved the Investment Committee's recommendation to approve a three-year contract renewal with Bain.

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>: Bain Capital Senior Loan Fund, L.P.

Service Provided: Active U.S. Bank Loans Portfolio Management

Effective Dates: July 1, 2021 through June 30, 2024

Duration: Three years

Benchmark: Credit Suisse Leveraged Loan Index

Allocation as of

December 31, 2020: \$228.6 million

January 26, 2021





#### REPORT TO BOARD OF ADMINISTRATION

From: Investment Committee

Sung Won Sohn, Chair

MEETING: JANUARY 26, 2021

ITEM: VII – E

Sung Won Sohn, Chair Elizabeth Lee Nilza R. Serrano

| SUBJECT: | FINALIST | FIRMS | OF  | THE    | CORE    | FIXED | INCOME   | MANAGER | SEARCH | AND |
|----------|----------|-------|-----|--------|---------|-------|----------|---------|--------|-----|
|          | ALLOCAT  |       | N A | אם חוי | SCIBI F | BOVDE | NOTION C |         |        |     |

CLOSED: ☐ CONSENT: ☐ RECEIVE & FILE: ☐

| Recom | man | dation |
|-------|-----|--------|
| Recom | men | uation |

That the Board:

ACTION: 🛛

- 1. Award contracts for three-year terms to the following five firms for the Active Core Fixed Income Mandate:
  - Robert W. Baird & Co., Inc.
  - Garcia Hamilton & Associates, L.P.
  - Income Research & Management
  - J.P. Morgan Asset Management
  - Loomis, Sayles & Company, L.P.
- 2. Authorize the General Manager to approve and execute the necessary documents, subject to satisfactory business and legal terms.
- 3. Allocate the Active Core Fixed Income Mandate assets to the five firms according to the allocation plan presented in this report.

### **Executive Summary**

At special meetings held on December 9 and 10, 2020, the Committee interviewed seven finalist firms for the Core Fixed Income Manager Search. In concurrence with staff and NEPC, LLC (NEPC), LACERS' General Fund Consultant, the Committee selected the following five firms to advance to the Board for possible contract award: Robert W. Baird & Co., Inc. (Baird), Garcia Hamilton & Associates, L.P. (GHA), Income Research & Management (IRM), J.P. Morgan Asset Management (JPMAM), and Loomis, Sayles & Company, L.P. (Loomis Sayles). At its meeting of January 12, 2021, the Committee reviewed and concurred with the core fixed income allocation plan proposed by staff and NEPC.

### **Discussion**

The Board-approved request for proposal (RFP) for core fixed income investment managers opened on August 19, 2019, and closed on October 4, 2019. A total of 57 proposals were received, representing 54 firms, including four emerging investment managers. For business reasons, one firm withdrew its proposal after submission. Following review, 54 of the 56 remaining proposals met the minimum qualifications and eight proposals from eight distinct firms were recommended to advance as semi-finalists. Staff and NEPC conducted further due diligence on each semi-finalist and recommended the following seven firms to advance as finalists:

- Robert W. Baird & Co., Inc. (incumbent core fixed income manager)
- Garcia Hamilton & Associates, L.P.
- Income Research & Management
- J.P. Morgan Asset Management
- Loomis, Sayles & Company, L.P. (incumbent core fixed income manager)
- Neuberger Berman Investment Advisers LLC (incumbent core fixed income manager)
- Segal Bryant & Hamill, LLC

At special meetings held on December 9 and 10, 2020, the Committee interviewed the seven finalist firms. The Committee inquired about various aspects of the firms and their respective strategies including risk-adjusted performance measurement, ESG implementation in the investment process, asset size constraints to managing the strategy, and investment approach in the low interest rate environment. The interviews also focused on organizational topics including regulatory compliance and personnel development. Following a discussion with staff and NEPC, the Committee selected Baird, GHA, IRM, JPMAM, and Loomis Sayles for Board consideration and possible contract awards. The Committee instructed staff and NEPC to return at a future Committee meeting with a recommendation for allocating the mandate among the five selected managers.

At its meeting of January 12, 2021, the Committee reviewed the allocation plan proposed by staff and NEPC, as presented in the following table.

| Manager                                     | Proposed Allocation as a % of Asset Class | Proposed Allocation in \$ |
|---|---|---------------------------|
| Robert W. Baird & Co., Inc.^                | 25.00%                                    | \$720 million             |
| Loomis, Sayles & Company, L.P. <sup>^</sup> | 25.00%                                    | \$720 million             |
| Garcia Hamilton & Associates, L.P.          | 16.67%                                    | \$480 million             |
| Income Research & Management                | 16.67%                                    | \$480 million             |
| J.P. Morgan Asset Management                | 16.67%                                    | \$480 million             |
| Total                                       | 100.00%                                   | \$2.88 billion            |

<sup>^</sup>Incumbent LACERS core fixed income managers

Staff discussed the quantitative and qualitative merits of this proposed allocation plan as detailed in Attachment 2. Staff also indicated that the mandate size of \$2.88 billion would be funded from the \$2.5 billion of assets managed by LACERS' current stable of active core fixed income managers; the remainder of \$380 million would be drawn from the passive core fixed income fund managed by State

Street Global Advisors Trust Company. The Committee recommends that the Board award contracts to Baird, GHA, IRM, JPMAM, and Loomis Sayles and allocate the mandate across the firms according to the proposed allocation plan.

### **Strategic Alignment**

The RFP for core fixed income investment managers aligns with the Strategic Plan Goal to optimize long-term risk adjusted investment returns (Goal IV).

<u>Prepared by:</u> Barbara Sandoval, Investment Officer II, Investment Division Jeremiah Paras, Investment Officer I, Investment Division

NMG/RJ/BF/BS/JP:rm

Attachments: 1. Investment Committee Recommendation Report dated December 9-10, 2020

- 2. Investment Committee Recommendation Report dated January 12, 2021
- 3. Proposed Resolutions





REPORT TO INVESTMENT COMMITTEE MEETING: DECEMBER 9-10, 2020

From: Neil M. Guglielmo, General Manager ITEM: II

nefm. Duglifus

SUBJECT: FINALIST FIRMS OF THE CORE FIXED INCOME MANAGER SEARCH AND

POSSIBLE COMMITTEE ACTION

ACTION: ☑ CLOSED: ☐ CONSENT: ☐ RECEIVE & FILE: ☐

### **Recommendation**

That the Committee:

- 1. Interview the following seven firms as finalists for the Core Fixed Income Mandate Search:
  - Robert W. Baird & Co., Inc.
  - Garcia Hamilton & Associates, L.P.
  - Income Research & Management
  - J.P. Morgan Asset Management
  - Loomis, Sayles & Company, L.P.
  - Neuberger Berman Investment Advisers LLC
  - Segal Bryant & Hamill, LLC
- 2. Recommend three or more finalists to the Board for contract award.

### **Executive Summary**

The Board-approved request for proposal (RFP) for core fixed income investment managers opened on August 19, 2019, and closed on October 4, 2019. A total of 57 proposals were received, representing 54 firms, including four emerging investment managers. For business reasons, one firm withdrew its proposal after submission. Following review by staff and NEPC, LLC (NEPC), LACERS General Fund Consultant, 54 of the 56 remaining proposals met the minimum qualifications and eight proposals from eight distinct firms were recommended to advance as semi-finalists. Staff and NEPC conducted further due diligence on each semi-finalist. Of the eight semi-finalists, seven firms are recommended to advance as finalists.

### **Discussion**

### Background

The Board approved an RFP process to evaluate the current marketplace for core fixed income investment managers on October 23, 2018. Based upon the asset allocation targets approved by the Board on April 10, 2018, approximately \$2.44 billion (13.75% of total fund assets) will be allocated to this mandate. LACERS seeks three or more qualified investment management firms to actively manage publicly-traded core fixed income investment strategies through separately managed accounts.

The search opened on August 19, 2019, and closed on October 4, 2019. The search was advertised in the Pensions and Investments and Emerging Manager Monthly publications. The RFP was published on LACERS' website and the websites of NEPC, Association of Asian American Investment Managers, and New America Alliance. Further, the RFP was emailed to all contacts within the LACERS Investment RFP/RFI Notification System database.

### Search Results

A total of 57 proposals were received, representing 54 firms, including four emerging investment managers. For business reasons, one firm withdrew its proposal after submission. Following a review of the minimum qualifications (MQs) required to participate in the search, 54 of the 56 remaining proposals met the MQs, including two of the four proposals from the emerging investment managers.

On September 8, 2020, the Committee reviewed NEPC's candidate evaluation report and concurred with the staff recommendation to advance the following eight firms as semi-finalists in the search:

- Robert W. Baird & Co., Inc. (incumbent fixed income manager)<sup>1</sup>
- C.S. McKee, L.P.
- Garcia Hamilton & Associates, L.P.
- Income Research & Management
- J.P. Morgan Asset Management
- Loomis, Sayles & Company, L.P. (incumbent fixed income manager)<sup>2</sup>
- Neuberger Berman Investment Advisers LLC (incumbent fixed income manager)<sup>3</sup>
- Segal Bryant & Hamill, LLC<sup>4</sup>

### Additional Due Diligence Activities

Staff and NEPC conducted due diligence meetings with all eight firms to obtain a better understanding of potential investment and organizational risks. Staff and NEPC interviewed various professionals on topics including, but not limited to, overall business strategy and growth, organization and reporting structure, staffing and compensation, investment philosophy and strategy, trading, risk management,

<sup>&</sup>lt;sup>1</sup> Managed approximately \$360 million for LACERS in core fixed income strategy as of November 30, 2020; Strategy submitted under proposal is distinct from current LACERS strategy

<sup>&</sup>lt;sup>2</sup> Managed approximately \$894 and \$246 million for LACERS in core fixed income and high yield fixed income strategies, respectively, as of November 30, 2020

<sup>&</sup>lt;sup>3</sup> Managed approximately \$905 million for LACERS in core fixed income strategy as of November 30, 2020

<sup>&</sup>lt;sup>4</sup> Managed approximately \$85 million for LACERS in domestic small cap value equities strategy as of November 30, 2020

compliance and controls, and technology. Staff also conducted reference checks and conferred with NEPC's manager research team.

Based upon these due diligence activities, staff recommends the following seven firms as the proposed finalists to consider for hire:

- Robert W. Baird & Co., Inc. (incumbent fixed income manager)
- Garcia Hamilton & Associates, L.P.
- Income Research & Management
- J.P. Morgan Asset Management
- Loomis, Sayles & Company, L.P. (incumbent fixed income manager)
- Neuberger Berman Investment Advisers LLC (incumbent fixed income manager)
- Segal Bryant & Hamill, LLC

These firms exhibit organizational stability, strong management teams, well-articulated investment strategies consistent with LACERS' objectives, well-defined risk management and compliance practices, and track records of adding value. Staff also received positive feedback from references for these firms. NEPC concurs with staff's recommendation.

### **Strategic Alignment**

The RFP for core fixed income investment managers aligns with the Strategic Plan Goal to optimize long-term risk adjusted investment returns (Goal IV).

<u>Prepared by:</u> Barbara Sandoval, Investment Officer II, Investment Division Jeremiah Paras, Investment Officer I. Investment Division

NMG/RJ/BF/BS/JP:rm

Attachments:

- 1. Finalist Information Matrix and Performance Returns
- 2. Presentation by Garcia Hamilton & Associates, L.P.
- 3. Presentation by Income Research & Management
- 4. Presentation by J.P. Morgan Asset Management
- 5. Presentation by Segal Bryant & Hamill, LLC
- 6. Presentation by Robert W. Baird & Co., Inc.
- 7. Presentation by Loomis, Sayles & Company, L.P.
- 8. Presentation by Neuberger Berman Investment Advisers LLC

### FINALISTS OF THE ACTIVE CORE FIXED INCOME INVESTMENT MANAGER SEARCH FINALIST INFORMATION MATRIX as of September 30, 2020

| - ·  |   |  |   |  |
|--|---|--|---|--|
| Firm Name  | Robert W. Baird & Co. Incorporated  | Garcia Hamilton & Associates, L.P.   | Income Research & Management  | J.P. Morgan Asset Management   |
| Strategy Name  | Baird Advisors Core Bond  | Fixed Income - Aggregate   | IR+M Aggregate  | JPM Core Bond  |
| Main Office  | Milwaukee   | Houston  | Boston  | New York   |
| Ownership Structure  | 95% employee-owned  | 100% employee-owned  | 89.3% employee-owned, 10.7% owned by non-employee founder family members  | Wholly-owned subsidiary of JP Morgan Chase & Co., a publicly-<br>traded company  |
| Year Founded   | 1919  | 1988   | 1987  | 1863   |
| Strategy Inception   | September 2000  | December 1991  | December 1991   | January 1986   |
| Fim Assets (\$ millions)   | \$104,700   | \$16,254   | \$84,269  | \$2,129,309  |
| Strategy Assets (\$ millions)  | \$42,700  | \$11,118   | \$13,357  | \$69,890   |
| Product Capacity   | Will limit the number of new large institutional relationships added each year  | Does not have a policy limiting AUM  | None identified   | None   |
| Number of Firm Employees   | 66  | 35   | 180   | 6,946  |
| Number of Professionals on Strategy  | 28  | 11   | 47  | 49   |
| Team   | 28 member PM Team   | 5 PMs, 5 analysts, 1 strategist  | 13 PMs, 4 Directors, 13 Research Analysts, 11 Risk Analysts, 6<br>Traders   | 17 PMs, 27 Research Analysts, 5 Traders  |
| Key Team Members   | Mary Ellen Stanek, ClO<br>Charlie Groeschell, Senior PM<br>Warren Pierson, Deputy ClO<br>Jay Schwister, Research Director   | Gilbert Garcia, Managing Partner<br>Karen Tass, PM<br>Nancy Rodriguez, PM<br>Jeffery Detwier, PM<br>Benjamin Monklewicz, PM<br>Don Elsenbrock, Strategist  | William O'Malley, CEO/co-CIO<br>Jim Gubitosi, co-CIO  | Richard Figuly, PM/Core Team Lead<br>Susan Parekh, Lead PM<br>Andy Melchiorre, PM  |
| Strategy Description   | The investment process begins with an evaluation of the return potential of each sector. They then determine which issuers appear to offer the best relative value within each sector. Available issues are then selected based on credit quality, attributes, structures, and iquidity. Decisions also have a top-down component in that they incorporate the firm's view of the macro risk environment and proad valuation of risk. Only investment grade securities are purchased for core portfolios. Credit research plays a fundamental role in the investment process and is an important aspect of security selection. Yield curve positioning is an important part of the portfolio's performance over time. | The investment process is top-down oriented and begins with qualitative research based on analysis of the following factors: sentiment, monetary policy, economic environment, valuation and inflation. The continual analysis of these indicators helps them to anticipate moves in interest rates and informs sector rotation decisions. The team also performs quantitative research and compares these results to their qualitative findings. The team uses this analysis to set larget ranges for duration, yield curve positioning, sector allocations and sector's contribution to duration. They also utilize traditional financial and quantitative metrics analysis as well as qualitative assessments to identify ESG risks and opportunities and inform buy/sell/hold decisions. | IR&M's process is designed to use bottom-up security selection and constructs portfolios to provide yield and convexity advantages. This is achieved by emphasizing selection in investment grade corporate bonds and mortgage-backed securities. The strategy is neutral to the benchmark in terms of duration and yield curve posture. Overweight in bond sectors will be the result of relative value decisions, where each potential investment is analyzed within a rigorous credit, structure, and price framework. ESG factors are considered as part of our credit analysis. They will use out-of-benchmark securities such as century bonds, put bonds, hybrid ARMS and very occasionally busted convertible bonds when they offer attractive value. | The strategy uses a bottom-up approach that is based on finding undervalued securities and sectors in an effort to provide incremental yield and total return versus the benchmark. Their security selection process emphasizes the securitized sectors because they believe that the market is elses efficient at pricing these securities. Purchases are investment grade only and they may invest in non-rated securities if the firm internally rates it investment grade. Duration management is the firm's primary risk control measure. |
| Investment Restrictions  | Duration neutral to benchmark; all cash bonds, all U.S. dollar-denominated, no derivatives and no leverage; core strategy may only purchase investment grade. The strategy does not have any other explicit constraints; however, some general guidelines: Industry exposure limited to 25%. Any single issuer may not comprise more than 5% (except for U.S. Government and Agency obligations). Overall, credit risk is generally limited to shorter maturities.  | 0-75% treasuries, 0-50% agencies, 0-60% mortgage-backed securities and 5-60% corporate bonds. Corporate bonds are limited to A-rated or better by 2 rating agencies. As a risk control, limits spread product exposure to the short-to-intermediate part of the yield curve. Does not invest in foreign bonds, high yield securities, zero-coupon bonds, or derivatives. Does not incorporate any leverage into their portfolios.  | Maximum security weighting is 15% for Treasury, 5% for securitized; maximum issuer weighting is 3% for credit and municipal holdings. Maximum sector weights include 75% Credit, 10% Municipal, 50% Agency-quanteed securitized, 20% other securitized, 25% Agency and 50% Treasury. Duration is ±0.25 years relative to index.   | Guidelines can be tailored to clients objectives. Typical sector allocations include 15%-35% Treasury, 0%-10% Agency (excluding MBS), 20%-45% Corporate and ABS, and 25%-60% Mortgage-Backed securities. Portfolio duration typically managed within 10% of index. Portfolios are 100% investment grade at time of purchase.   |
| Typical Number of Holdings/Issuers   | 200-350 holdings  | 35-45 holdings, 12-15 issuers  | 150 – 220 holdings  | 300 – 500 holdings   |
| Typical Turnover/Holding Period  | 20%-50% turnover  | 45%-75% turnover   | 35% - 75% turnover  | 25% turnover   |
| Investment Vehicle   | Separate Account  | Separate Account   | Separate Account  | Separate Account   |
| PRI Signatory/Year Signed  | No  | Yes/2019   | Yes/2013  | Yes/2007   |
| Max Allowable Mandate Allocation<br>(LACERS represents less than 25% of<br>strategy assets, \$ millions) | \$2,440   | \$2,440  | \$2,440   | \$2,440  |
| Proposed Fee Schedule  | First \$100m: 16 bps<br>Balance: 10 bps   | First \$25m: 25 bps<br>Next \$25m: 17 bps<br>Next \$200m: 10 bps<br>Next \$350m: 10 bps<br>Balance: 8 bps  | m: 17 bps First \$250m: 14 bps  <br> m: 14 bps Next \$250m: 12 bps  <br> m: 10 bps Balance: 10 bps  |  |
| Effective Fee (based on mandate equally allocated among three managers with \$810 million each)          | 10.74 bps   | 11.15 bps  | 11.85 bps   | 12.31 bps  |
| Effective Fee (based on mandate equally allocated among four managers with \$610 million each)           | 10.98 bps   | 12.18 bps  | 12.46 bps   | 13.07 bps  |
| Effective Fee (based on mandate equally allocated among five managers with \$490 million each)           | 11.22 bps   | 12.76 bps  | 13.02 bps   | 13.78 bps  |

### FINALISTS OF THE ACTIVE CORE FIXED INCOME INVESTMENT MANAGER SEARCH FINALIST INFORMATION MATRIX as of September 30, 2020

| Firm Name  | Loomis, Sayles & Company, L.P.   | Neuberger Berman Investment Advisers LLC  | Segal Bryant & Hamill, LLC  |
|--|--|---|---|
| Strategy Name  | Core Fixed Income  | Core Bond   | Core Fixed Income   |
| Main Office  | Boston   | New York  | Chicago   |
| Ownership Structure  | Wholly-owned subsidiary of Natixis Investment Managers, L.P.   | 100% owned by NBSH Acquisition, LLC, which is owned by the firm's current and former employees, directors and consultants and, in certain instances, their permitted transferees  | 53% employee-owned, 47% owned by Thoma Bravo, LLC   |
| Year Founded   | 1926   | 1939  | 1994  |
| Strategy Inception   | July 1980 (LACERS Account Inception Date)  | January 1982  | January 1987  |
| Fim Assets (\$ millions)   | \$328,039  | \$373,097   | \$21,232  |
| Strategy Assets (\$ millions)  | \$17,287   | \$7,179   | \$3,195   |
| Product Capacity   | \$50 billion with current staff  | \$100-\$125 billion given highly liquid investable sector   | Will evaluate when assets approach \$10 billion   |
| Number of Firm Employees   | 747  | 2,310   | 119   |
| Number of Professionals on Strategy  | 15   | 48  | 15  |
| Team   | Two PMs supported by 13 investment professionals and large research team   | 7 PMs, 32 Research Analysts, 7 Traders, 2 Portfolio Specialists   | 8 PMs, 6 analysts, 1 Fixed Income Trader  |
| Key Team Members   | John Hyll, PM<br>Neil Burke, PM  | Thanos Bardas, Senior PM<br>Dave Brown, Senior PM<br>Nate Kush, Senior PM   | Jim Dadura, Director of Fixed Income<br>Greg Hosbein, Senior PM   |
| Strategy Description   | Portfolio construction is driven by a combination of bottom-up security selection and top-down macroeconomic analysis. The firm mantains a centralized research group charged with identifying high potential relative return investment ideas. Portfolio duration is managed in a narrow range relative to the benchmark. | The Core Bond team allocates amongst fixed income sectors using a proprietary asset allocation framework. The quantitative element of this framework is based on Black-Litterman modeling with modifications. The team believes this approach better projects future return estimates and enhances tallyfincingla risk mitigation. Key sources of alpha are expected by the team to be sector allocation/rotation and security selection, but there is also a degree of durationly/ield curve flexibility versus the benchmark. | The strategy seeks to exploit inefficiencies in the bond market by using fundamental analysis to identify high-quality securities in areas generally overlooked by other managers (e.g., small issue corporates, taxable muris, and mortgages). Performance is primarily driven by bottom-up research and security selection, as opposed to market timing. The process also emphasizes disciplined risk controls, sector diversification and liquidity. |
| Investment Restrictions  | Duration ± 20% of the index, Portfolio credit quality greater than A2/A, Individual issue credit quality greater than B3/E, 5% maximum in single issuer (US government and agencies excluded), out of benchmark issuers are limited to 10% of the portfolio.   | Key restrictions for existing mandate: Portfolio duration ± 20% of benchmark. Spread duration max +30% of benchmark. Portfolio credit quality > 82 (Moody's) or A (\$&P), Individual issue credit quality > 83 by Moody's or B  | Maximum 5% invested in any one issuer (U.S. Treasury and Federal Agencies excluded). Duration ± 10% (± 0.5 year) of the benchmark. Cash less than 5%. Industry exposure averages less than 15%.   |
| Typical Number of Holdings/Issuers   | 145 – 186 holdings   | 200 – 300 holdings  | 125 – 175 holdings  |
| Typical Turnover/Holding Period  | 125% - 175% turnover   | 118% turnover for the 12-month period ending 9/30/2020  | 30% - 40% turnover  |
| Investment Vehicle   | Separate Account   | Separate Account  | Separate Account  |
| PRI Signatory/Year Signed  | Yes/2015   | Yes/2012  | Yes/2017  |
| Max Allowable Mandate Allocation<br>(LACERS represents less than 25% of<br>strategy assets, \$ millions) | \$2,440  | \$2,392   | \$1,065   |
| Proposed Fee Schedule  | First \$400m: 15 bps<br>Balance: 10 bps  | First \$150m: 13 bps Next \$150m: 11 bps Balance: 9 bps In addition, a 10% rebate shall apply to the total investment management fee  | First \$10m: 20 bps<br>Next \$90m: 10 bps<br>Balance: 8 bps   |
| Effective Fee (based on mandate equally allocated among three managers with \$810 million each)          | 12.47 bps  | 9.10 bps  | 8.37 bps  |
| Effective Fee (based on mandate equally allocated among four managers with \$610 million each)           | 13.28 bps  | 9.43 bps  | 8.49 bps  |
| Effective Fee (based on mandate equally allocated among five managers with \$490 million each)           | 14.08 bps  | 9.75 bps  | 8.61 bps  |

IC Meeting: 12/9-10/20 Item II Attachment 1

FINALISTS OF THE ACTIVE CORE FIXED INCOME INVESTMENT MANAGER SEARCH Annualized Returns and Risk as of September 30, 2020 Gross of Fees

|  | Inception  |        |         |         |          |          |          | Since     |
|--|------------|--------|---------|---------|----------|----------|----------|-----------|
| Firm Name                                    | Date       | 1 Year | 3 Years | 5 Years | 10 Years | 15 Years | 20 Years | Inception |
| Robert W. Baird & Co. Incorporated*          | 9/30/2000  | 8.12%  | 5.94%   | 5.00%   | 4.76%    | 5.19%    | 5.83%    | 5.83%     |
| Garcia Hamilton & Associates, L.P.           | 12/31/1991 | 7.26%  | 5.46%   | 4.44%   | 4.63%    | 5.74%    | 6.06%    | 6.29%     |
| Income Research & Management                 | 12/31/1991 | 8.63%  | 6.02%   | 4.92%   | 4.44%    | 5.24%    | 5.77%    | 6.25%     |
| J.P. Morgan Asset Management                 | 1/1/1986   | 7.26%  | 5.78%   | 4.63%   | 4.23%    | 5.25%    | 5.76%    | 7.18%     |
| Loomis, Sayles & Company, L.P.^              | 7/1/1980   | 9.20%  | 6.39%   | 5.63%   | 4.90%    | 5.60%    | 6.51%    | 9.01%     |
| Neuberger Berman Investment Advisers LLC^    | 10/31/1990 | 8.11%  | 5.67%   | 4.65%   | 4.45%    | 5.64%    | 6.24%    | 6.85%     |
| Segal Bryant & Hamill, LLC                   | 1/1/1987   | 7.64%  | 5.60%   | 4.42%   | 3.87%    | 5.06%    | 5.53%    | 6.65%     |
| Bloomberg Barclays U.S. Aggregate Bond Index | -          | 6.98%  | 5.24%   | 4.18%   | 3.64%    | 4.48%    | 5.01%    |           |

|   | 5 Year<br>Tracking | 5 Year<br>Information | 10 Year<br>Tracking | 10 Year<br>Information | 20 Year<br>Tracking | 20 Year<br>Information |
|---|--------------------|-----------------------|---------------------|------------------------|---------------------|------------------------|
| Firm Name                                 | Error              | Ratio                 | Error               | Ratio                  | Error               | Ratio                  |
| Robert W. Baird & Co. Incorporated*       | 0.91%              | 0.90                  | 0.81%               | 1.38                   | 1.21%               | 0.68                   |
| Garcia Hamilton & Associates, L.P.        | 1.15%              | 0.23                  | 1.63%               | 0.61                   | 1.40%               | 0.75                   |
| Income Research & Management              | 0.68%              | 1.09                  | 0.79%               | 1.01                   | 1.53%               | 0.50                   |
| J.P. Morgan Asset Management              | 0.71%              | 0.63                  | 0.62%               | 0.95                   | 0.85%               | 0.88                   |
| Loomis, Sayles & Company, L.P.^           | 1.05%              | 1.38                  | 1.43%               | 0.88                   | 3.31%               | 0.45                   |
| Neuberger Berman Investment Advisers LLC^ | 0.91%              | 0.52                  | 1.37%               | 0.59                   | 1.96%               | 0.63                   |
| Segal Bryant & Hamill, LLC                | 0.32%              | 0.75                  | 0.34%               | 0.68                   | 0.91%               | 0.57                   |

<sup>\*</sup>Return and risk metrics presented are for proposed Baird Advisors Core Bond strategy, distinct from the Intermediate Government/Credit strategy currently managed for LACERS
^Return and risk metrics presented are for core bond strategies currently managed for LACERS

IC Meeting: 12/9-10/20 Item II Attachment 1

FINALISTS OF THE ACTIVE CORE FIXED INCOME INVESTMENT MANAGER SEARCH Calendar Year Returns as of September 30, 2020 Gross of Fees

|  | Inception  |       |       |        |        |        |       |        |        |
|--|------------|-------|-------|--------|--------|--------|-------|--------|--------|
| Firm Name                                    | Date       | 2006  | 2007  | 2008   | 2009   | 2010   | 2011  | 2012   | 2013   |
| Robert W. Baird & Co. Incorporated*          | 9/30/2000  | 5.19% | 5.93% | -2.06% | 11.21% | 8.66%  | 8.17% | 8.24%  | -0.96% |
| Garcia Hamilton & Associates, L.P.           | 12/31/1991 | 4.19% | 8.61% | 5.88%  | 12.13% | 8.21%  | 5.33% | 10.48% | 0.09%  |
| Income Research & Management                 | 12/31/1991 | 4.81% | 6.91% | 0.23%  | 13.49% | 7.16%  | 7.30% | 7.39%  | -1.33% |
| J.P. Morgan Asset Management                 | 1/1/1986   | 4.59% | 7.38% | 4.56%  | 10.38% | 8.35%  | 7.89% | 5.73%  | -1.32% |
| Loomis, Sayles & Company, L.P.^              | 7/1/1980   | 4.18% | 6.54% | -4.95% | 20.09% | 8.81%  | 6.81% | 8.35%  | -0.98% |
| Neuberger Berman Investment Advisers LLC^    | 10/31/1990 | 5.59% | 5.75% | -3.70% | 23.06% | 11.00% | 6.45% | 8.98%  | -1.17% |
| Segal Bryant & Hamill, LLC                   | 1/1/1987   | 4.38% | 7.60% | 7.87%  | 8.73%  | 6.27%  | 8.59% | 4.36%  | -1.98% |
| Bloomberg Barclays U.S. Aggregate Bond Index |            | 4.33% | 6.97% | 5.24%  | 5.93%  | 6.54%  | 7.84% | 4.21%  | -2.02% |

|   | Inception  |       |        |       |       |        |       |          |
|---|------------|-------|--------|-------|-------|--------|-------|----------|
| Firm Name   | Date       | 2014  | 2015   | 2016  | 2017  | 2018   | 2019  | YTD 2020 |
| Robert W. Baird & Co. Incorporated*                   | 9/30/2000  | 7.21% | 0.86%  | 3.83% | 4.51% | 0.00%  | 9.81% | 7.72%    |
| Garcia Hamilton & Associates, L.P.                    | 12/31/1991 | 8.02% | 0.85%  | 3.18% | 3.82% | 0.98%  | 7.26% | 7.30%    |
| Income Research & Management                          | 12/31/1991 | 7.10% | 0.59%  | 3.57% | 3.97% | 0.09%  | 9.32% | 8.41%    |
| J.P. Morgan Asset Management                          | 1/1/1986   | 5.84% | 1.34%  | 2.92% | 4.26% | 0.67%  | 8.88% | 7.39%    |
| Loomis, Sayles & Company, L.P.^                       | 7/1/1980   | 7.47% | -0.36% | 5.72% | 4.70% | 0.08%  | 9.71% | 9.02%    |
| Neuberger Berman Investment Advisers LLC <sup>^</sup> | 10/31/1990 | 5.77% | 0.73%  | 3.34% | 3.84% | -0.51% | 9.40% | 7.81%    |
| Segal Bryant & Hamill, LLC                            | 1/1/1987   | 6.56% | 0.79%  | 2.66% | 3.42% | 0.46%  | 8.63% | 7.59%    |
| Bloomberg Barclays U.S. Aggregate Bond Index          |            | 5.97% | 0.55%  | 2.65% | 3.54% | 0.01%  | 8.72% | 6.79%    |

<sup>\*</sup>Performance returns presented are for proposed Baird Advisors Core Bond strategy, distinct from Intermediate Government/Credit strategy currently managed for LACERS \*Performance returns presented are for core bond strategies currently managed for LACERS



Presented By:

Gilbert A. Garcia, CFA
Managing Partner

Ruby Muñoz Dang
Partner



5 Houston Center 1401 McKinney, Suite 1600 Houston, TX 77010 Tel: (713) 853-2359 Fax: (713) 853-2300

Ruby@GarciaHamiltonAssociates.com www.GarciaHamiltonAssociates.com

## GARCIA HAMILTON & ASSOCIATES

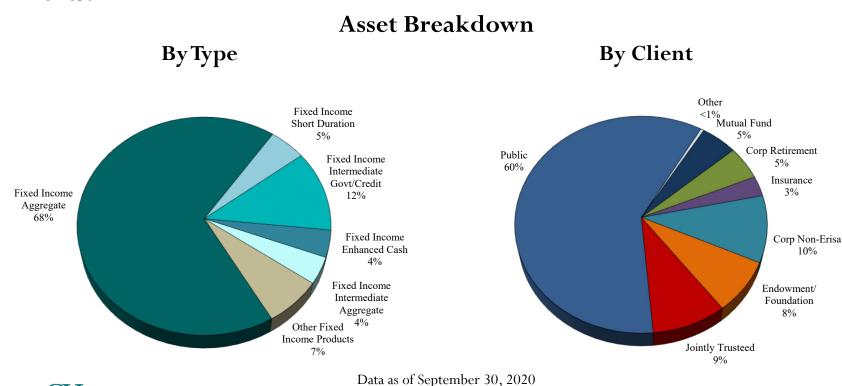
# Los Angeles City Employees' Retirement System

December 9, 2020



# Organization

- Founded in 1988
- Firm is 100% employee-owned and certified as an MBE firm
- ESG/RI Manager and a Principles for Responsible Investment (PRI) signatory
- Firm has 35 employees located in Houston, Texas
- The 11 members of the investment team have over 210 years of investment experience and over 90 years with the firm combined
- Firm manages over \$16 billion in assets under management
- High-quality fixed income strategies designed to prevent "negative surprises"
- No debt



### Representative Client List – 50+ Clients Over 10 Years

#### PUBLIC FUNDS

Addison Police, IL. City of Annapolis Police and FF, MD Arkansas Local Police & FF, AR Arkansas State Highway Employees, AR City of Atlanta GE, GA City of Atlanta Police & FF, GA Town of Bay Harbor Islands ERS, FL Berwyn Police & FF. II. City of Bloomington Police, IL City of Boynton Beach GE, FL Buffalo Grove Police, IL City of Cape Coral Police & FF, FL Capital Metropolitan Transportation Authority Retirement Plan, TX Chicago FF Annuity & Benefit, IL Chicago Municipal Annuity & Benefit, IL Chicago Public Schools, IL Chicago Transit Authority, IL Colorado FF & Police, CO Cook County Employees' & Officers' College of Micronesia Land Grant, FM Coral Gables Retirement System, FL City of Coral Springs FF, FL City of Coral Springs Police, FL City of Corpus Christi FF, TX Annuity & Benefit, IL

Dallas Area Rapid Transit, TX DFW International Airport, TX Town of Davie Police, FL Town of Davie FE FL

City of Deerfield Beach Police, FL City of Deerfield Beach FF, FL City of DeLand Police, FL Delray Beach Police, FF & GE, FL

City of Detroit Health Care Trust, MI

Detroit Retirement Protection Trust, MI Des Plaines FF & Police, IL Dukes County, MA East Bay Munipical Utility District ERS, CA ERS of Baltimore County, MD ERF of the City of Dallas, TX

Englewood FF, FL City of Evanston Police, IL

City of Evanston FF, IL Fairfax County Uniformed RS, VA City of Ft. Lauderdale GE, FL

City of Ft. Myers Police. FL City of Ft. Walton Beach GE, FL

City of Ft. Walton Beach Police, FL City of Ft. Walton Beach FF, FL FSM Social Security Administration, FM General RS of the City of Detroit, MI Policemen's Annuity and Benefit Fund Government of Guam, GU

Greater Orlando Aviation Authority, FL City of Hialeah FF, FL Hoffman Estates FF Pension, II.

Retiree Health Benefits Trust, NY

City of Hollywood FF, FL

City of Hollywood Police, FL Illinois State Board of Investments, IL Illinois Student Assistance Commission, IL Jackson County ERS, MI City of Jacksonville Beach ERS, FL

Lake Bluff Police, IL City of Lake Worth FF, FL City of Lakeland, FL

Lantana FF, FL Lantana Police Relief, FL Lemont Police, IL Lubbock FF, TX

Macon-Bibb County, GA Marianas Public Land Trust, MP Matteson FF, IL Medford Retirement System, MA

City of Melbourne Police & FF, FL

Metropolitan Water Reclamation District II Miami GE' & Sanitation ERS, FL

City of Miramar Police, FL Municipality Of Anchorage, AK MWRA Employees' RS, MA NC Association of County

Commissioners, NC City of New Port Richey Police, FL City of North Miami Beach GE, FL City of North Miami Beach Police & FF, FL

City of North Miami GE, FL City of North Miami Police, FL City of North Port Police, FL Northern Marianas College, MP City of Oakland Park Police & FF, FL

City of Ocoee Police & FF, FL Oklahoma FF, OK Town of Orange Park Police, FL

Orlando Utilities Commission, FL City of Ormond Beach Police, GE & FF, I Overland Park Police, KS

Town of Palm Beach, FL Palm Beach County FF, FL City of Palm Beach Gardens FF, FL Village of Palatine Police, IL

Village of Palm Springs Police & GE, FL City of Pembroke Pines OPEB Trust, FL Pennsylvania Turnpike Commission Retiree The Woodlands FF Retirement Medical Trust, PA

City of Pensacola GE & FF, FL Philadelphia Gas Works, PA City of Pinellas Park Police & GE, FL City of Plantation Police, FL

of Chicago, IL City of Pontiac Police & FF, MI

Prince George's County Police & FF, MD American Quarter Horse Association, TX

Prince William County Police, VA City of Punta Gorda Police & GE, FL Rantoul Police, IL

Republic of Palau Civil Service, Palau Republic of Palau COFA Trust Fund, Palau

River Forest Police, IL Riviera Beach GE, FL City of Riviera Beach Police, FL

Road Commission for Oakland County, MI City of Roanoke, VA

City of Rockledge Police, GE & FF, FL City of Sanford FF, FL

City of Sanford Police, FL City of Sarasota Police, FL

City of Sebring Police, FL City of St. Cloud Police & FF, GE, FL City of St. Louis FF, MO

St. Petersburg Police, FL South Walton Fire Control District FF, FL

State Universities RS, IL City of Sunrise Police, FL

City of Tamarac FF, FL City of Tarpon Springs Police, FL City of Taylor GE Retirement System, MI

Teachers' Retirement System, IL City of Temple Terrace Police & FF, FL

City of Titusville Police & FF, FL Hrbana Police II Utrik Atoll, Marshall Islands, MH

City of Venice FF, FL City of Venice Police, FL City of Vero Beach Police, FL

Village of Tequesta Public Safety Officers, FL

City of West Palm Beach Police, FL City of West Palm Beach GE, FL

City of West Palm Beach FF. FL Westchester Police, IL City of Westland Police & FF, MI

City of West Melbourne Police, FL City of Wilton Manors GE, FL Winnetka Illinois Police & FF, IL

City of Winston-Salem, NC City of Winter Garden GE, Police & FF, FL

City of Winter Haven Police, FL Wood Dale Police, IL

System, TX Yap State Trust Fund, FM

CORPORATE NON-ERISA

Air Force Association, VA American Baptist Home Mission Society, PA Port Authority of New York and New Jersey American Speech-Language-Hearing

Yorktown Independent School District, TX

Association, MD

Amerilodge Group LLC, MI AOA Deposit and Loan Fund, GA Archbold Medical Center, Inc., GA Archdiocese of Portland, OR Attorney's Liability Assurance Society, IL

Banner Health, AZ Bedford Fund, OUF Rethesda Inc. OH

Brooklyn Museum, NY Catholic Education of North Georgia, GA Century Insurance Company, GU Church Extension Fund of the Michigan

City Public Service Decommissioning Trust TX

Construction Association of Michigan, MI Crime Stoppers of Houston, TX

FSM Development Bank, FM John P. McGovern Museum of Health & Medical Science, TX KEW Management Investor, NY

Maryland Insurance Trust, MD Micronesia Conservation Trust, FM Naples Community Hospital HealthCare

System, FL Operators Reinsurance Company, CI

Pacific Indemnity Insurance Company, GU Paradigm Indemnity Corporation, OR Pheasants Forever, MN Roman Catholic Archdiocese of Atlanta, GA

Specialty Equipment Market Assoc., CA

Stetson University, Inc., FL Strategic Investment Fund for La Raza, DC St. Ignatius College Prep, IL Superior Enterprise Holdings, Inc., MI

Sweeny Community Hospital, TX Terrapin Insurance Company, CI University Athletic Association, Inc., GA University of Maryland Medical System Pool, MD

Union Presbyterian Seminary, VA United Board For Christian Higher Education in Asia, NY

United Regional Health Care System, TX The Walters Art Gallery, MD Wistar Institute of Anatomy and Biology, PA The Widows Corporation, PA

### CORPORATE ERISA

Atmos Energy Corporation, TX D.W. McMillan Hospital/ Escambia County Healthcare, AL Dimension Assurance LTD, CI Dimensions Health Corporation Pension Emergency Medicine Professional Assurance Risk Corporation, FL H.N.S. Management Co., Inc, CT

Integris Health, Inc., OK Millers Group, TX

Trust, MD

Nissan Motor Co., Ltd., TN Operators Reinsurance Company, KY Roman Catholic Archdiocese of Atlanta, GA STP Nuclear Operation Company, TX Sulzer Pumps (US) Inc., TX University Athletic Association, GA

#### ENDOWMENTS/FOUNDATIONS

University of Maryland Medical System

American Quarter Horse Foundation, TX Arkansas Tech University Foundation, AR Bakersfield College Foundation, CA Baptist Health Foundation of San Antonio, TX

Barnahas Foundation Common Trust II Board of Higher Education and Ministry, The United Methodist Church, TN

The Boyd and Joan Kelley Charitable Foundation, TX Briarwood-Brookwood, Inc., TX

Catholic Community Foundation of Minnesota, MN

Catholic Foundation of Oklahoma, OK Charles Hayden Foundation, NY Children's Home Foundation TX Community Foundation of Greater Flint, MI The Community Foundation of Herkimer &

Oneida Counties, TX Community Foundation for Northeast Florida, Inc., FL

Curtis Institute of Music, PA E. Rhodes and Leona B. Carpenter Foundation, PA

East Bay Community Foundation, CA

East Texas Medical Center Foundation, TX Embry Riddle Aeronautical University, FL Florida A&M University Foundation, FL Fort Hays State University, KS Gilbert Family Foundation, MI Greater Milwaukee Foundation, MI Guam Community College Foundation, GU

Hartford Foundation for Public Giving, CT International Retinal Research Foundation Inc., AL Jewish Senior Life Foundation, NY Louisiana Baptist Foundation, LA Marin Community Foundation, CA Mary Institute & St. Louis Country Day School, MO

Mary Louise Curtis Bok Foundation, PA McDaniel College, Inc., MD The Medical Foundation of North Carolina, NC

Medical University of South Carolina Foundation, SC

Northfield Mount Hermon School, MA Racine Community Foundation Inc., WI San Francisco Foundation, CA

San Juan Island Community Foundation, PR Sarah Campbell Blaffer Foundation, TX Seattle Foundation, WA

Shelby County Community Health Foundation, AL

Silicon Valley Community Foundation, CA Southern Baptist Foundation, TN Special Operations Warrior Foundation, GA Tallahassee Memorial HealthCare

Foundation FI Triangle Community Foundation, NC

United Methodist Foundation, NC University of Guam Endowment, GU

University of Hartford, CT Westminister Canterbury, VA

White's Residential & Family Services, IN Wichita Falls Area Community Foundation, TX Xavier University of Louisiana, LA

#### TAFT- HARTLEY & UNION

Bricklayers of Indiana, IN Central Illinois Carpenters Retirement, IL District 1199J New Jersey Healthcare Employers, NI IBEW Local Union #129, OH IBEW Local Union #351, NJ Indiana Electrical Workers Pension Trust, ID Local 665 IATSE Annuity Fund, HI MARTA/ATU Local 732, GA The Mason Tenders District Council of Greater New York and Long Island, NY Palm Tran, Inc./ATU Local 1577, GA

Plumbers Local Union #68, TX Sacramento Area Electrical Workers, CA San Mateo HERE, CA Service Employees International Union

Health And Welfare Fund, DC Sheet Metal, Air, Rail, and Transportation Association Local #33, OH

Sheet Metal Workers Health Plan, CA Teamsters Union Local NO. 35, NI WMATA/ Local 922 Retirement Plan. DC

American Beacon Garcia Hamilton Quality Bond Fund (Mutual Fund), TX Bivium Capital Partners, LLC, CA



IC Meeting: 12/9-10/20 Item II Attachment 2

### **Culture of Excellence**























FIXED INCOME INVESTMENT GRADE MANAGER OF THE YEAR





# Partners – Average Firm Tenure 16 Years

# Investment Team



GILBERT ANDREW
GARCIA, CFA
Managing Partner
Portfolio Manager
BA: Yale University
Year Hired: 2002
Industry Experience: 35 yrs
Ownership: 34.5%



KAREN H. TASS, CFA
Portfolio Manager
BA: Texas A&M University
MBA: University of
Houston
Year Hired: 2010
Industry Experience: 15 yrs
Ownership: 5.9%



NANCY RODRIGUEZ
Portfolio Manager
BS: University of Houston
Year Hired: 1998
Industry Experience: 33 yrs
Ownership: 5.0%



JEFFREY D. DETWILER,
CFA, AAMS
Portfolio Manager
BS: University of South
Florida
MS: University of Houston
Year Hired: 2007
Industry Experience: 24 yrs
Ownership: 2.0%



BENJAMIN D.
MONKIEWICZ
Portfolio Manager
BA: Sam Houston State
University
Year Hired: 2010
Industry Experience: 10 yrs
Ownership: 1.5%

Administrative Departments



DON ELSENBROCK
Portfolio Manager, Strategist
BS: University of Houston
MA: University of Houston
Year Hired: 2014
Industry Experience: 28 yrs
Ownership: 1.5%

### Client Service & Marketing



JANNA HAMILTON
Marketing and Client
Services
BA: Florida Atlantic
University
AIMSE: Wharton School of
Business
Year Hired: 1994
Industry Experience: 40 yrs
Ownership: 17.5%



RUBY MUÑOZ DANG Director of Marketing and Client Services BA: University of Houston – Downtown Year Hired: 1995 Industry Experience: 27 yrs Ownership: 11.6%



KEVIN LUNDAY, CPA
Chief Operating Officer
BBA: Texas Tech
University
Year Hired: 2007
Industry Experience: 19 yrs
Ownership: 6.5%



BETH L. MCWILLIAMS
Chief Compliance Officer
Patricia Stevens Secretarial
College
Year Hired: 1994
Industry Experience: 39 yrs
Ownership: 4.7%



GARY MONTGOMERY
Systems Manager
University of Houston –
Downtown
Year Hired: 2007
Industry Experience: 18 yrs
Ownership: 1.5%



STEPHANIE J. ROBERTS
Marketing and Client
Services
BBA: Texas Southern
University
Year Hired: 2000
Industry Experience: 24 yrs
Ownership: 6.8%



MORGAN DOYLE
Client Relations Manager
BS: University of Texas
Year Hired: 2014
Industry Experience: 6 yrs
Ownership: 1.0%



# Fixed Income Investment Team – Average Firm Tenure 9 Years



GILBERT ANDREW GARCIA, CFA Managing Partner Portfolio Manager BA: Yale University Year Hired: 2002 Industry Experience: 35 yrs



KAREN H. TASS, CFA
Partner
Portfolio Manager
BA: Texas A&M University
MBA: University of Houston
Year Hired: 2010
Industry Experience: 15 yrs
Coverage: Corporates



NANCY RODRIGUEZ
Partner
Portfolio Manager
BS: University of Houston
Year Hired: 1998
Industry Experience: 33 yrs
Coverage: Team Oversight



JEFFREY D. DETWILER, CFA, AAMS Partner Portfolio Manager BS: University of South Florida MS: University of Houston Year Hired: 2007 Industry Experience: 24 yrs Coverage: Short Term



Partner
Portfolio Manager
BA: Sam Houston State University
Year Hired: 2010
Industry Experience: 10 yrs
Coverage: MBS/Agencies



DON ELSENBROCK
Partner
Portfolio Manager, Strategist
BS: University of Houston
MA: University of Houston
Year Hired: 2014
Industry Experience: 28 yrs
Coverage: Strategist/Short Term



YVETTE M. DUEÑAS
Investment Analyst
BBA: University of Incarnate Word
MBA: Our Lady of the Lake University
Year Hired: 2016
Industry Experience: 13 yrs



CONNIE FALCON DAVIS Investment Analyst BS: University of Houston Year Hired: 2012 Industry Experience: 8 yrs Coverage: Analytics



REESE WELLER Investment Analyst BA: Texas Tech University Year Hired: 2017 Industry Experience: 20 yrs



BRIAN SIMON Investment Analyst BA: Morehouse College MBA: University of Houston-Victoria Year Hired: 2003-2007, 2018 Industry Experience: 22 yrs



JAZMINE DANIELS
Junior Analyst
BA: University of Texas at San Antonio
Year Hired: 2020
Industry Experience: <1 yr



### **Investment Goal**

### **Investment Goal**

Our goal is to outperform the benchmark, net of fees, over a full market cycle using a high-quality strategy with less risk and an ESG focus. By setting realistic expectations, we avoid taking unnecessary risks.

Achieving our goal is centered around several core principles:

- Preserve Principal
- Maintain Liquidity
- Provide High Current Income
- Be Responsible Citizens (ESG)

### Key Tools:

- Sector Rotation
- Controlled Interest Rate Anticipation
- Yield Curve Positioning



# **Investment Style**

### High-Quality

Portfolio Dominated by U.S. Treasuries, Agency Debentures and Agency 15-Year MBS

Corporate Securities Rated A or Better

Spread Product Exclusively in the Short to Intermediate Maturities to Reduce Volatility

### No Big Surprises

No Foreign Bonds/Yankees
No BBB Rated Securities
No Sin Names —Tobacco, Gambling, Alcohol, Firearms
No Derivatives
No Leverage/Dollar Rolls
No Pricing Overrides
Maintain a Manageable Number of Securities
No Soft Dollars
ESG Overlay

### **Flexibility**

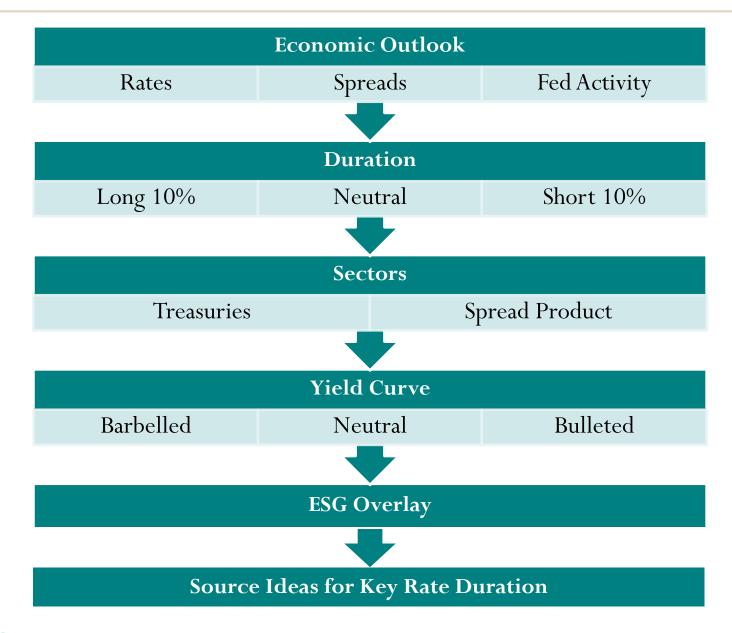
Actively Rotating Sectors
Actively Managing Yield Curve
Exploiting Smaller Markets

### Risk Controls

Percentage Sector Allocation, Duration Contribution by Sector, Credit Reviews, Yield Curve, Performance Attribution, Peer Group Performance Monitoring, and ESG Scale Monitoring



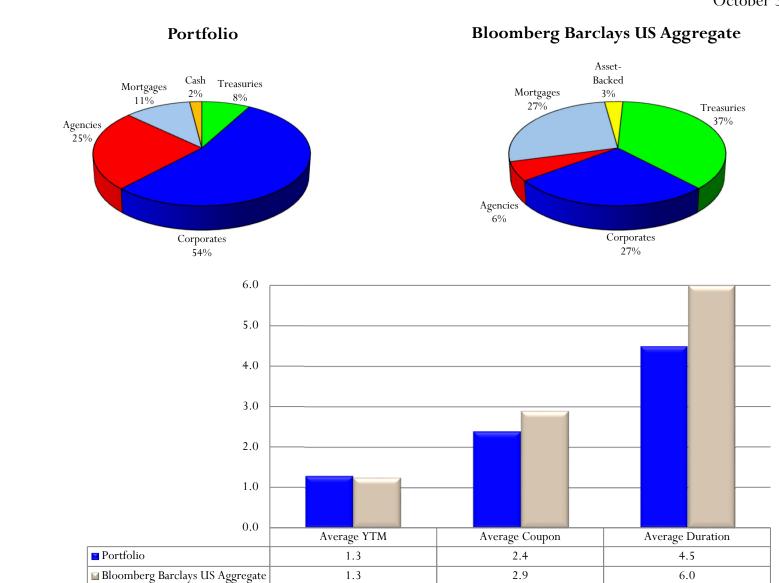
### **Portfolio Construction**





# Fixed Income – Aggregate Portfolio Characteristics

October 31, 2020







# **Risk Tools**

 $Representative \ Aggregate \ Portfolio$ 

| Duration Contribution |                                 | Treasury | Agency | Corp              | Corp<br>Spread D | MBS  | ABS  | Sum  |
|-----------------------|---------------------------------|----------|--------|-------------------|------------------|------|------|------|
| Dec '19               | Portfolio                       | 2.98     | 0.02   | 1.22              | 2.25             | 0.15 | 0.00 | 4.37 |
|                       | Bloomberg Barclays US Aggregate | 2.54     | 0.33   | <mark>1.95</mark> | 1.95             | 0.86 | 0.12 | 5.80 |
| Jun , 20              | Portfolio                       | 0.00     | 0.04   | <mark>4.19</mark> | 4.46             | 0.31 | 0.00 | 4.54 |
|                       | Bloomberg Barclays US Aggregate | 2.62     | 0.36   | <mark>2.30</mark> | 2.30             | 0.55 | 0.12 | 5.95 |
| Sep '20               | Portfolio                       | 0.62     | 0.05   | <mark>3.64</mark> | 3.86             | 0.28 | 0.00 | 4.59 |
|                       | Bloomberg Barclays US Aggregate | 2.65     | 0.37   | <mark>2.33</mark> | 2.33             | 0.56 | 0.12 | 6.03 |

| Yield Curve Positioning |                                 | 0-2   | 2-4   | 4-6   | 6-8   | 8-10  | 10-16             | 16+                |
|-------------------------|---------------------------------|-------|-------|-------|-------|-------|-------------------|--------------------|
| Dec '19                 | Portfolio                       | 54.76 | 4.44  | 0.00  | 22.41 | 9.62  | 0.00              | <mark>8.77</mark>  |
|                         | Bloomberg Barclays US Aggregate | 15.58 | 36.34 | 19.30 | 9.26  | 2.80  | <mark>7.29</mark> | <mark>9.43</mark>  |
| Jun , 50                | Portfolio                       | 34.59 | 12.45 | 0.00  | 26.57 | 26.39 | 0.00              | 0.00               |
|                         | Bloomberg Barclays US Aggregate | 22.79 | 31.64 | 14.45 | 8.82  | 3.96  | <mark>6.70</mark> | <mark>11.64</mark> |
| , 50                    | Portfolio                       | 34.16 | 11.18 | 0.00  | 25.52 | 29.14 | 0.00              | 0.00               |
| Sep                     | Bloomberg Barclays US Aggregate | 22.65 | 30.93 | 14.76 | 8.94  | 4.02  | <mark>6.77</mark> | 11.93              |

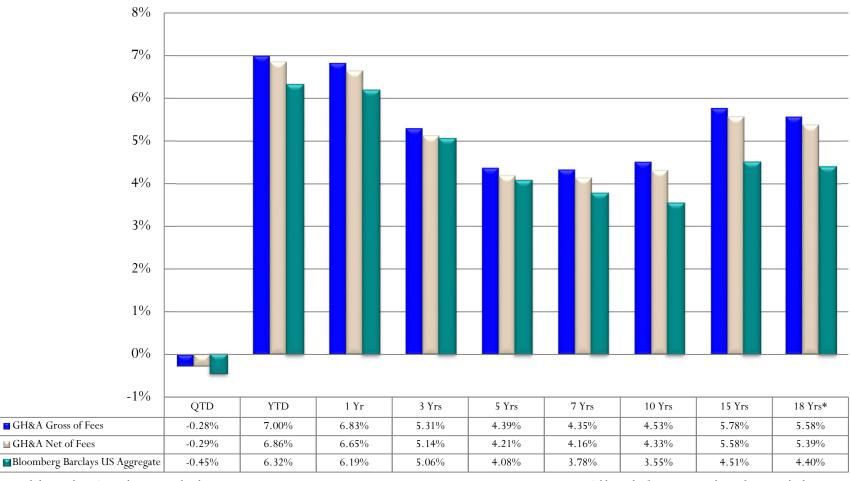


# Fixed Income – Aggregate Composite Returns

### Comparative Annualized Rates of Return

For periods ending October 31, 2020





Periods longer than 12 months are annualized.

\*Gilbert Garcia management inception March 31, 2002.

Additional information is in the performance disclosure.



# GH&A FI - Aggregate vs Aggregate Universe



IC Meeting: 12/9-10/20 Item II Attachment 2

# Attribution

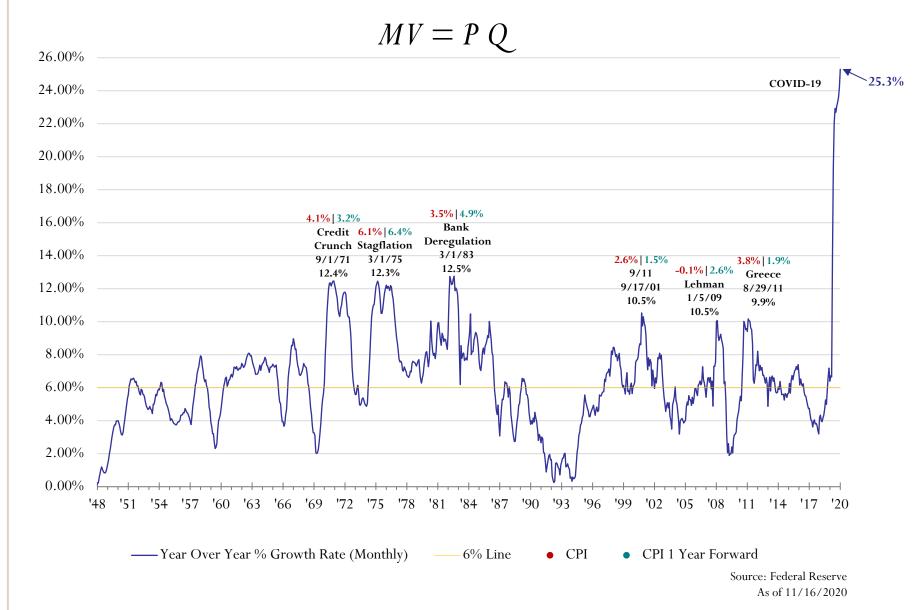
Representative Aggregate Portfolio

June 30,2020 - September 30, 2020

| Income               | 5 bps  |
|----------------------|--------|
| Yield Curve Movement | 1 bps  |
| Duration             | -1 bps |
| Sectors              | 12 bps |
| Net Performance      | 17 bps |



# **Money Supply Long Term Growth**





# **EEOC**

September 30, 2020

|                                | Non-<br>Minority<br>Male | Non-<br>Minority<br>Female | African<br>American<br>Male |   | _ | Hispanic/<br>Latino<br>Female | Asian<br>Male | Asian<br>Female | Total | Percentage |
|--------------------------------|--------------------------|----------------------------|-----------------------------|---|---|-------------------------------|---------------|-----------------|-------|------------|
| Senior Executives              | 1                        | 2                          |                             |   | 1 | 1                             |               |                 | 5     | 14%        |
| Investment Professionals       | 3                        | 1                          | 1                           | 1 | 1 | 3                             |               |                 | 10    | 29%        |
| Marketing & Client<br>Services |                          | 5                          | 1                           | 3 |   | 3                             |               | 1               | 13    | 37%        |
| Operations                     |                          |                            |                             | 3 |   | 1                             |               |                 | 4     | 11%        |
| IT                             |                          |                            | 1                           |   | 1 |                               |               |                 | 2     | 6%         |
| Compliance                     |                          |                            |                             |   |   | 1                             |               |                 | 1     | 3%         |
| Total                          | 4                        | 8                          | 3                           | 7 | 3 | 9                             | 0             | 1               | 35    | 100%       |

### **Additional Statistics:**

Total Female: 25 Total Male: 10 Minority: 23 Non-Minority: 12



## **Diversity**

#### Diversity is a central theme throughout the entire firm

- Certified as a MBE in several states
- 90% of the firm owned by minority and female partners
- •61% owned by minority partners and 53% owned by Hispanic partners
- 88% of employees are ethnic minorities and women
- Executed over 60% of brokerage volume with MBE/MWBE/veteran firms over the past several years
- We also work with many minority and women-owned vendors in the areas of:
- Office Supplies, Temporary Staffing Services, Travel, Accounting, Auditors
- The firm has a summer internship program for minority undergraduate and high school students
- We support and promote the LGBT community

#### Our firm directly supports numerous minority organizations in the community

#### **Community Service**

- Our Managing Partner, Gilbert Garcia, serves as a member of the SEC Asset Management Advisory Committee
- Our Managing Partner, Gilbert Garcia, serves as a member of the SEC Fixed Income Market Structure Advisory Committee
- Our Managing Partner, Gilbert Garcia, serves as trustee on the Dallas Police and Fire Pension System Board of Trustees
- Our Managing Partner, Gilbert Garcia, served as Chairman of the Metropolitan Transit Authority of Harris County Board for six years
- Our Managing Partner, Gilbert Garcia, was the 2012 Houston Area Urban League Gala Honorary Chair
- Our Managing Partner, Gilbert Garcia, was a co-chair of the 103rd NAACP National Convention
- Our Managing Partner, Gilbert Garcia, served as a trustee on the Houston Municipal Employees Pension System Board of Trustees
- Our Partner and Director of Marketing and Client Services, Ruby Muñoz Dang, served as Trustee for the METRO Texas Non-Union Pension Plan
- · Our Managing Partner, Gilbert Garcia, was awarded Houston Hispanic Chamber Male Entrepreneur of the Year

#### **NASP**

- National Association of Securities Professionals is a non-profit association of professionals that brings together minorities and women in the fields of
  asset management, public finance, investment banking, and other finance professions
- · Our Partner, Stephanie Roberts, is highly involved with the organization and is currently a NASP Board Member and the Texas chapter Treasurer

#### SEO

- •SEO A non-profit organization that mentors young women and minority individuals in the development of careers in investment banking, corporate law, and other leading global companies; Mr. Garcia went through the program in 1983 and is the longest serving board member (since 1988)
- Mr. Garcia was awarded the SEO Alumni Leadership Award at the 2015 Awards Dinner in New York City; Other honorees included Michael R.
   Bloomberg, three-term Mayor of New York City and Founder of Bloomberg LP & Bloomberg Philanthropies, and David M. Rubenstein, Co-Founder & Co-CEO of The Carlyle Group

#### **LULAC**

The League of United Latin American Citizens is a non-profit organization created to advance the economic condition, educational attainment,
 political influence, housing, health and civil rights of the Hispanic population of the United States



## **Business Risk Minimization**

Strong tone at the top for compliance

Compliance reports directly to senior management Will not tolerate discrimination nor harassment; complaints investigated within 24 hours

\$20 million E&O insurance
\$3 million cybersecurity insurance

Ownership dispersed among 13 partners

Buy/sell provisions on all partners at book value with 3-year financing

Two signature check provisions

Audited financials with NO debt

Internal dedicated programmer

Duplicate off-site data backups with firewall protection

Separation of duties

Multi-year storage of client info and all emails



## **GH&A ESG Sub-Score Metrics**

We have chosen to not "reinvent the wheel." We utilize third-party research of industry experts in our ESG evaluation. The research includes:

- RobecoSAM Rank A survey-based proprietary measure that ranks the sustainability of a company's core business. The industry specific rankings come from RobecoSAM's annual Corporate Sustainability Assessment (CSA); a survey that companies complete annually.
- *ISS Governance Quality Score* A proprietary measure by Institutional Shareholder Services (ISS).
- *CDP Climate Score* Based on an annual proprietary questionnaire measuring an organizations' integration of a climate change strategy that is intended to reduce emissions of GHG's (Green House Gases).

We assign weights to the third-party research metrics according to our own priorities and then calculate a weighted average score for each security. We then stratify the credit universe into 5 categories:

| Exemplary      | 0.80 - 1.00 |
|----------------|-------------|
| Satisfactory   | 0.60 - 0.80 |
| Neutral        | 0.40 - 0.60 |
| Lagging        | 0.20 - 0.40 |
| Unsatisfactory | 0.00 - 0.20 |



BOARD Meeting: 1/26/21 Item VII-E Attachment 1 IC Meeting: 12/9-10/20 Item II Attachment 2

**Appendix** 





Gilbert Andrew Garcia, CFA
Managing Partner

Mr. Garcia received a B.A. in Economics from Yale University. After graduating in 1985, he joined Salomon Brothers in New York City where he became a Vice President specializing in mortgage-backed securities. In 1990, he joined former Mayor Henry Cisneros to build Cisneros Asset Management Company, ultimately becoming its President. In 2002, he joined Garcia Hamilton & Associates and is the firm's Managing Partner. Under his leadership, the firm grew from \$200 million in fixed income assets under management to over \$16.4 billion as of October 2020.

GH&A has received numerous industry recognitions. Most recently in 2019 Houston Business Journal recognized Mr. Garcia among Houston's Top CEOs, as well as being ranked among their Best Places to Work in 2018. The firm also received Pensions & Investments' Best Places to Work in Money Management for the fourth year in a row (2019, 2018, 2017, 2016). Emerging Manager Monthly awarded the firm Fixed Income Manager of the Year for the third time (2019, 2018 and 2010). Other past awards include FundMap's 2018 US Fixed Income Manager, Institutional Investor's Intermediate-Term Fixed Income Manager of the Year in 2016 and 2015, as well as their 2014 Fixed Income Investment Grade Manager of the Year.

During the recent COVID-19 crisis, Mr. Garcia and GH&A have donated over 30,000 masks along with hand sanitizer and disinfectant wipes to various organizations.

Mr. Garcia is proud to serve on two SEC advisory boards: SEC's Fixed Income Market Structure Advisory Board and SEC's Asset Management Advisory Committee where he leads a subcommittee focused on Diversity and Inclusion. He currently serves as a member of the Board of Trustees for Dallas Police & Fire Pension System and serves with Chairman Henry Kravis on the Board of Directors of SEO, a non-profit providing summer internships on Wall Street for minority undergraduates. Additionally, in 2018 he was co-chair for the Susan G. Komen Race for the Cure. The same year, he was also awarded "Male Entrepreneur of the Year 2018" by the Houston Hispanic Chamber of Commerce. In 2015, Mr. Garcia was awarded the SEO Alumni Leadership Award alongside other honorees, including the former mayor of New York City, Michael R. Bloomberg, and Co-Founder & Co-CEO of The Carlyle Group, David M. Rubenstein.

From 2012 - 2016, Mr. Garcia served as Chairman of the Metropolitan Transit Authority of Harris County where he implemented the "Garcia Rule" which requires at least one diverse investment manager be included in every asset class search. Also, during his tenure, METRO paid down debt and started five year budget forecasting, secured a \$900 million full funding grant agreement for light rail expansion, passed a referendum securing additional funding for METRO with 80% voter approval, increased light rail from 7 miles to 22 miles, and reimagined the entire bus system. This led to METRO receiving transparency awards and being awarded the 2015 APTA Award for outstanding Public Transportation System Achievement.

Previously, Mr. Garcia served on the Board of Directors of Sanchez Energy, Secretary of the Board of Directors of the Houston Downtown Management District, member of the Board of Directors of the Yale Club of Houston and a member of the Board of Trustees of the Houston Municipal Employees Pension System. In addition, he is a Class X graduate of Leadership Houston. Mr. Garcia is married with four children and enjoys martial arts and coaching youth sports.





## Ruby Muñoz Dang Partner, Director of Marketing and Client Services

Ms. Dang received a B.A. in Finance from the University of Houston-Downtown in 1994. Following graduation, she joined Garcia Hamilton & Associates as a Portfolio Administrator. Over the years, she has held a variety of investment positions including Equity Trader, Equity Research Analyst and Assistant Equity Portfolio Manager. In January of 2014, Ms. Dang was promoted to Director of Marketing and Client Services, overseeing a team of fourteen professionals. She was promoted to Partner in 2014.

Ms. Dang and her team are responsible for fulfilling client inquiries and providing portfolio information. Additionally, they work closely with the consultant community and co-coordinate the firm's participation in educational forums and conference presentations.

Ms. Dang also served as a Trustee for the Metropolitan Transit Authority of Harris County Non-Union Pension Plan & Trust. Furthermore, she has spoken on numerous panels and forums related to both market and pension issues. Because education has been so important in her life, she devotes considerable time mentoring high school and college students. She is active in her kids' school, volunteering for various activities.

GH&A has received numerous industry recognitions. Most recently in 2019, *Pensions & Investments* ranked the firm among their Best Places to Work in Money Management for the fourth year in a row (2019, 2018, 2017, 2016). The firm also received *Houston Business Journal's* Best Places to Work in 2018. *Emerging Manager Monthly* awarded the firm Fixed Income Manager of the Year for the third time (2019, 2018 and 2010). Other past awards include FundMap's 2018 US Fixed Income Manager, *Institutional Investor*'s Intermediate-Term Fixed Income Manager of the Year in 2016 and 2015, as well as their 2014 Fixed Income Investment Grade Manager of the Year.



## **Performance Disclosure**

FIXED INCOME – AGGREGATE COMPOSITE (Disclosure Presentation as of December 31, 2019)

Garcia Hamilton & Associates, L.P.

|          |                                       | Annual Composite                          | Performance Results                                       |                          | Standard De   | viation (3-yr)1                                    | Compos               | site Assets                                  | Firm As                                       | ssets              |
|----------|---------------------------------------|---|---|--------------------------|---------------|--|----------------------|--|---|--------------------|
| Year End | Gross Composite Total Return (% US\$) | Net Composite<br>Total Return<br>(% US\$) | Bloomberg<br>Barclays US<br>Aggregate<br>Index Return (%) | Composite Dispersion (%) | Composite (%) | Bloomberg<br>Barclays US<br>Aggregate<br>Index (%) | Number of Portfolios | Composite Assets<br>Period End<br>(US\$ mil) | Total Firm Assets<br>Period End<br>(US\$ mil) | % of<br>Firm Asset |
| 2002     | 10.4                                  | 10.2                                      | 10.3  | NM                       | -             | -  | 3                    | 85   | 3,280   | 3                  |
| 2003     | 4.1                                   | 3.9                                       | 4.1   | NM                       | -             | -  | 3                    | 88   | 4,628   | 2                  |
| 2004     | 4.9                                   | 4.8                                       | 4.3   | NM                       | -             | -  | 4                    | 98   | 4,710   | 2                  |
| 2005     | 3.8                                   | 3.6                                       | 2.4   | NM                       | -             | -  | 4                    | 121  | 4,152   | 3                  |
| 2006     | 4.2                                   | 4.0                                       | 4.3   | NM                       | -             | -  | 4                    | 126  | 3,025   | 4                  |
| 2007     | 8.6                                   | 8.4                                       | 7.0   | 0.1                      | -             | -  | 6                    | 184  | 2,215   | 8                  |
| 2008     | 5.9                                   | 5.7                                       | 5.2   | 0.2                      | -             | -  | 9                    | 248  | 1,538   | 16                 |
| 2009     | 12.1                                  | 11.9                                      | 5.9   | 1.7                      | -             | -  | 16                   | 419  | 1,939   | 22                 |
| 2010     | 8.2                                   | 8.0                                       | 6.5   | 0.4                      | -             | -  | 27                   | 653  | 2,382   | 27                 |
| 2011     | 5.3                                   | 5.1                                       | 7.8   | 0.3                      | 3.5           | 2.8  | 42                   | 983  | 2,704   | 36                 |
| 2012     | 10.5                                  | 10.3                                      | 4.2   | 0.2                      | 3.1           | 2.4  | 47                   | 1,084  | 3,227   | 34                 |
| 2013     | 0.1                                   | -0.1                                      | -2.0  | 0.2                      | 3.4           | 2.7  | 59                   | 1,372  | 3,387   | 40                 |
| 2014     | 8.0                                   | 7.8                                       | 6.0   | 0.2                      | 2.8           | 2.6  | 111                  | 2,485  | 4,962   | 50                 |
| 2015     | 0.8                                   | 0.7                                       | 0.6   | 0.1                      | 3.2           | 2.9  | 146                  | 3,768  | 6,340   | 59                 |
| 2016     | 3.2                                   | 3.0                                       | 2.7   | 0.1                      | 3.3           | 3.0  | 168                  | 5,080  | 8,016   | 63                 |
| 2017     | 3.8                                   | 3.6                                       | 3.5   | 0.1                      | 3.1           | 2.8  | 185                  | 185 7,135                                    |   | 71                 |
| 2018     | 1.0                                   | 0.8                                       | 0.0   | 0.2                      | 2.5           | 2.8  | 205                  | 8,287  | 12,590  | 66                 |
| 2019     | 7.3                                   | 7.1                                       | 8.7   | 0.5                      | 2.3           | 2.9  | 250                  | 10,113                                       | 14,997  | 67                 |

Historical information not required prior to 2011. NM = Not statistically meaningful due to an insufficient number of portfolios in the composite for the entire year. Creation Date: 10/1/1999. Source: Bloomberg Barclays

The GH&A Fixed Income – Aggregate Composite is comprised of fully discretionary, fee paying institutional portfolios, including those portfolios no longer with the firm. The Fixed Income – Aggregate investment philosophy utilizes high-quality U.S. investment grade fixed income securities. To help control risk, the portfolios purchase spread product (non-Treasuries) with less than 10-year maturities, 15-year and 20-year Agency Guaranteed Mortgage-Backed securities and Corporate Bonds rated a minimum of single "A-". The portfolios do not contain derivatives and do not employ leverage. The duration exposure is generally managed within a +/- 10% band around the Bloomberg Barclays US Aggregate Index and a maximum of +/- 25% in extreme market environments.

The composite benchmark is the Bloomberg Barclays US Aggregate Index. The benchmark is used for comparative purposes only and generally reflects the risk or investment style of the product. The account minimum for the composite is \$2.0 million.

Garcia Hamilton & Associates, L.P., (GH&A) claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. GH&A has been independently verified for the periods January 1, 1993, through December 31, 2015, by Ashland Partners & Company LLP and from January 1, 2016, through December 31, 2018, by ACA Performance Services, LLC. The verification reports are available upon request. Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. Verification does not ensure the accuracy of any specific composite presentation.

Returns presented include the reinvestment of all income. The net of fees performance results are calculated based on actual fees. The standard fee schedule is: 0.25% of the first \$25 million, 0.20% of the next \$25 million, 0.18% of the next \$50 million, 0.15% of the next \$100 million, and 0.12% of the balance. GH&A is an investment management firm registered under the Investment Advisers Act of 1940. GH&A was known as Davis Hamilton Jackson & Associates prior to June 30, 2010. Past performance is no guarantee of future results. A complete list and description of firm composites is available upon request.

Policies for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request. Composite dispersion is calculated using an asset value-weighted standard deviation of annual gross returns of those portfolios included in the composite the entire year. Standard deviation is presented as a 3-year annualized standard deviation measure of risk using monthly gross returns as of each annual period end. While the composite is older, this date was selected when Mr. Garcia arrived and took over the portfolios.



**BOARD Meeting: 1/26/21** Item VII-E Attachment 1

IC Meeting: 12/9-10/20 **Attachment 3** 

## INCOME RESEARCH + MANAGEMENT LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

December 9, 2020

Presented by: Jim Gubitosi, CFA

Kara Maloy, CFA

Angela Meringoff, CFA

Bill O'Malley, CFA



**BOARD Meeting: 1/26/21** Item VII-E

Attachment 1

Attachment 3

IC Meeting: 12/9-10/20

## WHY IR+M

- + Stable organization
- + Consistent investment process and performance
- + Proactive client service with transparent communication
- + Deep, accessible team of subject matter experts
- + Competitive fees



BOARD Meeting: 1/26/21 Item VII-E

Attachment 1

IC Meeting: 12/9-10/20

Attachment 3

IR+M FIXED INCOME CAPABILITIES

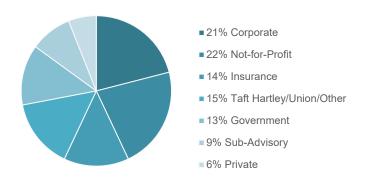
IR+M OVERVIEW



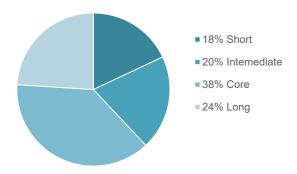
#### FIRM FACTS

- 30+ years since firm's inception
- \$84.0 billion in assets under management
- Exclusively US dollar-denominated fixed income
- Consistent, team-oriented, bottom-up investment approach
  - 16-year average portfolio manager tenure
- Material ESG factors fully integrated within our investment process
- Privately owned with 57 employee shareholders

#### ASSETS BY CLIENT TYPE



#### ASSETS BY STRATEGY



#### **KEY DIFFERENTIATORS**

+ INDEPENDENT FIRM

+ VALUE ORIENTED APPROACH

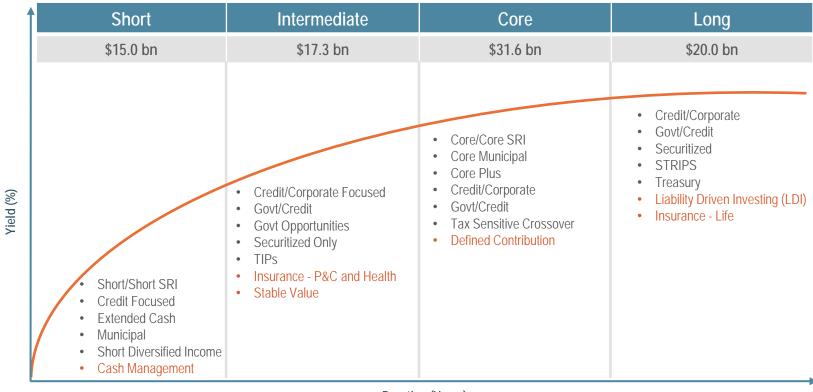
+ COLLABORATIVE CULTURE

+ CLIENT FOCUS



## IR+M STRATEGY OVERVIEW SOLUTIONS SPECTRUM

IR+M manages custom solutions across the yield curve



#### **Duration (Years)**

### **AUM by Strategy**

|                     | Short    | Intermediate | Core      | Long        |
|---------------------|----------|--------------|-----------|-------------|
| Broad               | \$8.2 bn | \$11.1 bn    | \$22.3 bn | \$8.1 bn    |
| Government/TIPS     | \$2.1 bn | \$2.2 bn     | \$2.8 bn  | \$ 476.4 mm |
| Corporate-focus     | \$3.7 bn | \$3.9 bn     | \$2.9 bn  | \$11.5 bn   |
| Municipal/Crossover | \$1.1 bn | \$0.0 bn     | \$3.5 bn  | \$18.8 mm   |



## IR+M OVERVIEW DIVERSITY OF CLIENTS

#### GOVERNMENT: 34

City of Anniston, AL Police & Fire Retirement System Bristol County, MA Retirement System Cambridge, MA Retirement System DeKalb County Employees' Retirement Plan City of Detroit, MI Police & Fire Retirement System Government of Guam Retirement Fund City of Knoxville, TN Pension Board MBTA Retirement Fund Metropolitan St. Louis Sewer District New Hampshire Retirement System City of Orlando, FL Plymouth County, MA Retirement Association City of Springfield, MO Police & Fire Retirement System City of Tallahassee Commonwealth of Virginia

Washington Suburban Sanitary Commission

#### CORPORATE: 47

City of Warwick, RI

AMETEK, Inc. Belk, Inc. Cisco Systems Jones Day Kaman Corporation Merck & Co., Inc. Textron, Inc.

#### SUB-ADVISORY: 10

Commonfund Harbor Capital Advisors, Inc. **SEI Investments Management Corporation** 

#### HEALTHCARE: 51 Adventist Health System

Allina Health System **Boston Medical Center Corporation** CT Children's Medical Center Henry Ford Health System Hoad Memorial Hospital Presbyterian MaineHealth Massachusetts Medical Society Memorial Sloan-Kettering Cancer Center MetroWest Community Health Care Foundation NewYork-Presbyterian Hospital ProMedica Health System Rochester General Hospital Sturdy Memorial Hospital Trinitas Regional Medical Center **Tufts Medical Center** University of Colorado Medicine

#### FDUCATION: 33

Arizona State University Claremont McKenna College Colby College Ithaca College Regents of the University of Colorado The Rockefeller University The University of Iowa St. Lawrence University Syracuse University Temple University Trinity University University of Maine System University of Massachusetts University of San Diego

#### **INSURANCE: 48**

American Bankers Mutual Insurance Anthem Insurance Companies, Inc. Attorneys' Liability Assurance Society AvMed Health Plans BETA Healthcare Group Blue Cross Blue Shield of Kansas Blue Cross Blue Shield of Massachusetts Blue Cross Blue Shield of Tennessee CareMore Health Plan **CCC Investment Trust** Cidel Bank & Trust Inc. Cidel Fund Management Inc.

Commonwealth Professional Assurance Co. Excellus Health Plan, Inc.

Fallon Community Health Plan MedAmerica Insurance Company

MedAmerica Insurance Company of Florida MedAmerica Insurance Company of New York

MIG Assurance (Cayman) Ltd. Mountain States Healthcare MVP Health Plan. Inc.

Neighborhood Health Plan of Rhode Island New Life Insurance Company

Physicians Health Plan of Northern Indiana Tufts Associated Health Plans Volunteer State Health Plan. Inc.

#### ENDOWMENT, FOUNDATION, & OTHER: 70

American Bible Society Archdiocese of Cincinnati Bill and Melinda Gates Foundation Catholic Relief Services Central New York Community Foundation Church of the Brethren Benefit Trust CRU

Fund for New Jersev Hartford Foundation for Public Giving

IEEE. Inc.

Diocese of Rockville Centre

Knights of Columbus

Northern California Conference of Seventh-Day Adventists

Queen Lili`uokalani Trust Regenstrief Foundation, Inc. Sandler Foundation Sisters of the Precious Blood The Boston Foundation

The Community Foundation for Greater New Haven, Inc.

The First Church of Christ, Scientist The Oregon Community Foundation The Rhode Island Community Foundation The Salvation Army, Illinois

The Samuel Roberts Noble Foundation

The Trustees of Reservations Trustees of Donations

Winter Park Health Foundation Inc.

#### UNION AND TAFT HARTI FY: 16

Laborers' International Union of North America New England Health Care Employees' Pension Fund Pipefitters Benefit Fund Teamsters Joint Council Pension Fund Sheet Metal Workers Pension Fund Social Service Employees Union Annuity Fund Union Individual Account Retirement Fund United Food and Commercial Workers

> This is a partial list of IR+M's clients as of 10/31/20. The list excludes confidential clients, private clients, and investors in private placements. It is not known whether the clients listed here approve or disapprove of IR+M or of the investment advisory services provided.

## IR+M OVERVIEW WHO WE ARE

#### SENIOR MANAGEMENT

Bill O'Malley, CFA\*

Principal CEO, Co-CIO 32 years experience

Jack Sommers, CFA\*

Principal

Executive Chairperson 35 years experience

John Sommers\*

Principal

Senior Portfolio Manager 55 years experience

Matt Conroy, CFA\*

Principal

Chief Financial Officer 28 years experience

Max DeSantis, CFA\*

Principal

Director of Enterprise Solutions 21 years experience

Jim Gubitosi, CFA\*

Principal Co-CIO

16 years experience

Sarah Kilpatrick\*

Principal

COO, Senior Portfolio Manager 18 years experience

Molly Manning\*

Principal

Director of Client Service 22 years experience

Sue Synodis\*

Principal

Chief Human Capital Officer

40 years experience

#### Brooke Anderson, CFA

Principal

Director of Investment Product Management 26 years experience

Rick Kizik, CFA

Principal

Chief Compliance Officer 28 years experience

#### WHAT WE STAND FOR

+ To take care of our clients we need to take care of ourselves and our community, too.





#### Commitment to ESG and Sustainability

- Promote environmentally conscious culture
- Fully integrated ESG research process

#### Diversity, Equity and Inclusion

- Workforce Integration, Retention and Engagement Committee (WIRE)
- CEO pledge for D&I

#### Giving Back to the Community

- Annual IR+M Week of Giving and paid Personal Volunteering Days
- Generous Charitable Donation Matching Program



































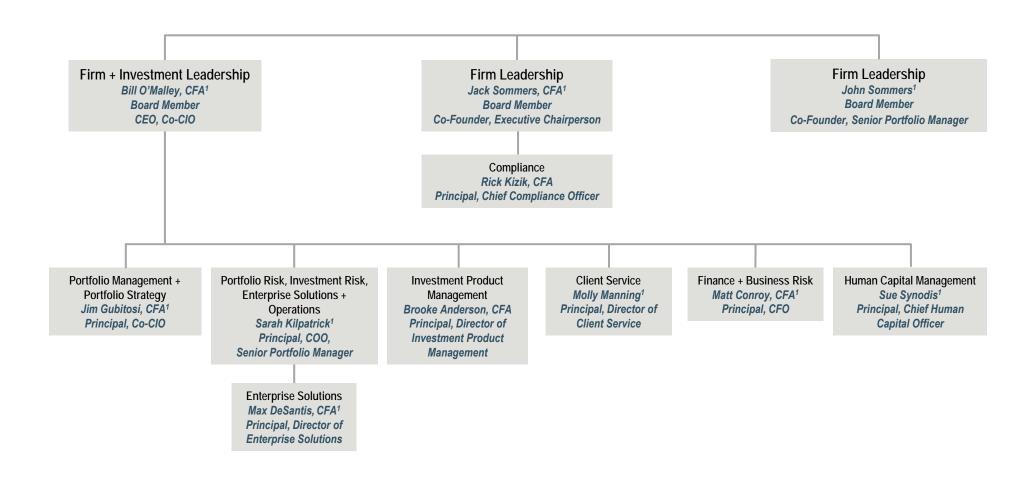








## IR+M OVERVIEW ORGANIZATIONAL CHART





## IR+M DIVERSITY, EQUITY, AND INCLUSION (DEI) OVERVIEW

## **Diversity Policy Statement**

- We commit to taking action as a firm and individually to create conditions that support equal rights for people of color and all under-represented communities.
- We emphasize hiring, training and mentoring our employees to eliminate discrimination based on age, gender, race, national or ethnic origin, physical abilities, religious beliefs, sexual orientation, veteran status and socio-economic background within our firm and our communities.
- We support cognitive and experiential diversity by acknowledging that differences in background, communication style, and life experience contribute to making us uniquely who we are and stronger as an organization.
- We commit to fostering a diverse workforce through a variety of ongoing recruiting, retention, and inclusion initiatives.
- We condemn all forms of racism that continue to plague Black and Brown communities. We will continue the work of being antiracist as individuals and as an organization.

## Our Diversity, Equity and Inclusion PACT:



### **PRIORITIZE**

Focus on DEI; this begins with our CEO and Senior Management and must be embraced by our entire firm for our efforts to succeed



#### **ACT**

Take visible internal inclusion steps; reimagine strategic hiring as an opportunity, and support external organizations that align with our values



#### **COMMIT**

Clearly prioritize our DEI support through IR+M's Firm Vision and Goals, and reinforce through consistent messaging and feedback



#### **TRACK**

Measure and share indicators of diversity, and create mechanisms for qualitative feedback to foster a more inclusive culture



## IR+M DIVERSITY, EQUITY, AND INCLUSION (DEI) INITIATIVES AND PARTNERSHIPS

**MENTOR** 

**ACT** 

**ADVOCATE** 

**RECRUIT** 

**PARTNER** 

#### RECRUITING

Recruiting: We focus on purposeful hiring to attract candidates who are from under-represented groups in the asset management industry. Specifically, we ensure our job descriptions use language that invite candidates of diverse backgrounds. We advertise open roles to broader audiences, and we make certain our interview process reflects our values as a firm and our focus on diversity and inclusion.

#### **PARTNERSHIPS**

- Ellavate: In partnership with Dr. Ella
  Washington, Founder of Ellavate Solutions and
  a leading voice in the DEI field, we are working
  to understand our shortcomings and to take
  action to make IR+M a more inclusive and
  equitable workplace.
- CFA Institute's Experimental Partner Program:
   As a participant in this program, IR+M commits to help drive change and nurture DEI in the investment management industry.
- Year Up: As a long-time supporter of Year Up, IR+M partners with the organization to help close the opportunity divide for young adults by providing internships, volunteer opportunities, and financial support.
- Philanthropic Support: IR+M dedicates a portion of our annual charitable giving to organizations focused on ending racial bias.

#### ACTION

Office of DEI: We have a newly created office cochaired by two senior leaders, with a mission to be a catalyst for firm initiatives, provide strong internal and external communication, oversee metrics, and work in close partnership with the CEO to ensure we are continually making forward progress on our DEI journey.

#### **ADVOCACY**

Workforce Integration, Retention, and Engagement Committee ("WIRE"): WIRE is committed to fostering an anti-racist, inclusive, and respectful culture at IR+M. WIRE generates ideas and facilitates efforts to promote DEI and help mitigate all bias by providing opportunities for education, discussion, support, networking, and information sharing.

#### **MENTORSHIP**

**New Hire Mentor Program and Networking Circles:** We emphasize diversity and inclusion in these two long-standing IR+M programs.



As of 10/31/20

## Attachment 3

## IR+M OVERVIEW INVESTMENT PROFESSIONALS

| TARGET TEAM           | YRS EXP / YI                              | RS at IR+M |
|-----------------------|---|------------|
| Bill O'Malley, CFA    | Principal, CEO, Co-CIO                    | 32 / 25    |
| Ed Ingalls, CFA       | Principal, Senior PM / Product Specialist | 41 / 20    |
| Jim Gubitosi, CFA     | Principal, Co-CIO                         | 16 / 13    |
| Sarah Kilpatrick      | Principal, COO, Senior Portfolio Manager  | 18 / 16    |
| Bill O'Neill, CFA     | Principal, Senior Portfolio Manager       | 20 / 15    |
| Jake Remley, CFA      | Principal, Senior Portfolio Manager       | 19 / 14    |
| Allysen Mattison, CFA | Director of Investment Risk               | 15 / 11    |

| PORTFOLIO MANAGERS    | YRS EXP / YRS at IR+M                     |         |  |  |  |  |
|-----------------------|---|---------|--|--|--|--|
| John Sommers          | Principal, Senior Portfolio Manager       | 55 / 33 |  |  |  |  |
| Paul Clifford, CFA    | Principal, Senior PM / Investment Product | 34 / 17 |  |  |  |  |
|                       | Specialist                                |         |  |  |  |  |
| Mike Sheldon, CFA     | Principal, Senior Portfolio Manager       | 29 / 12 |  |  |  |  |
| Scott Pike, CFA       | Senior Portfolio Manager                  | 23 / 13 |  |  |  |  |
| Matt Walker, CFA      | Senior Portfolio Manager                  | 17 / 13 |  |  |  |  |
| Wesly Pate, CFA       | Portfolio Manager                         | 12 / 9  |  |  |  |  |
| Justin Quattrini, CFA | Portfolio Manager                         | 17 / 14 |  |  |  |  |

| PORTFOLIO STRATEGY      | / RISK + INVESTMENT RISK         | YRS EXP / YRS at IR+IVI |
|-------------------------|----------------------------------|-------------------------|
| John Costello, CFA      | Senior Portfolio Strategy Analys | st 8/7                  |
| Tucker Rothmann, CFA    | Portfolio Strategy Analyst       | 7/3                     |
| Annemarie Ellicott      | Senior Portfolio Risk Analyst    | 9/6                     |
| Mark Riordan, CFA       | Senior Portfolio Risk Analyst    | 11/8                    |
| Joe Alfano, CFA         | Portfolio Risk Analyst           | 11 / 7                  |
| Samantha Quinn, CFA     | Portfolio Risk Analyst           | 8/5                     |
| Kaysonne Anderson       | Portfolio Risk Associate         | 10 / 7                  |
| John Lu                 | Junior Portfolio Risk Associate  | 4 / <1                  |
| Sarah Spencer           | Business Management Analyst      |                         |
| Carrie Mermelstein, CFA | Senior Investment Risk Analyst   | 19 / 1                  |
| Devan Acker             | Investment Risk Analyst          | 9/9                     |

| DIRECTORS + INVESTMENT    | T PRODUCT SPECIALISTS YRS EXP / YRS         | S at IR+M |
|---------------------------|---|-----------|
| Rachel Campbell           | Director of Securitized Research            | 14 / 11   |
| Nate Hollingsworth, CFA   | Director of Portfolio Risk                  | 14 / 11   |
| Kara Maloy, CFA           | Director of Credit Research                 | 14 / 10   |
| Brooke Anderson, CFA      | Principal, Director of Investment Product   | 26 /10    |
|                           | Management                                  |           |
| Amy DiMarzio              | SVP, Investment Product Specialist          | 20 / 3    |
| Allison Walsh, CFA        | SVP, Head of ESG & Corporate Sustainability | 17 / 4    |
| Theresa Roy, FSA, EA, CFA | VP, Investment Product Specialist           | 11 / <1   |

| RESEARCH / INVESTMEN | NT PRODUCT YRS EXP / YR                    | S at IR+M |
|----------------------|--|-----------|
| Caroline Chen        | SVP, Senior Research Analyst (Securitized) | 18 / 4    |
| Kristoff Nelson, CFA | SVP, Senior Research Analyst (Credit)      | 12/9      |
| Isha Chanana, CFA    | Senior Research Analyst (Credit)           | 13 / 5    |
| Luke Ferriter, CFA   | Senior Research Analyst (Credit)           | 14/6      |
| Rob Nuccio, CFA      | Senior Research Analyst (Credit)           | 12 / 8    |
| Ralph Saturné        | Senior Research Analyst (Securitized)      | 13 / 8    |
| Ginny Schiappa, CFA  | Senior Research Analyst (Credit)           | 9/5       |
| Michael Bronson, CFA | Research Analyst (Credit)                  | 7 / 4     |
| Tony Graves, CFA     | Research Analyst (Credit)                  | 7 / <1    |
| Layla Zhu, CFA       | Research Analyst (Securitized)             | 7 / 4     |
| Harrison Ameen       | Research Associate                         | 5/1       |
| Emily O'Toole        | Junior Research Associate                  | 3 / 1     |
| Valérie Salmon       | Junior Research Associate                  | 1/1       |
| Dan Comiskey, CFA    | Senior Investment Product Analyst          | 7/5       |
| Neal Gombeski, CFA   | Senior Investment Product Analyst          | 15 / 5    |
| Jennifer Kaing       | Investment Product Analyst                 | 10 / <1   |

| TRADERS   |   | YRS EXP / YRS at IR+M                             |
|---|---|---|
| Lucas Murray<br>Mark Paulson<br>Preston Raymond, CFA<br>Andy Tenczar<br>Jeremy Holtz, CFA | SVP, Senior Trader<br>Senior Trader<br>Senior Trader<br>Senior Trader<br>Trader | 16 / 12<br>14 / 11<br>15 / 9<br>22 / 8<br>15 / 10 |
| Nicole Pasquale   | Junior Trader   | 3 / <1  |
|   |   |   |



## IR+M OVERVIEW LEADERSHIP + OWNERSHIP EVOLUTION

- Firm founded in 1987; privately held
- Leadership Team built out over time
  - 17 year average tenure for Management Committee members
    - Succession plan in place
  - 16 year average tenure for Portfolio Management Team
- Shareholder base has grown exponentially, currently 57 employee shareholders
  - Firm offers ownership opportunity to designated employees annually

| Client Serv<br>dedicate<br>employee h       | ed         |          | ll O'Malley<br>oins IR+M |           |         | Te<br>res                 | lient Serv<br>eam Direc<br>sponsibili<br>formalize | ctor<br>ties |                    |   |       | Pla<br>Res | siness<br>nning<br>source<br>o formed | Tea<br>resp | vestme<br>m Dire<br>onsibi<br>rmalize | ector<br>ilities |             | own<br>ex-So                                   | oloyee<br>ership<br>ommers<br>eds 50% | s) II | R+M adopts<br>C-suite titles |
|---|------------|----------|--------------------------|-----------|---------|---------------------------|--|--------------|--------------------|---|-------|------------|---------------------------------------|-------------|---------------------------------------|------------------|-------------|--|---------------------------------------|-------|------------------------------|
| 1988  | 1990       | 1992     | 1994 19                  | 96 1998   | 3 200   | 0 200                     | 02   | 2004         | 2006               | 2008  | 201   | 0          | 2012                                  | 2           | 014                                   | 2                | 016         | 2  | 2018                                  | 4     | 2020                         |
| 2 ←   | IR+M Emplo | oyee Sha | reholder Gı              | owth Time | eline — | 3                         | 5  | 7 1          | 0                  | 11  | 14 18 | 20         | 23                                    | 29          | 34 (                                  | 38 4             | 42          | 47   | 52                                    | 55    | 57                           |
| 1987 1                                      | 1989 1991  | 1993     | 3 1995                   | 1997      | 1999    | 2001                      | 2003   | 20           | 005                | 2007  | 2009  | 2011       | I                                     | 2013        | 2                                     | 2015             | 4           | 2017   | 4                                     | 2019  |                              |
| IR+M founded by<br>John and Jack<br>Sommers |            |          |                          |           |         | st employee<br>hareholder | 9  |              | Jack<br>leadership | Team formed<br>transitions<br>of Investme<br>am to Bill |       |            |                                       |             | anage<br>Commi<br>forme               | ittee            | lea<br>Clie | assur<br>nd role<br>ent Ser<br>d Prod<br>Teams | for<br>rvice<br>duct                  |       |                              |



BOARD Meeting: 1/26/21

Item VII-E Attachment 1 IC Meeting: 12/9-10/20

Attachment 3

IR+M FIXED INCOME CAPABILITIES

## **INVESTMENT PROCESS**



## IR+M INVESTMENT PHILOSOPHY AND PROCESS

#### **PHILOSOPHY**

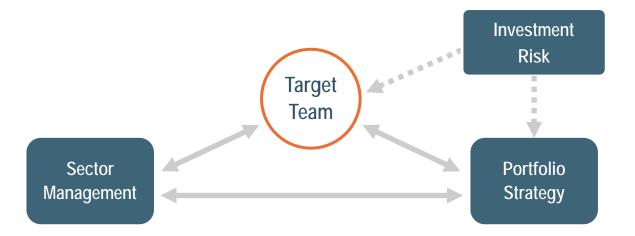
Duration neutral

- Benchmark aware, not beholden
- + Take what the market gives you

+ Relative-value oriented

- + Selective
- + Focus on ESG Factors
- Bottom-up security selection

#### **INVESTMENT PROCESS OVERVIEW**



### Research + Analysis

- Bottom-up security selection
- Focus on credit, structure and price
- Consider ESG factors as part of our fundamental analysis

#### Risk Positioning + Monitoring

- Define investment philosophy
- Assess relative value across sectors
- Conduct material market risk evaluation

### Construction + Optimization

- Invest to risk parameters established by Target Team
- Express preferred themes made by Sector Management
- Fulfill client needs and objectives



Attachment 3

## IR+M INVESTMENT PROCESS BOTTOM-UP APPROACH

### **Target Team SECTOR MANAGEMENT PORTFOLIO STRATEGY FIXED INCOME** UNIVERSE Idea Generation/ ESG Analysis **Construction / Implementation** Sector Management Preferences Credit Target Team Direction Portfolio Suitability Structure Securitized Credit Price Best ideas Portfolio Government Municipal Bonds **Investment** Risk we don't like Overlay

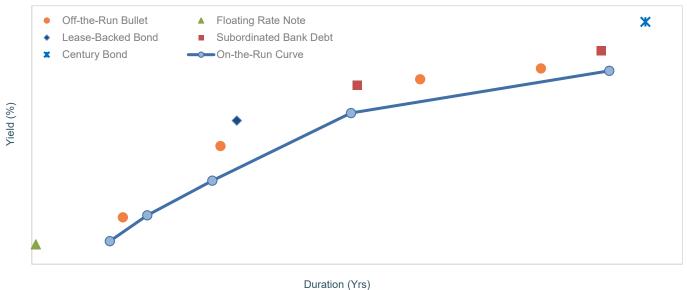


## IR+M INVESTMENT PROCESS UNIQUE OPPORTUNITIES

#### **VALUE-ORIENTED APPROACH**

- Market complexities create overlooked bond structures/issues with attractive return profiles and favorable characteristics
- Unique structures and off-the-run points on the yield curve have potential for yield, OAS, and convexity advantages

## Large Financial Company Yield Curve







## IR+M INVESTMENT PROCESS SECURITIZED OPPORTUNITIES

#### **VALUE-ORIENTED APPROACH**

#### **Agency Fixed-Rate Mortgage-Backed Securities (MBS)**

Specified pass-through pools, collateralized mortgage obligations (CMOs)

#### Agency Multi-Family Mortgage-Backed Securities (MBS)

· Loan level and structural features help provide cash flow stability

#### Agency Hybrid Adjustable-Rate Mortgage Securities (ARMS)

Fixed or floating-rate securities

#### Non-Agency Fixed-Rate Mortgage-Backed Securities (MBS)

• Senior, primarily front cash flow structure to limit extension risk

#### **Commercial Mortgage-Backed Securities (CMBS)**

- · Senior positioning with high levels of credit enhancement
- Favor seasoned, well-diversified pools

#### **Asset-Backed Securities (ABS)**

Emphasize structures with strong credit enhancement and solid collateral performance

#### **Small Business Administration (SBA)**

- · Full faith and credit of the US Treasury
- · Prepayment protection

| 10/31/20<br>Characteristics | IR+M<br>Securitized<br>Portfolio | Bloomberg Barclays<br>Securitized<br>Index |
|-----------------------------|----------------------------------|--|
| OAS (bps)                   | 85                               | 56   |
| Effective Duration (yrs)    | 2.99                             | 2.55                                       |
| Convexity                   | (0.61)                           | (1.58)                                     |
| 12/31/19                    |                                  |  |
| OAS (bp)                    | 56                               | 42   |
| Effective Duration (yrs)    | 3.15                             | 3.34                                       |
| Convexity                   | (0.37)                           | (1.71)                                     |

#### Durations: IR+M Securitized Portfolio vs.



The IR+M Securitized Portfolio and IR+M Agency MBS Portfolio are both sample portfolios. IR+M Sample Securitized Portfolio includes Small Business Administration Bonds (SBAs). Source: Bloomberg Barclays

## IR+M INVESTMENT PROCESS PORTFOLIO CONSTRUCTION + RISK CONTROL

· We are benchmark aware, but not benchmark constrained

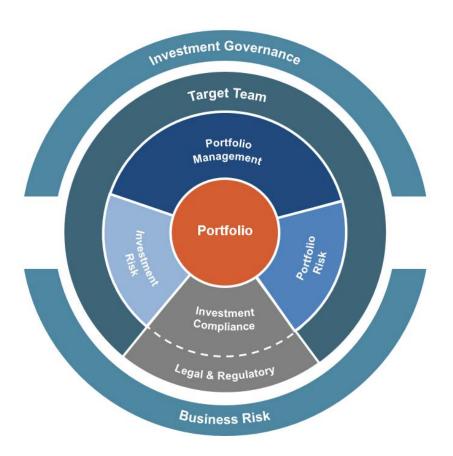
| Factors                | IR+M Broad Strategy Approach  |
|------------------------|---|
| Duration / Yield Curve | + Duration and key rate neutral to benchmark  |
| Yield                  | + Spread product overweight generally means portfolio's effective spread (OAS) is greater than the Index's effective spread (OAS)             |
| Sector Allocation      | <ul> <li>Security selection and relative value drive exposures</li> <li>Diversified by sector, but we don't need to own everything</li> </ul> |
| Quality                | + Return of principal is paramount  |
| ESG                    | + Compensation vs. risk mitigation; focus on business sustainability  |
| Liquidity              | + Provide liquidity when well-compensated   |
| Tracking Error         | + Tracking error reflects available opportunities   |
| US Cash Bonds          | + No derivatives / no currency  |
| Leverage               | + None  |



## IR+M OVERVIEW RISK GOVERNANCE

• Managing risk is a cross-functional effort, with several teams and systems engaged in the process

#### **FUNCTIONAL OVERSIGHT**



#### **TECHNICAL OVERSIGHT**

#### Third Party Solutions

- + Order Management System (Fidessa)
  - Guideline Compliance Monitoring (Sentinel)
  - + Trade Allocations and Trade Workflow (Minerva)
  - + Portfolio Partition Workbooks (Tesseract)
- + Portfolio Risk & Analytics (Bloomberg PORT+)

#### **Proprietary Tools**

- Portfolio Exposures & Historical Data (PRISM Portfolio Risk Investment Strategy Management)
- Sector Targets (TMA Target Management Application)
- + Attribution (PAA Performance Attribution Application)



**BOARD Meeting: 1/26/21** 

Item VII-E Attachment 1

IC Meeting: 12/9-10/20

Attachment 3

IR+M FIXED INCOME CAPABILITIES

## **ESG FACTOR INTEGRATION**



## IR+M RESPONSIBLE INVESTMENT INTRODUCTION

SRI

**ESG** 

Impact/ Thematic

### Socially Responsible Investing

- Incorporates negative screening criteria to intentionally avoid selected industries
- Adapts screens to clients' needs and beliefs, such as alcohol, gambling, and predatory lending
- IR+M manages \$11.9 billion in 100+ custom SRI mandates and has managed SRI accounts for over 15 years

#### Environmental, Social & Governance

- Integrates environmental, social, and governance (ESG) factors through a holistic approach into traditional credit analysis
- Examines ESG issues that may significantly impact long-term value and creditworthiness
- May include best-in-class investing
- IR+M manages all of its assets incorporating an ESG lens

## Impact / Thematic Investing

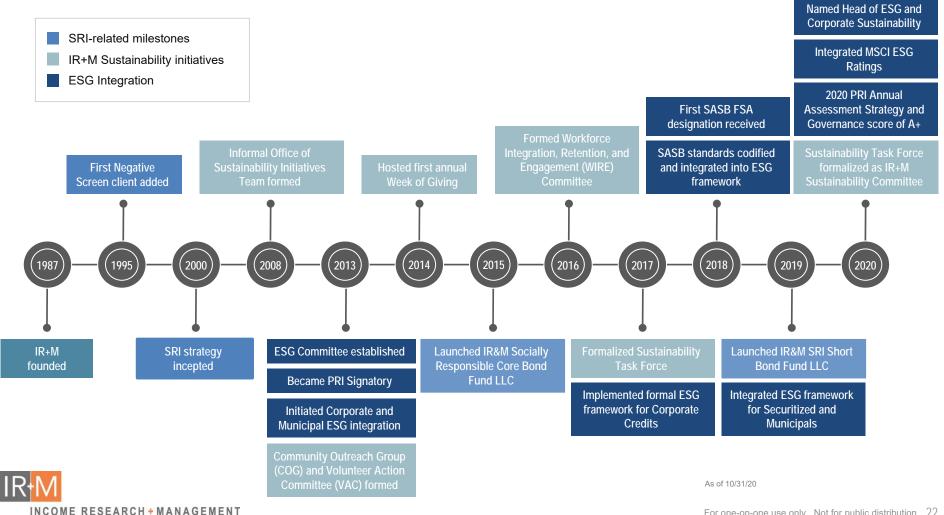
- Seeks out investments in organizations that effect constructive environmental or social change while benefiting financial return
- Actively pursues specific positive and measurable impact through investments and engagement
- Utilizes values-based investing intended to drive change
- May include investing in areas such as green bonds or participating in divestment campaigns



As of 10/31/20

## IR+M COMMITMENT TO ESG AND SUSTAINABILITY

- IR+M has a history of commitment to socially responsible investing and the incorporation of environmental, social and governance factors in our investment process
- We have a demonstrated commitment to sustainability and Diversity, Equity, and Inclusion (DEI) at the firm level



## **IR+M ESG PROCESS**

• IR+M research analysts and portfolio managers employ an integrated approach to incorporating ESG factors into our fundamental bottom-up credit research process



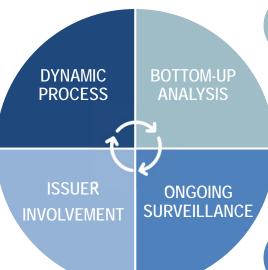
### **ESG Framework**

- Relies on experience of our 13 research analysts and 13 portfolio managers
- Identifies 100+ inputs to our proprietary Key Issues Map
- Incorporates SASB guidance to determine materiality
- Consistently applied across all asset classes and sectors



#### Engagement

- Participate in 40-50 meetings monthly: one-on-one discussions, road shows, ESG conferences, PRI/SASB events
- Engage with issuers on material ESG factors
- Encourage disclosure which may lead to change



## Sector Specific Research

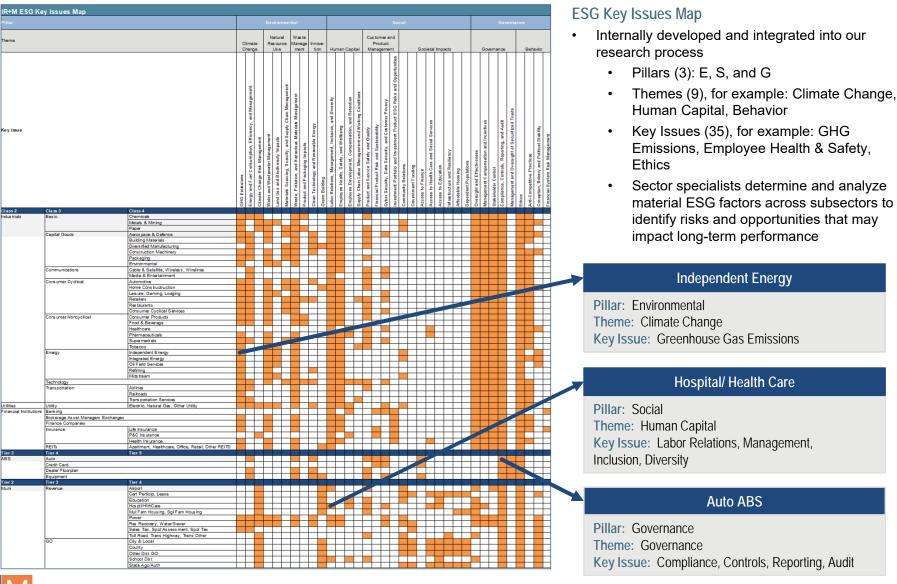
- Integrates 35 key ESG issues with bottom-up analysis
- Identify leaders and laggards within each industry
- Inform opinions with external data providers including MSCI, Sustainalytics, Bloomberg, ISS



#### **Monitoring Key Issues**

- Actively monitor material ESG events
- Weekly formal ESG discussions and issuer surveillance
- Ratings adjusted as key issues develop

## **IR+M** ESG KEY ISSUES





BOARD Meeting: 1/26/21

Item VII-E Attachment 1 IC Meeting: 12/9-10/20 Item II

Attachment 3

IR+M FIXED INCOME CAPABILITIES

## IR+M AGGREGATE STRATEGY



## IR+M AGGREGATE STRATEGY CHARACTERISTICS

| Characteristics          | IR+M<br>Aggregate<br>Portfolio<br>(10/31/20) | Bloomberg Barclays<br>Aggregate<br>Index<br>(10/31/20) | Sector Distribution (%) | IR+M<br>Aggregate<br>Portfolio<br>(10/31/20) | Bloomberg Barclays<br>Aggregate<br>Index<br>(10/31/20) |
|--------------------------|--|--|-------------------------|--|--|
| Yield (%)                | 1.58   | 1.24   | Government              | 13.9   | 38.7   |
| Spread to Tsy (bp)       | 98   | 54   | Treasury                | 7.8  | 37.1   |
| Effective Duration (yrs) | 6.01   | 6.12   | TIPS                    | 2.7  | 0.0  |
| Convexity                | 0.55   | 0.37   | Agency                  | 0.0  | 1.5  |
| Number Of Issues         | 284  | 11,971   | Govt Guaranteed         | 3.4  | 0.1  |
| Average Quality (M/S&P)  | Aa3/A+                                       | Aa2/AA-  | Credit                  | 41.0   | 31.2   |
|                          |  |  | Finance                 | 13.6   | 8.2  |
| D () D) ( ) () (0()      |  |  | Industrial              | 22.8   | 16.8   |
| Ratings Distribution (%) |  |  | Utility                 | 4.5  | 2.2  |
| Aaa                      | 54.5   | 70.0   | Credit Non-Corporate    | 0.0  | 3.9  |
| Aa                       | 3.4  | 3.4  | Securitized             | 42.6   | 29.4   |
| Α                        | 16.4   | 12.0   | RMBS                    | 1.8  | 0.0  |
| Baa                      | 24.2   | 14.6   | Agency RMBS             | 24.1   | 26.8   |
| Ва                       | 1.1  | 0.0  | ABS                     | 7.4  | 0.4  |
| Cash                     | 0.3  | 0.0  | CMBS                    | 8.3  | 1.3  |
| Total                    | 100.0  | 100.0  | Agency CMBS             | 1.0  | 0.9  |
|                          |  |  | Municipal               | 2.2  | 0.7  |
|                          |  |  | GO                      | 0.0  | 0.2  |
|                          |  |  | Revenue                 | 2.2  | 0.5  |
|                          |  |  | Cash                    | 0.3  | 0.0  |

Total

- IR+M performance objective: Outperform the index by 50-75 bps annually over a market cycle
- Three ways to outperform the benchmark
  - Yield advantage gives the portfolio wind at its back
  - High quality positioning allows the portfolio to hold-up better in negative economic scenarios
  - Security selection generates ~70% of excess returns relative to index

Some statistics require assumptions for calculations which can be disclosed upon request. Yields are represented as of the above date(s) and are subject to change.

100.0

The views contained in this report are those of IR+M as of 10/31/20 and are based on information obtained by IR+M from sources that are believed to be reliable. Source: Bloomberg Barclays



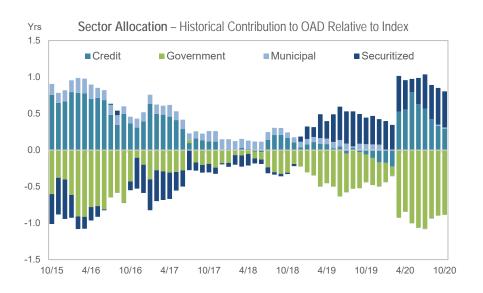
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Totals may not sum to 100 due to rounding.

## IR+M AGGREGATE STRATEGY RISK CHARACTERISTICS

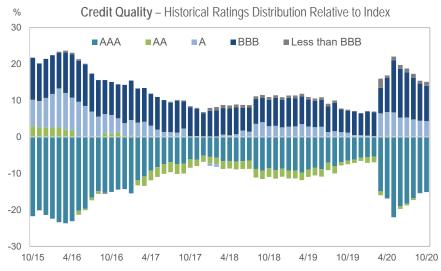
#### **RISK TYPES**

- + Interest Rate Risk
- Sector Allocation
- Credit Quality/ESG Risks
- + Security Selection
- + Liquidity
- + Tracking Error



#### **INTEREST RATE RISK**

- Duration neutral position versus benchmark
  - Duration +/- 0.25 years
- Neutral exposure to key rates versus benchmark
  - Key rates +/- 0.25 years
- + Convexity aware



Some statistics require assumptions for calculations which can be disclosed upon request. Index is Bloomberg Barclays Aggregate Index.

Source: Bloomberg Barclays as of 10/31/20.

## IR+M AGGREGATE STRATEGY RISK CHARACTERISTICS

Sector Allocation – Top 10 OASD Differences vs. Index by Spread Sectors

| Overweight (yrs)              |      | Underweight (y | Underweight (yrs) |  |  |
|-------------------------------|------|----------------|-------------------|--|--|
| Sector                        | OASD | Sector         | OASD              |  |  |
| Transportation                | 0.19 | Sovereign      | -0.12             |  |  |
| Brokerage                     | 0.16 | Technology     | -0.08             |  |  |
| Small Business Administration | 0.13 | Basic          | -0.07             |  |  |
| CMBS SS 2.0/3.0               | 0.11 | CMBS Other     | -0.06             |  |  |
| Capital Goods                 | 0.07 | Supranational  | -0.05             |  |  |
| CMBS SS 2.0/3.0 LCF           | 0.07 | Energy         | -0.05             |  |  |
| Banking                       | 0.07 | Non-Corp Other | -0.04             |  |  |
| Taxable Muni – Special Tax    | 0.07 | US Agency      | -0.04             |  |  |
| Agency Fixed Rate CMO         | 0.07 | Other Indus    | -0.02             |  |  |
| Communication                 | 0.07 | Trans Other    | -0.02             |  |  |

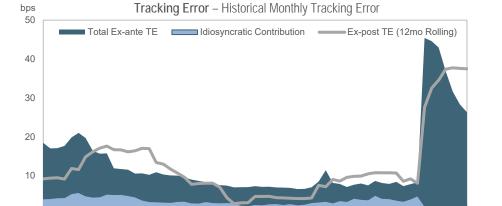
#### 5-Year Historical Characteristics Relative to Index



# INCOME RESEARCH + MANAGEMENT

#### Security Selection - Top 10 OASD Differences vs. Index by Credit Ticker

| Overweigl | ht (yrs) | Und  | Underweight (yrs) |  |  |
|-----------|----------|------|-------------------|--|--|
| Ticker    | OASD     | Tick | er OASD           |  |  |
| KKR       | 0.10     | WFC  | -0.04             |  |  |
| CLECLI    | 0.08     | AAPL | -0.03             |  |  |
| EXC       | 0.08     | MSFT | -0.03             |  |  |
| BX        | 0.07     | MEX  | -0.03             |  |  |
| CP        | 0.06     | CVS  | -0.02             |  |  |
| CHTR      | 0.06     | ABBV | -0.02             |  |  |
| NYSDEV    | 0.05     | UNH  | -0.02             |  |  |
| VRSK      | 0.05     | JPM  | -0.02             |  |  |
| MS        | 0.05     | ВА   | -0.02             |  |  |
| MCD       | 0.05     | HSBC | -0.02             |  |  |



9/17 IR+M Aggregate Composite is used for historical monthly tracking error. Tracking Error as of 9/30/20.

Sector Allocation and Security Selection are as of 10/31/20.

9/16

9/15

3/16

Some statistics require assumptions for calculations which can be disclosed upon request.

3/17

Index is Bloomberg Barclays Aggregate Index. Yields are represented as of the above date and are subject to change.

This is not a recommendation to purchase or sell any specific security listed in the above chart.

The blue bars show the 5-year historical range and the orange diamond represents the value as of 10/31/20. Ratings (Moody's) shows the number of rating notch differences between the portfolio and index.

3/18

9/18

The relative govt-backed weighting is the aggregate weighting for Treasuries, Agency, Govt Guaranteed, Agency RMBS and Agency CMBS versus the benchmark weighting for those sectors.

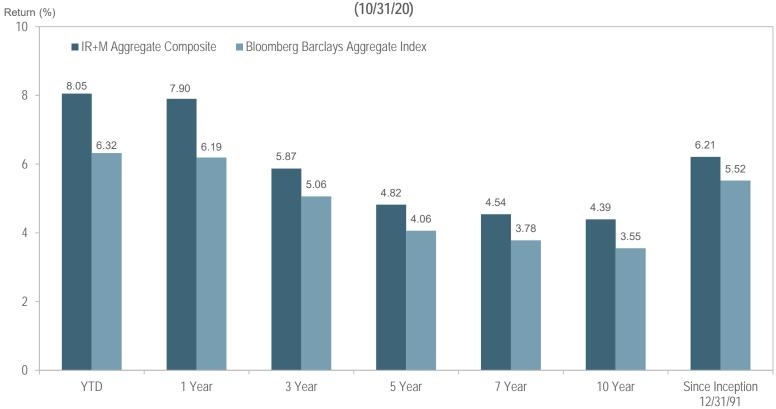
Sources: Bloomberg Barclays, IR+M Analytics, Barclays POINT® and Bloomberg PORT+
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3/20

9/20

## IR+M AGGREGATE STRATEGY PERFORMANCE

# IR+M Aggregate Composite vs. Bloomberg Barclays Aggregate Index Investment Results (10/31/20)





Unless otherwise stated, the investment results shown do not reflect the deduction of investment advisory fees. Periods over one year are annualized. Past performance is not indicative of future results. A similar analysis can be provided for any time period since inception. Please refer to the GIPS® composite disclosures at the end of this presentation.

# IR+M AGGREGATE STRATEGY HISTORICAL PERFORMANCE ATTRIBUTION

### IR+M Aggregate Composite

|      | Composite<br>Return<br>(Gross of Fee) | Bloomberg Barclays<br>Aggregate Index<br>Return | Return<br>Difference | Market Term<br>Structure | Asset<br>Allocation | Security<br>Selection | Price<br>and Intraday | Total |
|------|---------------------------------------|---|----------------------|--------------------------|---------------------|-----------------------|-----------------------|-------|
| YTD  | 8.05                                  | 6.32  | 1.73                 | 0.15                     | 1.26                | 0.55                  | (0.23)                | 1.73  |
| 2019 | 9.32                                  | 8.72  | 0.60                 | (0.19)                   | 0.60                | 0.26                  | (0.07)                | 0.60  |
| 2018 | 0.09                                  | 0.01  | 0.08                 | (0.06)                   | (0.19)              | 0.34                  | (0.01)                | 0.08  |
| 2017 | 3.97                                  | 3.54  | 0.43                 | (0.08)                   | 0.44                | 0.12                  | (0.05)                | 0.43  |
| 2016 | 3.57                                  | 2.65  | 0.92                 | (0.16)                   | 0.96                | 0.15                  | (0.03)                | 0.92  |
| 2015 | 0.59                                  | 0.55  | 0.04                 | (0.05)                   | (0.11)              | 0.23                  | (0.03)                | 0.04  |

Source: Bloomberg Barclays

# INVESTMENT RESULTS IR+M VS. PEERS



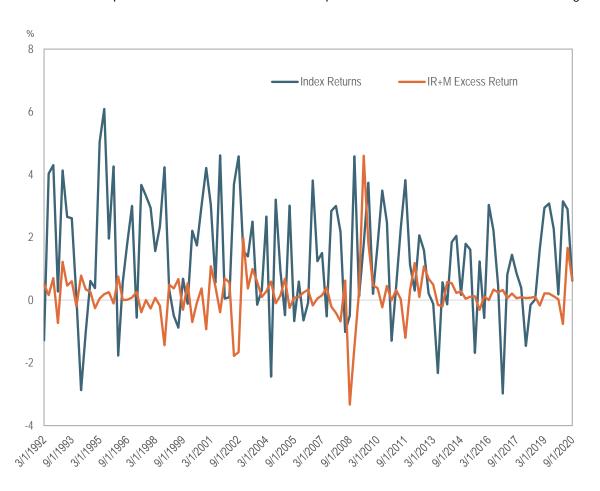


Blue shading represents return ranges in 5th, 25th, 75th, and 95th percentiles of the 257 manager observations available via eVestment. The bottom table represents IR+M Aggregate Composite's percentile rank in comparison to eVestment's manager observations.

Source: eVestment as of 9/30/2020. eVestment collects information directly from investment management firms and other sources believed to be reliable. eVestment does not guarantee or warrant the accuracy, timeliness, or completeness of the information provided and are not responsible for any errors or omissions. Performance results may be provided with additional disclosures available on our systems and other important considerations such as fees may be applicable. Not for general distribution. \* All categories not necessarily included; Totals may not equal 100.

# STRONG PERFORMANCE IN DOWN MARKETS

• IR+M outperformed the index in 23 of the 26 quarters since 1991 when the index had negative absolute returns



| -0.16<br>-1.46<br>-2.98<br>-0.57<br>-1.68 | 0.08<br>0.06<br>0.32<br>0.12  |
|---|---|
| -2.98<br>-0.57                            | 0.32  |
| -0.57                                     |   |
|   | 0.12  |
| -1.68                                     |   |
|   | 0.12  |
| -0.14                                     | 0.57  |
| -2.32                                     | -0.15   |
| -0.12                                     | 0.49  |
| -1.30                                     | -0.01   |
| -0.49                                     | -3.33   |
| -1.02                                     | 0.62  |
| -0.52                                     | 0.40  |
| -0.08                                     | 0.33  |
| -0.65                                     | 0.24  |
| -0.67                                     | 0.08  |
| -0.48                                     | 0.68  |
| -2.44                                     | 0.59  |
| -0.15                                     | 0.58  |
| -0.12                                     | 0.54  |
| -0.88                                     | 0.67  |
| -0.50                                     | 0.37  |
| -0.56                                     | 0.26  |
| -1.77                                     | 0.75  |
| -1.03                                     | 0.34  |
| -2.87                                     | 0.78  |
| -1.28                                     | 0.51  |
|   | -0.14 -2.32 -0.12 -1.30 -0.49 -1.02 -0.52 -0.08 -0.65 -0.67 -0.48 -2.44 -0.15 -0.12 -0.88 -0.50 -0.56 -1.77 -1.03 -2.87 |



As of 9/30/20.

Index is Bloomberg Barclays Aggregate Index. IR+M excess returns shown are for the IR+M Aggregate Composite. The above information is supplemental to the IR+M Composite Disclosures at the end of this presentation. The IR+M Aggregate Composite incepted 12/31/91. Table on the right shows quarters in which the Bloomberg Barclays Aggregate Index had negative absolute return.

The corresponding IR+M Aggregate Composite excess return vs. the Index is also listed. Both Index return and excess return are shown as percentages. Source: IR+M Analytics, Bloomberg Barclays

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Attachment 1

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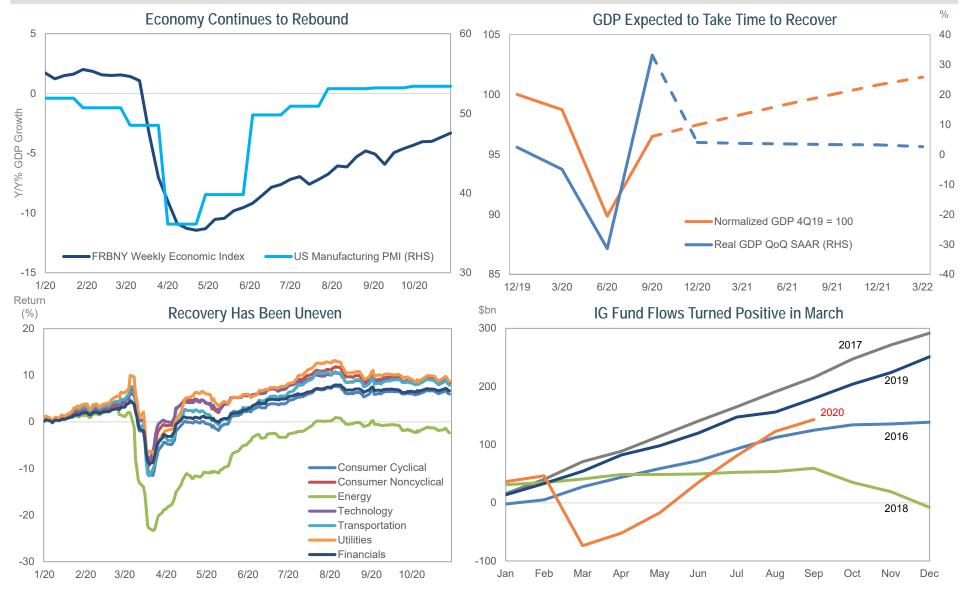
Attachment 3

IR+M FIXED INCOME CAPABILITIES

# MARKET UPDATE



# MARKET UPDATE WHERE ARE WE NOW?

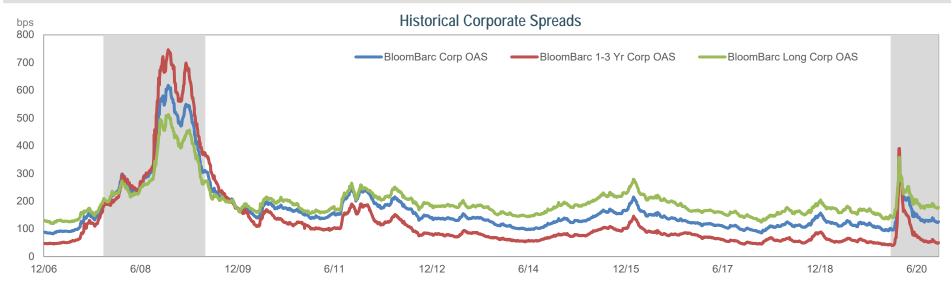




Sources: Bloomberg and IR+M analytics as of 10/31/20. Bottom right chart sourced from JPMorgan as of 9/30/2020. Dashed lines in top right chart are estimates. The views contained in this report are those of IR+M as of 10/31/20 and are based on information obtained by IR+M from sources that are believed to be reliable.

# hment 1 Attachment 3

# MARKET UPDATE SPREAD HISTORY AND FISCAL AND MONETARY ACTIONS



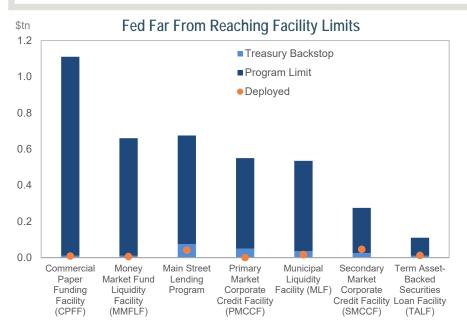
#### YTD Policy Responses and Spreads bps 500 400 300 200 100 0 1/20 2/20 3/20 4/20 5/20 7/20 8/20 10/20 6/20 9/20 Fiscal Monetary BloomBarc Corp OAS BloomBarc 1-3 Yr Corp OAS BloomBarc Long Corp OAS

### Great Financial Crisis vs. COVID-19 Response

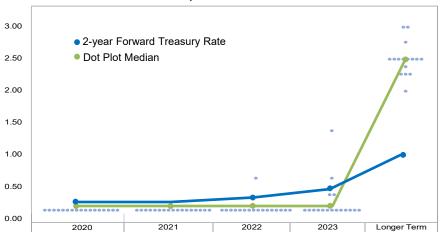
| Oroat i manolai onoio voi oo v                                      | ,    |      |           |                     |
|---|------|------|-----------|---------------------|
|   | 2008 | 2020 | Announced | Launched            |
| Asset Purchases (QE)  | Х    | Х    | 3/15/20   | 3/15/20             |
| Zero Bound Rates  | Х    | Х    | 3/15/20   | 3/15/20             |
| Primary Credit Rate/Discount Window                                 | X    | X    | 3/15/20   | 3/15/20             |
| Reserve Requirements  |      | Х    | 3/15/20   | 3/15/20             |
| Central Bank Liquidity Swaps  | Х    | Х    | 3/15/20   | 3/16/20             |
| Term Auction Facility (TAF)   | Х    |      |           |                     |
| Term Securities Lending Facility (TSLF)                             | Х    |      |           |                     |
| TSLF Options Program  | Х    |      |           |                     |
| Primary Dealer Credit Facility (PDFF)                               | X    | X    | 3/17/20   | 3/20/20             |
| Commercial Paper Funding Facility (CPFF)                            | Х    | Х    | 3/17/20   | 4/14/20             |
| Money Market MF Liquidity Facility (MMLF)                           | X    | X    | 3/18/20   | 3/23/20             |
| Term Asset-Backed Securities Loan Facility (TALF)                   | Х    | Х    | 3/23/20   | 6/17/20             |
| Troubled Asset Relief Program (TARP)                                | Х    |      |           |                     |
| Primary Market Corporate Credit Facility (PMCCF)                    |      | Х    | 3/23/20   | 6/29/20             |
| Secondary Market Corporate Credit Facility (SMCCF)                  |      | X    | 3/23/20   | 5/12/20,<br>6/16/20 |
| Foreign and International Monetary Authorities (FIMA) Repo Facility |      | Х    | 3/31/20   | 4/6/20              |
| Main Street New Loan Facility (MSNLF)                               |      | Х    | 4/9/20    | 7/15/20             |
| Main Street Expanded Loan Facility (MSELF)                          |      | Х    | 4/9/20    | 7/15/20             |
| Main Street Priority Loan Facility (MSPLF)                          |      | X    | 4/30/20   | 7/15/20             |
| Municipal Liquidity Facility (MLF)                                  |      | Х    | 4/9/20    | 6/5/20              |
| Paycheck Protection Program Liquidity Facility (PPPLF)              |      | X    | 4/9/20    | 4/16/20             |

Sources: Bloomberg and Federal Reserve as of 10/31/20. Gray bars in top chart indicate US recessions. Blue vertical lines represent fiscal policy responses and red vertical lines represent monetary policy responses in bottom left chart. The bottom right chart is not a complete list of policies enacted during the GFC and COVID-19 Response. A complete list can be provided upon request. The views contained in this report are those of IR+M as of 10/31/20 and are based on information obtained by IR+M from sources that are believed to be reliable.

# MARKET UPDATE FED AND TREASURY RESPONSE



### Rates Expected to Remain Low

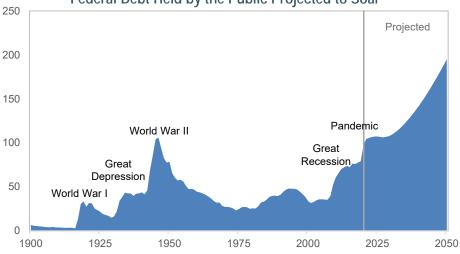


### Fed Increased Holdings of Treasuries, MBS, and Corporates



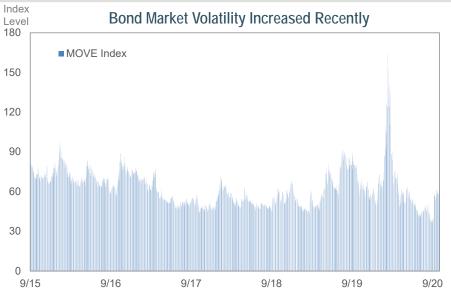
### Federal Debt Held by the Public Projected to Soar

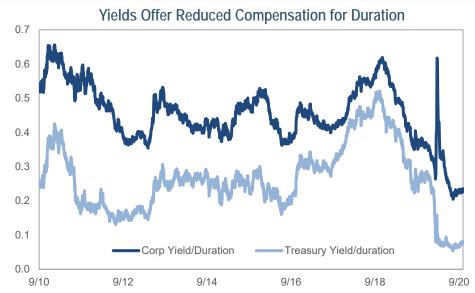
% of GDP



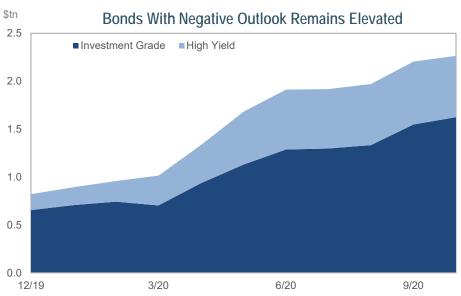
Sources: Bloomberg and Federal Reserve as of 10/31/20. Lower left chart is Fed Dot Plot from September meeting. Lower right chart sourced from Congressional Budget Office as of 9/30/2020. The views contained in this report are those of IR+M as of 10/31/20 and are based on information obtained by IR+M from sources that are believed to be reliable.

# MARKET UPDATE RISKS ON THE HORIZON



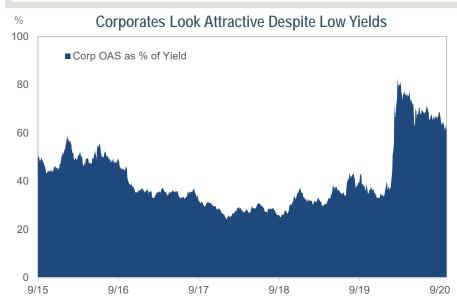


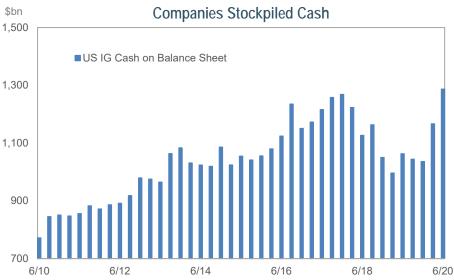


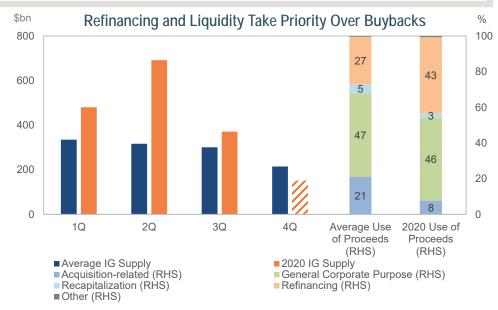


Sources: Bloomberg and IR+M analytics as of 10/31/20. Bottom left chart sourced from JPMorgan as of 9/30/20. Bottom right chart represents bonds with negative outlook from Moodys. The views contained in this report are those of IR+M as of 10/31/20 and are based on information obtained by IR+M from sources that are believed to be reliable.

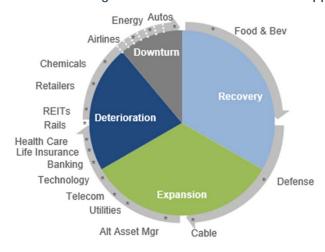
# MARKET UPDATE CORPORATE MARKET OUTLOOK





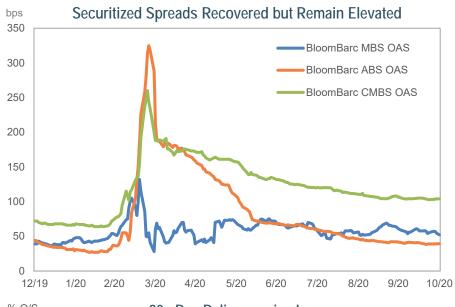


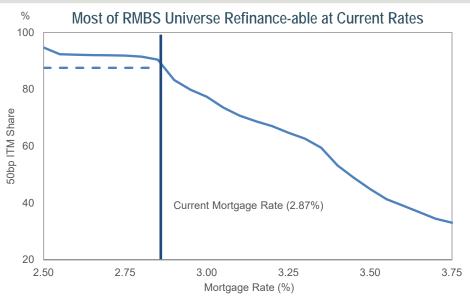
### **Fundamental Divergence Across Sectors Provides Opportunity**

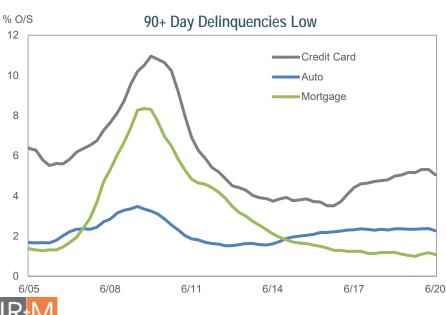


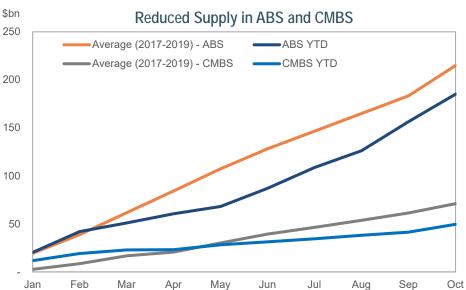
Sources: Bloomberg and IR+M analytics as of 10/31/20. Source for top right chart is JPMorgan, MS Research, and S&P LCD as of 9/30/20. Shaded orange bar in top right chart represents estimated investment-supply issuance in 4020. Average supply and average use of proceeds is the average of 2015 – 2019. Source for bottom left chart is JPMorgan. Bottom right chart as of 9/30/2020. The views contained in this report are those of IR+M as of 10/31/20 and are based on information obtained by IR+M from sources that are believed to be reliable.

# MARKET UPDATE SECURITIZED MARKET RESPONSE









Sources: Bloomberg as of 10/31/20. Top right chart sourced from Citi Research as of 9/21/20. Dashed line in chart represents portion of universe refinance-able at current rates, based on mortgages that have rates 50bps or higher than current rate. Bottom left chart sourced from New York Fed Consumer Credit Panel as of 6/30/20. The views contained in this report are those of IR+M as of 10/31/20 and are based on information obtained by IR+M from sources that are believed to be reliable.

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Attachment 3

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IR+M FIXED INCOME CAPABILITIES

# **APPENDIX**



# PRESENTER BIOGRAPHIES



Bill O'Malley, CFA
Board Member
Chief Executive Officer, CoChief Investment Officer, 32
years of experience

Bill joined IR+M in September 1994. Prior to IR+M, Bill was a Vice President at Wellington Management Company, LLP. Before joining Wellington in 1989, Bill worked at The Vanguard Group and in Morgan Stanley's Fixed Income Division. Bill has a BA from Amherst College (1984) and an MBA from The Wharton School of the University of Pennsylvania (1989).



Jim Gubitosi, CFA
Co-Chief Investment Officer
Principal, 16 years of
experience

Jim joined IR+M in March 2007. Prior to joining IR+M, he was a Senior Analyst at Financial Architects Partners. Jim has a BSBA from Boston University School of Management (2004).



Kara Maloy, CFA
Credit Team
Director of Credit Research,
14 years of experience

Kara joined IR+M in April 2010. Prior to joining IR+M, Kara was a Securities Valuation Analyst at John Hancock Financial. Kara has a BA from Cornell University (2006).



Angela Meringoff, CFA Senior Client Portfolio Manager Principal, 22 years of experience

Angela joined IR+M in September 2010. Prior to joining IR+M, Angela was a Vice President with State Street Bank and Trust Company. Angela has a BA from Western Washington University (1998).





#### INCOME RESEARCH + MANAGEMENT

#### ESG in the Investment Industry

- The US Department of Labor (DOL) proposed a rule that ERISA fiduciaries may not invest in ESG vehicles for the purpose of non-financial objectives.
  - The DOL sent enforcement letters to those plan sponsors with ESG funds in their plan lineups, requesting documentation ahead of the possible change.
  - The proposed rule sparked a heated reaction, with 95% of responders opposing the change, according to analysis led by US SIF¹.
- Hurricane Laura was the seventh named storm to make landfall in the US this year, a new record over the same time period. Studies have shown that storm intensity and water temperature are likely correlated.
  - The remaining 2020 Atlantic hurricane season is expected to be very active, which may result in increased economic damage.
- The US House of Representatives passed the Moving Forward Act, aiming to revitalize federal infrastructure while achieving net-zero emissions goals.
   The ambitious green bill is expected to face opposition in the Senate.

| Characteristics | Bloomberg Barclays US Aggregate (Agg) & MSCI Focused Sub-Indices |              |      |               |  |  |
|-----------------|--|--------------|------|---------------|--|--|
| Onaracteristics | Standard   | ESG-Weighted | SRI  | Sustainabilty |  |  |
| Yield to Worst  | 1.15   | 1.07         | 1.10 | 1.03          |  |  |
| Duration        | 6.09   | 6.36         | 5.91 | 5.76          |  |  |
| Spread          | 57   | 50           | 53   | 46            |  |  |
| Convexity       | 0.46   | 0.61         | 0.40 | 0.35          |  |  |
| 1-Yr Return (%) | 6.47   | 6.79         | 6.50 | 6.52          |  |  |

As of August 31, 2020

#### The Connection Between E and S

- Throughout the pandemic, the focus on racial inequality has also highlighted climate injustice, and the connection between the environment and many social issues, which may directly impact certain related credits.
  - Evidence indicates that communities of color are disproportionately impacted by climate change, since some of these communities may live and attend school near polluting facilities.
  - Polluting facilities may impact the surrounding community's health while also resulting in residents missing school or work. Communities' proximity to these facilities could contribute to lower property values and under-funded schools, perpetuating the poverty cycle.

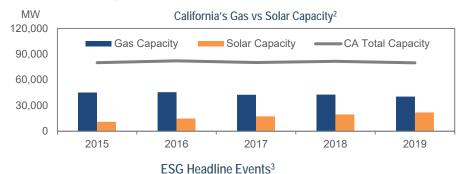


## **ESG MONITOR**

THIRD OUARTER 2020

#### The Complexities of ESG

- California has led the US in Clean Energy Policy and targets 100% renewables and zero carbon by 2045. The recent rolling blackouts, the first since 2001, impacted thousands of California residents and highlight the complexities that these programs can face. Despite recent setbacks, California remains dedicated to their advancement of renewables, reduction of carbon, and other green projects.
- During record-setting heatwaves, California grid operators shut down electrical power as demand exceeded available power supply. Magnified by the extreme heat and wildfires, the pandemic has changed how people and businesses use electricity, making it harder for grid operators to forecast.
- To make progress towards their aggressive zero carbon policy, California has
  retired 10 gas-fired plants since 2010. As a result, there is less available gas
  supply at peak hours coinciding with the lack of available solar power after
  sundown. Recent power blackouts highlight the challenge of balancing electric
  reliability with carbon reduction goals as more renewable energy storage is
  needed.
- As a leader in Clean Energy Policy, many states will look to California's response to this challenging situation. The far-reaching implications of the regulatory environment is a key consideration in our fundamental research.



- ESG factors influence headlines and can impact credit performance. Social factors continue their prevalence in the media.
  - Glencore and Tesla have backed a new alliance in the Democratic Republic of Congo in an effort to eradicate child labor and improve working conditions at cobalt mines. The DRC supplies 60% of the world's cobalt, which is a key input for batteries.
  - Employees at Premium Point Investments were charged with inflating asset values, allowing them to collect higher fees and attract investors. Many of these prime jumbo RMBS assets continue to trade on the secondary market.

- Income Research + Management (IR+M) was named a Best Place to Work in Money Management for the fourth consecutive year by Pensions & Investments
- Presented by Pensions & Investments, the global news source of money management, the annual survey and recognition program is dedicated to identifying and recognizing the best employers in the money management industry
- One of the cornerstones of IR+M is its unique culture, which is collaborative and collegial, as well as
  focused on serving its clients and community; the firm's open office environment fosters constant
  communication across team lines, and empowers employees to freely share ideas
- The firm's commitment to the community is pervasive, with employees frequently volunteering to mentor students or provide meals to those in need; additionally, the firm's benefits program reflects its emphasis on the importance of work/life balance

For a complete list of the 2019 Pensions & Investments' Best Places to Work in Money Management winners, please visit:

https://www.pionline.com/best-places-work/76-money-managers-go-above-and-beyond





Aggregate Composite
January 1, 1992 through December 31, 2019

|      |        |             |           |                 |           | 1                       |                |                      |        |
|------|--------|-------------|-----------|-----------------|-----------|-------------------------|----------------|----------------------|--------|
| Year |        | Returns (%) |           | 3-Yr St Dev (%) |           | Number of<br>Portfolios | Dispersion (%) | Y/E Assets (USD, mm) |        |
|      | Gross  | Net         | Benchmark | Composite       | Benchmark |                         | Composite      | Composite            | Firm   |
| 1992 | 8.06   | 7.69        | 7.40      | N/A             | N/A       | ≤ 5                     | N/A            | 9                    | 538    |
| 1993 | 11.95  | 11.57       | 9.75      | N/A             | N/A       | ≤ 5                     | N/A            | 21                   | 803    |
| 1994 | (1.80) | (2.15)      | (2.92)    | N/A             | N/A       | ≤ 5                     | N/A            | 18                   | 957    |
| 1995 | 18.90  | 18.50       | 18.47     | N/A             | N/A       | ≤ 5                     | N/A            | 97                   | 1,700  |
| 1996 | 4.53   | 4.17        | 3.63      | N/A             | N/A       | ≤ 5                     | N/A            | 100                  | 1,964  |
| 1997 | 9.22   | 8.85        | 9.65      | N/A             | N/A       | ≤ 5                     | N/A            | 108                  | 2,420  |
| 1998 | 7.61   | 7.24        | 8.69      | N/A             | N/A       | 6                       | 0.10           | 293                  | 3,041  |
| 1999 | 0.45   | 0.10        | (0.82)    | N/A             | N/A       | 6                       | 0.08           | 239                  | 3,374  |
| 2000 | 10.19  | 9.81        | 11.63     | N/A             | N/A       | 7                       | 0.63           | 162                  | 3,620  |
| 2001 | 10.38  | 10.01       | 8.44      | N/A             | N/A       | 7                       | 0.22           | 111                  | 3,705  |
| 2002 | 9.32   | 8.94        | 10.26     | N/A             | N/A       | 7                       | 0.24           | 181                  | 3,847  |
| 2003 | 6.20   | 5.84        | 4.10      | N/A             | N/A       | 12                      | 0.40           | 700                  | 5,108  |
| 2004 | 5.31   | 4.95        | 4.34      | N/A             | N/A       | 16                      | 0.21           | 927                  | 6,636  |
| 2005 | 3.05   | 2.69        | 2.43      | N/A             | N/A       | 33                      | 0.23           | 1,255                | 7,480  |
| 2006 | 4.81   | 4.45        | 4.33      | N/A             | N/A       | 42                      | 0.17           | 1,845                | 9,238  |
| 2007 | 6.91   | 6.54        | 6.97      | N/A             | N/A       | 44                      | 0.27           | 2,616                | 11,507 |
| 2008 | 0.23   | (0.12)      | 5.24      | N/A             | N/A       | 51                      | 1.47           | 2,618                | 13,718 |
| 2009 | 13.49  | 13.11       | 5.93      | N/A             | N/A       | 69                      | 1.35           | 3,765                | 21,252 |
| 2010 | 7.16   | 6.79        | 6.54      | N/A             | N/A       | 84                      | 0.32           | 4,885                | 26,295 |
| 2011 | 7.30   | 6.93        | 7.84      | 3.35            | 2.78      | 86                      | 0.25           | 5,054                | 30,676 |
| 2012 | 7.39   | 7.02        | 4.22      | 2.49            | 2.38      | 84                      | 0.35           | 5,391                | 35,466 |
| 2013 | (1.33) | (1.68)      | (2.02)    | 2.89            | 2.71      | 72                      | 0.20           | 4,528                | 37,224 |
| 2014 | 7.10   | 6.73        | 5.97      | 2.75            | 2.63      | 71                      | 0.19           | 6,075                | 48,414 |
| 2015 | 0.59   | 0.23        | 0.55      | 2.91            | 2.88      | 62                      | 0.14           | 6,747                | 54,887 |
| 2016 | 3.57   | 3.15        | 2.65      | 2.88            | 2.98      | 66                      | 0.20           | 8,290                | 61,589 |
| 2017 | 3.97   | 3.56        | 3.54      | 2.65            | 2.78      | 69                      | 0.13           | 9,099                | 69,256 |
| 2018 | 0.09   | (0.32)      | 0.01      | 2.65            | 2.84      | 69                      | 0.09           | 9,470                | 71,882 |
| 2019 | 9.32   | 8.89        | 8.72      | 2.76            | 2.87      | 66                      | 0.13           | 10,424               | 75,105 |

The three-year annualized ex-post standard deviation of the composite and benchmark is as of year end. Reporting began in 2011.



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# IR+M COMPOSITE DISCLOSURES – 12/31/19 (continued)

### **Aggregate Composite Continued**

Income Research & Management ("IR+M") is an independent investment management firm with approximately \$75.1 billion in assets under management. IR+M has no subsidiaries or divisions, all business is done at IR+M and all assets are managed by IR+M. A complete list of composite descriptions is available upon request. IR+M claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. IR+M has been independently verified for the period January 1, 2000 through December 31, 2019 by ACA Performance Services. Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's processes and procedures are designed to calculate and present performance in compliance with the GIPS standards. The Aggregate Composite has been examined for the period January 1, 2000 through December 31, 2019. The verification and performance examination reports are available upon request.

Valuations are computed, performance is reported, and fees are based on U.S. dollars. Gross-of-fee performance returns are presented before management and custodial fees but after all trading expenses. Net-of-fee performance returns are calculated using the highest fee of the two scenarios: 1) fee charged to a current portfolio within the composite or 2) the standard fee schedule. Therefore, we use whichever fee is highest for a given year. The fees are deducted quarterly, using one-fourth of the annual fee rate. Fees disclosed are the standard management fee for that strategy. Actual management fees may be different than those illustrated in this disclosure. Additional information regarding valuing portfolios, calculating performance and preparing compliant presentations are available upon request.

Dispersion is calculated using the equal-weighted standard deviation of all portfolios that were included in the composite for the entire year. Dispersion is not calculated for years with five or fewer portfolios in the composite for the entire year.

This composite utilizes a Significant Cash Flow Policy, which is described as follows. Prior to 1/1/10, if cash flows exceeded 5%, IR+M removed the portfolio from the composite, effective as of the last full month of management prior to the cash flow, if the impact to the performance of the composite was greater than the absolute value of 0.02%. For periods beginning 1/1/10 or later, IR+M will remove a portfolio from a composite if an external contribution or withdrawal (flow) is significant. The portfolio will be removed as of the last full month of management prior to the flow. IR+M defines a flow (either cash or securities) as significant by mandate according to the following criteria: Government mandates: No level – all portfolios left in regardless of size of flow; Corporate/Broad market/TIPS: 25% of beginning portfolio value; Convertibles/Municipals: 10% of beginning portfolio value. Portfolios will re-enter the composite according to the Entering Composites criteria detailed in the IR+M GIPS Policy Manual. Additional information regarding the treatment of significant cash flows is available on request.

Derivatives, if used in those accounts whose guidelines permit their use, are primarily engaged as hedging instruments. Interest Rate Swaps and Treasury-bond futures may be used to manage a portfolio's duration, and Credit Default Swaps may be used in strategies to isolate a particular issuer's credit risk.

The Aggregate Composite is comprised of separately managed institutional portfolios mainly invested in a diversified range of domestic, investment grade, fixed income securities. The objective of the mandate is to outperform the benchmark on a total return basis while staying within the boundaries of individual client guidelines. The securities' typical maturity range is between 1-12 years. The benchmark for the composite is the Bloomberg Barclays Aggregate Index. Benchmark returns are not covered by the report of independent verifiers. The standard management fee schedule is 0.30% on the initial \$50mm, 0.25% on the next \$50mm, 0.20% on the next \$100mm, and 0.15% on amounts over \$200mm. The composite was created on 12/31/91.



### IR+M DISCLOSURE STATEMENT

#### **Attribution Disclosures:**

Market Term Structure Components

Duration - the contribution to relative return due to the difference between the portfolio's and the index's overall duration, assuming a parallel change in interest rates. The basic formula is the (difference in duration between the portfolio and the index) multiplied by the total return of the reference Treasury.

Shape - the contribution to relative return due to the difference between the portfolio's and the index's duration profiles. The basic formula is the [(difference of each key rate duration between the portfolio and the index) multiplied by the total return of the respective key rate Treasury] minus the Duration and Other effects.

Other - the contribution to relative return due to the cumulative differences in carry, rolldown, and convexity.

Asset Allocation - the contribution to relative return due to portfolio's sector overweight or underweight compared to the index. The basic formula is the (difference between the portfolio and index sector weights) multiplied by the (difference between the index sector excess return and the index total excess return).

Security Selection - the contribution to relative return due to the portfolio's security selection compared to the index. The basic formula is (the difference in sector excess return between the portfolio and the index) multiplied by the portfolio sector weight.

Price & Intraday Components

Pricing - the contribution to relative return due to changes in the relative prices for securities held in common with the index. IR+M uses ICE as a pricing source for the majority of its portfolios, while indices typically use their own internally calculated prices.

Intraday - the contribution to relative return due to the implementation impact from executing trades. It is generally the performance cost from the differences between execution price of traded positions and the end-of-day prices used for daily valuation.

The IR+M attribution model is a proprietary model that uses data from multiple analytical sources to estimate portfolio attribution and does not claim that outputs are exact measurements. IR+M used the Brinson-Fachler methodology in the attached attribution calculations. Additional detail on calculation methodology can be provided upon request.



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It should not be assumed that the yields or any other data presented exist today or will in the future. Past performance is not a guarantee of future results and current and future portfolio holdings are subject to risk. Securities listed in this presentation are for illustrative purposes only and are not a recommendation to purchase or sell any of the securities listed. Forward looking analyses are based on assumptions and may change. It should not be assumed that recommendations made in the future will be profitable or will equal the performance of the securities listed. Some statistics require assumptions for calculations which can be disclosed upon request.

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This presentation was requested by Los Angeles City Employees' Retirement System.



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Please see additional disclosures for important composite performance information such as inception date and historical index changes.

Please refer to your investment management agreement ("IMA") for additional information including, but not limited to, investment advisory fee information.

#### Characteristics:

Unless otherwise noted, characteristics and holdings are from the representative portfolio of the applicable composite or specific to the client account included in this presentation. The representative portfolio information is supplemental to the IR+M Composite Disclosures. Some statistics require assumptions for calculations which can be disclosed upon request. Yields are represented as of the aforementioned dates and are subject to change. A similar analysis can be provided for any portfolio we manage. Totals may not sum due to rounding.

### Sample Portfolios:

All sample portfolios are represented as of the aforementioned dates. There are limitations in sample results, including the fact that such results neither represent trading nor reflect the impact that economic market factors might have had on the management of the account if the adviser had been managing an actual clients money. Actual results may differ. A similar analysis can be provided of any portfolio we manage.



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# J.P. Morgan Core Bond Strategy

Los Angeles City Employees' Retirement System | Data as of September 30, 2020

Finals Presentation - December 9, 2020

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**Richard Figuly,** Portfolio Manager, Managing Director 614-213-2234, <a href="mailto:richard.figuly@jpmorgan.com">richard.figuly@jpmorgan.com</a>

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# Los Angeles City Employees' Retirement System J.P. Morgan Asset Management Client Team

#### **CLIENT ADVISOR**

Responsible for understanding goals and objectives in order to provide strategic advice on investment allocation and portfolio structure

#### CLIENT ACCOUNT MANAGER

Provides custom service solutions in partnership with your JPMAM coverage team. Serves as the lead contact for all service related matters including operational, ongoing legal, and administrative aspects of the relationship.

#### **CLIENT ADVISORS**

**LARA CLARKE** – Client Advisor **e.** lara.clarke@jpmorgan.com **t.** 415.823.1430

**DARREN SMITH** – Client Advisor **e.** darren.f.smith@ipmorgan.com

t. 415.315.8939



#### **INVESTMENT SPECIALIST**

JOE HISDORF – Core Bond e. joseph.k.hisdorf@jpmorgan.com t. 614.213.1561

#### CLIENT ACCOUNT MANAGER

GAMA BLANCO - Client Account Manager

e. gamaliel.blanco@jpmchase.com

t. 212-622-0093

#### INVESTMENT SPECIALIST

Facilitates connectivity between you and portfolio managers and serves as a specialized source of product strategy, investment process, and market knowledge.

#### **PORTFOLIO MANAGER**

Responsible for implementing the strategy, buying and selling securities to create a portfolio within guideline parameters that maximizes return while minimizing risk.

#### **PORTFOLIO MANAGERS**

**SUSAN PAREKH –** Core Bond **e.** susan.parekh@jpmorgan.com **t.** 614.213.6543

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**ANDY MELCHIORRE** – Core Bond **e.** andrew.melchiorre@jpmorgan.com **t.** 614.213.7533



# JP Morgan Chase's Commitment to Community Engagement:

Our Corporate Responsibility initiatives help identify solutions to some of the most pressing global economic and social challenges. We are leveraging our core strengths, capabilities, data and expertise to create meaningful and sustainable impact in our communities.



# COMMUNITY COMMITMENT

### \$30bn committed

to advance racial equity.

### \$500mm Invested

In 2018, JPMorgan Chase launched AdvancingCities, a \$500 million, five-year initiative that will invest in solutions that bolster the long-term vitality of the world's cities and the communities within them that have not benefited from economic growth.



### SMALL BUSINESS

**\$29bn** in financing to small businesses in 2019

### \$75 committed

Commitment over three years to support underserved small business owners by connecting them to critical resources that help them grow faster, create jobs and strengthen local economies.



### NEIGHBORHOOD REVITALIZATION

### \$125mm

Through initiatives like PRO Neighborhoods, we are working to identify and support solutions for creating economic opportunity in disadvantaged neighborhoods around the country.



# SUPPORTING LOCAL INITIATIVES

### \$1.5mm

The National Skills Coalition partners with business, education and community leaders to improve federal and state-level workforce policies and education systems. A \$1.5M grant will strengthen their state-level efforts in regions across the country.

Source: J.P. Morgan Chase & Co.



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# Commitment to Diversity and Inclusion: Enriched by our culture

**50%** of firm's Operating Committee

25%

of senior leaders globally

■ 51% of all US employee are ethnically diverse.

Adelante

Ethnically



49% of all employees

 Women on The Move program focused on women's careers and financial health. A Women on The Move BRG supports women and allies globally

 The ReEntry Program creates a pathway for individuals to return to the workforce after a career break. To date, 132 fellows have gone through the program

LGBT+ Executive Council serve as a collective senior voice for the LGBT community with a core team of MDs leading the strategy to connect and better engage across the PRIDE BRG

Sponsored the Human Rights Campaign's
 "A Workplace Divided" study and working with Out & Equal to build software solutions through Force for Good

 Currently developing manager / employee transgender educational toolkit



 Black, Hispanic and Asian Executive Forums serve as a collective senior voice for their respective communities with a core team of MDs leading the strategy to connect and better engage across the BRGs and LOB Forums

> Advancing Black Leaders launched in 2016 to focus on developing and sourcing Black talent

 Advancing Black Pathways aimed at having sustainable impact on economic development, growth and empowerment externally in the black community

**15,000+** %

Vets hired by JPMC since 2011

 In addition helped 500,000 veteran hires by 200+ leading firms

• Awarded 1,047 mortgage free homes to military

families through **Military Home Awards** Program

Support veteran-owned small businesses through special financial products at Chase and invest \$4.2 million in organizations that support veteran entrepreneurs







AccessAbility, NextGen, Sage and Working Families Business Resource Groups support our employee communities and allies that represent people with disabilities, generations in the workplace, administrative assistants, and families.



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Platform Overview



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# Why Fixed Income with J.P. Morgan Asset Management

A powerful combination of expertise, deep resources and time-tested process set us apart

| PHILOSOPHY Invest as lenders of our clients' money                              |
|---|
| Bank-owned asset manager with a<br>fiduciary mindset and a 150-year<br>heritage |

- Team based and transparent approach with a focus on client outcomes and significant access to our investment teams
- Strive to deliver consistently strong risk-adjusted returns
- Risk management, a critical part of our culture, is embedded on multiple levels

#### **APPROACH**

Globally integrated, research-driven

- 270+ fixed income investment professionals across 5 countries benefit from diverse views and the best ideas from across the platform
- Common trading platform creates scale and drives our goal of best execution
- Process is powered by Spectrum, proprietary technology, which includes optimizers and trading bots
- Centralized research team with 65 quantitative and fundamental research analysts

#### **PROCESS**

Rigorous, disciplined, proprietary

- Fundamental, Quantitative, Technical (FQT) inputs used to underwrite every investment we make
- ESG factors are integrated throughout our investment process
- Continuous collaboration including our weekly strategy meetings and our Investment Quarterly (IQ) form the framework for our process
- Access to key decision makers in government and industry, and strong relationships with financial institutions
- Proprietary insights and data with investments in Artificial Intelligence and machine learning to harness big data

Source: J.P. Morgan Asset Management; as of June 30, 2020.



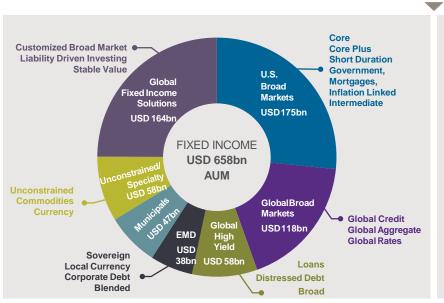
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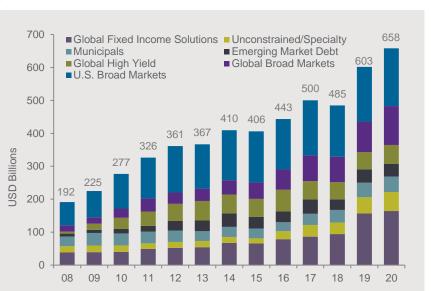
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# **Expertise to deliver superior client outcomes**

#### J.P. MORGAN CORE BOND STRATEGY (\$72.3B AUM)

#### **GLOBAL FIXED INCOME, CURRENCY & COMMODITIES ASSETS UNDER MANAGEMENT**





### ASSET & WEALTH MANAGEMENT (\$2.19T AUM)

#### JPMORGAN CHASE & CO.

Source: J.P. Morgan Asset Management. Data as of September 30, 2020. Due to rounding, data may not always add up to the total AUM. AUM figures are representative of assets managed by the Global Fixed Income, Currency & Commodities group and include AUM managed on behalf of other J.P. Morgan Asset Management investment teams. The manager seeks to achieve the above stated objective. There can be no guarantee the objective will be met.



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# **Core Bond Strategy**



# What differentiates our approach to Core Bond?

Differentiated Investment Style

Expertise in securitized (agency and nonagency) is a strong complement to deep corporate credit resources

Rigorous portfolio level stress testing and scenario analysis is done with the goal of mitigating downside risk

Portfolios are typically 100% cash securities (i.e. no use of futures or derivatives)

### Differentiated Results

- Increases portfolio diversification
- Provides high quality out of benchmark opportunities
- Typically a low correlation of excess returns vs. top intermediate fixed income managers\*
- Focus on generating risk adjusted returns
- Long term consistency of performance
  - rolling two-year returns exceeded the Barclays Aggregate Index 78 of the last 80 quarters
  - outperformed the Barclays Aggregate index in 23 out of the last 25 calendar years
- Negative correlation to S&P 500\*
- Risk exposures that are readily understood
- Transparency of portfolio positioning
- Ease of reporting and monitoring



<sup>\*</sup> Based on top 20 core fixed income managers by AUM as of 9/30/20 over 5 and 10 year investment horizon.

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# People



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### **Core Bond Investment Team**



### Rick Figuly

Lead Portfolio Manager Core Bond Fixed Income

#### **PORTFOLIO MANAGERS**



Kent Weber, CFA
Portfolio Manager



**Tim Eisel**Portfolio Manager



Justin Rucker, CFA
Portfolio Manager



Daniel Ateru, CFA
Portfolio Manager



Andy Melchiorre, CFA
Portfolio Manager



**Susan Parekh** *Portfolio Manager* 



Scott Grimshaw, CFA
Portfolio Manager



Michael Pacca Portfolio Manager

#### **COMMON PLATFORM**



Greg Tell\*
Head of Investment
Specialists



Kay Herr, CFA\* Head of Research



Vincent Kumaradjaja\* Head of Risk



Brian Lysiak\* Head of Trading

\* Bob Michele direct report As of September, 2020



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# **Investment Process**



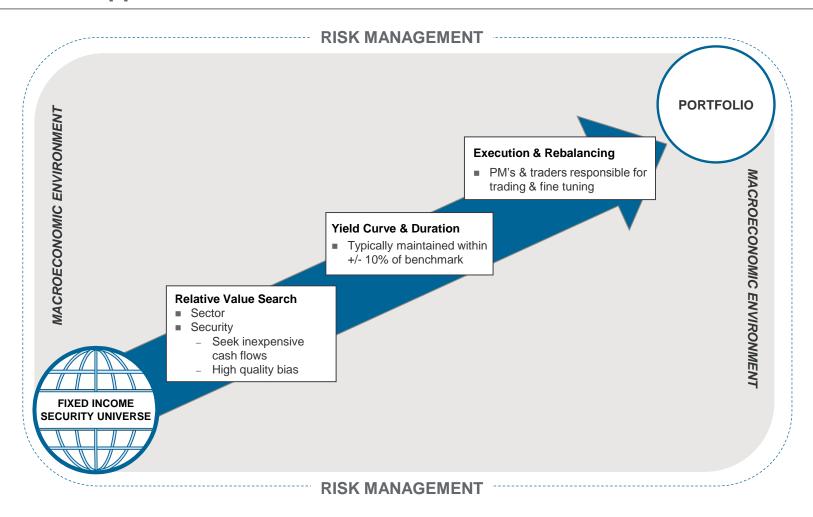
### **Fundamental Investment Tenets**

- We believe in a disciplined value-driven approach based on **bottom-up**, **fundamental analysis**
- Longer term investing versus trading mentality
- Style emphasizes research and **individual security analysis**, rather than large macro bets
- Portfolios are well diversified and of high average credit quality, helping to minimize individual security risk
- Many small decisions drive overall portfolio strategy, making us less dependent on a few top-down decisions
- Low turnover minimizes trading costs
- Risk management, embedded throughout the process, seeks to limit downside risk relative to a benchmark

This approach has resulted in consistent, long-term outperformance of the benchmark in a variety of market environments



# **Investment Approach**



The manager seeks to achieve the stated objectives. There can be no guarantee the objectives will be met.



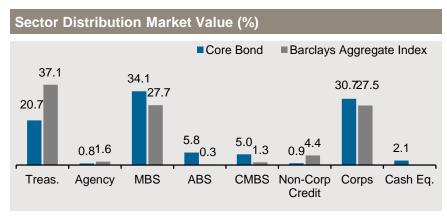
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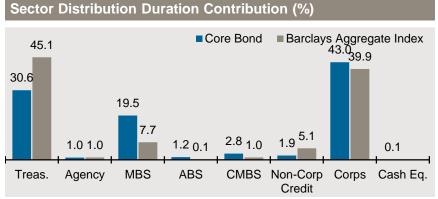
# **Core Bond Composite Snapshot**

All data as of September 30, 2020

| Portfolio statistics  | Core Bond | Barclays<br>Agg | Diff.  |
|-----------------------|-----------|-----------------|--------|
| Yield to Maturity     | 1.65%     | 1.06%           | +0.59% |
| OAS (bps)             | 113       | 54              | +59    |
| Duration (yrs)        | 6.03      | 5.95            | +0.08  |
| Spread Duration (yrs) | 4.40      | 3.62            | +0.78  |
| Convexity             | 0.71      | 0.65            | +0.06  |
| Average Quality       | A+        | AA              | -      |
| Turnover              | 23%       | _               | -      |
| Average # of Holdings | 300-500** | 11,912          | -      |

| Quality Distribution (MV%)* | Core Bond | Barclays Agg |
|-----------------------------|-----------|--------------|
| AAA                         | 57.03%    | 70.32%       |
| AA                          | 6.54%     | 5.42%        |
| A                           | 16.43%    | 13.07%       |
| BBB                         | 17.36%    | 11.19%       |
| BB and Below                | 0.33%     | 0.00%        |
| Not Rated                   | 2.32%     | 0.00%        |
| Total                       | 100.0%    | 100.0%       |





<sup>\*</sup>Credit quality distribution compiled using the highest applicable rating from any Nationally Recognized Statistical Rating Organization (NRSRO). Securities that are not rated by any NRSRO are reflected as such.

Measurements in percent. statistics are compiled by running vendor data through J.P. Morgan's internal analytic models. Please see performance disclosures which accompany this presentation. Actual account characteristics may differ

Since 1/1/17, sector classifications have been updated within Global Fixed Income to provide greater consistency, transparency, granularity, and alignment with current industry conventions.



<sup>\*\*</sup>Portfolio holdings vary based on account size, tenure, and investment guidelines

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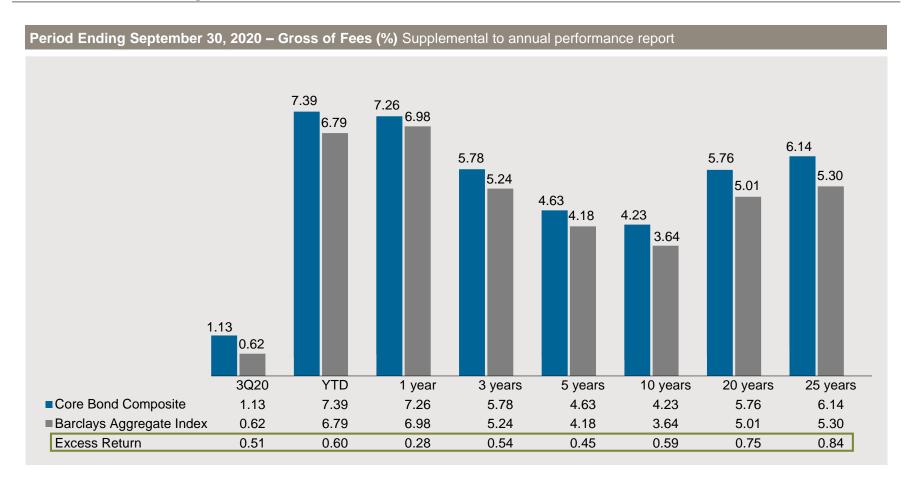
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# **Investment Performance**



## **Core Bond Composite Investment Performance**



Past performance is not indicative of future returns. Performance includes the reinvestment of income. Inception Date: 12/31/1985

Performance results are gross of investment management fees. The deduction of an advisory fee reduces an investor's return. Actual account performance will vary depending on individual portfolio security selection and the applicable fee schedule. Fees are described in Part II of the Advisor's ADV which is available upon request. (Please see back for additional performance disclosure)

Since 1/1/17, sector classifications have been updated within Global Fixed Income to provide greater consistency, transparency, granularity, and alignment with current industry conventions.



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## **Core Bond has favorable risk metrics**

| All data as of September 30, 2020                 |         |         | = top decil | e        | =        | top quartile |
|---|---------|---------|-------------|----------|----------|--------------|
| Performance & Risk Statistics                     | 3 Years | 5 Years | 10 Years    | 15 Years | 20 Years | 25 Years     |
| Performance                                       |         |         |             |          |          |              |
| Excess Return Ranking                             | 42      | 57      | 44          | 25       | 21       | 9            |
| Standard Deviation (vs. Barclays Aggregate Index) |         |         |             |          |          |              |
| Core Bond   | 3.60    | 3.32    | 2.92        | 3.06     | 3.35     | 3.39         |
| Barclays Aggregate                                | 3.37    | 3.15    | 2.96        | 3.20     | 3.42     | 3.42         |
| Standard Deviation Ranking                        | 42      | 44      | 18          | 8        | 10       | 11           |
| Information Ratio (vs. Barclays Aggregate Index)  |         |         |             |          |          |              |
| Core Bond   | 0.63    | 0.64    | 0.98        | 0.84     | 0.88     | 1.02         |
| Information Ratio Ranking                         | 30      | 37      | 14          | 8        | 6        | 2            |
| Sharpe Ratio (using Citigroup 3-Month T-Bill)     |         |         |             |          |          |              |
| Core Bond   | 1.15    | 1.05    | 1.24        | 1.32     | 1.27     | 1.15         |
| Barclays Aggregate                                | 1.07    | 0.96    | 1.02        | 1.02     | 1.03     | 0.90         |
| Sharpe Ratio Ranking                              | 35      | 47      | 20          | 1        | 3        | 1            |
| Correlation of Returns (vs. S&P 500)              |         |         |             |          |          |              |
| Core Bond   | 0.04    | (0.02)  | (80.0)      | 0.00     | (0.14)   | (0.05)       |

Source: eVestment Alliance (Core Fixed Income Universe) and J.P. Morgan Asset Management. Performance results are gross of investment management fees. Calculations based on monthly returns. The deduction of an advisory fee reduces an investor's return. Actual account performance will vary depending on individual portfolio security selection and the applicable fee schedule. Past performance is not a guarantee of comparable future results. Fees are described in Part II of the Advisor's ADV which is available upon request.



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## Core Bond can be a complement or diversifier

Period ending September 30, 2020 - Gross of fees (%) Excess returns calculated versus the Bloomberg Barclays Aggregate Bond Index

| 5 Year Correlations of Excess Returns |                       |  |  |  |  |
|---------------------------------------|-----------------------|--|--|--|--|
|                                       | J.P. Morgan Core Bond |  |  |  |  |
| Baird Advisors                        | 0.58                  |  |  |  |  |
| CS McKee                              | 0.58                  |  |  |  |  |
| Garcia Hamilton & Associates          | 0.44                  |  |  |  |  |
| Income Research & Management          | 0.58                  |  |  |  |  |
| Loomis, Sayles & Company              | 0.64                  |  |  |  |  |
| Neuberger Berman                      | 0.38                  |  |  |  |  |
| Segall Bryant & Hamill                | 0.58                  |  |  |  |  |
| S&P 500 (correlation of returns)      | (0.02)                |  |  |  |  |

| 10 Year Correlations of Excess Returns |        |  |  |  |  |
|--|--------|--|--|--|--|
| J.P. Morgan Core Bond                  |        |  |  |  |  |
| Baird Advisors                         | 0.47   |  |  |  |  |
| CS McKee                               | 0.57   |  |  |  |  |
| Garcia Hamilton & Associates           | 0.28   |  |  |  |  |
| Income Research & Management           | 0.38   |  |  |  |  |
| Loomis, Sayles & Company               | 0.50   |  |  |  |  |
| Neuberger Berman                       | 0.33   |  |  |  |  |
| Segall Bryant & Hamill                 | 0.29   |  |  |  |  |
| S&P 500 (correlation of returns)       | (0.08) |  |  |  |  |



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# Appendix



## **Today's Presenters**



#### Lara Clarke

Lara Clarke, managing director, is a Client Advisor within J.P. Morgan Asset Management and is based in Los Angeles. She oversees client and business development efforts providing tailored investment solutions for U.S. institutional investors across public and corporate pension plans. She is also the Client Segment Lead for U.S. public pension funds. Previously, Lara was Director of Marketing and Business Development for Los Angeles Capital Management, an institutional equity investment manager focused on creating customized portfolios to meet client specific needs. She led the firm's marketing strategy for the public pension, corporate plan sponsor, endowment/foundation, and consultant community in the West and Midwest regions. Lara is also the Co-Founder and President of Women in Institutional Investments Network (WIIIN), a 501(c)(3) non-profit organization focused on creating a community for women in institutional investments in Southern California through educational and philanthropic events. Lara received a B.S. in Finance and International Business from Pennsylvania State University and M.B.A. from the UCLA Anderson School of Management. She holds the FINRA Series 7, 63 and NFA Series 3 licenses.



#### **Richard Figuly**

Richard Figuly, managing director, is Head of Core Strategy within our Global Fixed Income, Currency & Commodities (GFICC) group. Based in Columbus, Rick leads a group of portfolio managers on the Core Strategy team who are responsible for managing institutional taxable bond portfolios and fund vehicles. Rick is the Lead Portfolio Manager on the Core Bond Fund and Mortgaged Backed Securities Fund. An employee since 1993, Rick previously served as a fixed income trader trading all taxable fixed income securities while specializing in structured products. Prior to joining the firm, Rick was a fiduciary tax accountant at the Bank One Ohio Trust Company. Rick is also a retired Major of the Ohio Army National Guard. He holds a B.S. in finance from The Ohio State University.



#### Susan Parekh

**Susan Parekh**, executive director, is a member of the Global Fixed Income, Currency & Commodities (GFICC) group. Based in Columbus, Susan is a portfolio manager responsible for managing Short Duration, Stable Value, Core and Long Duration Bond institutional taxable bond portfolios and fund vehicles. An employee since 1996, Susan previously worked as a performance analyst and a senior investment fund accountant. Susan holds a B.B.A. in accounting and finance from Western Michigan University.



#### Joe Hisdorf

Joe Hisdorf, executive director, is a member of the Global Fixed Income, Currency & Commodities (GFICC) group. Based in Columbus, Joe is an investment specialist for the U.S. Broad Markets team and is responsible for communicating investment strategy, decisions and performance across various fixed income products to clients, consultants, prospects and internal partners. An employee since 2003, Joe has served in various positions within Asset Management which include business analyst, consultant analyst and project manager. Previously, he worked for Bisys Fund Services as a senior mutual fund accountant. Joe holds a B.B.A in finance from the College of Business at Ohio University and holds FINRA Series 7, 63, and 65 licenses.

As of September 30, 2020.



Item VII-E
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IC Meeting: 12/9-10/20

Item II
Attachment 4

## Global Fixed Income, Currency & Commodities

#### **Bob Michele**

Head of Global Fixed Income, Currency & Commodities

#### **INVESTMENT LEADS**



Steve Lear, CFA\* U.S. CIO



Barb Miller\*
Customized Bond Portfolios
CIO



lain Stealey, CFA\*
International CIO



Pierre-Yves Bareau\*
Emerging Markets CIO

#### **COMMON PLATFORM**



Greg Tell\*
Head of Investment
Specialists



Kay Herr, CFA\*
Head of Research



Vincent Kumaradjaja\* Head of Risk



Brian Lysiak\* Head of Trading

#### **BUSINESS MANAGEMENT**



Rash Bardha Middle Office/Operations



Niall Byrne, CFA



Josh Ludmer Technology



As of September 30th 2020, There can be no assurance that the professionals currently employed by J.P. Morgan Asset Management will continue to be employed by J.P. Morgan Asset Management or that the past performance or success of any such professional serves as an indicator of such professional's future performance or success.



<sup>\*</sup> Bob Michele direct report

**BOARD Meeting: 1/26/21** 

Item VII-E Attachment 1 IC Meeting: 12/9-10/20

Attachment 4

## Integrating ESG factors throughout our investment process

**ESG Integration:** The explicit consideration of material ESG factors in the investment decision-making process

| RESEARCH DRIVEN BY A COMMON LANGUAGE           |                         |                      |  |  |  |  |
|--|-------------------------|----------------------|--|--|--|--|
| Fundamental                                    | Quantitative valuations | Technicals           |  |  |  |  |
| Macro factors                                  | Yields                  | Supply and demand    |  |  |  |  |
| Corporate health metrics                       | Spreads                 | Liquidity            |  |  |  |  |
| Environmental, social and governance practices |                         | Investor positioning |  |  |  |  |

# FOCUSING ON PROPRIETARY RESEARCH

- 60+ career research analysts across 15 fixed income sectors
- ESG factors incorporated within existing FQT research language
- Data from providers such as MSCI and ISS Ethix supplement our views

# INFORMING OUR VIEWS & ENGAGEMENT

- Frequent meetings with company management
- Benefiting from the voting rights of our equity counterparts
- Participation in industry forums to improve sustainability standards
- Engagement with data providers to improve coverage of fixed income universe

# REFLECTED IN PORTFOLIO CONSTRUCTION

- Spectrum<sup>TM</sup> houses ESG research across the platform
- Oversight by independent and fixed income risk management teams identifies ESG outliers

**USD 658**bn

AUM in **ESG-integrated** strategies

Source: J.P. Morgan Asset Management. ESG-integrated AUM data as of September 30, 2020. AUM figures are representative of assets managed by the Global Fixed Income, Currency & Commodities group and include AUM managed on behalf of other J.P. Morgan Asset Management investment teams.



IC Meeting: 12/9-10/20 Item II Attachment 4

## Active management demands active risk management

Our risk management discipline is essential to our investment process

## **Portfolio Management Team**

1

- Responsible for managing portfolios to stated risk management guidelines, and for determining and ensuring risk exposures are deliberate and appropriately scaled
- Accountable for the regular (e.g., daily/weekly/monthly/quarterly) review and monitoring of customized risk data and analytics across portfolios
- Ongoing monitoring of the portfolio's sustainability profile, including ESG outliers

#### **Investment Director**

2

- Provides embedded fiduciary and risk oversight, while independently ensuring portfolios adhere to stated operating and compliance guidelines
- Upholds governance framework through periodic investment reviews, Board reporting and customized risk monitoring within the asset class
- Develop monitoring tools for PM and oversight use

### **Independent Risk Management**

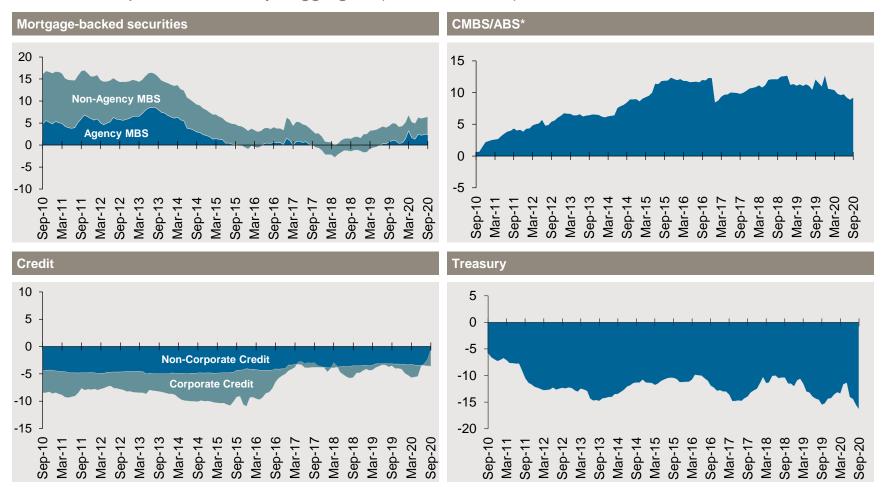
3

- Provides independent, consolidated view of risks at multiple levels including investment, counterparty, liquidity and operational risk
- Produces standard weekly global risk packages for senior management summarizing key risk metrics across multiple funds and asset classes and provides credible challenge to the business through review of accounts that trigger risk thresholds



## **Sector Weight Comparison**

Core Bond composite vs. Barclays Aggregate (% market value)



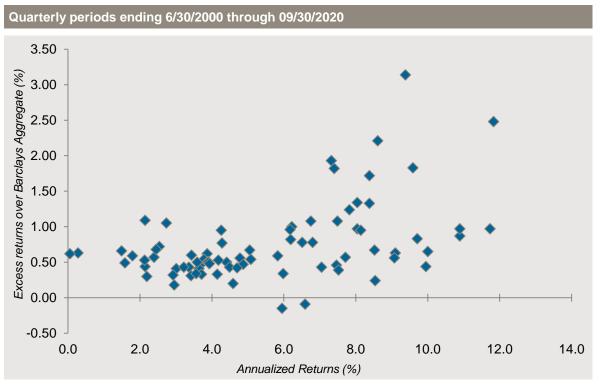


Since 1/1/17, sector classifications have been updated within Global Fixed Income to provide greater consistency, transparency, granularity, and alignment with current industry conventions.



## Consistency is the hallmark of our investment approach

Core bond composite two-year rolling returns (gross of fees) supplemental to annual performance report



- Seasoned investment team
- Consistent investment process
- Consistent long-term outperformance versus benchmark
- High peer-group performance

#### Goal: outperform the index by 50-100 bps annually over a full market cycle

- 1 The charts and/or graphs shown above and throughout the presentation are for illustration and discussion purposes only.
- 2 Past performance is not indicative of future returns. Performance includes the reinvestment of income.
- 3 Performance results are gross of investment management fees. The deduction of an advisory fee reduces an investor's return. Actual account performance will vary depending on individual portfolio security selection and the applicable fee schedule. Fees are described in Part II of the Advisor's ADV which is available upon request. (Please see back for additional performance disclosure)
- 4 Because this strategy primarily invests in bonds, it is subject to interest rate risks. Bond prices generally fall when interest rates rise. This may make the strategy more volatile. Please see addition risks on the back disclosure page.



IC Meeting: 12/9-10/20 Item II Attachment 4

## **Core Bond Strategy Attribution**

#### Periods ending September 30, 2020 - Gross of fees returns in basis points (bps)

| Performance               | YTD Return | 1 Year Return | 3 Year Return |
|---------------------------|------------|---------------|---------------|
| Strategy                  | 739        | 726           | 578           |
| Benchmark                 | 679        | 698           | 524           |
| Excess                    | 60         | 28            | 54            |
| Benchmark Pricing*        | 26         | 17            | 3             |
| Attribution Excess Return | 34         | 11            | 51            |
| Duration                  | 9          | 7             | 16            |
| Curve                     | 3          | (1)           | 3             |
| Residual*                 | 2          | 0             | 8             |
| Alpha Ex-Duration         | 20         | 5             | 24            |

|                                       |                      | YTD                   |                       |                      | 1 Year                |                       |                      | 3 Years               |                       |
|---------------------------------------|----------------------|-----------------------|-----------------------|----------------------|-----------------------|-----------------------|----------------------|-----------------------|-----------------------|
| Sector                                | Sector<br>Allocation | Security<br>Selection | Alpha Ex-<br>Duration | Sector<br>Allocation | Security<br>Selection | Alpha Ex-<br>Duration | Sector<br>Allocation | Security<br>Selection | Alpha Ex-<br>Duration |
| Treasury                              | (14)                 | 1                     | (13)                  | (2)                  | (0)                   | (2)                   | 2                    | 1                     | 3                     |
| Agency                                | 0                    | 0                     | 0                     | (0)                  | 1                     | 0                     | (0)                  | 0                     | 0                     |
| Agency Mortgage**                     | (1)                  | 21                    | 20                    | (1)                  | 5                     | 3                     | 0                    | 5                     | 5                     |
| Non-Agency Mortgage                   | 2                    | 0                     | 2                     | 0                    | 0                     | 0                     | 4                    | 0                     | 4                     |
| Commercial Mortgage-Backed Securities | (2)                  | 1                     | (1)                   | (4)                  | 2                     | (3)                   | (0)                  | 3                     | 2                     |
| Asset-Backed Securities               | 11                   | (1)                   | 10                    | 5                    | 1                     | 5                     | 2                    | 5                     | 7                     |
| Credit                                | 14                   | (15)                  | (1)                   | 8                    | (8)                   | 0                     | 2                    | 1                     | 3                     |
| Cash                                  | 2                    | 0                     | 2                     | 1                    | 0                     | 1                     | (1)                  | 0                     | (1)                   |
| Total                                 | 12                   | 8                     | 20                    | 6                    | (1)                   | 5                     | 9                    | 15                    | 24                    |

Source: J.P. Morgan Asset Management

The returns in this report are based on PRISM returns and therefore may differ from official returns. The returns are calculated using the PRISM model and excess returns in this report are calculated arithmetically at account level. The returns are gross of fees Past performance is not indicative of future results.



<sup>\*</sup>Residual attribution and benchmark pricing includes trading costs, compounding, and pricing discrepancies between benchmark and internal systems.

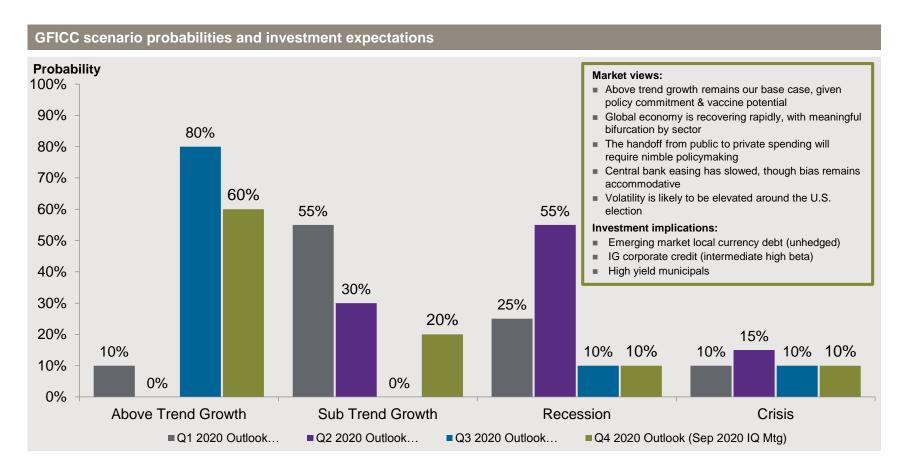
<sup>\*\*</sup> Agency Mortgage: Agency RMBS & Agency CMBS

BOARD Meeting: 1/26/21

Item VII-E Attachment 1 IC Meeting: 12/9-10/20 Item II

Attachment 4

## Output from Investment Quarterly meeting helps inform investment thesis



Source: GFICC Investment Quarterly. As of September 15, 2020. Forecasts, projections and other forward looking statements are based upon current beliefs and expectations. They are for illustrative purposes only and serve as an indication of what may occur. Given the inherent uncertainties and risks associated with forecasts, projections and other forward statements, actual events, results or performance may differ materially from those reflected or contemplated. IQ: Investment Quarterly.



IC Meeting: 12/9-10/20 Item II Attachment 4

# GIPS® Report: Core Bond Composite December 31, 2018

| Year | Composite Gross of<br>Fees Return % | Composite Net of Fees Return % | Benchmark Return<br>% | Number of<br>Accounts | Internal Dispersion | Composite 3Yr<br>Annualized Std Dev<br>(%) | Benchmark 3Yr<br>Annualized Std Dev (%) | Composite Assets (\$Millions) | Firm Assets<br>(\$ Billions) |
|------|-------------------------------------|--------------------------------|-----------------------|-----------------------|---------------------|--|---|-------------------------------|------------------------------|
| 2018 | 0.67                                | 0.37                           | 0.01                  | 35                    | 0.05                | 2.79                                       | 2.88                                    | 61,401                        | 1,230                        |
| 2017 | 4.26                                | 3.94                           | 3.54                  | 41                    | 0.13                | 2.77                                       | 2.81                                    | 61,049                        | 1,165                        |
| 2016 | 2.92                                | 2.61                           | 2.65                  | 53                    | 0.15                | 2.90                                       | 3.02                                    | 58,229                        | 1,068                        |
| 2015 | 1.34                                | 1.03                           | 0.55                  | 65                    | 0.11                | 2.62                                       | 2.92                                    | 65,433                        | 834                          |
| 2014 | 5.84                                | 5.52                           | 5.97                  | 65                    | 0.10                | 2.37                                       | 2.67                                    | 64,279                        | 845                          |
| 2013 | -1.32                               | -1.61                          | -2.02                 | 68                    | 0.15                | 2.42                                       | 2.75                                    | 55,315                        | 775                          |
| 2012 | 5.73                                | 5.41                           | 4.21                  | 66                    | 0.30                | 2.15                                       | 2.42                                    | 56,824                        | 701                          |
| 2011 | 7.89                                | 7.57                           | 7.84                  | 62                    | 0.20                | 2.59                                       | 2.82                                    | 48,729                        | 657                          |
| 2010 | 8.35                                | 8.03                           | 6.54                  | 60                    | 0.70                | 3.71                                       | 4.23                                    | 41,837                        | 621                          |
| 2009 | 10.38                               | 10.05                          | 5.93                  | 38                    | 1.22                | 3.75                                       | 4.17                                    | 22,342                        | 617                          |

<sup>\*</sup>Composite Dispersion is not shown for periods with less than 6 Accounts

Firm Definition: J.P. Morgan Investment Management Inc. (JPMIM or the Firm) consists of the assets of institutional clients invested in US managed products including 1) the Fixed Income and Cash assets formerly part of Chase Asset Management and MDSass&Chase Partners, 2) the New York institutional investment division of JPMorgan Chase Bank, N.A., formerly Morgan Guaranty Trust Company of New York, 3) the institutional investment assets of JPMorgan Investment Advisors, Inc. (JPMIA), formerly known as Banc One Investment Advisors Corporation (BOIA), the advisor to institutional assets directly managed by JPMIA or sub-advised by an affiliate institution, and 4) the institutional assets of Bear Stearns Asset Management Inc. The Firm also includes Separately Managed Accounts over which JPMIM has full and sole discretion. JPMIM is marketed under JPMorgan Asset Management.

Internal Dispersion: The internal dispersion of annual returns is measured by the asset-weighted standard deviation of gross account returns included in the composite for the full year. For periods with less than 6 accounts included for the entire year, internal dispersion is not presented (n/a) as it is not considered meaningful.

Standard Deviation: The 3 Year Annualized Standard Deviation measures the variability of the composite and the benchmark returns over the preceding 36-month period. The standard deviation of the Composite and benchmark are not presented (n/a) for periods where the composite does not have a 36-month history.

Composite Listing: A list of composite descriptions and policies for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request.

Composite Description: The Core Bond strategy seeks to outperform the Bloomberg Barclays Aggregate Bond Index over a market cycle while maintaining a risk profile similar to the index. The strategy focuses on adding value through a bottom-up, value-oriented approach, that emphasizes security selection. Security selection is generally guided by the benchmark and can include corporate bonds, mortgage-backed securities, asset-backed securities, treasuries and agency bonds. Since July 1, 2018, a composite-specific minimum asset level of \$100 million has been applied. Prior to July 1, 2018, the composite-specific minimum was \$10 million. Prior to April 1, 2004, the composite-specific minimum was \$10 million. The composite was created in January 1986.

Fee Schedule: Both gross and net returns reflect the reinvestment of income, deduction of transaction costs, and are net of withholding taxes where applicable. All returns are expressed in U.S. dollars. Gross returns do not reflect the deduction of investment advisory fees or any other expenses that may be incurred in the management of the account. The Net-of-fees returns are calculated by deducting composite model management fee ("model fee") from the gross composite return on a monthly basis. The model fee is either the highest tier of the fee schedule in effect for the period, or a higher value, whichever is required to ensure the composite model net of fee return is lower than or equal to the composite net of fee return calculated using actual fees. As of December 31, 2018, the standard annual fee schedule is as follows: 0.30% on the first \$75 million of assets managed; 0.25% on the next \$75 million; 0.225% on the next \$150 million; 0.15% on the balance. Actual advisory fees charged and actual account minimum size may vary by account due to various conditions described in Part IIA of Form ADV.

Compliance Statement: J.P. Morgan Investment Management Inc. claims compliance with the GIPS standards. J.P. Morgan Investment Management Inc. has been independently verified for the period 2001-2018. Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. The Core Bond Composite has been examined for the periods 01/01/1994 to 12/31/2018. The verification and performance examination reports are available upon request.

Benchmark Description: The benchmark is the Bloomberg Barclays Aggregate Bond Index. The index returns are provided to represent the investment environment existing during the time periods shown and are not covered by the report of independent verifiers. For comparison purposes the index is fully invested, which includes the reinvestment of income. The returns for the index do not include any transaction costs, management fees or other costs.

Significant Cash Flow Policy: Beginning January 1, 2005, an account is temporarily removed from the composite if it experiences a cash and/or securities inflow or outflow greater than or equal to 10% of the account's beginning market value.

Past and Future Performance: Past performance is no guarantee of future results. As with any investment vehicle, there is always the potential for gains as well as the possibility of losses.



IC Meeting: 12/9-10/20 Item II Attachment 4

## **Disclosures**

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IC Meeting: 12/9-10/20 Item II Attachment 5



James D. Dadura, CFA Principal, Director of Fixed Income

Clark W. Koertner Principal, Director of Institutional Sales

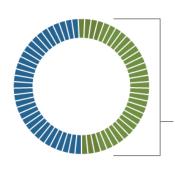
# Los Angeles City Employees' Retirement System (LACERS)

A Differentiated Approach to Fixed Income Investing



# AN INTRODUCTION TO SEGALL BRYANT & HAMILL

## SBH AT-A-GLANCE



119-person team with expertise across all aspects of investment management56 investment professionals

| <b>27 YRS</b> | Average years of experience |
|---------------|-----------------------------|
| 2/ TR3        | for portfolio managers      |

**Over 70%** 

Percentage of investment professionals that are CFA® charterholders

\$21.2B

**AUM/AUA\*** 

## PROVEN INVESTMENT MANAGEMENT EXPERTISE

- Independently managed investment firm founded in 1994
- Majority employee ownership consists of 33 employee Principals and a strong financial partner in Thoma Bravo, LLC
- Partnership culture results in a high degree of continuity among our investment teams and lasting client relationships
- Diversified mix of investment strategies, including domestic and international equities, fixed income and customized solutions
- Signatory of United Nations' Principles for Responsible Investment (UNPRI)



# SBH VISION STATEMENT

Since the firm's inception in 1994, Segall Bryant & Hamill has demonstrated its enduring commitment to the essential values established by its founders Ralph Segall, Al Bryant, Jon Hamill and Jeff Slepian. These include Integrity, Trust, Humility, Curiosity and Inclusion. As we move forward, it is imperative that we have clarity of purpose and vision, and cohesion in our approach to achieve that vision. Ultimately, our goal is to serve clients to the best of our ability through strong investment research, creative investment solutions and a dedication to exceeding their expectations.

Overall, we will seek to be a premier investment firm sought out by investors and employees alike. We will be known nationally for providing clients relevant, value-add investment and financial solutions and high touch personalized client service to help them exceed their financial objectives. In doing so, we will provide our employees an inclusive culture in which to thrive, defined by professional growth, diversity of thought, collaboration and integrity.

Spring 2019

Philip 2 Shieft Victoria and Tray-loh Maun Nicholson

Mill W. Rey

Ref M Squll

Dol- C. Fenley Mitch Styr Meghan O Donall No. Fer Kill Hair from Hat.

Jeffy Charles Mitch Styr Any Hor Donall No. Fer Kale Nulola Foly

Chrowton Clark Duy Ang D. D. Janger R. D. Junger R. D.

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Attachment 5



# SBH GUIDING PRINCIPLES

As we build toward the future, we will do so based on several **Guiding Principles**:

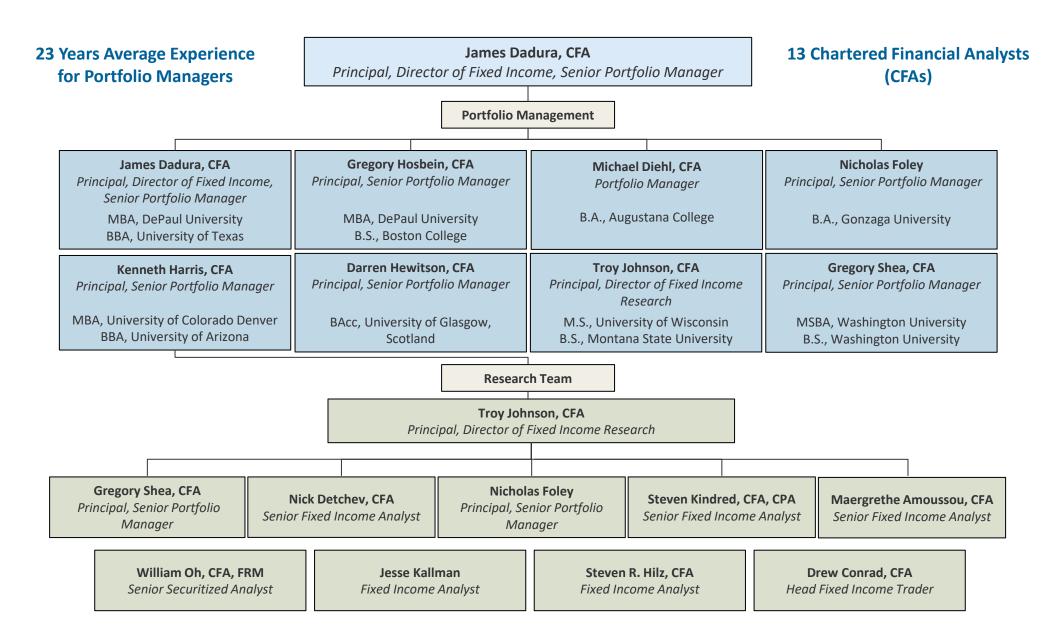
- **Client Focused** We will put our clients first by acting in their best interests, exhibiting the highest ethical standards and serving them through a commitment to excellence. We will enlist our collective intellectual talents to think creatively and seek out unique investment and financial solutions for our clients. We will strive to exceed their expectations in every possible way.
- **Value-Added Investment Solutions** We will remain committed to providing our clients with world class investment research delivered through effective investment strategies and customized solutions. We will be disciplined, consistent and intensely research focused. We will continue to integrate environmental, social and governance (ESG) factors into our research to ensure our investment decisions take into consideration the risks that unsustainable business practices pose to economic outcomes.
- **Autonomy and Accountability** We will hire talented professionals, provide concise, clear job responsibilities, trust that they will act in the best interests of our clients and hold them accountable for the results. This Guiding Principle must be established and reinforced at every level of our organization.
- **Decentralized Management** While structure is necessary to maintain a stable business environment, we will avoid unnecessary bureaucracy and strive to maintain simplicity. Decision making will continue to be pushed down, consistent with our principles of autonomy and accountability. This will allow us to remain nimble and encourage our employees to think creatively. We will acknowledge when our employees achieve success and coach them when decisions they make are not within the spirit of our vision.
- **Diversity and Inclusion** We believe diverse thinking and inclusive principles will allow us to find the best outcomes for both our clients and our employees. As a result, we will seek the best talent from diverse employment sources and provide an open environment free of any biases based on race, gender, sexual orientation, disability or harassment.
- **Employee Development** We will work to develop our diverse talent by providing our employees the opportunity to show initiative and assume responsibility. We will invest in our employees through training, direct feedback and mentoring. We will encourage and incent them to remain curious and stretch the boundaries of their potential.

**Attachment 5** 

hment 1



# AN INTRODUCTION TO SBH FIXED INCOME



**Attachment 5** 

Attachment 1
AN INTRODUCTION TO SEGALL BRYANT & HAMILL

Adams County Retirement Plan



# **DIVERSE CLIENT LIST\***

#### CORPORATE

The ACT Reserve Fund
Ameren Corporation
Avangrid
Bemis Manufacturing Company
Blue Cross & Blue Shield of Nebraska
Cox Enterprises
Eversource Energy\*\*
Exelon Corporation
First Financial Insurance Company
Kentucky Insurance Guaranty Authority
Kinder Morgan, Inc.
Pinnacle West Capital Corporation

#### TAFT-HARTLEY

Valero Energy Corporation

Boilermakers National Health & Welfare Fund Central Laborers Pension Fund Central Pennsylvania Teamsters Chicago Carpenters Welfare Fund Indiana Electrical Workers Pension Trust International Painters Pension Fund IUOE Local 825 Pension Fund Massachusetts Laborers' Annuity Fund Michigan Laborers' Annuity Fund NECA IBEW Welfare Trust Fund New York Hotel and Motel Trades Council\*\* Northern California Cement Masons Screen Actors Guild-Producers Pension Plan\*\*

#### PUBLIC

Anne Arundel County
City of Aurora General Employees' Retirement System
City of Ocala General Employees' Retirement System
City of Phoenix
Dallas Fort Worth International Airport\*\*
Frederick County Employees' Retirement Plan
Lexington-Fayette Urban County Govt.
Michigan Municipal Risk Management Authority
Municipal Employees' Annuity & Benefit (Chicago)
New Hampshire Retirement System
Omaha Police & Fire Retirement System
Retirement System of Tulsa County Employees

#### NONPROFIT/HEALTH CARE

ADV Midwest Radiology
Baptist Health
Bronson Healthcare
Delta Upsilon
Denver Kids
Dominican Sisters of Springfield, IL
Hawaii Medical Service Association
Illinois College of Optometry
Indian Community School of Milwaukee
Jewish Community Foundation
Lake Health
Sisters of St. Francis

The Archdiocese of San Francisco

# 25% 40% 16% Public

■ Nonprofit/Health Care

Taft-Hartley

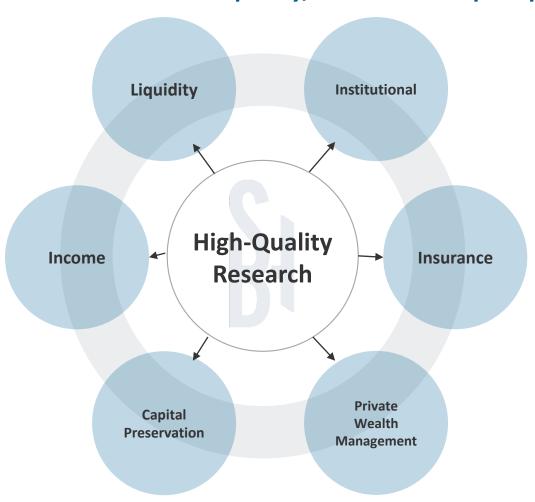
<sup>\*</sup> Partial client list shown. Clients were selected based upon a combination of several criteria including Assets Under Management/Assets Under Advisement (AUM/AUA) geographical location, strategy and industry. Total AUM/AUA as of 9/30/20. This list contains a representative sample of Segall Bryant & Hamill's clients that have investment agreements in force as of September 30, 2020. Account performance was not a factor in compiling this list. It is not known whether the listed clients approve or disapprove of Segall Bryant & Hamill or the advisory services provided.

<sup>\*\*</sup> SEI Trust Company (the "Trustee") serves as the Trustee of the Fund and maintains ultimate fiduciary authority over the management of, and the investments made, in the Fund. The Fund is part of a Collective Investment Trust (the "Trust") operated by the Trustee. The Trustee is a trust company organized under the laws of the Commonwealth of Pennsylvania and wholly owned subsidiary of SEI Investments Company (SEI). The Segall Bryant & Hamill Emerging Markets Trust (the "SBH Trusts") are trusts for the collective investment of assets or participating tax qualified pension and profit sharing plans and related trusts, and governmental plans as more fully described in the Declaration of Trust. As bank collective trusts, the SBH Trusts are exempt from registration as an investment company. The SBH Trusts are managed by SEI Trust Company, the trustee, based on the investment advice of Segall Bryant & Hamill, the investment adviser to the trusts.



# SOLUTIONS-BASED FIXED INCOME PLATFORM

We believe that Fixed Income portfolios should be **high quality** and **tailored** to meet the liquidity, income and capital preservation needs of each of our clients.



- Solutions cover the entire maturity spectrum
- Ability to customize solutions based on client's specific needs and requirements
- Team manages more than \$11 billion in fixed income assets\*

<sup>\*</sup>Data as of 9/30/20. Model UMA assets of \$0 million are included in the AUA portion of the AUM/AUA total.



# **INVESTMENT PHILOSOPHY & PROCESS**

## **INVESTMENT PHILOSOPHY**

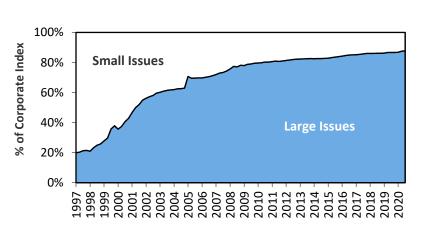
- We seek to take advantage of inefficiencies in the fixed income market by identifying high quality, overlooked issues that offer a measurable return advantage.
- We focus on fundamental analysis and disciplined risk controls rather than market timing.
- Our consistent process seeks to perform well in all periods with an emphasis on downside preservation.





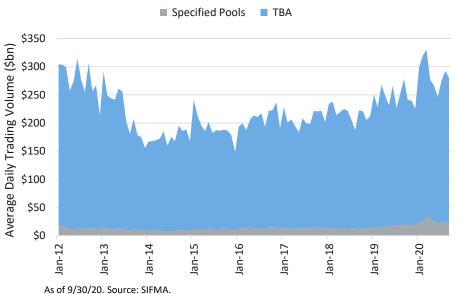
# **EXAMPLES OF MARKET INEFFICIENCIES – TAXABLE**

## **Small Issue Corporate Bonds**

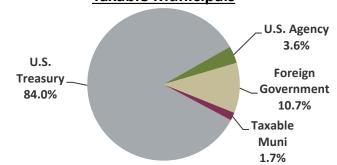


As of 9/30/20. Source: ICE BofAML U.S. Large Cap Corporate Index, ICE BofAML U.S. Corporate Small Cap Index, SBH

# **Specified Pools**

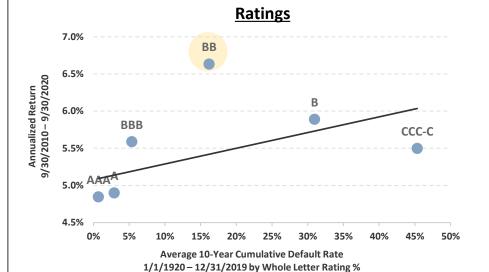


## **Taxable Municipals**



| <u>Sector</u>                                | <u>Yield</u> | Avg. Quality |
|--|--------------|--------------|
| 5-10 year U.S. Foreign Govt. & Supranational | 1.50%        | A1           |
| 5-10 year Taxable Municipal                  | 1.70%        | AA3          |
| 5-10 year U.S. Agency                        | 0.88%        | AAA          |
| 5-10 year U.S. Treasury                      | 0.45%        | AAA          |

As of 9/30/20. Source: Barclays Live and ICE BofAML Indices



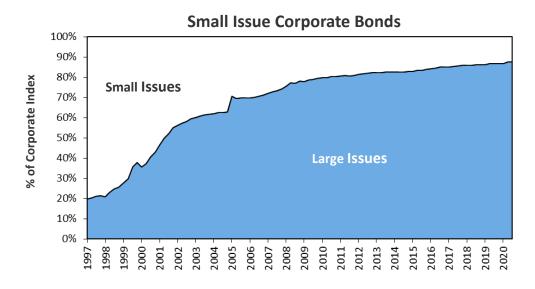
Source: ICE BofAML, Moody's Investors Service Global Credit Research.

**Attachment 1 Attachment 5** 



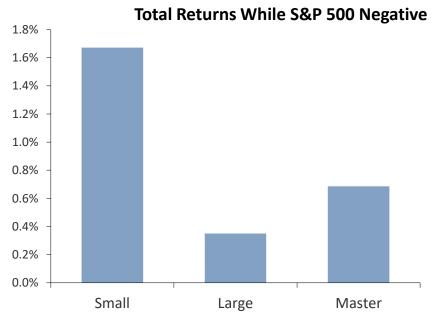
# SMALL ISSUE VS. LARGE ISSUE

(As of 9/30/20)

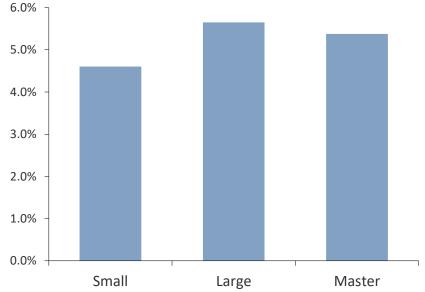


#### **Small Issue Characteristics**

|              | <u>Yield</u> | # of Issues | Avg, Deal Size |
|--------------|--------------|-------------|----------------|
| Small Issues | 2.35%        | 2,531       | \$347MM        |
| Large Issues | 2.01%        | 6,180       | \$1,033MM      |



## **Total Returns While S&P 500 is Positive**

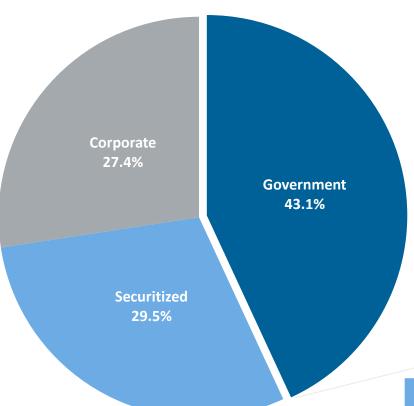


"YTW" = Yield to worst, data on S&P 500 since 12/31/1996. Historical performance cannot guarantee future results. See specific performance disclosure pages at the end of the presentation. Source: ICE BofAML U.S. Large Cap Corporate Index, ICE BofAML U.S. Corporate Small Cap Index, Merrill Lynch/ICE Corporate Master Index (all small issue and large issue corporate bonds). Bloomberg, SBH

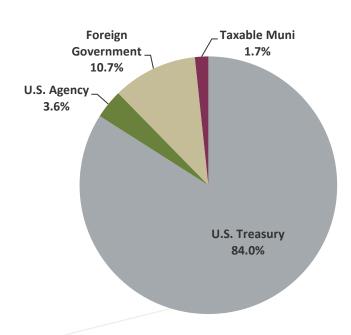


# **EXAMPLES OF MARKET INEFFICIENCIES**

Bloomberg Barclays U.S. Aggregate Index Sector Breakdown



#### Government Sector Breakdown



#### **Government Sector Characteristics**

| Sector                                       | Yield | Avg. Quality |
|--|-------|--------------|
| 5-10 year U.S. Foreign Govt. & Supranational | 1.50% | A1           |
| 5-10 year Taxable Municipal                  | 1.70% | AA3          |
| 5-10 year U.S. Agency                        | 0.88% | AAA          |
| 5-10 year U.S. Treasury                      | 0.45% | AAA          |

As of 9/30/20

Source: BarclaysLive and Merrill Indices



# **EXAMPLES OF MARKET INEFFICIENCIES**

## **OUR APPROACH: STRUCTURED SECURITIES**

## **Residential Mortgage-Backed Securities**

Specified Agency Mortgage Pools vs. TBA Mortgages

- Specified Agency Mortgage Pools allow selection of favorable loan characteristics such as loan size, issue date and geographic concentration.
- TBA Mortgages suffer from adverse selection.

## **Commercial Mortgage-Backed Securities**

Freddie Mac K-Bonds vs. Private Label CMBS

- Freddie Mac K-Bonds are backed by the U.S. Government agency FHLMC.
- Support for Private Label CMBS is dependent on commercial defaults rates.



# FUNDAMENTAL ANALYSIS AND RISK CONTROLS

1. SCREENS

- Initial screens rank all U.S. companies with public debt based on financial and credit strength
- Screens analyze operating cash flow, free cash flow stability, interest coverage, leverage ratios, and ESG factors

### **Quality Screen Ranking**

|                      |        | Moody  | S&P    | Adj. EBIT / | Debt / Adj. | Ta | tal Assets | % Rank  |
|----------------------|--------|--------|--------|-------------|-------------|----|------------|---------|
| Issuer Name          | Ticker | Rating | Rating | Interest    | EBITDA      | 10 | lai Assets | % Kalik |
| PROCTER & GAMBLE CO  | PG     | Aa3    | AA-    | 29.3x       | 2.1x        | \$ | 120,406    | 100%    |
| ALTRIA GROUP INC     | MO     | A3     | A-     | 14.1x       | 1.4x        | \$ | 43,202     | 98%     |
| UNILVER CAPITAL CORP | UNANA  | A1     | A+     | 17.0x       | 2.2x        | \$ | 72,475     | 96%     |
| REYNOLDS AMERICA INC | BATSUN | Baa2   | BBB+   | 6.6x        | 1.5x        | \$ | 190,740    | 94%     |
| PEPSICO INC          | PEP    | A1     | A+     | 9.4x        | 3.0x        | \$ | 79,804     | 92%     |

## **Event Risk Screen Ranking**

|        |                             |             |             |             |       |      | vs. Russell 3000 |       |       | EV/1 yr est | Avg   |
|--------|-----------------------------|-------------|-------------|-------------|-------|------|------------------|-------|-------|-------------|-------|
| Ticker | Issuer Name                 | CUR<br>RANK | EQTY<br>VAL | RISK<br>VAL | Risks | Mit. | 6 mo             | 1 yr  | 3 yr  | EBITDA      | Comps |
| JBHT   | HUNT (JB) TRANSPRT SVCS Inc | 10.0        | 0.0         | 0.0         |       |      | 20.6%            | -2.4% | -0.4% | 11.2x       | 6.9x  |
| PCAR   | PACCAR INC                  | 10.0        | 0.0         | 0.0         |       |      | 8.0%             | 30.1% | 2.0%  | 7.6x        | 8.3x  |
| ADP    | AUTOMATIC DATA PROCESSING   | 10.0        | 0.0         | 0.0         |       |      | -5.7%            | -0.3% | 7.7%  | 20.5x       | 21.2x |
| UPS    | UNITED PARCEL SERVICE-CL B  | 9.0         | 0.0         | 1.0         | AM    |      | 11.2%            | 4.0%  | -8.0% | 13.0x       | 11.3x |
| CBOE   | CBOE GLOBAL MARKETS INC     | 9.0         | 0.0         | 1.0         | IA    | RI   | 10.2%            | -9.7% | 7.8%  | 16.5x       | 18.9x |

#### **Credit Momentum Screen Ranking**

| Ticker | Issuer Name      | YoY Chg<br>Equity<br>Dist/CFO | YoY Chg<br>Liab./TEV | 6 Mos Equity<br>Rel to S&P<br>500 | Yoy Chg<br>EBIT/Assets | Percentile<br>Rank |
|--------|------------------|-------------------------------|----------------------|-----------------------------------|------------------------|--------------------|
| EL     | ESTEE LAUDER CO  | -38.1%                        | -42.9%               | 29.6%                             | 12.5%                  | 97%                |
| DGELN  | GRAND METRO INV  | 43.7%                         | -27.4%               | -6.6%                             | 11.5%                  | 64%                |
| MO     | ALTRIA GROUP INC | -2.3%                         | 11.1%                | -5.8%                             | 13.9%                  | 48%                |
| RBLN   | RECKITT BEN TSY  | -33.0%                        | -47.1%               | -20.6%                            | -42.4%                 | 44%                |
| PEP    | PEPSICO INC      | -9.3%                         | 5.4%                 | -7.3%                             | -7.1%                  | 35%                |

#### **ESG Screen Ranking**

| Ticker | Issuer Name       | Environmental<br>Score | Social Score | Governance<br>Score | Percentile<br>Rank |
|--------|-------------------|------------------------|--------------|---------------------|--------------------|
| BNFP   | DANONE            | 87%                    | 97%          | 97%                 | 99%                |
| CL     | COLGATE-PALMOLIVE | 96%                    | 93%          | 91%                 | 98%                |
| UNA NA | UNILEVER          | 96%                    | 99%          | 75%                 | 96%                |
| HSY    | HERSHEY CO        | 85%                    | 89%          | 90%                 | 95%                |
| NESNVX | NESTLE            | 72%                    | 95%          | 93%                 | 94%                |

Source: Bloomberg. For illustrative purposes only.



# FUNDAMENTAL ANALYSIS AND RISK CONTROLS

2. SECURITY SELECTION & **PORTFOLIO CONSTRUCTION** 

#### **MODELS/STRESS TESTS**

- Models are hand-built and dynamic, allowing team to stress test company financials under a variety of scenarios, including worstcase outcomes
- Team utilizes SEC and company data rather than sell-side or third-party research

#### **SECURITY SELECTION**

- Security selection is based on valuation and risk analysis conducted through initial screens/models
- Team members have research responsibilities and present thesis to team for debate
- Potential security transactions are analyzed to evaluate impact on entire portfolio

#### PORTFOLIO CONSTRUCTION/ **CUSTOMIZATION**

- Portfolios are diversified among issuers and industries
- Portfolios tailored to meet client's specific needs and customized to individual investment policies
- Portfolio manager makes final buy/sell decision on securities in each portfolio

#### **RISK CONTROLS**

- Team conducts ongoing review of holdings and continuous risk analysis
- Catalysts for exiting positions include drop in quantitative ranking, deteriorating credit fundamentals, narrow breakeven spreads and relative value versus other highquality investments





# **FUNDAMENTAL ANALYSIS AND RISK CONTROLS**

3. RISK MANAGEMENT

- We analyze risk by monitoring:
  - Contribution to duration, interest rate duration, spread duration, option risk, yield curve exposure, key rate duration, pre-payment risk and ESG factors
- We utilize various software systems in order to monitor and measure risk, including:
  - BondEdge, APX, proprietary models
- Three independent teams monitor risk:
  - Portfolio Team, Compliance Team and Institutional Client Service Team

## **Sector/Maturity Matrix**

(% by Market Value)

|                          | 0 - 2      | yr    | 2 - 4     | yr    | 4 - 8     | yr    | 8 - 10    | yr    | 10 - 20   | ) yr  | >20       | yr    | TOT       | AL    |
|--------------------------|------------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|-----------|-------|
| Sector                   | Portfolio  | Index | Portfolio | Index | Portfolio | Index | Portfolio | Index | Portfolio | Index | Portfolio | Index | Portfolio | Index |
|                          |            |       |           |       |           |       |           |       |           |       |           |       |           |       |
| Treasury                 | 0.5        | 6.4   | 1.1       | 9.7   | 1.4       | 12.2  | 2.2       | 3.0   | 0.0       | 0.7   | 7.9       | 5.5   | 13.1      | 37.4  |
|                          |            |       |           |       |           |       |           |       |           |       |           |       |           |       |
| Agency                   | 0.6        | 0.9   | 0.2       | 0.8   | 0.6       | 0.3   | 2.5       | 0.1   | 0.0       | 0.2   | 0.0       | 0.1   | 3.8       | 2.5   |
| 0                        | <b>5</b> 4 | 2.7   | 44.0      | 4.5   | 40.0      | 7.0   | 3.5       | 3.1   | 4.1       | 2.0   | 3.4       | 5.8   | 40.0      | 05.4  |
| Corporate                | 5.4        | 2.7   | 14.2      | 4.5   | 12.6      | 7.2   | 3.5       | 3.1   | 4.1       | 2.0   | 3.4       | 5.8   | 43.2      | 25.4  |
| Securitized              |            |       |           |       |           |       |           |       |           |       |           |       |           |       |
| - Pass-throughs          |            | 0.0   | 4.7       | 4.8   | 25.0      | 22.1  | 0.0       | 0.0   | 0.0       | 0.0   | 0.0       | 0.0   | 30.2      | 26.9  |
| - Non-index (CMO)        |            | 0.0   | 0.9       | 0.0   | 0.1       | 0.0   | 0.0       | 0.0   | 0.0       | 0.0   | 0.0       | 0.0   | 1.7       | 0.0   |
| - CMBS                   |            | 0.2   | 0.0       | 0.3   | 0.0       | 0.8   | 0.0       | 0.5   | 0.0       | 0.0   | 0.0       | 0.0   | 0.0       | 1.7   |
| - ABS                    |            | 0.3   | 0.0       | 0.2   | 0.0       | 0.0   | 0.0       | 0.0   | 0.0       | 0.0   | 0.0       | 0.0   | 2.3       | 0.5   |
| 7.50                     | 2.0        | 0.0   | 0.0       | 0.2   | 0.0       | 0.0   | 0.0       | 0.0   | 0.0       | 0.0   | 0.0       | 0.0   | 2.0       | 0.0   |
| Sovereign/Supra/Foreign  | 0.0        | 0.7   | 0.0       | 1.4   | 0.0       | 1.3   | 0.0       | 0.5   | 0.0       | 0.7   | 0.0       | 0.9   | 0.0       | 5.6   |
| Oovereign/oupra/r oreign | 0.0        | 0.7   | 0.0       | 1.4   | 0.0       | 1.5   | 0.0       | 0.5   | 0.0       | 0.7   | 0.0       | 0.5   | 0.0       | 3.0   |
| Municipal/Other          | 0.4        | 0.0   | 1.2       | 0.0   | 1.0       | 0.0   | 0.0       | 0.0   | 0.2       | 0.0   | 0.4       | 0.0   | 3.3       | 0.0   |
| iviunicipai/Other        | 0.4        | 0.0   | 1.2       | 0.0   | 1.0       | 0.0   | 0.0       | 0.0   | 0.2       | 0.0   | 0.4       | 0.0   | 3.3       | 0.0   |
| 01                       | 0.5        | 0.0   | 0.0       | 0.0   | 0.0       | 0.0   | 0.0       | 0.0   | 0.0       | 0.0   | 0.0       | 0.0   | 0.5       | 0.0   |
| Cash                     | 2.5        | 0.0   | 0.0       | 0.0   | 0.0       | 0.0   | 0.0       | 0.0   | 0.0       | 0.0   | 0.0       | 0.0   | 2.5       | 0.0   |
|                          |            |       |           |       |           |       |           |       |           |       |           |       |           |       |
| TOTAL                    | 12.8       | 11.3  | 22.2      | 21.5  | 40.7      | 44.0  | 8.2       | 7.2   | 4.4       | 3.6   | 11.8      | 12.4  | 100.0     | 100.0 |

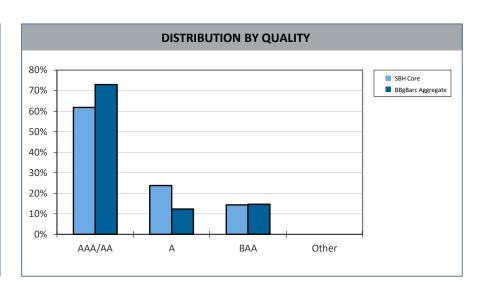


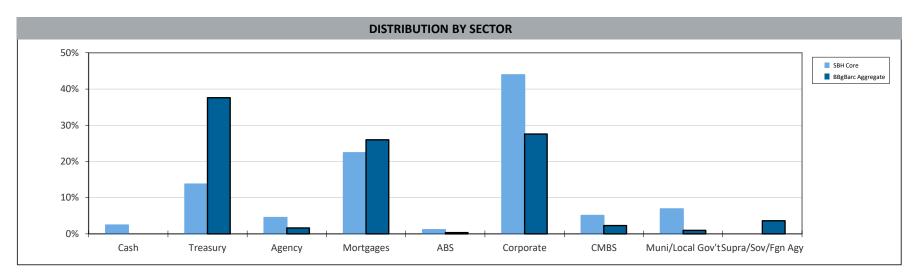


# CORE FIXED INCOME COMPOSITE STRUCTURE\*

(As of 9/30/20)

|  | SUMMARY STATISTICS |       |        |      |  |  |  |  |  |  |
|--|--------------------|-------|--------|------|--|--|--|--|--|--|
| SBH Core BBgBarc Difference % of Aggregate |                    |       |        |      |  |  |  |  |  |  |
| Yield To<br>Maturity (%)                   | 1.27%              | 1.22% | 0.05%  | 104% |  |  |  |  |  |  |
| Current<br>Yield (%)                       | 2.65%              | 2.66% | -0.01% | 100% |  |  |  |  |  |  |
| Quality                                    | Aa2                | Aa2   | -      | -    |  |  |  |  |  |  |
| Coupon (%)                                 | 2.90%              | 2.93% | -0.02% | 99%  |  |  |  |  |  |  |
| Maturity Years                             | 7.81               | 8.31  | -0.50  | 94%  |  |  |  |  |  |  |
| Duration                                   | 6.12               | 6.21  | -0.09  | 99%  |  |  |  |  |  |  |





<sup>\*</sup> This information is supplemental to the fully compliant presentation.

Source: CMS BondEdge

# Item VII-E Attachment 1

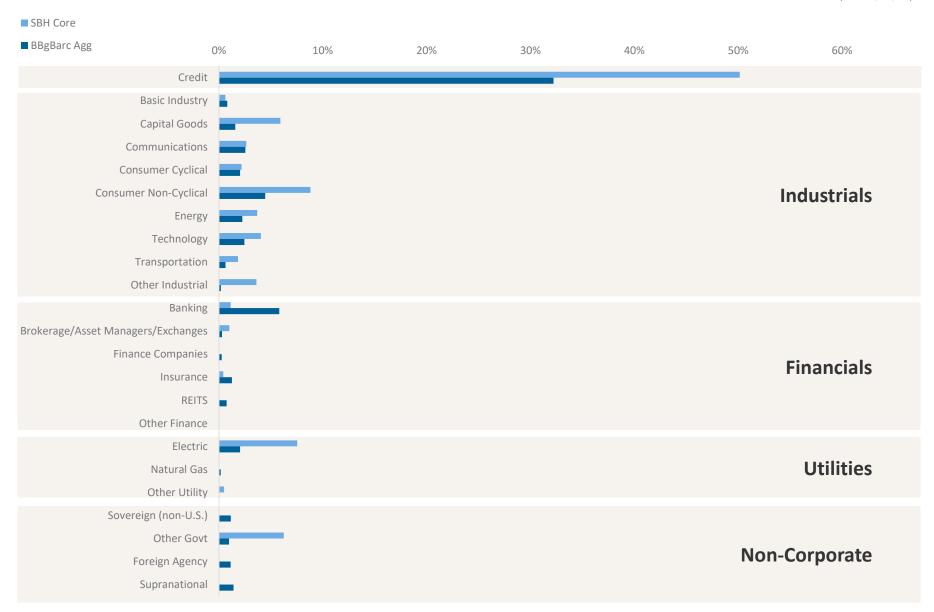




# CREDIT SECTOR DETAIL - CORE FIXED INCOME COMPOSITE\*

(As of 9/30/20)

**Attachment 5** 



<sup>\*</sup> This information is supplemental to the fully compliant presentation. Source: CMS BondEdge.

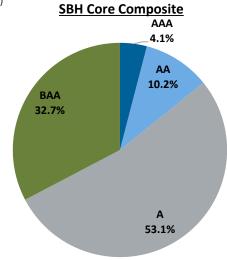


ment 1 Attachment 5



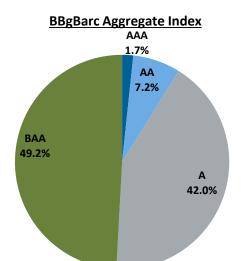
# CORPORATE CREDIT SECTOR DETAIL – CORE FIXED INCOME COMPOSITE





**SBH Corporate Duration: 6.52** 

| SBH Top 10 Corporate Holdings |
|-------------------------------|
| MERCK & CO INC                |
| FEDEX CORP                    |
| UNION PACIFIC CORP            |
| WILLIAMS COS INC/THE          |
| APPLE INC                     |
| AMPHENOL CORP                 |
| EXELON CORP                   |
| MICROSOFT CORP                |
| BEST BUY CO INC               |
| PEPSICO INC                   |



BBgBarc Agg. Corporate Duration: 8.67

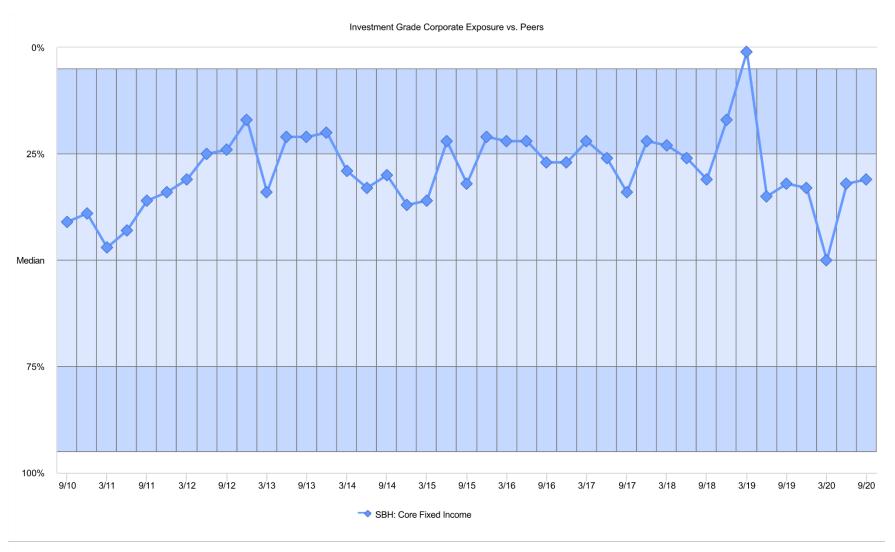
| BBgBarc Agg. Top 10 Corporate Holdings |
|--|
| BANK OF AMERICA CORP                   |
| JPMORGAN CHASE & CO                    |
| WELLS FARGO & CO                       |
| AT&T INC                               |
| CITIGROUP INC                          |
| COMCAST CORP                           |
| GOLDMAN SACHS GROUP INC/THE            |
| APPLE INC                              |
| MORGAN STANLEY                         |
| VERIZON COMMUNICATIONS INC             |

Source: CMS BondEdge. Ratings breakouts are determined based on the lower of either Moody's or S&P issue level credit ratings. Totals may not sum to 100% due to rounding.



# CONSISTENT CREDIT EXPOSURE

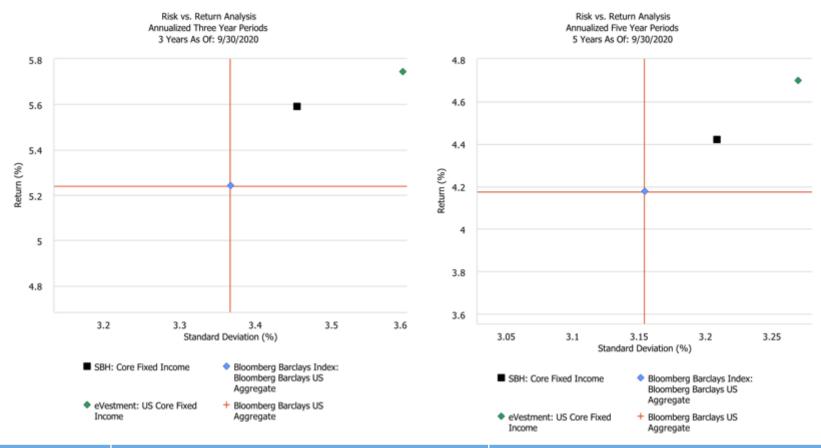
**Attachment 5** 



Universe: eVestment US Core Fixed Income



# CORE FIXED INCOME RISK/RETURN PROFILE\*



| Market Capture                 | 3 Yo                 | ears                   | 5 Years                     |                        |  |  |
|--------------------------------|----------------------|------------------------|-----------------------------|------------------------|--|--|
|                                | Upside Capture Ratio | Downside Capture Ratio | <b>Upside Capture Ratio</b> | Downside Capture Ratio |  |  |
| SBH Core Fixed Income          | 103.6                | 96.4                   | 102.7                       | 97.0                   |  |  |
| BBgBarc U.S. Aggregate<br>Bond | 100.0                | 100.0                  | 100.0                       | 100.0                  |  |  |

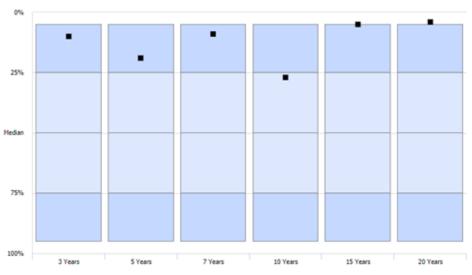
<sup>\*</sup>As of 9/30/20; Returns are gross of fees. Historical performance cannot guarantee future results. See specific performance disclosure pages at the end of the presentation. Source: eVestment. Based on monthly data.

Item II
Attachment 5



# **CONSISTENT RETURNS AND DIVERSIFICATION**

## **Rolling Information Ratio\***

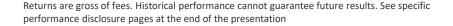


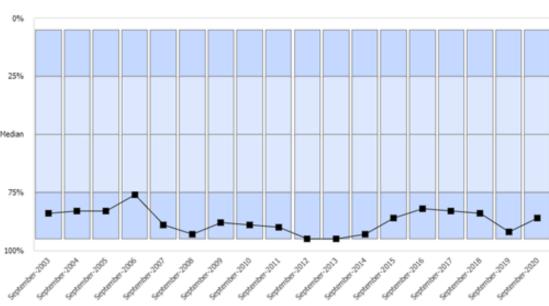
The strategy has consistently delivered superior risk-adjusted returns versus its peer universe.

#### **Correlation to S&P 500**

Relative to peers, the strategy offers superior diversification benefits as measured by its correlation to the S&P 500.

\* The Information Ratio is the excess return for the strategy relative to its benchmark divided by the standard deviation of those excess return. Put differently, the ratio divides a strategy's active return by the risks the strategy has taken relative to the benchmark to achieve the active return.



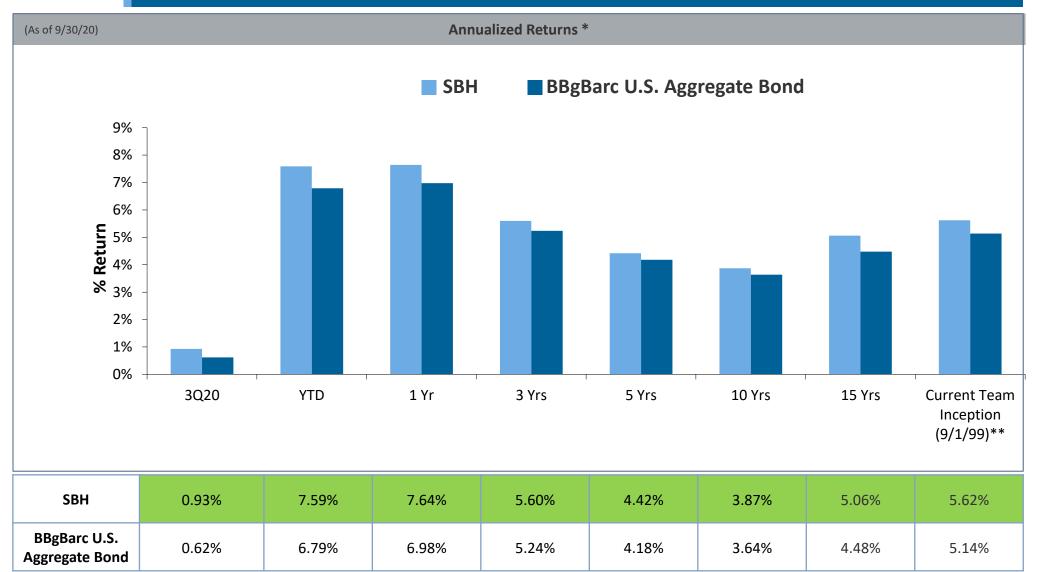


As of 9/30/20 Universe: eVestment US Core Fixed Income Source: eVestment. Based on monthly data.

Attachment 5



# CORE FIXED INCOME COMPOSITE PERFORMANCE



<sup>\*</sup>Preliminary. Periods greater than one year are annualized. Performance is gross of fees. Historical performance cannot guarantee future results. See specific performance disclosure pages at the end of the presentation. Core Fixed Income inception 1/1/1987.

<sup>\*\*</sup>Track record of current team begins 9/1/1999 when current portfolio managers began managing strategy.

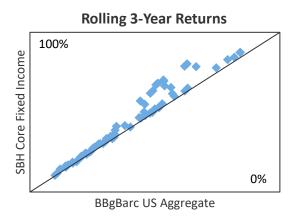
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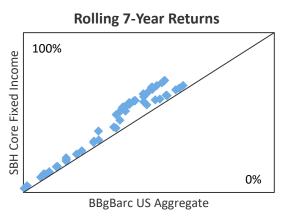


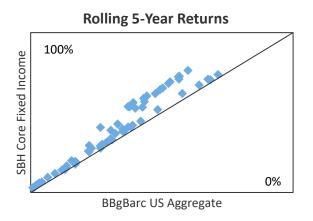
### CORE FIXED INCOME COMPOSITE PERFORMANCE

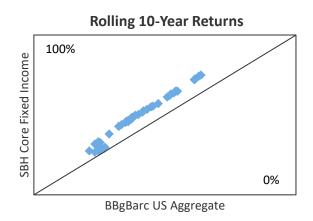
(As of 9/30/20)

### **LONG-TERM TRACK RECORD OF CURRENT INVESTMENT TEAM\***









<sup>\*</sup> Data beginning 9/1/1999 when current portfolio managers began managing strategy. Returns are gross of fees. Historical performance cannot guarantee future results. See specific performance disclosure pages at the end of the presentation. Source: eVestment



### **FEE SCHEDULE**

### **LACERS Proposed Fee Schedule**

#### \$625 Million

#### **Proposed Fee:**

First \$10 million @ 0.20% Next \$90 million @ 0.10% Balance @ 0.08%

#### **Standard Fee:**

First \$10 million @ 0.25% Next \$15 million @ 0.20% Balance @ 0.15%

#### Annual \$ Savings:

\$425,000

BOARD Meeting: 1/26/21 Item VII-E Attachment 1

**Attachment 5** 

IC Meeting: 12/9-10/20



## **Appendix**

Attachment 5





### **SBH DIVERSITY & INCLUSION**

**Purpose/Mission:** Foster a diverse and inclusive workforce and work environment in which individuals from varied backgrounds are brought together, supported, and valued so that the firm and its employees, clients and community benefit from a strong culture, diversity of thought and robust decision making.

**Vision:** Firm leadership fosters a culture that embraces and encourages unique differences in which employees seek to add to the diversity of our firm at every level because we believe that diversity and inclusion are the cornerstone of high organizational performance.

#### **D&I** Committee Comprised of:

- Top Leadership
- Principals and Non-Principals
- **Investment Professionals and Other Professionals**
- Women and Men
- Minorities and Majorities

#### **Proof Point:**

SBH is the founder of the Workplace Equality Index (in 2001) and manages a mutual fund which provides investors with the opportunity to own publicly traded shares of corporations doing business in the U.S. with progressive workplace policies that treat all employees equally-regardless of sexual orientation, gender, ethnicity, religion and other preferences.



### **SBH DIVERSITY & INCLUSION PROGRAMS**

#### BEING A PART OF THE SOLUTION

#### **EMPOWERMENT NETWORK**

- Speakers and employee engagement around Diversity & Inclusion topics such as Unconscious Bias and Avoiding Stereotypes.
- · Colorado Women's Chamber of Commerce, LGBTQ Chamber of Denver, Hispanic Chamber of Denver & Denver Metro Chamber of Commerce Speakers, Workshops and development events.
- WIP (Women Investment Professionals of Chicago) and WIIIN (Women in Institutional Investments Network of Los Angeles) events.

#### **EMPLOYEE DEVELOPMENT**

- Diversity & Inclusion training for Principals at annual retreat.
- Diversity & Inclusion employee survey.
- Coming soon "SBH Financial Literacy Events".

#### **RECRUITING EFFORTS**

- Internship program giving students with diverse socioeconomic and academic backgrounds a chance to explore a career in investment management.
- · Expanded recruiting to more diverse organizations and schools.
- More inclusive job descriptions.

#### **EDUCATIONAL OUTREACH**

- GOAL: To introduce the investment industry, investment career paths and SBH to students with varied interests and backgrounds while promoting a culture of inclusion and community involvement to SBH employees.
- SBH "Career Day" for college, high school and middle school students.
- SBH Investment Professional presentations at local schools and universities.
- CEO presentations at historically black colleges.

#### **CULTURAL EVENTS**

 Events intended to share, experience and celebrate diversity such as Día de Los Muertos and Chinese New Year celebrations.

#### **COMMUNITY OUTREACH**

- Tutor elementary school students in underserved schools through Reading Partners Denver and Working in the Schools Chicago.
- · Habitat for Humanity.
- Pride Parade Denver.
- Provide employees two days of paid leave to volunteer in the community.
- Significant employee and Principal involvement with non-profit organizations through volunteering and Board appointments.

Attachment 5



### RECRUITING AND RETENTION AT SBH

**Competitive Compensation and Incentive Program.** Employee compensation includes multiple components and is designed to attract and retain superior investment talent and to align the teams' incentives with client interests. Compensation for investment professionals generally consists of base salary, incentive bonus, and profit sharing, as well as possible equity ownership in the firm. Non-investment professionals are compensated with a salary and discretionary incentive bonus based on their performance.

**Equity Ownership.** A unique aspect of the firm's compensation program is the offering of equity ownership. Eligible employees include those who create long-term value for the firm and its clients. The firm believes this is a key competitive differentiator in the ability to attract and retain superior talent.

**Career Development.** The firm's senior management team is dedicated to developing employee talent and providing opportunities for personal growth. As stated in our values, we strongly believe in autonomy and accountability for our employees. Through mentorship, we encourage our employees to be critical thinkers and develop intellectual curiosity.

**Professional Development Opportunities.** Management encourages and supports all employees to further their professional development with the firm's education assistance program. The program provides employees with tuition reimbursement and reimbursement for attendance at relevant workshops and conferences. In addition, the SBH Professional Qualification Program provides financial assistance to employees who aspire to higher levels of skills and professional competencies. This program covers professional qualifications such as the Chartered Financial Analyst (CFA) and the Chartered Financial Planner (CFP) as well as other position-specific designations.



### FIRM APPROACH TO ESG INVESTING

#### **ESG INTEGRATION**

- Across the management of all client accounts, our research teams have integrated ESG
  factors into the firm's research process to ensure our investment decisions are conscious of
  the risk that unsustainable business practices pose to economic outcomes.
- The firm understands that a company's relationships with its stakeholders—customers, suppliers, employees, communities, governments, creditors, shareholders, and the broader environment—can have meaningful implications on its financial profile and future investment value. As such, we methodically review the existing and potential externalities resulting from the corporate behavior of companies within the investable market.
- SBH is a signatory of the United Nations' Principles for Responsible Investment (PRI).
   Signing the internationally recognized PRI shows our commitment to responsible investment within a global community, seeking companies that exhibit positive stewardship in their environmental, social, and corporate governance practices.

### SBH FIXED INCOME APPROACH TO ESG INVESTING

#### **ESG FACTORS**

- Our philosophy of investing in quality issuers drives the inclusion of ESG factors in the investment process. We believe responsible corporate citizenship is additive to the creditworthiness of underlying issuers and contributes to our quality determination and assessment of risks.
- Analysts evaluate issuers across ESG factors to account for the company's historical activities and the current messaging and actions of the management team.
- Analysts create separate ESG screens, which use qualitative and quantitative factors across each "E," "S" and "G" section. The companies are then ranked against their peers which allows the team to identify the highest quality companies in which to invest, consistent with the fundamental investment process.
- Analysts discuss ESG screens, observations and rankings with portfolio managers during initial credit reviews and credit updates. Portfolio managers use this ESG research to aid them in evaluating the appropriateness of the investment and risk factors associated with the credit.





#### **PRESENTERS**



James D. Dadura, CFA Principal, Director of Fixed Income

Jim Dadura is Principal and Director of Fixed Income for Segall Bryant & Hamill. He leads SBH's Fixed Income group. In addition, his responsibilities include the management of Core and Intermediate Fixed Income products. Prior to joining SBH, Mr. Dadura served as a mortgage-backed security, portfolio structure and quantitative analyst at The Chicago Trust Company from 1994 to 1999. He holds a BBA from the University of Texas and an MBA from DePaul University. Mr. Dadura started in the investment industry in 1994 and has earned the Chartered Financial Analyst (CFA) designation.



Clark W. Koertner Principal, Director of Institutional Sales

Clark Koertner is a Principal for Segall Bryant & Hamill and leads SBH's Institutional Relations efforts. His primary responsibilities include all external facing communication channels, including Client Service, Sales and Consultant Relations. Prior to joining SBH in 2004, Mr. Koertner was a consultant at Stratford Advisory Group and Mercer Investment Consulting, concentrating on asset allocation and manager research decisions. Mr. Koertner is a graduate of Miami University's Robert T. Farmer School of Business, where he attained a B.S. in Finance and Management Information Systems. Mr. Koertner is also a graduate of the University of Chicago Booth School of Business CMI program. He has been in the institutional investment industry since 2001 and holds Series 6 and 63 securities licenses. Mr. Koertner is active in his local Cystic Fibrosis Foundation, and is on the Big Shoulders Fund Chairmen's Council, whose mission is to provide support to inner-city schools which provide a quality, values-based education for Chicago's children.

**Attachment 5** 

**Attachment 1** 



### CORE FIXED INCOME COMPOSITE PERFORMANCE\*

(As of 9/30/20)

#### Core Fixed Income

Quarterly & Annual Returns Period Ending 9/30/2020

|      |      | _         |         | _       |
|------|------|-----------|---------|---------|
| Appu | 1700 | ( 3333333 | 2 11330 | Returns |
|      |      |           |         |         |

|            | SBH   | SBH   | Barlcays |
|------------|-------|-------|----------|
| Annualized | Gross | Net   | Agg      |
| 1 Year     | 7.64% | 7.40% | 6.98%    |
| 3 Years    | 5.60% | 5.36% | 5.24%    |
| 5 Years    | 4.42% | 4.20% | 4.18%    |
| 10 Years   | 3.87% | 3.66% | 3.64%    |

#### 3 Year Ex-Post Standard Devation

|      |            | Barclays |
|------|------------|----------|
|      | <u>SBH</u> | Agg      |
| 2011 | 2.86%      | 2.78%    |
| 2012 | 2.53%      | 2.39%    |
| 2013 | 2.73%      | 2.71%    |
| 2014 | 2.60%      | 2.63%    |
| 2015 | 2.88%      | 2.88%    |
| 2016 | 3.00%      | 2.98%    |
| 2017 | 2.80%      | 2.78%    |
| 2018 | 2.84%      | 2.84%    |
| 2019 | 2.90%      | 2.87%    |
| 2020 | 3.41%      | 3.32%    |

| Period |                 | 1Q     | 2Q     | 3Q     | 4Q     | YTO    | <b>‡</b> of Accounts | Std Dev. | Composite<br>Market<br>Yalue<br>(\$ mil) | Total<br>Firm<br>Market<br>Value |
|--------|-----------------|--------|--------|--------|--------|--------|----------------------|----------|--|----------------------------------|
| 2010   | Gross of Fee    | 1.91%  | 3.53%  | 2.42%  | -1.67% | 6.26%  | 29                   | 0.16%    | \$889.3                                  | \$7,237.0                        |
|        | Net of Fee      | 1.86%  | 3.48%  | 2.37%  | -1.72% | 6.05%  |                      |          |  |                                  |
| Barcla | ays Capital Agg | 1.78%  | 3.49%  | 2.48%  | -1.30% | 6.54%  |                      |          |  |                                  |
| 2011   | Gross of Fee    | 0.67%  | 2.22%  | 4.38%  | 1.10%  | 8.59%  | 43                   | 0.10%    | \$1,272.0                                | \$7,866.5                        |
|        | Net of Fee      | 0.63%  | 2.17%  | 4.33%  | 1.05%  | 8.39%  |                      |          |  |                                  |
| Barcla | ays Capital Agg | 0.42%  | 2.29%  | 3.82%  | 1.12%  | 7.84%  |                      |          |  |                                  |
| 2012   | Gross of Fee    | 0.36%  | 2.12%  | 1.56%  | 0.26%  | 4.36%  | 55                   | 0.20%    | \$1,347.5                                | \$8,936.6                        |
|        | Net of Fee      | 0.31%  | 2.07%  | 1.51%  | 0.21%  | 4.15%  |                      |          |  |                                  |
| Barcla | ays Capital Agg | 0.30%  | 2.06%  | 1.58%  | 0.22%  | 4.21%  |                      |          |  |                                  |
| 2013   | Gross of Fee    | 0.03%  | -2.47% | 0.51%  | -0.03% | -1.97% | 41                   | 0.10%    | \$940.3                                  | \$9,468.1                        |
|        | Net of Fee      | -0.02% | -2.52% | 0.46%  | -0.08% | -2.17% |                      |          |  |                                  |
| Barcla | ays Capital Agg | -0.13% | -2.33% | 0.57%  | -0.14% | -2.04% |                      |          |  |                                  |
| 2014   | Gross of Fee    | 2.01%  | 2.15%  | 0.35%  | 1.90%  | 6.55%  | 37                   | 0.08%    | \$1,072.7                                | \$9,729.0                        |
|        | Net of Fee      | 1.96%  | 2.10%  | 0.30%  | 1.84%  | 6.33%  |                      |          |  |                                  |
| Barcla | ays Capital Agg | 1.84%  | 2.04%  | 0.17%  | 1.79%  | 5.96%  |                      |          |  |                                  |
| 2015   | Gross of Fee    | 1.70%  | -1.78% | 1.30%  | -0.40% | 0.78%  | 37                   | 0.06%    | \$986.2                                  | \$9,592.2                        |
|        | Net of Fee      | 1.65%  | -1.83% | 1.25%  | -0.45% | 0.58%  |                      |          |  |                                  |
| Barcla | ays Capital Agg | 1.61%  | -1.68% | 1.23%  | -0.57% | 0.55%  |                      |          |  |                                  |
| 2016   | Gross of Fee    | 2.86%  | 2.36%  | 0.48%  | -2.97% | 2.65%  | 39                   | 0.09%    | \$875.6                                  | \$11,171.6                       |
|        | Net of Fee      | 2.81%  | 2.30%  | 0.43%  | -3.02% | 2.44%  |                      |          |  |                                  |
| Barcla | ays Capital Agg | 3.03%  | 2.21%  | 0.46%  | -2.98% | 2.65%  |                      |          |  |                                  |
| 2017   | Gross of Fee    | 0.83%  | 1.51%  | 0.75%  | 0.29%  | 3.42%  | 43                   | 0.07%    | \$1,472.3                                | \$12,466.3                       |
|        | Net of Fee      | 0.77%  | 1.46%  | 0.70%  | 0.24%  | 3.20%  |                      |          |  |                                  |
|        | ays Capital Agg | 0.82%  | 1.44%  | 0.85%  | 0.39%  | 3.54%  |                      |          |  |                                  |
| 2018   | Gross of Fee    | -1.38% | 0.04%  | -0.04% | 1.87%  | 0.46%  | 40                   | 0.04%    | \$999.1                                  | \$18,587.0                       |
|        | Net of Fee      | -1.43% | -0.01% | -0.09% | 1.81%  | 0.24%  |                      |          |  |                                  |
|        | ays Capital Agg | -1.46% | -0.16% | 0.02%  | 1.64%  | 0.01%  |                      |          |  |                                  |
| 2019   | Gross of Fee    | 2.98%  | 3.00%  | 2.36%  | 0.05%  | 8.63%  | 36                   | 0.05%    | \$910.0                                  | \$19,653.3                       |
|        | Net of Fee      | 2.92%  | 2.94%  | 2.31%  | -0.01% | 8.38%  |                      |          |  |                                  |
|        | ays Capital Agg |        | 3.08%  | 2.27%  | 0.18%  | 8.72%  |                      |          |  |                                  |
| 2020   | Gross of Fee    | 3.08%  | 3.41%  | 0.93%  |        | 7.59%  | 39                   | 0.15%    | \$1,038.0                                | \$21,083.6                       |
|        | Net of Fee      | 3.03%  | 3.35%  | 0.87%  |        | 7.41%  |                      |          |  |                                  |
| Barcla | ays Capital Agg | 3.15%  | 2.90%  | 0.62%  |        | 6.79%  |                      |          |  |                                  |

nm: composite held five or fewer accounts for the entire year. Internal dispersion (standard deviation) is not presented for this period.

**BOARD Meeting: 1/26/21** 

Item VII-E **Attachment 1** 

IC Meeting: 12/9-10/20

**Attachment 5** 



### CORE FIXED INCOME COMPOSITE PERFORMANCE

Segall Bryant & Hamill (SBH) is a Registered Investment Adviser established in 1994. SBH provides fee-based management of fixed income and equity portfolios for institutional clients and high net worth individuals. On June 30, 2015, SBH acquired Philadelphia International Advisors (PIA). Prior to the acquisition, PIA was a privately held investment management firm whose sole focus was the management of international equities. The group that was formerly PIA manages all SBH's international composites which have been a part of SBH since the acquisition. On May 1, 2018, SBH acquired Denver Investment Advisors LLC (aka Denver Investments). As a result of the Denver Investments acquisition, SBH added several new Portfolio Managers and composites to the overall firm. The Core Fixed composite was created in October, 1994. The Core Fixed composite is a fixed income strategy which consists of domestic investment grade fixed income securities, the majority of which have a maturity of 10 years or less. Accordingly, the composite is benchmarked against the Barclays Capital Aggregate Bond Index. The Barclays Capital Aggregate Bond Index is a broad-based benchmark that measures the investment grade, US dollar-denominated, fixed-rate taxable bond market, including Treasuries, governmentrelated and corporate securities, MBS (agency fixed-rate and hybrid ARM passthroughs), ABS, and CMBS. The Barclays Capital Aggregate Bond Index has a duration of 5.92 years and a maturity of 7.97 years. The Core Fixed composite is comprised of all fee paying, discretionary, tax-exempt, institutional accounts managed to this investment approach which have assets greater than \$1 million and one full quarter of returns. Accounts falling below the \$1 million threshold are not eligible for inclusion in the composite. In addition, accounts that have a significant cash flow, defined as 25% of the market value prior to 10/1/2012 and 10% of the market value beginning 10/1/2012, will be removed from the composite until the next reconciliation and calculation period. Prior to January 1, 2010, SBH carved out the fixed income segments and the equity segments of balanced portfolios by adjusting end-of-period cash according to target allocations. Due to new GIPS guidelines effective 1/1/2010, Balanced portfolio segments are no longer included which resulted in several accounts leaving the composite. Gross results are shown net of trading costs and include the reinvestment of all dividends and interest. Net results are shown net of management fees as well as trading costs and include the reinvestment of all dividends and interest. Net results reflect actual fees paid. The current fee schedule applicable to the Core Fixed composite accounts is 0.25% on the first \$25 million of assets, 0.20% on the next \$25 million of assets and 0.15% over \$50 million of assets. Actual fees will vary. Prior to October 1994, performance results reflect returns generated by the investment manager using this investment strategy at another firm. All information is based on US dollar values. Returns are calculated on a capitalization and time weighted basis and linked quarterly. Dispersion of returns is measured by an equal weighted standard deviation of all the accounts in the composite for a full year period. Neither the composite nor the benchmark returns reflect the withholding of any taxes for ordinary income or capital gains. Segall Bryant & Hamill claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Segall Bryant & Hamill has been independently verified for the periods January 1, 2000 through December 31, 2017. The verification report is available upon request. Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. Verification does not ensure the accuracy of any specific composite presentation. It should be noted that principal risk is taken and that historical performance can not guarantee future results. A complete list and description of the firm's composites, as well as additional information regarding policies for valuing portfolios, calculating returns and preparing compliant presentations, is available upon request from SBH.

Attachment 5



**3Q20 MARKET COMMENTARY** 

#### **CORE FIXED INCOME**

#### **Market Overview**

Encouraged by aggressive Federal Reserve (Fed) stimulus and low interest rates, corporations have issued over \$2 trillion in new debt in 2020 (\$1.7 trillion of investment grade and over \$300 billion of high yield), already more than any full calendar year in history. This towering wave of new debt is generally viewed as a credit positive as it provides much needed liquidity for many corporations to ride out the impacts from COVID-19 and wait for the economy to normalize. While the extra balance sheet cash may be beneficial in the short term, the longer-term impact of the added debt remains to be seen. Notwithstanding these concerns, yield-hungry investors were very receptive to all the new corporate debt. In the third quarter, corporate bonds posted strong returns with riskier credits outperforming higher quality credits and Treasuries.

#### Performance

The Segall Bryant & Hamill Core strategy returned 0.9%\* in the third quarter versus a return of 0.6% for its benchmark, the Bloomberg Barclays U.S. Aggregate Bond Index. For the year-to-date period through third quarter, the strategy returned 7.6% versus 6.8% for the index. The drivers of relative performance for the quarter and year-to-date period are outlined in the table on the following page.

\*Preliminary returns. Continued on next page...



### 3Q20 PERFORMANCE ATTRIBUTION

### **CORE FIXED INCOME**

| Return Attribution      | QTD    | YTD    | Notes  |
|-------------------------|--------|--------|--|
| Security Selection      | -0.06% | 0.83%  | Security selection had a slightly negative impact on relative performance during the third quarter of 2020. Specifically, during the quarter the composite's corporate securities returned 1.43% vs. 1.54% for the corporate's included in the benchmark. The composite's higher quality bias was the primary driver of this relative performance. The composite was underweight BBB corporate securities (32% vs. 49% for the benchmark). BBB corporates returned 2.00% vs. 1.09% for AAA corporate securities in the benchmark. Offsetting this was a positive contribution from the composite's mortgage backed securities, which returned 0.41% vs. 0.11% for the mortgage-backed securities in the benchmark. |
| Sector Selection        | 0.30%  | -0.25% | Sector selection had a positive impact on performance during the third quarter. During the quarter, the composite was overweight corporate securities vs. the benchmark (43% vs. 28%) and underweight U.S. Treasury securities vs. the benchmark (15% vs. 37%). This helped relative performance as corporate securities returned 1.54% in the quarter vs. 0.17% for U.S. Treasuries.  |
| Parallel Duration Shift | 0.00%  | -0.15% | During the quarter, the composite's duration was slightly shorter than the duration of the benchmark (98.5%). This had a neutral impact on performance during the quarter.   |
| Yield Curve Positioning | 0.06%  | 0.37%  | Yield curve positioning had a slightly positive impact on performance during the quarter. During the quarter 2-year Treasury yields decreased by 2 basis points, 3-year Treasury yields decreased by 2 basis points, 5-year Treasury yields decreased by 1 basis points, 10-year Treasury yields increased by 3 basis points, and 30-year Treasury yields increased by 5 basis points.   |
| TOTAL*                  | 0.31%  | 0.80%  |  |

<sup>\*</sup> Totals may not add exactly due to rounding. Source: Bloomberg Barclays, BondEdge

Attachment 5



### **3Q20 MARKET COMMENTARY**

### **CORE FIXED INCOME**

#### **Outlook and Positioning**

There are several major crosscurrents that could potentially influence the trajectory of the bond market in the coming months. First, the economy continues to limp along as the world waits for a vaccine or other positive virus-related news. Second, against this backdrop, the Federal Reserve continues to take a very active role in shaping the U.S. economy and market functions. It has pledged to keep interest rates low and to bolster market liquidity via a variety of new and/or expanded programs, all of which are designed to facilitate purchases of securities not traditionally thought of as in the Fed's domain. The Fed is also still engaged in more traditional quantitative easing strategies via its continued purchases of Treasuries and mortgage-backed securities (MBS). These efforts have combined to keep spreads tight and yields low on all short-term securities. It has also allowed many corporate issuers to access the market at favorable rates, which we expect to continue. Finally, for the next month the nation's attention will be focused on the culmination of a contentious election cycle. Against that backdrop, there are several pockets of concern: the high yield default rate continues to tick up, mortgage prepayments continue to creep higher, and further fiscal stimulus is in question. The net impact of these points is to highlight our strategy of diligent credit analysis and thoughtful portfolio construction. We will focus on securities we expect to perform well under the many scenarios that could unfold in the coming months, with a continued emphasis on higher quality corporate bonds and taxable munis.

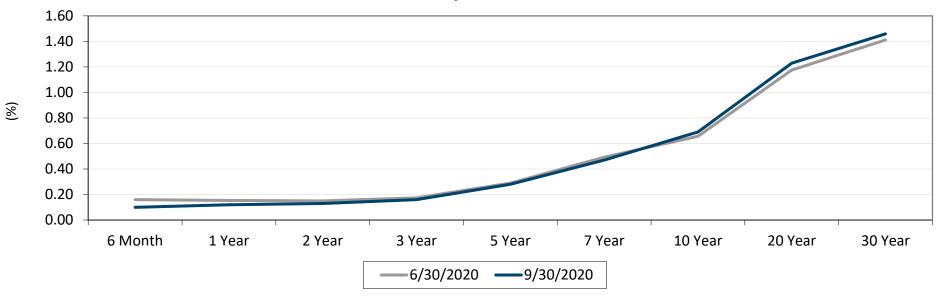
**Attachment 1** 



### INTEREST RATES AND RETURNS: QUARTER-TO-DATE

(As of 9/30/20)

### **Treasury Yield Curves**



#### **Quarter-to-date Returns**

| Short Term                |       | Intermediate (1-10yr)       |       | Broad Market (1-30yr) |       |  |
|---------------------------|-------|-----------------------------|-------|-----------------------|-------|--|
| 0-3 Year U.S. High Yield* | 4.11% | Intermediate High Yield     | 4.41% | U.S. High Yield       | 4.60% |  |
| 1-3 Year Aggregate        | 0.16% | Intermediate Aggregate      | 0.48% | U.S. Aggregate        | 0.62% |  |
| 1-3 Year Gov't/Credit     | 0.23% | Intermediate Gov't/Credit   | 0.61% | EM Aggregate          | 2.37% |  |
| 1-3 Year U.S. Treasury    | 0.10% | Intermediate U.S. Treasury  | 0.19% | U.S. Treasury         | 0.17% |  |
| 1-3 Year U.S. Corporate   | 0.60% | Intermediate U.S. Corporate | 1.33% | U.S. Corporate        | 1.54% |  |

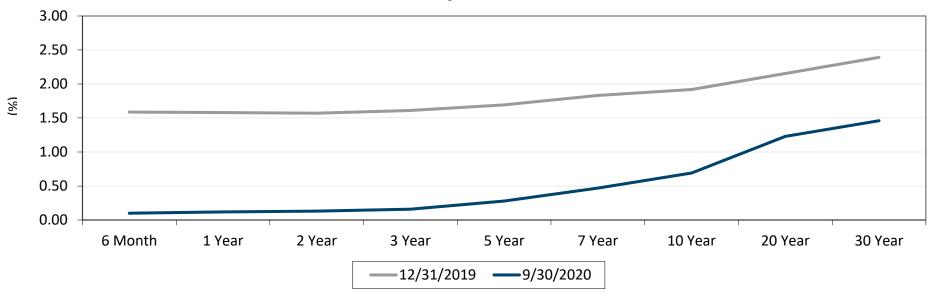




### INTEREST RATES AND RETURNS: YEAR-TO-DATE

(As of 9/30/20)

#### **Treasury Yield Curves**



#### **Year-to-date Returns**

| Short Term                |        | Intermediate (1-10yr)       |        | Broad Market (1-30yr) |       |  |
|---------------------------|--------|-----------------------------|--------|-----------------------|-------|--|
| 0-3 Year U.S. High Yield* | -1.61% | Intermediate High Yield     | -0.19% | U.S. High Yield       | 0.62% |  |
| 1-3 Year Aggregate        | 2.85%  | Intermediate Aggregate      | 5.16%  | U.S. Aggregate        | 6.79% |  |
| 1-3 Year Gov't/Credit     | 3.12%  | Intermediate Gov't/Credit   | 5.92%  | EM Aggregate          | 1.93% |  |
| 1-3 Year U.S. Treasury    | 3.11%  | Intermediate U.S. Treasury  | 6.02%  | U.S. Treasury         | 8.90% |  |
| 1-3 Year U.S. Corporate   | 3.10%  | Intermediate U.S. Corporate | 5.61%  | U.S. Corporate        | 6.64% |  |

**Attachment 1** 

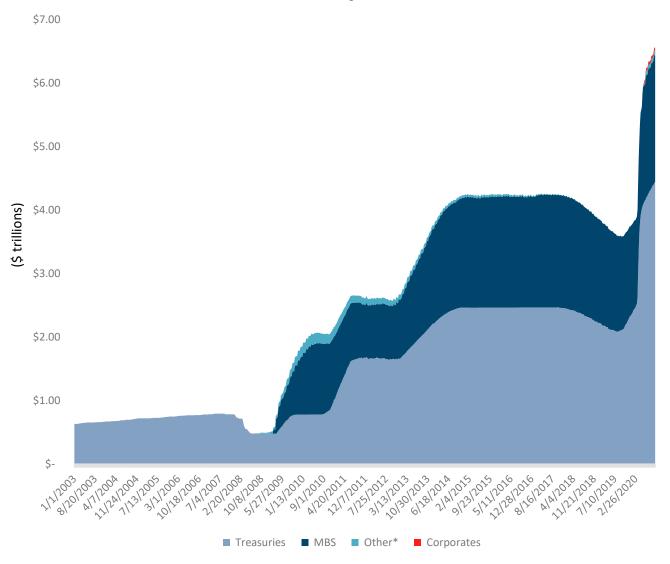
**Attachment 5** 



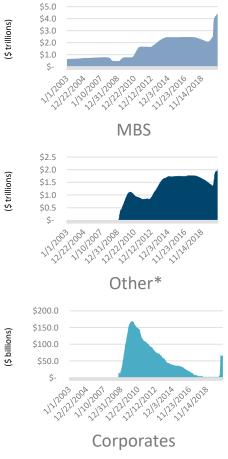
### SECURITIES HELD BY FEDERAL RESERVE

(As of 9/30/20)

### **Securities Held by Federal Reserve**



#### **Treasuries**







Source: St. Louis Federal Reserve Bank

<sup>\*</sup> Other is a combination of Agencies, Commercial Paper Facility and Municipal Facility

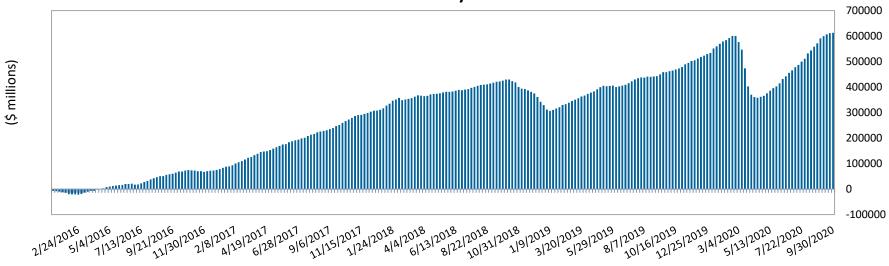


### **FUND FLOWS AND EXCESS RETURNS**

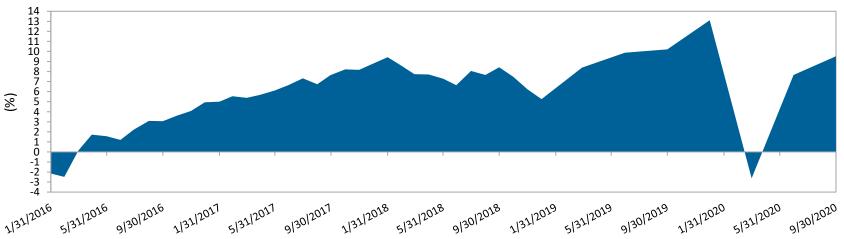
(As of 9/30/20)

Strong demand for the safety of U.S. Treasuries has helped them outperform most other asset classes so far in 2020.

#### **ICI Taxable Bond Est. Weekly Cumulative Cash Flow**



#### 2016-2020 Excess Return on Barclays Corporate Index







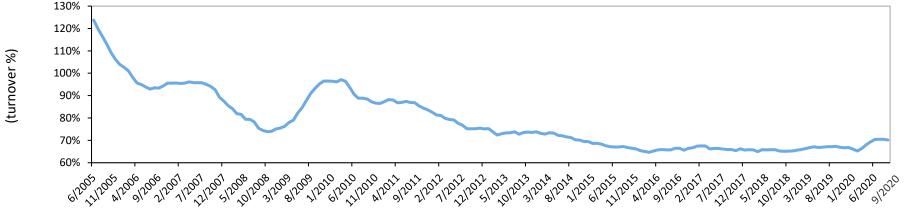
### **BOND MARKET LIQUIDITY**

(As of 9/30/20)

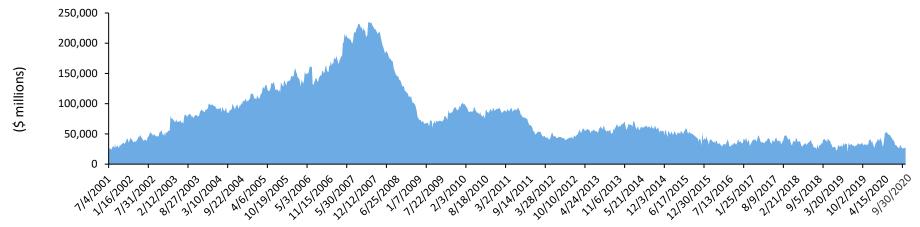
#### Market Liquidity is at a 10-Year Low

Market liquidity has dropped steadily over the past decade as dealers reduce their inventories.





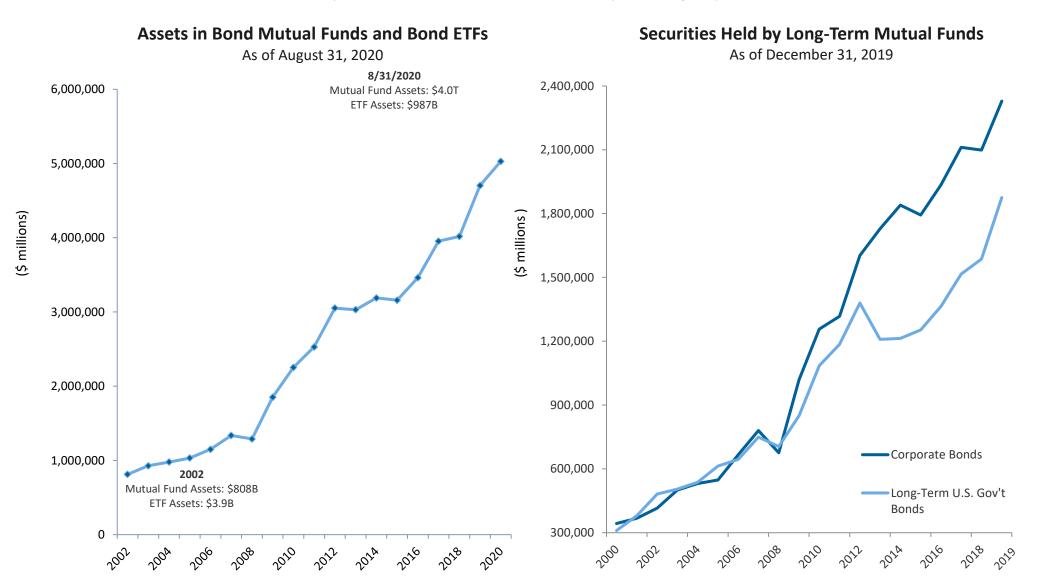
#### **Dealer Inventories**

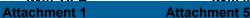




### **FUND FLOWS**

Flows into bond mutual funds have been generally strong in 2020, aided by the Federal Reserve's commitment to purchasing corporate bonds.

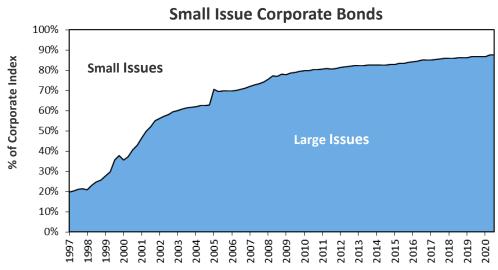






### SMALL ISSUE VS. LARGE ISSUE

(As of 9/30/20)

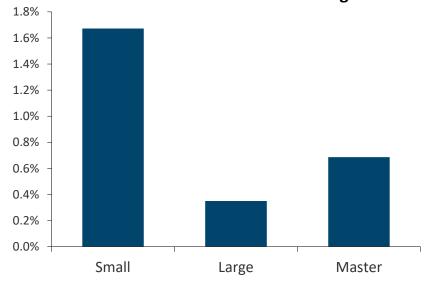


Small issue corporate bonds continue to produce higher returns to large issues.

#### **Small Issue Characteristics**

|              | <u>Yield</u> | # of Issues | Avg, Deal Size |
|--------------|--------------|-------------|----------------|
| Small Issues | 2.35%        | 2,531       | \$347MM        |
| Large Issues | 2.01%        | 6,180       | \$1,033MM      |

#### **Total Returns While S&P 500 Negative**



#### **Stress Characteristics**

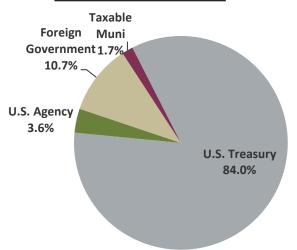
|                    | <u>Small</u> | <u>Large</u> | <u>Master</u> |
|--------------------|--------------|--------------|---------------|
| Return             | 1.67%        | 0.35%        | 0.69%         |
| Standard Deviation | 6.62%        | 6.46%        | 6.39%         |
| Information Ratio  | 0.25         | 0.05         | 0.11          |



### TAXABLE MUNICIPAL BONDS

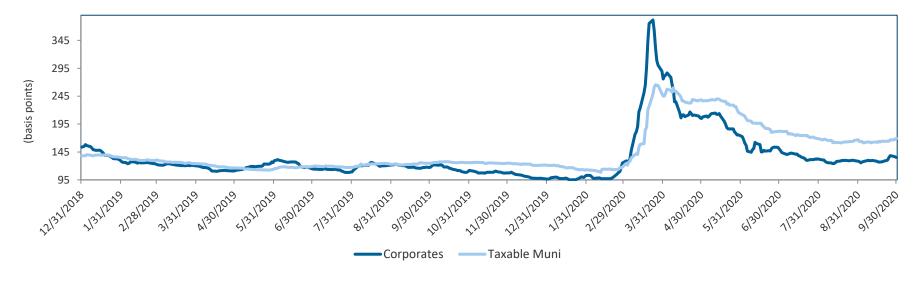
(As of 9/30/20)

#### **Government Securities**



| Sector                                       | Yield | Avg. Quality |
|--|-------|--------------|
| 5-10 Year Taxable Municipal                  | 1.50% | A1           |
| 5-10 Year U.S. Foreign Govt. & Supranational | 1.70% | AA3          |
| 5-10 Year U.S. Agency                        | 0.88% | AAA          |
| 5-10 Year U.S. Treasury                      | 0.45% | AAA          |

#### **Ten Year Spreads**

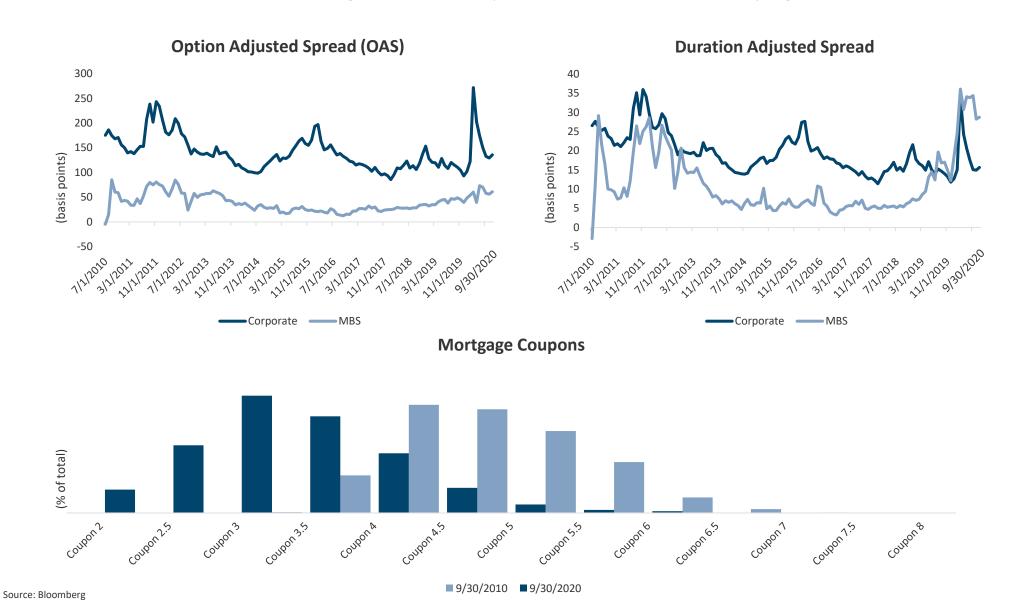




### MORTGAGE BACKED SECURITIES

(As of 9/30/20)

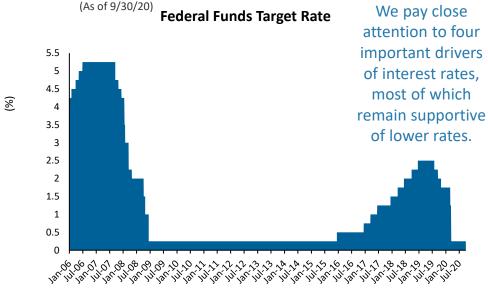
Spreads on corporate bonds and mortgage-backed securities made a strong move tighter in the second quarter but remain wide of where they began 2020.



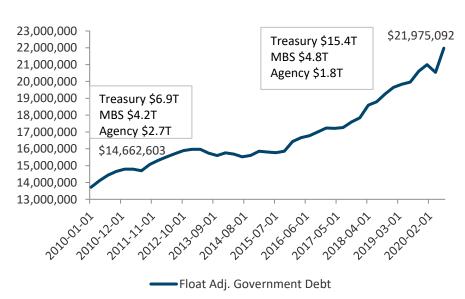
**Attachment 1** 



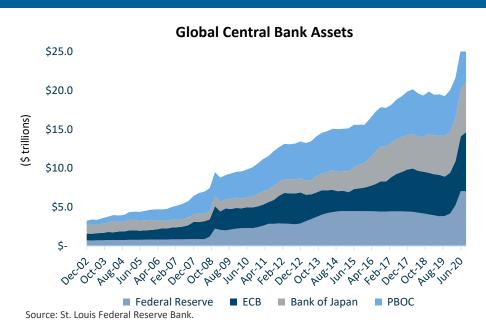
### FOUR FACTORS THAT AFFECT INTEREST RATES



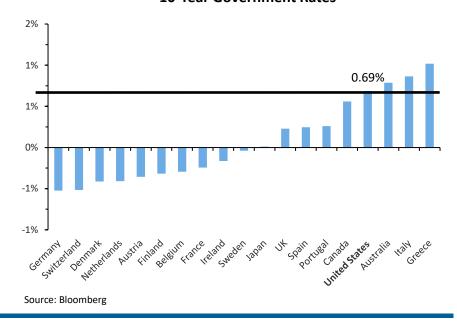
Source: Bloomberg



\* Total outstanding U.S. government and agency guaranteed debt adjusted for securities held at the Federal Reserve and US Depository Institutions. Sources: St. Louis Federal Reserve Bank, Barclays



#### 10-Year Government Rates

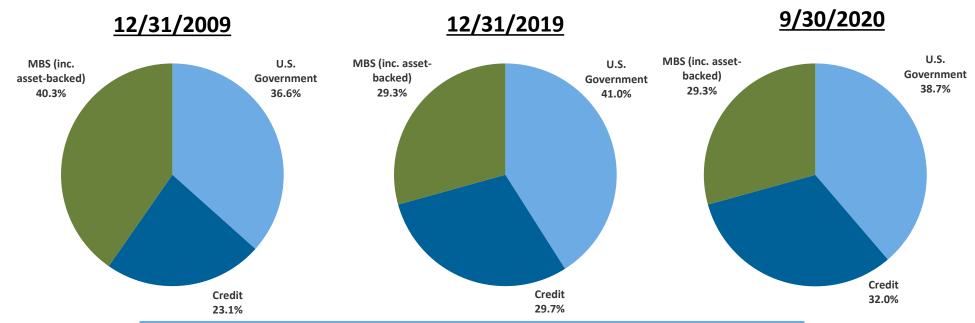


**Attachment 5** 



### **CHANGE IN INDEX COMPONENTS**

(As of 9/30/20)



| Components of BBgBarc U.S. Aggregate Index | 12/31/2009  | 12/31/2019  | 9/30/2020   |
|--|-------------|-------------|-------------|
| U.S. Government Market Value (Millions)    | \$4,970,177 | \$9,462,117 | \$9,513,462 |
| U.S. Government % of Total                 | 36.6%       | 40.8%       | 38.7%       |
| U.S. Government Duration                   | 4.7         | 6.4         | 7.0         |
| Credit Market Value (Millions)             | \$3,131,491 | \$6,862,598 | \$7,854,452 |
| Credit % of Total                          | 23.1%       | 29.6%       | 32.0%       |
| Credit Duration                            | 6.2         | 7.7         | 8.3         |
| MBS Market Value (Millions)                | \$5,475,474 | \$6,861,235 | \$7,198,182 |
| MBS (inc. asset-backed) % of Total         | 40.3%       | 29.6%       | 29.3%       |
| MBS (inc. asset-backed) Duration           | 4.6         | 4.3         | 3.4         |





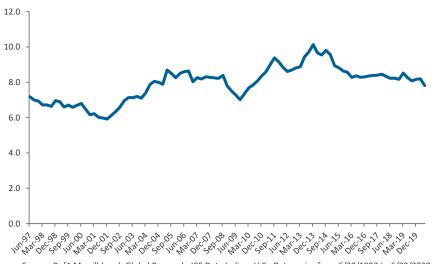
### **CORPORATE CREDIT FUNDAMENTALS**

U.S. Investment Grade Non-Financial Issuers Net Leverage



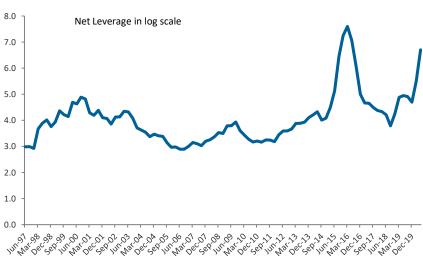
Source: BofA Merrill Lynch Global Research, ICE Data Indices LLC. Data series from 6/30/1997 to 6/30/2020

#### **U.S. Investment Grade Non-Financial Issuers Coverage**



Source: BofA Merrill Lynch Global Research, ICE Data Indices LLC. Data series from 6/30/1997 to 6/30/2020

#### ICE BofAML U.S. High Yield Index Leverage



Source: BofA Merrill Lynch Global Research, ICE Data Indices LLC. Data series from 6/30/1997 to 6/30/2020

#### ICE BofAML U.S. High Yield Index Coverage



Source: BofA Merrill Lynch Global Research, ICE Data Indices LLC. Data series from 6/30/1997 to 6/30/2020

**Attachment 1** 

Attachment 5



### CORPORATE RETURNS BY LEVERAGE ENVIRONMENT

#### **Period Information**

| Year  | 2010                  | 2011                    | 2012                  | 2013                   | 2014                  | 2015                    | 2016                  | 2017                  | 2018                   | 2019                   | YTD Q2<br>2020          |
|---|-----------------------|-------------------------|-----------------------|------------------------|-----------------------|-------------------------|-----------------------|-----------------------|------------------------|------------------------|-------------------------|
|   |                       |                         |                       |                        |                       |                         |                       |                       |                        |                        |                         |
| Fed, ECB, BOJ and PBOC<br>Policy Rate Hikes | 1                     | 3                       | 0                     | 0                      | 0                     | 1                       | 1                     | 3                     | 4                      | 0                      | 0                       |
| " " Policy Rate Cuts                        | 0                     | 0                       | 2                     | 0                      | 3                     | 3                       | 2                     | 0                     | 0                      | 3                      | 2                       |
| " " Balance Sheets, in \$B                  | \$ 10.619.65          | \$ 12.789.44            | \$ 13.450.09          | \$ 14,551.20           | \$ 15,069.81          | \$ 15,610.78            | \$ 17,352.74          | \$ 20,033.70          | \$ 19,867.25           | \$ 20,020.55           | \$ 25,258.47            |
| \$ Change, in Billions                      | ,                     | \$ 2,169.79             |                       | \$ 1,101.11            | \$ 518.60             | \$ 540.98               | \$ 1,741.96           | \$ 2,680.96           | \$ (166.45)            |                        | \$ 3,618.64             |
| 5 Change, in Dimons                         |                       | φ 2,200.70              | ψ 000.00              | ψ 1,101.11             | φ 520.00              | φ 5.0.00                | φ _,,                 | φ 2,000.00            | φ (2001.0)             | φ 100.00               | ŷ 5,010.0 <del>4</del>  |
| U.S. GDP Growth                             | 2.60%                 | 1.60%                   | 2.20%                 | 1.80%                  | 2.50%                 | 2.90%                   | 1.60%                 | 2.40%                 | 2.90%                  | 2.30%                  | -32.9%                  |
| U.S. CPI Average                            | 1.64%                 | 3.14%                   | 2.07%                 | 1.47%                  | 1.62%                 | 0.12%                   | 1.27%                 | 2.14%                 | 2.44%                  | 1.81%                  | -1.0%                   |
| S&P 500 Change                              | 15.06%                | 2.11%                   | 15.99%                | 32.37%                 | 13.68%                | 1.37%                   | 11.95%                | 21.82%                | -4.39%                 | 31.48%                 | -3.09%                  |
| <b>0</b>                                    |                       |                         |                       |                        |                       |                         |                       |                       |                        |                        |                         |
| Corporate Returns                           |                       |                         |                       |                        |                       |                         |                       |                       |                        |                        |                         |
| corporate neturns                           |                       |                         |                       |                        |                       |                         |                       |                       |                        |                        |                         |
| 10+ Year Most Levered                       | 10.71%                | 14.12%                  | 13.17%                | -4.56%                 | 16.22%                | -5.62%                  | 13.53%                | 11.19%                | -2.11%                 | 24.14%                 | 2.12%                   |
| 10+ Year Least Levered                      | 11.46%                | 18.77%                  | 11.08%                | -6.18%                 | 15.06%                | -2.27%                  | 8.31%                 | 12.25%                | -2.36%                 | 22.12%                 | 9.25%                   |
| Difference                                  | -0.75%                | -4.65%                  | 2.09%                 | 1.62%                  | 1.16%                 | -3.35%                  | 5.22%                 | -1.06%                | 0.25%                  | 2.03%                  | -7.13%                  |
|   |                       |                         |                       |                        |                       |                         |                       |                       |                        |                        |                         |
| 7-10 Year Most Levered                      | 10.78%                | 7.52%                   | 12.25%                | -2.67%                 | 7.90%                 | -0.39%                  | 6.67%                 | 5.80%                 | -2.33%                 | 14.77%                 |                         |
| 7-10 Year Least Levered                     | 10.01%                | 10.73%                  | 8.92%                 | -2.81%                 | 8.35%                 | 2.00%                   | 4.00%                 | 5.60%                 | -2.17%                 | 13.86%                 | 7.01%                   |
| Difference                                  | 0.78%                 | -3.21%                  | 3.32%                 | 0.14%                  | -0.46%                | -2.39%                  | 2.67%                 | 0.20%                 | -0.16%                 | 0.91%                  | -3.71%                  |
|   | 0.460/                | F 000/                  | 42.400/               | 4.040/                 | 4.020/                | 0.260/                  | C 250/                | 4.540/                | 0.540/                 | 44.700/                | 2.400/                  |
| 5-7 Year Most Levered                       | 9.46%                 | 5.00%                   | 13.40%                | 1.04%                  | 4.82%                 | 0.36%                   | 6.35%                 | 4.51%                 | -0.51%                 | 11.70%                 | 3.18%                   |
| 5-7 Year Least Levered                      | 8.44%<br><b>1.01%</b> | 7.86%<br>- <b>2.86%</b> | 7.56%<br><b>5.83%</b> | -0.08%<br><b>1.12%</b> | 4.58%<br><b>0.24%</b> | 2.03%<br>- <b>1.67%</b> | 3.80%<br><b>2.56%</b> | 4.38%<br><b>0.12%</b> | -0.65%<br><b>0.13%</b> | 10.71%<br><b>0.99%</b> | 6.97%<br>- <b>3.79%</b> |
| Difference                                  | 1.01%                 | -2.80%                  | 3.63%                 | 1.12/0                 | 0.24/0                | -1.07/6                 | 2.30%                 | 0.12/6                | 0.13%                  | 0.55%                  | -3./3/0                 |
| 3-5 Year Most Levered                       | 7.03%                 | 3.31%                   | 9.31%                 | 1.76%                  | 2.72%                 | 1.03%                   | 3.94%                 | 3.22%                 | 0.35%                  | 8.11%                  | 2.75%                   |
| 3-5 Year Least Levered                      | 6.02%                 | 5.32%                   | 5.73%                 | 0.86%                  | 2.76%                 | 1.71%                   | 2.86%                 | 2.84%                 | 0.35%                  | 7.89%                  | 5.04%                   |
| Difference                                  | 1.01%                 | -2.01%                  | 3.58%                 | 0.89%                  | -0.04%                | -0.68%                  | 1.08%                 | 0.39%                 | 0.00%                  | 0.22%                  | -2.29%                  |
|   |                       |                         |                       |                        |                       |                         |                       |                       |                        |                        |                         |
| 1-3 Year Most Levered                       | 4.84%                 | 1.35%                   | 5.45%                 | 1.80%                  | 1.15%                 | 0.86%                   | 2.66%                 | 1.89%                 | 1.48%                  | 4.93%                  | 1.61%                   |
| 1-3 Year Least Levered                      | 3.77%                 | 2.34%                   | 2.58%                 | 1.30%                  | 1.11%                 | 1.07%                   | 1.92%                 | 1.54%                 | 1.49%                  | 4.59%                  | 3.03%                   |
| Difference                                  | 1.07%                 | -0.98%                  | 2.86%                 | 0.49%                  | 0.04%                 | -0.20%                  | 0.74%                 | 0.35%                 | -0.01%                 | 0.34%                  | -1.42%                  |
|   |                       |                         |                       |                        |                       |                         |                       |                       |                        |                        |                         |

Attachment 5

IC Meeting: 12/9-10/20



### **EXCESS RETURNS BY SECTOR**

(As of 9/30/20)

### **Excess Returns by Sector**

| 2010     | 2011     | 2012     | 2013     | 2014     | 2015     | 2016     | 2017     | 2018     | 2019     | 2020 YTD |
|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| 2.29%    | 0.52%    | 7.34%    | 2.86%    | 0.93%    | 0.44%    | 4.93%    | 3.46%    | 0.13%    | 6.76%    | 0.70%    |
| IG Corp  | ABS      | IG Corp  | IG Corp  | Non Corp | ABS      | IG Corp  | IG Corp  | ABS      | IG Corp  | ABS      |
| 2.25%    | 0.00%    | 5.39%    | 0.98%    | 0.53%    | 0.00%    | 2.05%    | 2.78%    | 0.00%    | 3.31%    | 0.00%    |
| MBS      | Treasury | Non Corp | MBS      | ABS      | Treasury | Non Corp | Non Corp | Treasury | Non Corp | Treasury |
| 1.69%    | -1.06%   | 2.46%    | 0.24%    | 0.40%    | -0.05%   | 0.95%    | 0.92%    | -0.59%   | 0.71%    | -0.52%   |
| ABS      | MBS      | ABS      | ABS      | MBS      | MBS      | ABS      | ABS      | MBS      | ABS      | MBS      |
| 0.48%    | -1.49%   | 0.91%    | 0.03%    | 0.00%    | -1.61%   | 0.00%    | 0.52%    | -1.01%   | 0.61%    | -3.86%   |
| Non Corp | Non Corp | MBS      | Non Corp | Treasury | IG Corp  | Treasury | MBS      | Non Corp | MBS      | Non Corp |
| 0.00%    | -3.67%   | 0.00%    | 0.00%    | -0.48%   | -2.02%   | -0.11%   | 0.00%    | -3.15%   | 0.00%    | -3.94%   |
| Treasury | IG Corp  | Treasury | Treasury | IG Corp  | Non Corp | MBS      | Treasury | IG Corp  | Treasury | IG Corp  |

Item II
Attachment 5



### **EXCESS RETURNS BY MATURITY**

(As of 9/30/20)

### **Excess Returns by Maturity**

| 2010       | 2011       | 2012       | 2013       | 2014       | 2015       | 2016       | 2017       | 2018      | 2019       | 2020 YTD  |
|------------|------------|------------|------------|------------|------------|------------|------------|-----------|------------|-----------|
| 3.38%      | 0.13%      | 5.09%      | 1.59%      | 0.55%      | 0.14%      | 5.51%      | 3.44%      | 0.00%     | 6.32%      | 0.15%     |
| 5-7 years  | 1-3 years  | 10+ years  | 10+ years  | 5-7 years  | 3-5 years  | 10+ years  | 10+ years  | 1-3 years | 10+ years  | 3-5 years |
| 2.08%      | -0.29%     | 4.06%      | 1.07%      | 0.49%      | 0.08%      | 1.64%      | 1.30%      | -0.36%    | 2.49%      | -0.14%    |
| 3-5 years  | 3-5 years  | 7-10 years | 5-7 years  | 3-5 years  | 1-3 years  | 7-10 years | 7-10 years | 3-5 years | 7-10 years | 5-7 years |
| 1.99%      | -1.17%     | 2.61%      | 0.97%      | 0.30%      | -0.36%     | 0.55%      | 0.74%      | -0.75%    | 1.37%      | -0.15%    |
| 7-10 years | 5-7 years  | 5-7 years  | 3-5 years  | 7-10 years | 7-10 years | 3-5 years  | 3-5 years  | 5-7 years | 5-7 years  | 1-3 years |
| 0.90%      | -1.71%     | 1.56%      | 0.59%      | 0.18%      | -0.37%     | 0.52%      | 0.72%      | -0.94%    | 1.26%      | -1.53%    |
| 10+ years  | 7-10 years | 3-5 years  | 7-10 years | 1-3 years  | 5-7 years  | 5-7 years  | 5-7 years  | 7 - 10    | 3-5 years  | 7 - 10    |
| 0.51%      | -4.10%     | 0.89%      | 0.33%      | -1.76%     | -2.78%     | 0.40%      | 0.39%      | -3.27%    | 0.43%      | -5.04%    |
| 1-3 years  | 10+ years  | 1-3 years  | 1-3 years  | 10+ years  | 10+ years  | 1-3 years  | 1-3 years  | 10+ years | 1-3 years  | 10+ years |

BOARD Meeting: 1/26/21 Item VII-E Attachment 1 IC Meeting: 12/9-10/20 Item II Attachment 6

# Prepared for LACERS



### Representing Baird Advisors



Mary Ellen Stanek, CFA
Managing Director
Chief Investment Officer



**Charles B. Groeschell**Managing Director
Senior Portfolio Manager



**M. Sharon deGuzman**Managing Director
Senior Portfolio Manager

### **Table of Contents**

### <u>Section</u>

| Firm/Team Overview          | 1 |
|-----------------------------|---|
| Philosophy/Process Overview | 2 |
| Baird Aggregate Bond Fund   | 3 |
| Appendix                    |   |



BOARD Meeting: 1/26/21 Item VII-E

Attachment 1



### Section 1

Firm/Team Overview

### **Baird Advisors Update**



**1919** founded in Milwaukee

2004 Baird becomes employee-owned

**4,500** Associates (More than two thirds are shareholders)













#### **Morningstar recognizes Baird Funds**

- Baird Aggregate and Baird Short-Term Bond Funds receive
   Morningstar's highest gold rating
- Mary Ellen Stanek again named 1 of 5 Nominees for 2020
   Morningstar Outstanding Portfolio Manager Award
- Baird Core Plus, Aggregate, and Short-Term Bond Funds selected for Morningstar's *Thrilling 36* mutual fund list out of more than 8,000 mutual funds
- Baird Funds recognized as the *Top 2 Fund Family* out of the Largest 150 Fund Families

#### **Refinitiv Lipper Fund Awards**

Baird Short-Term Municipal Bond Fund was rated **Best Fund** for the past 3 years in the Short Municipal Debt category.

**Pensions & Investments'** "Best Places to Work in Money Management" for 8 Straight Years

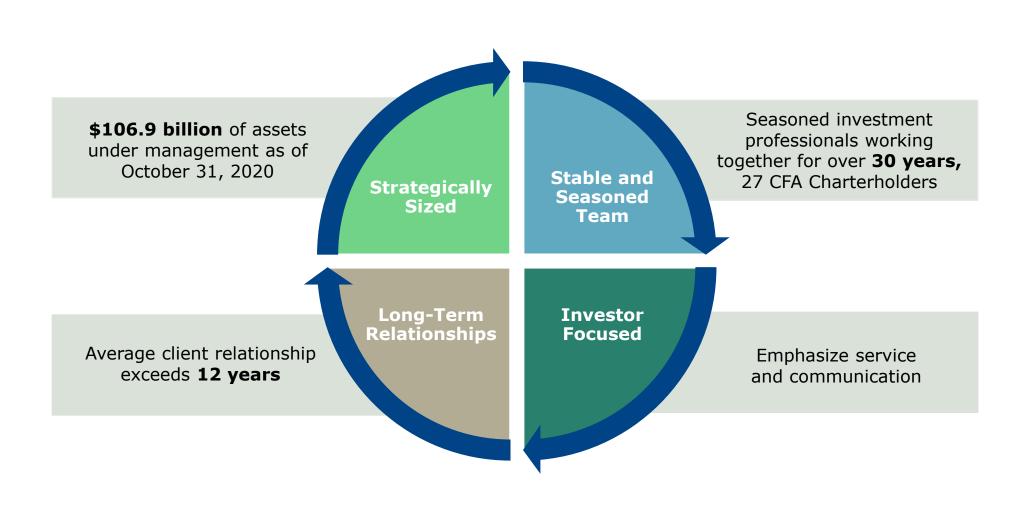
#### Barron's

- 100 Most Influential Women in U.S. Finance: Mary Ellen Stanek
- June 2020 Baird Short-Term Municipal Bond Fund Profile: A Muni-Bond Fund That Lets You Sleep at Night

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#### **Baird Advisors Overview**

Experienced Team with a Competitive Track Record in High-Quality Fixed Income Management



#### **Baird Advisors**

### Competitive Advantages

- Stable team of experienced investment professionals
- Risk-controlled discipline delivering over 30 years of competitive returns
- Consistency of returns versus peers
- Strategically sized, emphasizing bottom-up versus top-down approach
- All cash bonds, all U.S. dollar-denominated, no derivatives, no leverage
- Attractive expense ratio benefits future returns (30 bps Institutional Class)
- Employee-owned, strong financial services firm





## Baird Advisors - Representative Clients

Average client relationship exceeds 12 years



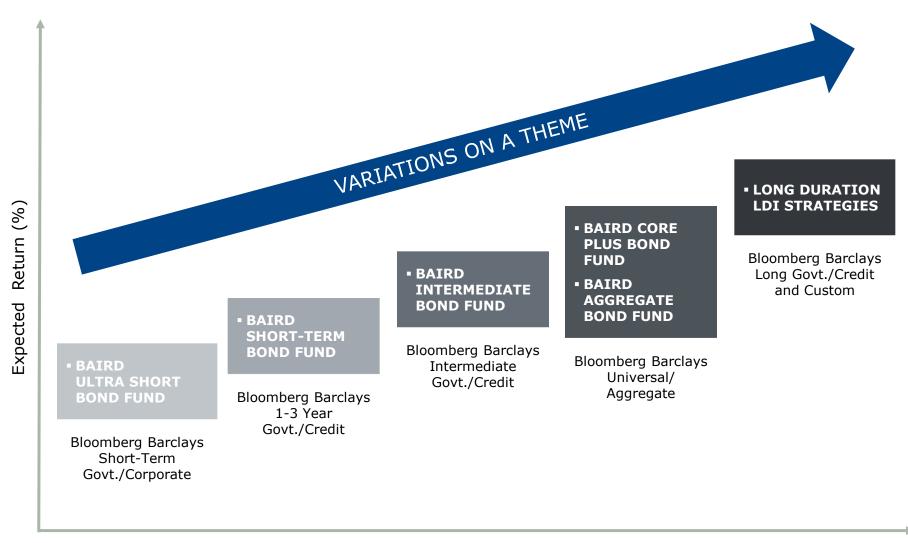
IC Meeting: 12/9-10/20 Item II Attachment 6

# Strategy Assets Under Management As of October 31, 2020

| Strategy Description | Market<br>Value | Market<br>Value % |
|----------------------|-----------------|-------------------|
| Core (AGG + GC)      | \$43.7          | 40.9%             |
| Core Plus            | \$30.6          | 28.6%             |
| Intermediate         | \$11.6          | 10.8%             |
| Short                | \$9.9           | 9.3%              |
| Tax-Exempt           | \$5.0           | 4.7%              |
| Ultra Short          | \$4.4           | 4.1%              |
| LDI Long Duration    | \$1.4           | 1.3%              |
| Other                | \$0.3           | 0.3%              |
| Total                | \$106.9         | 100.0%            |

## Structured, Risk-Controlled Taxable Portfolio Management

Consistent Approach Applied Across Risk Spectrum



Risk (Duration Years)

IC Meeting: 12/9-10/20 Item 11 Attachment 6 BAIRD

## **Baird Taxable Bond Funds**

Total Net Returns as of October 31, 2020

|  |             | Annualized |        |        |         | Since                           |  |
|--|-------------|------------|--------|--------|---------|---------------------------------|--|
|  | YTD<br>2020 | 1-Year     | 3-Year | 5-Year | 10-Year | Since<br>Inception <sup>1</sup> | Inception<br>Lipper Rank<br>& Percentile |
| Baird Core Plus Bond Fund – Institutional          | 7.02%       | 7.14%      | 5.55%  | 4.92%  | 4.50%   | 5.92%                           | 7 of 53                                  |
| Bloomberg Barclays Universal Bond Index            | 5.82%       | 5.96%      | 4.98%  | 4.35%  | 3.83%   | 5.20%                           | 13%                                      |
| Baird Aggregate Bond Fund – Institutional          | 7.11%       | 7.09%      | 5.46%  | 4.59%  | 4.36%   | 5.47%                           | 12 of 130                                |
| Bloomberg Barclays Aggregate Index                 | 6.32%       | 6.19%      | 5.06%  | 4.08%  | 3.55%   | 4.97%                           | 10%                                      |
|  |             |            |        |        |         |                                 |  |
| Baird Intermediate Bond Fund – Institutional       | 6.36%       | 6.38%      | 4.60%  | 3.73%  | 3.44%   | 4.88%                           | 3 of 45                                  |
| Bloomberg Barclays Intermediate Govt/Credit Index  | 5.69%       | 5.67%      | 4.36%  | 3.37%  | 2.84%   | 4.44%                           | 7%                                       |
| Baird Short-Term Bond Fund – Institutional         | 3.71%       | 3.97%      | 3.24%  | 2.67%  | 2.31%   | 2.88%                           | 25 of 117                                |
| Bloomberg Barclays 1-3 Year Govt/Credit Index      | 3.14%       | 3.39%      | 2.85%  | 2.10%  | 1.54%   | 2.48%                           | 22%                                      |
| Baird Ultra Short Bond Fund - Institutional        | 1.54%       | 1.91%      | 2.27%  | 1.87%  | n/a     | 1.60%                           | 18 of 87                                 |
| Bloomberg Barclays Short-Term Govt/Corporate Index | 1.28%       | 1.55%      | 2.03%  | 1.54%  | n/a     | 1.19%                           | 21%                                      |

Performance data quoted represents past performance. Past performance does not guarantee future results. Investment return and principal value of an investment in the fund will fluctuate so that an investor's shares when redeemed may be worth more or less than their original cost. The funds' current performance may be lower or higher than the performance data quoted. For performance current to the most recent monthend, please visit <a href="www.bairdfunds.com">www.bairdfunds.com</a>.

Expense Ratio for the Institutional Share Classes is 0.30%; for the Investor Share Classes is 0.55%. The Advisor has contractually agreed to waive management fees for the Baird Ultra Short Bond Fund in an amount equal to an annual rate of 0.15% of the average daily net assets for the Fund until April 30, 2021. The agreement may only be terminated prior to the end of this term by or with the consent of the Board of Directors of Baird Funds, Inc.

Returns shown include the reinvestment of all dividends and capital gains.

<sup>&</sup>lt;sup>1</sup> The Baird Core Plus, Aggregate and Intermediate Bond Funds Since Inception net returns are based on performance from September 30, 2000 through October 31, 2020. The Baird Short-Term Bond Fund Since Inception net return is based on performance from August 31, 2004 through October 31, 2020. The Baird Ultra Short Bond Fund Since Inception net return is based on performance from December 31, 2013 through October 31, 2020.

IC Meeting: 12/9-10/20 Item II Attachment 6 BAIRD

## Baird Taxable Bond Funds Lipper Rankings as of October 31, 2020

|  | YTD<br>Lipper Rank &<br><u>Percentile</u> | 1 Yr<br>Lipper Rank &<br><u>Percentile</u> | 3 Yr<br>Lipper Rank &<br><u>Percentile</u> | 5 Yr<br>Lipper Rank &<br><u>Percentile</u> | 10 Yr<br>Lipper Rank &<br><u>Percentile</u> | Since Inception<br>Lipper Rank &<br><u>Percentile</u> |
|--|---|--|--|--|---|---|
| Baird Core Plus Bond Fund – Institutional    | 92 of 291                                 | 75 of 290                                  | 44 of 248                                  | 36 of 199                                  | 27 of 148                                   | 7 of 53   |
| (BCOIX) Fund Inception 9/29/00               | 32%                                       | 26%  | 18%  | 18%  | 19%   | 13%   |
|  |   |  |  |  |   |   |
| Baird Aggregate Bond Fund – Institutional    | 102 of 491                                | 97 of 490                                  | 66 of 451                                  | 66 of 403                                  | 20 of 307                                   | 12 of 130   |
| (BAGIX) Fund Inception 9/29/00               | 21%                                       | 20%  | 15%  | 17%  | 7%  | 10%   |
|  |   |  |  |  |   |   |
| Baird Intermediate Bond Fund – Institutional | 20 of 166                                 | 20 of 166                                  | 3 of 150                                   | 7 of 141                                   | 5 of 87                                     | 3 of 45   |
| (BIMIX) Fund Inception 9/29/00               | 12%                                       | 12%  | 2%   | 5%   | 6%  | 7%  |
|  |   |  |  |  |   |   |
| Baird Short-Term Bond Fund – Institutional   | 46 of 357                                 | 44 of 354                                  | 37 of 321                                  | 65 of 283                                  | 28 of 186                                   | 25 of 117   |
| (BSBIX) Fund Inception 8/31/04               | 13%                                       | 13%  | 12%  | 23%  | 15%   | 22%   |
|  |   |  |  |  |   |   |
| Baird Ultra Short Bond Fund – Institutional  | 49 of 156                                 | 42 of 155                                  | 25 of 128                                  | 30 of 97                                   | N/A   | 18 of 87  |
| (BUBIX) Fund Inception 12/31/13              | 32%                                       | 27%  | 20%  | 31%  |   | 21%   |

Lipper rankings are based on average annual total returns for the 1, 3, 5, 10-year life periods for each respective Lipper category. Each fund is ranked based on average annual total returns assuming reinvestment of dividends and capital gains distributions, at net asset value and the deduction of all fund expenses. Since inception Lipper rankings are calculated from the month end following the fund's inception. Past performance is no guarantee of future returns.

IC Meeting: 12/9-10/20

# **Attachment 6**

## Consistency is Key

## Baird Taxable Bond Funds – Institutional Shares

| Percentage of Time the Funds Outperform Their<br>Morningstar Category Average |                              |                             |                               |                            |                            |  |  |
|---|------------------------------|-----------------------------|-------------------------------|----------------------------|----------------------------|--|--|
| Rolling Time<br>Periods   | Baird<br>Ultra Short<br>Bond | Baird<br>Short-Term<br>Bond | Baird<br>Intermediate<br>Bond | Baird<br>Aggregate<br>Bond | Baird<br>Core Plus<br>Bond |  |  |
| 1 Year  | 79%                          | 87%                         | 52%                           | 90%                        | 84%                        |  |  |
| 2 Year  | 88%                          | 92%                         | 57%                           | 94%                        | 92%                        |  |  |
| 3 Year  | 100%                         | 99%                         | 59%                           | 100%                       | 100%                       |  |  |
| 5 Year  | 100%                         | 100%                        | 64%                           | 100%                       | 100%                       |  |  |

Source: Morningstar Direct as of October 31, 2020.

Performance numbers used are through each month end period from each fund's inception date.
The Baird Core Plus, Aggregate and Intermediate Bond Funds Since Inception net returns are based on performance from September 30, 2000 through October 31, 2020. The Baird Short-Term Bond Fund Since Inception net return is based on performance from August 31, 2004 through October 31, 2020. The Baird Ultra Short Bond Fund Since Inception net return is based on performance from December 31, 2013 through October 31, 2020.

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**Attachment 1** 



## Section 2

Philosophy/Process Overview

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## Investment Philosophy & Process:

A Two-Fold Approach

## Step 1: Structure Portfolio to Achieve Return of the Benchmark

| Complete Understanding of the Benchmark                  | <ul> <li>Quantify duration, sector and subsector weightings</li> <li>Evaluate pricing, turnover and projected changes to benchmark</li> <li>Purchase only U.S. dollar-denominated securities</li> </ul>       |
|--|---|
| Remain <i>Duration Neutral</i> to Control Portfolio Risk | <ul> <li>Precisely match duration to index at all times</li> <li>Immediately adjust portfolio as contributions and withdrawals occur</li> <li>Rebalance at month-end to match benchmark changes</li> </ul>    |
| Maintain Strict Adherence to Portfolio Guidelines        | <ul> <li>Continuously monitor risk-control measures</li> <li>Use scenario analysis</li> <li>Compliance systems for all portfolio trades</li> </ul>  |
| Emphasis on Security Structure/Credit Research           | <ul> <li>Evaluate specific security covenants, cash flows and liquidity concerns</li> <li>Assess company financials and management</li> <li>Consider prospects for sector and position in industry</li> </ul> |
|  |   |

IC Meeting: 12/9-10/20 Item II Attachment 6 BAIRD

## Investment Philosophy & Process:

A Two-Fold Approach

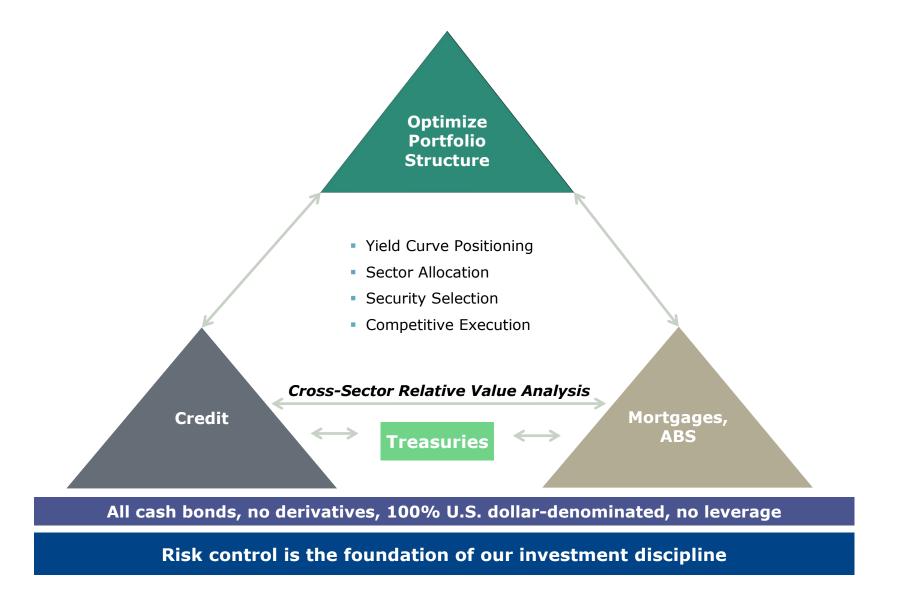
Step 2: Add Incremental Value through Bottom-Up, Risk-Controlled Process

| Sources of Added Value:  |  |  |  |  |  |
|--|--|--|--|--|--|
| Yield Curve Positioning  | <ul><li>Optimize yield and "roll down"</li><li>Analyze yield curve on a continual basis</li></ul>  |  |  |  |  |
| Sector Allocation  | <ul> <li>Evolve sector allocations around long-term biases</li> <li>Focus on relative value</li> <li>Yield spreads and underlying risks change constantly</li> </ul> |  |  |  |  |
| Security Selection   | <ul><li>Structure</li><li>Attributes</li><li>Liquidity</li></ul>   |  |  |  |  |
| Competitive Execution  | <ul> <li>Capitalize on market inefficiencies</li> <li>Receive timely market information</li> <li>Utilize long-standing dealer relationships</li> </ul>               |  |  |  |  |
| We seek to consistently add 15-50 basis points of incremental return |  |  |  |  |  |

Consistent,
Competitive
Performance Over
Complete Market
Cycles

We seek to consistently add 15-50 basis points of incremental return

## Implementation – A Holistic Approach



Attachment 1

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## Baird Advisors Approach to ESG/Sustainable Investing

- ESG considerations integrated into overall investment process for decades
- 30+ years of experience managing socially screened portfolios
  - The team currently manages over 50 portfolios totaling \$13 billion.
- Bottom-up approach to research and investing considers all potential opportunities and risks of issuers including the following ESG factors:

#### **Environmental**

- Climate change
- Land use
- · Water use
- Waste management
- Energy management
- Air quality/emissions

#### Social

- Human rights
- · Diversity and inclusion
- Consumer protection
- Fair labor practices
- Values (e.g. tobacco, gambling, landmines)

#### Governance

- Management structure
- Executive compensation
- Board independence
- Employee relations
- Transparency and disclosure
- Data protection and privacy
- Seek to invest in companies that are leaders in their industries and focused on long-term sustainability
  - Assess management's attentiveness (or lack thereof) to ESG challenges and opportunities
  - Consider reputational risk associated with very severe controversies in areas such as environment, customers, human rights, labor rights, governance
  - Analyze the long-term ESG track record of companies with particular attention to recent actions
  - Assess a company's ESG performance relative to its peers
- Use ISS, Bloomberg and proprietary pre-trade and post-trade compliance testing to monitor portfolios' structure and risk profile as well as compliance to investment guidelines, and specific ESG guidelines if applicable, on a daily basis
  - We regularly engage ISS as we continue to refine our process for incorporating their tools into our portfolio management process.
- We also review individual issuers to determine if a significant percentage of their revenues are derived from and/or their business practices may be considered sensitive to socially conscious investors.
  - Tobacco, gambling, controversial weapons, nuclear power, private prisons; religious screens available

6/21 IC N /II-E



### Research

#### **Internal Research Drives Our Investment Process**

#### **Internal Expertise: Identifying Value from the Bottom Up**



- Optimize yield
- Search for roll-down opportunities
- Maintain neutral duration



- Analyze both structure and collateral
- Prefer senior secured with limited cash flow timing risk, lower LTV
- Top-tier originators and servicers



- Look at specific issues by structure
- Review issuers by fundamentals, management and benchmark weighting
- Consider sector trends, regulatory environment and benchmark weighting

#### **External Tools:**

- Interactive Data BondEdge:
   Portfolio and benchmark analysis,
   guideline compliance
- Barclays Live: Benchmark analysis
- Bloomberg: Benchmark analysis, Security analysis, company research
- MarketAxess: Corporate trading platform and TRACE data market monitor
- TradeWeb: Treasury and agency trading platform, historical curve information
- Intex Solutions and Bond Studio: Residential and commercial loan analysis
- Yield Book: Option-adjusted spread (OAS) and scenario analysis
- CreditSights: Independent credit research from a team of highly ranked analysts
- Investor Tools Perform: Municipal portfolio management and analytics system
- Custom Index Manager: Municipal portfolio risk and attribution system
- Access to Baird equity and credit analysts and other Wall Streetleading fixed income and equity research

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## Section 3

Baird Aggregate Bond Fund

## Risk Controls in Taxable Portfolio Construction



#### **DURATION NEUTRAL TO BENCHMARK**



#### **U.S. TREASURY AND GOVERNMENT AGENCY SECURITIES**

- Emphasized for long duration exposures
- Used to match duration



#### **CREDIT SECURITIES**

- Overall credit positioning generally shorter on the yield curve versus respective benchmark
- · Emphasize sectors and industries that give high priority to stable credit rating
- Broad issuer diversification overall; increases for lower credit quality



#### MORTGAGE-BACKED AND ASSET-BACKED SECURITIES

- Favor more prepayment protection than U.S. Government Agency MBS (positive convexity "tilt")
- Focus on most senior class in deal structure if Non-U.S. Government guaranteed



#### **CASH BONDS**

- No foreign currency
- No derivatives
- No leverage



#### **ONGOING PORTFOLIO MONITORING**

Continuous review of portfolios for adherence to stated guidelines and objectives

RISK CONTROL IS THE FOUNDATION OF OUR INVESTMENT DISCIPLINE

Attachment 1

## Portfolio Positioning

#### Attractive portfolio yield advantage over benchmark

Maintain sufficient liquidity for uncertain environment

#### Portfolio positioned to benefit from spread sector outperformance

- Maintain nominal underweight to U.S. Treasury sector
- Opportunities across spread sectors attractive on a selective basis
- Modest overweight to spread sectors

#### Portfolio positioned fairly neutral to yield curve

- Duration neutral overall
- Yield curve likely to remain steep in the long end
- Maintain positive convexity tilt

#### Continued focus on risk control

- Importance of fundamental credit analysis
- Emphasize diversification
- Maintain coupon advantage

#### Experienced team and risk-controlled process key to long-term success

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# **Attachment 6**

# Baird Aggregate Bond Fund Portfolio Characteristics as of October 31, 2020

| Yield to Maturity | 1.45%      | 1.24%      | Double Viold Advantage           |
|-------------------|------------|------------|----------------------------------|
| Average Coupon    | 3.23%      | 2.85%      | Portfolio Yield Advantage        |
| Duration          | 6.12 years | 6.12 years | +0.21% to the Bloomberg Barclays |
| Average Maturity  | 7.86 years | 8.07 years | Aggregate Index                  |

|                       | Baird Aggregate<br>Bond Fund | Bloomberg<br>Barclays Aggregate<br>Index | Baird Aggregate<br>Bond Fund | Bloomberg<br>Barclays Aggregate<br>Index |
|-----------------------|------------------------------|--|------------------------------|--|
|                       | Nominal Weighted Composition |  | Duration Weigh               | ted Composition                          |
| Quality Breakdown (%) |                              |  |                              |  |
| U.S. Treasury         | 21.2                         | 37.1                                     | 36.8                         | 43.3                                     |
| U.S. Agency           | 23.4                         | 29.4                                     | 12.4                         | 12.1                                     |
| Aaa                   | 11.2                         | 3.8                                      | 5.0                          | 3.1                                      |
| Aa                    | 3.7                          | 3.1                                      | 4.3                          | 4.5                                      |
| A                     | 16.2                         | 12.0                                     | 16.8                         | 16.6                                     |
| Ваа                   | 23.4                         | 14.6                                     | 24.2                         | 20.4                                     |
| Below Baa             | 0.9                          | 0.0                                      | 0.5                          | 0.0                                      |
|                       | 100.0%                       | 100.0%                                   | 100.0%                       | 100.0%                                   |
| Sector Breakdown (%)  |                              |  |                              |  |
| U.S. Treasury         | 21.2                         | 37.1                                     | 36.8                         | 43.3                                     |
| U.S. Agency (Non-MBS) | 0.0                          | 1.6                                      | 0.0                          | 1.0                                      |
| Other Govt. Related   | 1.5                          | 4.7                                      | 1.2                          | 5.1                                      |
| Industrials           | 22.7                         | 16.8                                     | 26.8                         | 25.6                                     |
| Utilities             | 1.6                          | 2.2                                      | 2.6                          | 4.0                                      |
| Financials            | 18.1                         | 8.2                                      | 15.4                         | 8.8                                      |
| U.S. Agency RMBS      | 19.7                         | 26.8                                     | 9.2                          | 10.2                                     |
| Non-Agency RMBS       | 2.2                          | 0.0                                      | 0.9                          | 0.0                                      |
| U.S. Agency CMBS      | 3.7                          | 1.0                                      | 3.2                          | 0.9                                      |
| Non-Agency CMBS       | 4.6                          | 1.2                                      | 3.1                          | 1.0                                      |
| ABS                   | 1.9                          | 0.4                                      | 0.8                          | 0.1                                      |
| Cash                  | 2.8                          | 0.0                                      | 0.0                          | 0.0                                      |
|                       | 100.0%                       | 100.0%                                   | 100.0%                       | 100.0%                                   |
| Number of Issues      | 1,455                        | 11,971                                   |                              |  |
| Market Value          | \$31,028,928,763             |  |                              |  |

The Yield to Maturity represents the weighted average Yield to Worst of each individual holding in the portfolio. Yield to Worst is the lower of:
1) Yield to Maturity or 2) Yield to Call, if applicable.
SEC 30-day Yields Institutional Class = 1.46%, Investor Class = 1.21% as of 10/31/20
Below Baa category includes non-rated bonds.

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Attachment 1



## Key Drivers of Performance – YTD 2020 Baird Aggregate Bond Fund

#### **Credit Positioning - Positive overall**

- Positive Overweight to Investment Grade Credit (increased exposure post widening)
- Positive Active positioning within Investment Grade Credit
  - Positive Favoring credit shorter on the curve versus the benchmark and positive security selection
  - Modest Negative Overweight to BBB Credit

#### MBS & ABS Positioning – Positive overall

- Positive Active positioning within MBS & ABS
  - Positive Active positioning within Agency RMBS was a positive factor YTD as exposure was opportunistically increased in March in specified pools which have outperformed more generic, faster-paying pools at record low mortgage rates
  - Positive Exposure to Agency CMBS & Non-Agency RMBS
  - Positive Within Non-Agency CMBS investing in only the most senior classes which outperformed subordinated classes

#### **Yield Curve Positioning - Positive overall**

- Positive Positive convexity tilt of overall portfolio versus the benchmark
- Modest Positive Modest underweight to the long end of the yield curve as well as favoring 20yr over 30yr maturities as the yield curve steepened

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# Appendix

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## Outlook Improving but Still Cloudy

Weak Economy Supported by Massive Government Policy Response

## **Uncertain Economy**

- Calendar 2020 GDP -2 to -5%
- Calendar 2021 GDP ~ +2 to +3%
   (base case estimates)
- Resurgent COVID-19 is slowing economic recovery
- Unemployment is falling, but still stands at 6.9% versus 3.5% pre-COVID
- Upward pressure on marginal Federal, corporate and individual tax rates
- Material long-term changes to business and economy developing
  - Some definite winners and losers

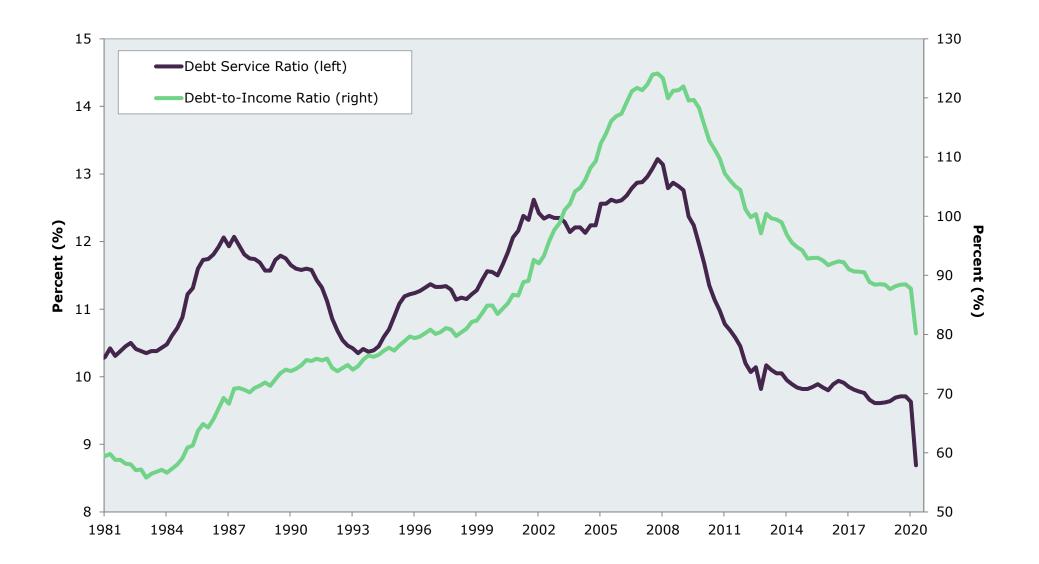
### **Coordinated Policy Response**

- Monetary Policy
  - Fed continues to provide unprecedented liquidity and backstop credit markets
  - Balance sheet stays above \$7T and grows further
- Fiscal Policy
  - \$2.2T CARES Act benefits to affected businesses and workers are soon expiring
  - Second fiscal package needed



## Consumer Balance Sheets in Good Shape

Debt Ratios Have Fallen Sharply



Source: FRB, BEA, Goldman Sachs Global Investment Research

Data as of: 6/30/20

40/0

2027

## Household Net Worth is Strong

60

50

Helped by Rise in Housing and Equity Markets



40/3

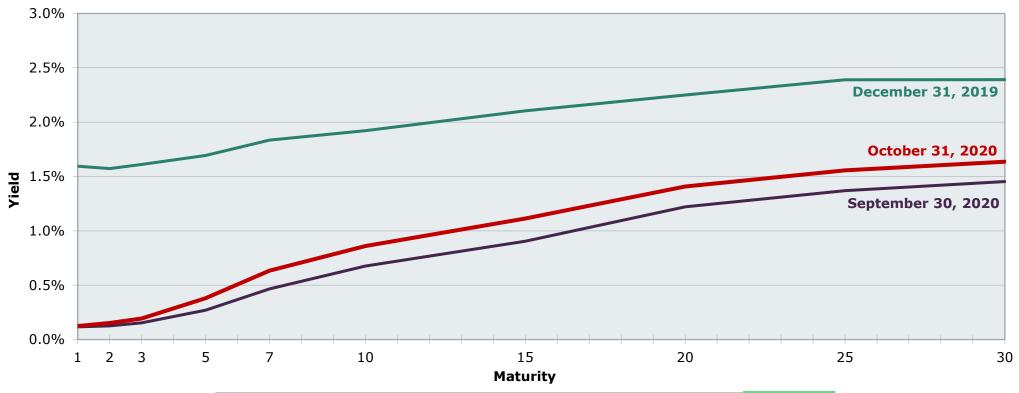
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## Treasury Yields Edge Up in October



| Maturity | December 31,<br>2019 | September 30,<br>2020 | October 31,<br>2020 | 1 Mo.<br>Change | YTD<br>Change |
|----------|----------------------|-----------------------|---------------------|-----------------|---------------|
| 1        | 1.60%                | 0.12%                 | 0.12%               | 0.00%           | -1.48%        |
| 2        | 1.57%                | 0.13%                 | 0.15%               | 0.02%           | -1.42%        |
| 3        | 1.61%                | 0.15%                 | 0.19%               | 0.04%           | -1.42%        |
| 5        | 1.69%                | 0.27%                 | 0.38%               | 0.11%           | -1.31%        |
| 7        | 1.83%                | 0.47%                 | 0.63%               | 0.16%           | -1.20%        |
| 10       | 1.92%                | 0.68%                 | 0.86%               | 0.18%           | -1.06%        |
| 20       | 2.25%                | 1.22%                 | 1.41%               | 0.19%           | -0.84%        |
| 30       | 2.39%                | 1.45%                 | 1.64%               | 0.19%           | -0.75%        |

Source: Bloomberg Data as of: 10/31/20

## Yield Spreads Tighten Again in October

| Option-Adjusted Spreads (bps)     |          |         |          |         |          |                |                 |               |                                  |
|-----------------------------------|----------|---------|----------|---------|----------|----------------|-----------------|---------------|----------------------------------|
|                                   | 11/30/08 | 2/11/16 | 12/31/19 | 9/30/20 | 10/31/20 | March<br>Wides | 1 Mo.<br>Change | YTD<br>Change | Post Crisis<br>Avg. <sup>2</sup> |
| U.S. Aggregate Index              | 239      | 68      | 39       | 60      | 54       | 127 (3/20)     | -6              | 15            | 54                               |
| U.S. Agency Sector (Non-MBS)      | 154      | 21      | 10       | 16      | 13       | 53 (3/25)      | -3              | 3             | 19                               |
| MBS and ABS Sectors               |          |         |          |         |          |                |                 |               |                                  |
| U.S. Agency Pass-Throughs         | 157      | 21      | 39       | 61      | 52       | 132 (3/19)     | -9              | 13            | 38                               |
| U.S. Agency CMBS                  | N/A      | 56      | 53       | 62      | 56       | 144 (3/23)     | -6              | 3             | N/A                              |
| Non-Agency CMBS                   | 1298     | 178     | 85       | 139     | 140      | 348 (3/25)     | 1               | 55            | 173                              |
| Consumer ABS                      | 935      | 68      | 44       | 41      | 39       | 325 (3/26)     | -2              | -5            | 65                               |
| Investment Grade Credit Sectors   |          |         |          |         |          |                |                 |               |                                  |
| U.S. Corporates                   | 607      | 214     | 93       | 136     | 125      | 373 (3/23)     | -11             | 32            | 145                              |
| Industrials                       | 546      | 235     | 99       | 140     | 131      | 383 (3/23)     | -9              | 32            | 139                              |
| Utilities                         | 545      | 165     | 97       | 141     | 131      | 298 (3/24)     | -10             | 34            | 137                              |
| Financials                        | 697      | 185     | 80       | 126     | 112      | 378 (3/23)     | -14             | 32            | 157                              |
| Other Govt. Related               | 218      | 135     | 72       | 84      | 79       | 180 (3/23)     | -5              | 7             | 97                               |
| High Yield Credit Sectors         |          |         |          |         |          |                |                 |               |                                  |
| U.S. High Yield Corporates        | 1833     | 839     | 336      | 517     | 509      | 1100 (3/23)    | -8              | 173           | 501                              |
| Emerging Market Debt <sup>1</sup> | 1229     | 846     | 573      | 638     | 638      | 1370 (3/23)    | 0               | 65            | 585                              |
|                                   |          |         |          |         |          |                |                 |               |                                  |

<sup>&</sup>lt;sup>1</sup> Emerging Market Debt is a subindex of the Bloomberg Barclays U.S. Universal Index and is primarily rated below Investment Grade. <sup>2</sup> Average since 6/30/09. Source: Bloomberg Barclays Data as of: 10/31/20

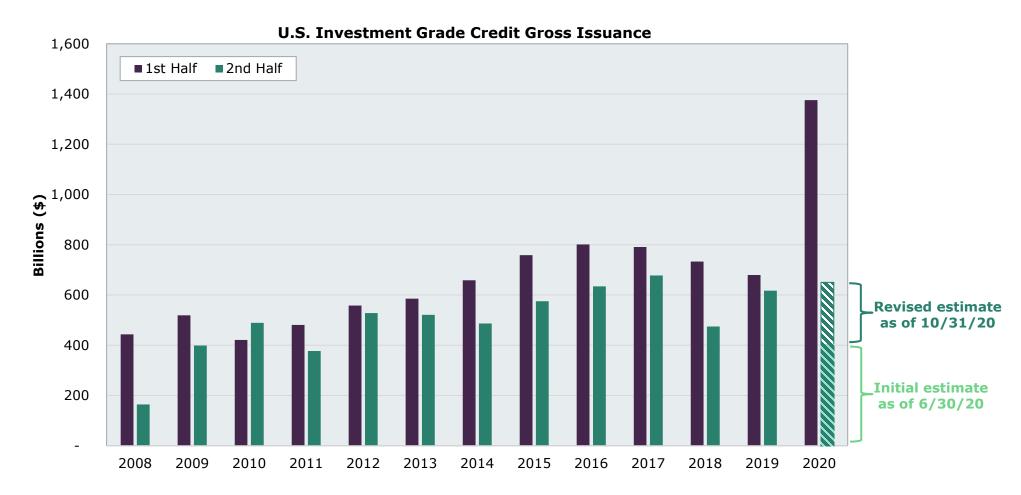
IC Meeting: 12/9-10/20

**Attachment 6** 

## nd



2<sup>nd</sup> Half Supply Not as Weak as Expected

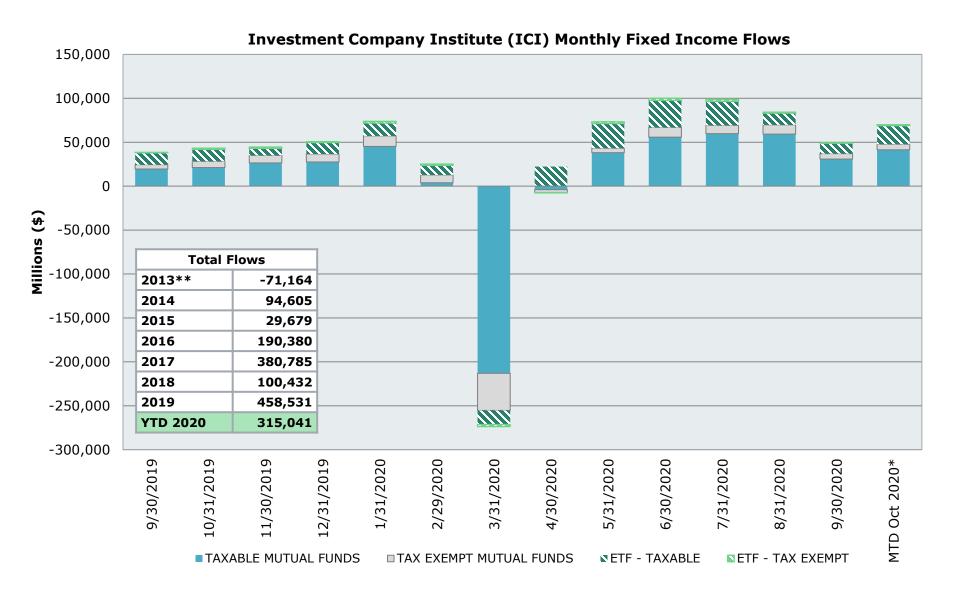


| Credit Supply Through 10/31 (\$Billions) |         |         |      |  |  |  |  |
|--|---------|---------|------|--|--|--|--|
| YTD 2020 YTD 2019 YoY% Change            |         |         |      |  |  |  |  |
| Gross Supply                             | 1,943.2 | 1,172.6 | 66%  |  |  |  |  |
| Net Supply                               | 1,068.6 | 349.7   | 206% |  |  |  |  |

Source: Barclays Data as of: 10/31/20

## Domestic Fixed Income Flows are Strongly Positive Again





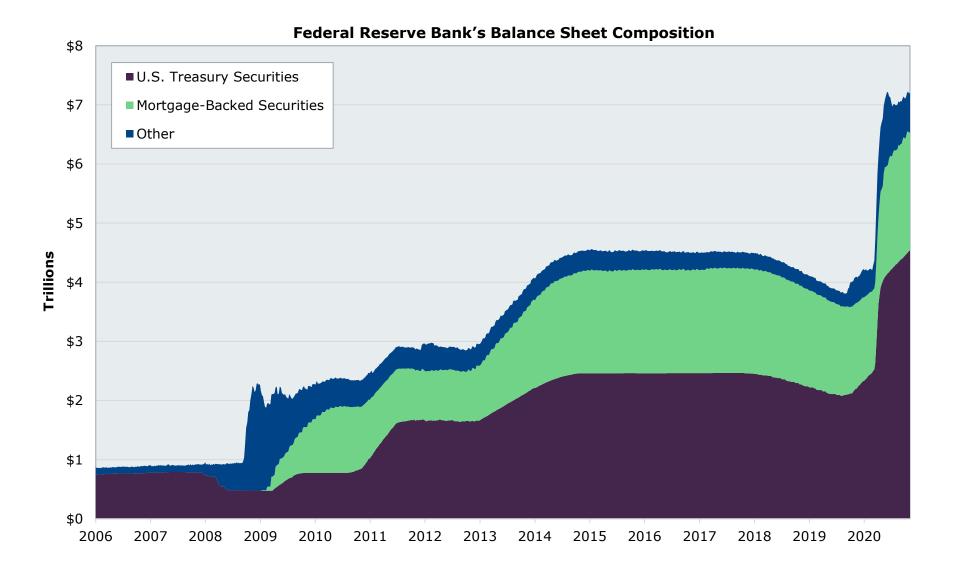
<sup>\*</sup>Weekly data ending 10/28/20 (October 2020 numbers are estimated)

Source: Investment Company Institute, Bloomberg

Data as of: 10/31/20

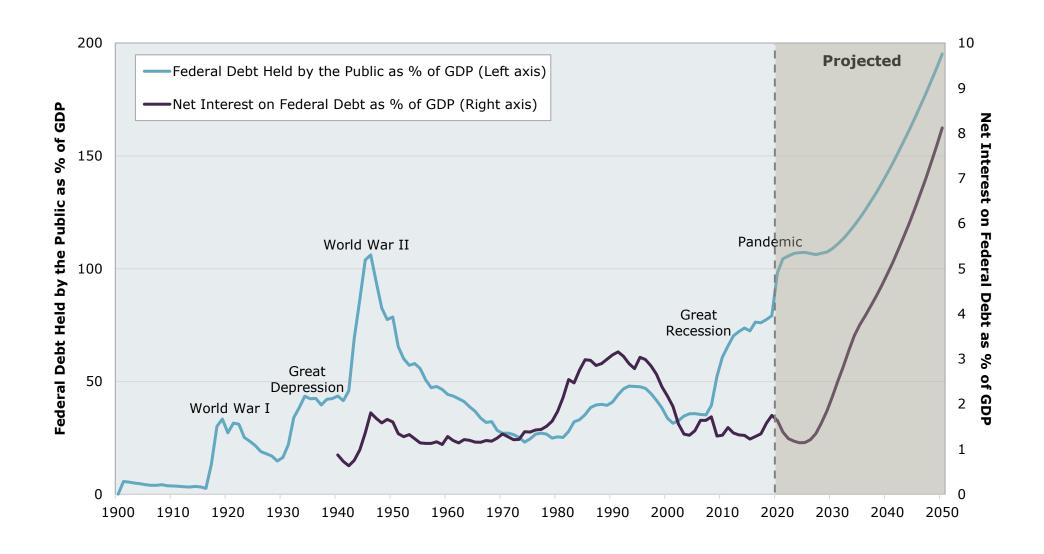
<sup>\*\* 2013</sup> Flows are only Mutual Fund flows, ETF Flows are not available

## Fed's Balance Sheet Expands to New Records



## Federal Debt up Sharply

Interest Cost Steady For Now



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# Item II Attachment 6 BAIRD

### **Baird Advisors**

#### **Portfolio Management Team**

Formulation of Investment Outlook & Portfolio Strategy

**Key Areas of Focus:** 

Construction & Risk

Portfolio

CreditMBS/ABS

Monitorina

Mary Ellen Stanek, CFA
Gary Elfe, CFA
Charles Groeschell
Jay Schwister, CFA
Warren Pierson, CFA
Duane McAllister, CFA
Lyle Fitterer, CFA
Jeffrey Simmons, CFA

Daniel Tranchita, CFA Sharon deGuzman Jeffrey Schrom, CFA Patrick Mutsune, CFA Meghan Dean, CFA Patrick Brown, CFA

Andrew O'Connell, CFA Abhishek Pulakanti, CFA, FRM Ian Elfe, CFA Alice Ambrowiak, CFA, CPA

Gabriel Diederich, CFA Erik Schleicher, CFA Joseph Czechowicz, CFA

Jed Bruss, CFA
John Cremer, CFA
Donald Smiley, CFA
Lauren Vollrath, CFA
Allison Parra, CFA
Kristiyan Trukov, CFA
Jaclyn Godwin

MD, Chief Investment Officer 41 years MD, Research Director Emeritus 41 years MD, Senior Portfolio Manager 41 years MD, Research Director 36 years MD, Deputy Chief Investment Officer 34 years MD, Senior Portfolio Manager-Muni 33 years MD, Senior Portfolio Manager-Muni 31 years MD, Senior Portfolio Manager 33 years MD, Senior Portfolio Manager 31 years MD, Senior Portfolio Manager 29 years MD, Senior Portfolio Manager 26 years MD, Senior Investment & Systems Analyst 23 years MD, Senior Portfolio Manager 20 years MD, Senior Investment Analyst 17 years SVP, Senior Investment Analyst 13 years SVP, Senior Investment Analyst 12 years SVP, Senior Investment Analyst 12 years SVP, Investment Analyst 18 years SVP, Portfolio Manager-Muni 17 years 16 years SVP, Portfolio Manager-Muni SVP, Portfolio Manager-Muni 13 years VP, Investment Analyst 11 years VP, Investment Analyst 8 years VP, Investment Analyst 7 years VP, Investment Analyst 5 years VP, Investment Analyst 4 years **Investment Analyst** 3 years

#### **Baird Resource Partners**

**Investment Analyst** 

Legal & Compliance (81)

Information Technology (227)

Human Resources (60)

Finance (69)

Research (Equity & Credit)
(118)

3 years

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**Attachment 6** 

Attachment 1

## **Baird Advisors**

#### **Portfolio Management Support Team**

| Portiono Management Support ream |          |
|----------------------------------|----------|
| MD, Operations Manager           | 33 years |
| MD, Portfolio Analyst            | 19 years |
| SVP, Portfolio Analyst           | 22 years |
| SVP, Portfolio Analyst           | 18 years |
| VP, Portfolio Analyst            | 42 years |
| VP, Portfolio Manager Specialist | 40 years |
| VP, Portfolio Manager Specialist | 34 years |
| VP Portfolio Managor Specialist  | 26 years |

| Erika Haska      | VP, Portfolio Manager Specialist  | 26 years |
|------------------|-----------------------------------|----------|
| Carisa Oppermann | VP, Portfolio Analyst             | 18 years |
| Bridget Kempf    | VP, Portfolio Analyst             | 12 years |
| Alyssa Dahms     | VP, Portfolio Analyst             | 9 years  |
| Alvin Nevels     | AVP, Portfolio Manager Specialist | 37 years |
| Margaret Lynn    | AVP, Portfolio Manager Specialist | 14 years |
| Nate Robertstad  | AVP, Data Analyst                 | 9 years  |
| Carla Teat       | Portfolio Manager Specialist      | 36 vears |

| Nate Robertstad                 | AVP, Data Analyst                                 | 9 years          |
|---------------------------------|---|------------------|
| Carla Teat                      | Portfolio Manager Specialist                      | 36 years         |
| Elaine Skenadore                | Portfolio Analyst                                 | 28 years         |
| Adela Ortiz                     | Portfolio Analyst                                 | 17 years         |
| Candace Watson                  | Portfolio Manager Specialist                      | 8 years          |
| Allison Mayer                   | Portfolio Analyst                                 | 6 years          |
| Nicholas Krueger                | Portfolio Analyst                                 | 1 year           |
| Candace Watson<br>Allison Mayer | Portfolio Manager Specialist<br>Portfolio Analyst | 8 year<br>6 year |

Brianna Hogans Portfolio Analyst
Julie Asher Portfolio Analyst

#### **Client Service Team**

| Richard Whittow, CEBS     | Managing Director         | 41 years |
|---------------------------|---------------------------|----------|
| Randall North             | Managing Director         | 32 years |
| Peter Hammond             | Managing Director         | 27 years |
| Heidi Schneider, CFA, CPA | Managing Director         | 25 years |
| Dustin Hutter, CPA        | Managing Director         | 21 Years |
| Michael Possley           | Managing Director         | 20 years |
| Mandy Hess, CPA           | Senior Vice President     | 27 years |
| Adrianne Limjoco          | Senior Vice President     | 20 years |
| Devon Norwood             | Senior Vice President     | 15 years |
| Kathleen Ruidl            | Vice President            | 15 years |
| Caroline Murphy           | Vice President            | 8 years  |
| Madelynn Wallen, CFA      | Vice President            | 6 years  |
| Rebekah Bozich            | Assistant Vice President  | 16 years |
| Tiaira Johnson            | Client Service Specialist | 10 years |
| Kayla Hollenbeck          | Portfolio Analyst         | 10 years |
| Brett Dawsey              | Client Service Specialist | 4 years  |
| Brian Jacobs, CPA         | Business Analyst          | 3 years  |

#### **Baird Resource Partners**

Anna Lucius

Mary Hoppa Amy Johnson Tara Haley Janna Goihl Janet Kube

Monica Augustine Mary Walters

Portfolio Analyst

1 year

IC Meeting: 12/9-10/20 Item II Attachment 6 BAIRD

## Representing Baird Advisors



Mary Ellen Stanek, CFA
Managing Director
Chief Investment Officer – Baird Advisors
President of Baird Funds

Education: B.S. Political Science – Marquette University (1978)

M.B.A – University of Wisconsin–Milwaukee (1984)

Professional Designation: Chartered Financial Analyst (1983)

Mary Ellen Stanek, CFA, has over 41 years of investment management experience. She currently serves as Managing Director of Robert W. Baird & Co. and Chief Investment Officer of Baird Advisors responsible for over \$96 billion in assets under management. Additionally, she serves as President of the Baird Funds. Previously she had served as President and CEO of Firstar Investment Research & Management Company.

In 2019 and 2020, Mary Ellen was a finalist for Morningstar's Outstanding Portfolio Manager Award. Under her leadership, the Baird Advisors team was also named a finalist for the Morningstar, Inc.'s 2016 Fixed Income Fund Manager of the Year Award and has also been recognized multiple times as a "Best Place to Work in Money Management" by Pensions & Investments. In 2020, she was named to Barron's inaugural list of the 100 Most Influential Women in U.S. Finance.

Mary Ellen is a member of The CFA Institute, the CFA Society of Milwaukee, the Greater Milwaukee Committee (past Board Chair), Milwaukee 7 (past Co-Chair), Tempo (past President), Professional Dimensions and Milwaukee Women Inc.

Mary Ellen serves on the boards of Baird Financial Group, Northwestern Mutual, and WEC Energy Group (NYSE:WEC). She also serves on the boards of All-In Milwaukee, Boys and Girls Clubs (past Board Chair), Children's Hospital Foundation, Faith In Our Future Trust, Froedtert Health, Greater Milwaukee Committee, Greater Milwaukee Foundation, Medical College of Wisconsin (past Board Chair), and Milwaukee World Festival. She served on the Board of Marquette University where she chaired the Board and was elected Trustee Emerita. She has co-chaired annual campaigns for the United Performing Arts Fund and the United Way.

Mary Ellen has received the Marquette University Alumna of the Year (2010) recognition, the Marquette University College of Arts and Sciences Person for Others Award, Marquette University High School's Spirit of St. Ignatius Award, The St. Francis Children's Service Award, The Tempo Mentor Award, The Business Journal Women of Influence Award, The Point of Light Award, Professional Dimensions Sacagawea Award, Wisconsin Business Hall of Fame Distinguished Executive Award, Baird's Brenton H. Rupple Citizenship Award and the Herb Kohl Champion Award. She and her husband were named "Parents of the Year" by COA Youth and Family Centers (2011). In 2012, she received the MVP Award from Boys & Girls Clubs.

She received her undergraduate degree from Marquette University (Magna Cum Laude, Phi Beta Kappa) and her graduate degree from the University of Wisconsin, Milwaukee. She is a Chartered Financial Analyst.

Mary Ellen and her husband, Scott, have three children: Peter (Erin), Katie (Tim), and Patrick and four grandchildren: Emme, Abigail, Kathryn and Henry.

## Representing Baird Advisors



Charles B. Groeschell
Managing Director
Senior Portfolio Manager
Baird Funds Vice President

Education:

B.A. - Texas Christian University (1976)

M.B.A. - University of Milwaukee (1979)

Charlie has 41 years of investment experience managing various types of fixed income portfolios. He plays a lead role in the overall management and distribution of fixed income investment management services at Baird Advisors. His primary responsibilities include client servicing and setting investment policy with a major portion of his time allocated to security analysis, credit research and implementing the long-term investment strategy of the team.

Charlie serves as the Chairman of the Board for Prevent Blindness Wisconsin. He is currently on the Board of the Boys & Girls Clubs of Greater Milwaukee; in 2008, Charlie successfully

co-chaired the annual campaign for the Clubs to raise \$3.8 million. Again in 2019, he will co-chair the annual campaign for the Clubs with a goal to raise over \$5 million. Charlie is the Chair of the Club's Endowment Committee and is a member of the Finance Committee. Charlie was also the annual campaign Co-chair of Sharp Literacy in 2009.

Charlie has received Baird's G. Frederick Kasten, Jr. Award for Asset Management and Baird's Brenton H. Rupple Citizenship Award.

Charlie and his wife, Beverly, have two children: Scott and Leigh.

IC Meeting: 12/9-10/20 Item II Attachment 6 BAIRD

## Representing Baird Advisors



**M. Sharon deGuzman**Managing Director
Senior Portfolio Manager

Education: B.A. – Eastern Illinois University (1988)

Sharon has 29 years of investment experience managing various types of fixed income portfolios. She is a Managing Director and Senior Portfolio Manager for Baird Advisors, Robert W. Baird & Co's institutional fixed income management group. Sharon has been a named portfolio manager on all of the Baird Bond Fund offerings since their inception dates. She plays a lead role on portfolio construction and focuses on managing short and intermediate taxable portfolios and tax-exempt portfolios.

Prior to joining Baird Advisors, Sharon was an Assistant Vice President and Portfolio Manager with Firstar Investment Research and Management Company (FIRMCO) where she did quantitative fixed income analysis and portfolio management.

Sharon is a member of the CFA Institute and the CFA Society of Milwaukee. She serves on the boards of Divine Savior Holy Angels High School, the American Lung Association of Wisconsin, the Wauwatosa Public Library Foundation and TEMPO Milwaukee. Sharon is a member of Milwaukee Women Inc. and Professional Dimensions. Sharon is a former member of the Finance Committee and the former assistant treasurer for United Way of Greater Milwaukee. She is the past co-chair of Baird's Women Associate Resource Group.

Sharon received the Milwaukee Business Journal's Women of Influence Award – Mentor category in 2015.

Sharon is also an active volunteer at Christ King Parish and School in Wauwatosa, WI. Sharon and her husband Jim served as co-chairs in 2015 and 2016 for the Soles for Catholic Education Walk for the Archdiocese of Milwaukee.

Sharon and her husband, Jim, have five children: Nicole, Mara, Luke, William and Olivia.

IC Meeting: 12/9-10/20 Item II Attachment 6 BAIRD

## **Benefits**

- Long-term relationships focused on client and direct communication
- Experienced management team implementing proven investment discipline
  - Structured, risk-controlled process
  - No derivatives, no non-\$ currency exposure, no leverage
  - Focus on bottom-up added value from sector allocation and security selection
- Total focus on fixed income management
- Culture and resources key to future success
- Importance of the relationship to Baird Advisors

## Important Disclosures

**BOARD Meeting: 1/26/21** Item VII-E Attachment 1

IC Meeting: 12/9-10/20 Item 1 **Attachment 6** 

Investors should consider the investment objectives, risks, charges and expenses of the fund carefully before investing. This, and other information can be found in the prospectus or summary prospectus. A prospectus or summary prospectus may be obtained by visiting www.bairdfunds.com. Please read the prospectus or summary prospectus carefully before you invest or send money.

Performance data quoted represents past performance. Past performance does not quarantee future results. Investment return and principal value of an investment in the fund will fluctuate so that an investor's shares when redeemed, may be worth more or less than their original cost. The funds' current performance may be lower or higher than the performance data quoted. For performance current to the most recent month-end, please visit www.bairdfunds.com. Funds may invest in U.S. dollar denominated foreign securities which involve additional risks such as the potential for political and economic instability and less strict regulation. The Fund may also invest in mortgage and asset-backed securities which include interest rate and prepayment risks more pronounced than those of other fixed income securities.

Baird Funds are offered through Robert W. Baird & Co., a registered broker/dealer, member NYSE and SIPC. Robert W. Baird & Co. also serves as investment advisor for the Fund and receives compensation for these services as disclosed in the current prospectus.

Lipper rankings are based on average annual total returns for the 1, 3, 5, 10-year/life periods for each respective Lipper category. Baird Core Plus Bond Fund is ranked among the Core Plus Bond Funds, Baird Aggregate Bond Fund is ranked among the Core Bond Funds, Baird Intermediate Bond Fund is ranked among Short-Intermediate Investment Grade Debt Funds, Baird Short-Term Bond Fund is ranked among the Short Investment Grade Debt Funds, Baird Ultra Short Bond Fund is ranked among the Ultra-Short Obligations Funds, Baird Quality Intermediate Municipal and Baird Core Intermediate Municipal Bond Funds are ranked among the Intermediate Municipal Debt Funds, Baird Municipal Bond Fund is ranked among the General & Insured Municipal Debt Funds, Baird Strategic Municipal Bond Fund is ranked among the Short-Intermediate Municipal Debt Funds and Baird Short-Term Municipal Bond Fund is ranked among the Short Municipal Debt Funds. Each fund is ranked based on average annual total returns assuming reinvestment of dividends and capital gains, distributions, at net asset value and the deduction of all fund expenses. Past performance is no guarantee of future results.

Morningstar categories: Baird Core Plus Bond Fund is ranked within the Intermediate Core-Plus Bond Fund category (Overall: 540 funds, 3-year period: 540, 5-year period: 458, 10-year period: 340). Baird Aggregate and Baird Intermediate Bond Funds are ranked within the Intermediate Core Bond Fund category (Overall: 378 funds, 3-year period: 378, 5-year period: 333, 10-year period: 253). Baird Short-Term Bond Fund is ranked within the Short-Term Bond Fund category (Overall: 512 funds, 3-year period: 512, 5-year period: 455, 10-year period: 297). Baird Ultra Short Bond Fund is ranked within the Ultrashort Bond Fund category (Overall: 170 funds, 3-year period: 170, 5-year period: 130). Baird Quality Intermediate, Baird Core Intermediate, and Baird Strategic Municipal Bond Funds are ranked within the Municipal National Intermediate Bond Fund category (Overall: 242) funds, 3-year period: 242, 5-year period: 218, 10-year period: 160). Baird Short-Term Municipal Bond Fund is ranked within the Municipal National Short Bond Fund category (Overall: 196 funds, 3-year period: 196, 5-year period: 178). Baird Municipal Bond Fund is ranked within the Municipal National Long Bond Fund category.

The quality profile is calculated on a market value-weighted basis using the highest credit quality rating given by S&P, Moody's or Fitch for each security in the fund. Per the Baird Funds prospectus, each security in the bond fund is assigned the highest credit quality rating provided by a nationally recognized statistical rating organization (e.g. S&P, Moody's, Fitch). Per the Bloomberg Barclays index controlling rating methodology, each security in the index is assigned a rating using S&P, Moody's, and Fitch (middle of three ratings, lower of two ratings, or singular rating if rated by one rating agency).

This presentation is for institutional investors and registered investment advisors use only. Not approved for use with the public.

IC Meeting: 12/9-10/20 Item II Attachment 7



# LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

PRESENTED BY:
John Hyll
Vice President, Portfolio Manager

Neil A. Burke Vice President, Portfolio Manager

Stephanie S. Lord, CFA, CIC Vice President, Relationship Manager

| LOOMIS | SAYLES

December 10, 2020

IC Meeting: 12/9-10/20 Item II Attachment 7

# presented by:



JOHN HYLL Vice President, Portfolio Manager



**NEIL A. BURKE**Vice President, Portfolio Manager



STEPHANIE S. LORD, CFA, CIC Vice President, Relationship Manager



### loomis sayles at a glance

Serving clients with integrity and a global perspective since 1926

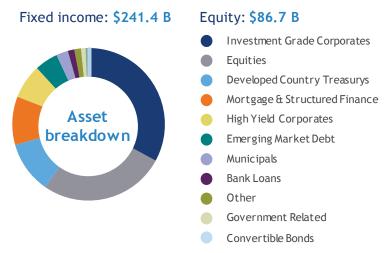


BOSTON • CHICAGO • DETROIT • SAN FRANCISCO

LONDON • SINGAPORE • UTRECHT



#### Investment expertise across asset classes



Slide is as of 9/30/2020. The Utrecht office opened on November 1, 2020.

Due to rounding, pie chart total may not equal 100%.

Other includes cash  $\mathcal{C}$  equivalents and derivatives.

Total AUM includes the assets of both Loomis, Sayles & Co., LP, and Loomis Sayles Trust Company, LLC. (\$30.5 billion for the Loomis Sayles Trust Company). Loomis Sayles Trust Company is a wholly owned subsidiary of Loomis, Sayles & Company, L.P.



# foundation for alpha

| CREDIT RESEARCH  | EQUITY   | MACRO<br>STRATEGIES   | MORTGAGE & STRUCTURED FINANCE   | QUANTITATIVE RESEARCH<br>& RISK ANALYSIS   |
|--|--|---|---|--|
| Alpha generation through differentiated insights   | Driving alpha through independent thinking                             | Focused insights for investment team impact   | Opportunities outside traditional asset classes   | Bringing together the art and science of investing   |
| Providing insight and differentiated perspectives across the credit classes, risk spectrum, and capital structure  Active long-term st built on different non-consensus in |  | Tailor-made research and data driven assessments of global macro investment conditions, opportunities and risks   | Uncovering hidden alpha in complex structured markets   | Generating signals that can identify risk patterns and opportunities   |
|  |  |   |   | Sign of the second seco |
| TRADING  | ESG  | INVESTMENT<br>RISK OVERSIGHT  | TECHNOLOGY  | BUSINESS<br>INFRASTRUCTURE   |
| Beyond trade execution   | Integrate and engage   | Ensuring investment teams are meeting client needs & expectations   | Translating data into insight   | Allowing investors to remain focused on alpha generation   |
| +50 trading professionals integrated within all investment processes every step of the way   | Training and tools for investment teams to assess material ESG factors | A common foundation underlying all strategies:  Sound philosophy Rigorous, repeatable process Proprietary research Disciplined portfolio constructio Integrated risk management | Tapping the power of our proprietary In2! technology platform, integrating more than 5 billion data points each day | Legal, compliance, distribution, marketing, relationship management, & client services   |



**BOARD Meeting: 1/26/21** 

Attachment 7

IC Meeting: 12/9-10/20

### Item VII-E Attachment 1

# alpha engines

#### **FIXED INCOME**

| ALPHA<br>STRATEGIES  | BANK LOANS  | DISCIPLINED<br>ALPHA  | EMERGING<br>MARKET<br>DEBT                          | EURO<br>CREDIT†   | FULL<br>DISCRETION  | GLOBAL   | MORTGAGE & STRUCTURED FINANCE  | MUNICIPAL                             | RELATIVE<br>RETURN  |
|--|---|---|---|---|---|--|--|---------------------------------------|---|
| Credit Asset  Emerging Market Debt Blended  World Credit Asset Multi-Asset Income Inflation Protected (TIPS)  Systematic Investment Strategies | Senior Loans Senior Floating Rate and Fixed Income CLOs | Core Intermediate Corporate Long Corporate Long Gov't Corp Long Credit Global Disciplined Alpha** | Corporate Local Currency Short Duration Asia Credit | Euro IG<br>Credit<br>Euro<br>Sustainable<br>IG Credit<br>Euro High<br>Yield | Multisector  Core Plus Full Discretion  High Yield Full Discretion  Global High Yield  US High Yield  High Yield  Conservative  Strategic Alpha | Global Bond Global Credit Global Debt Unconstrained Global Disciplined Alpha** | Agency MBS  Core Securitized  IG Securitized Credit (ERISA)  High Yield Securitized Credit Private Debt and Equity | Short Intermediate Medium Crossover** | Short Duration Inter. Duration Core Core Plus IG Corporate IG Inter. Corp Long Corporate Long Credit Long Gov't/Credit Custom LDI |
| \$9.2 B*   | \$4.1 B   | \$16.6 B  | \$3.1 B   | -   | \$64.9 B  | \$34.3 B   | \$12.1 B*  | \$7.8 B                               | \$102.3 B   |

#### **EQUITY**

| GROWTH EQUITY<br>STRATEGIES  | GLOBAL EMERGING<br>MARKETS EQUITY   | GLOBAL EQUITY<br>OPPORTUNITIES                | SPECIALTY GROWTH<br>STRATEGIES                       | SMALL CAP VALUE                       |
|--|---|---|--|---------------------------------------|
| All Cap Growth Global Growth International Growth Large Cap Growth Long/Short Equity | Global Emerging Markets<br>Equity<br>Global Emerging Markets<br>Equity Long/Short | Global Allocation Global Equity Opportunities | Small Cap Growth Small/Mid Cap Growth Mid Cap Growth | Small Cap Value<br>Small/Mid Cap Core |
| \$71.6 B   | \$30.4 M***   | \$7.1 B                                       | \$5.6 B  | \$2.3 B                               |

<sup>†</sup>The Euro Credit team joined Loomis Sayles on November 1, 2020. Funding is anticipated by year end.



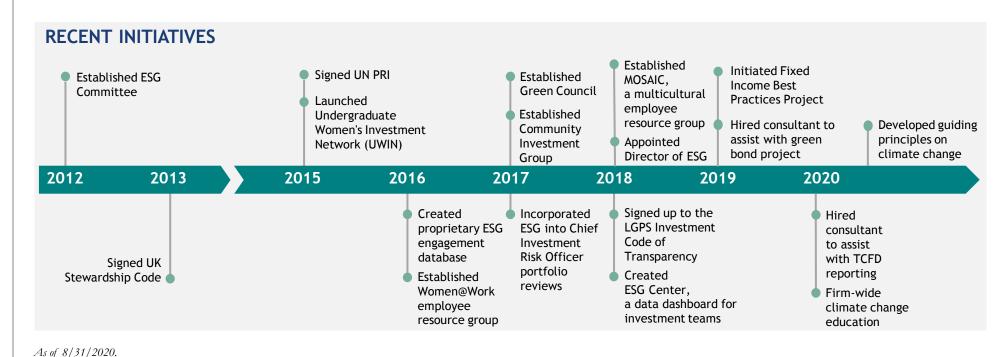
<sup>\*</sup>Includes accounts that may also be counted as part of other strategies \*\*Co-managed investment strategy \*\*\*Assets include seed money from our parent company.

# ESG at loomis sayles

### OUR RESEARCH AND ACTIVE INVESTMENT MANAGEMENT CULTURE INHERENTLY EMBED ESG FACTORS

### Our ultimate goal is superior, long-term risk adjusted performance

- · Assessment of material ESG elements is an intrinsic part of our long-term fundamental, proprietary research
- Support the investment teams with ESG research tools and training
- Prioritization of the recruitment, development, and retention of exceptional talent
- Ongoing commitment to the local communities in which we live and work





IC Meeting: 12/9-10/20 Item II Attachment 7

### our approach

PRACTICAL, AUTHENTIC AND ASPIRATIONAL

LOOMIS SAYLES "THE FIRM"

ESG WITHIN OUR INVESTMENT PROCESS

**ESG RELATED REQUESTS** 







Governance

Integration

Clients

**Fiduciary Duty** 

Infrastructure

**Prospects** 

**ESG Values** 

**Engagement** 

Collaboration



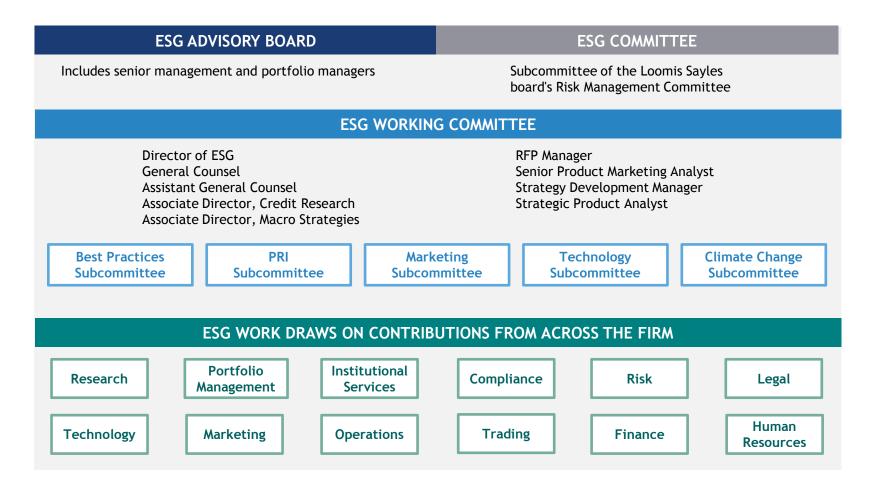
Item VII-E
Attachment 1

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# loomis sayles ESG structure

### STRATEGIC DECISION TO EMBED ESG THROUGHOUT THE ORGANIZATION

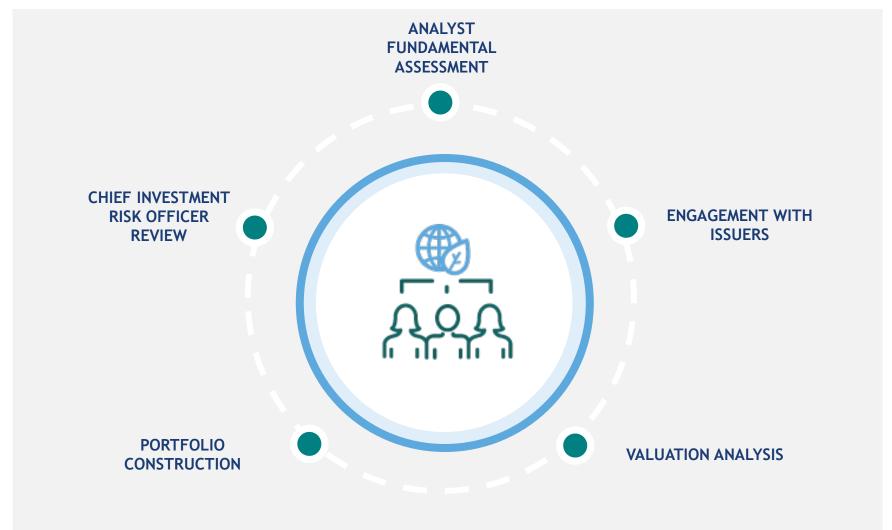




Attachment 1

# ESG integration

### AT LOOMIS SAYLES ESG CAN BE INTEGRATED WITHIN ALL STEPS OF AN INVESTMENT PROCESS



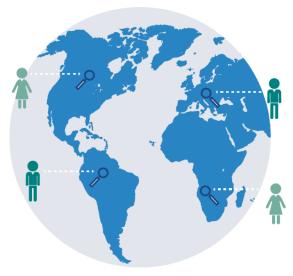


### ESG research

### LOOMIS SAYLES INTEGRATES ESG INTO FUNDAMENTAL RESEARCH ACROSS ALL ASSET CLASSES

We recognize the important role that environmental, social and governance (ESG) issues play in the global economy, financial markets and society at large.

- We inherently consider ESG issues as part of our investment analysis and recommendations.
- Our analysts strive to develop a thorough understanding of an issuer's track record, governance, management strength and strategy, its use of, and impact on, human and natural resources, as well as regulatory and political risks.
- We draw on discussions with company management teams and sovereign officials regarding ESG issues, as well as subscribing to and utilizing third party ESG Research.
- Analysts develop independent views of material factors impacting fundamentals in their valuation assessments of equity, credit, sovereign, municipal, and securitized assets.





### portfolio management team

#### HIGHLY EXPERIENCED TEAM SUPPORTED BY DEEP FIRM RESOURCES

| PRODUCT TEAM               |  | JOHN HYLL<br>Portfolio Manager  | <b>NEIL BURKE</b><br>Portfolio Manager                        |   |   |                 |  |
|----------------------------|--|---|---|---|---|-----------------|--|
|                            |  | •   |   | -   |   |                 |  |
| rs of industry experience: |  | 37  |   |   | 29  |                 |  |
| Yrs with firm:             | 33   |   |   |   | 23  |                 |  |
| KEY SUPPORT                |  | LDI SOLUTIONS   |   | PRODUCT   | MANAGEMENT  |                 |  |
|                            | Jus  | tin Teman, ASA, CFA*  |   | Gene N  | lorrison, CFA   |                 |  |
|                            | 5  | Srinivas Andra, PhD   |   | EJ Tat  | eosian, CFA   |                 |  |
|                            |  | Xinjia Liu  |   | Kristy  | Hergrueter  |                 |  |
|                            |  | •   |   |   | nie Abelard   |                 |  |
|                            | INVESTMENT AN  | IAI VCTC  | DODTEOL IC  | ) SPECIALIST  | OUANTITATIVE  | - DICK          |  |
|                            | Devon McKer  |   |   |   | Michael Cro   |                 |  |
|                            | Anna Wang**  |   | Peter Obermann  |   | menaet crowett  |                 |  |
| SECTOR TEAMS               | US Yield Cu  | rve   | Global  | Asset Allocation  | Developed No  | n-US Markets    |  |
|                            | Inv Grade / Global<br>Credit   | Mortgage &<br>Structured Finance  | US<br>Government  | High Yield /<br>Bank Loans  | Emerging<br>Markets   | Convertibles    |  |
| FIRM RESOURCES             | Macro Strategies 2 Directors Associate Director Economist Senior Quantitative Analyst Senior Commodities Analyst 2 Senior Research Analysts 3 Senior Research Associates | Credit Resear<br>Director<br>2 Associate Director<br>Head of Municip<br>Head of Convert<br>37 Senior Analys<br>12 Analysts<br>7 Research Senio<br>7 Research Asso | ctors<br>al Research<br>ibles Research<br>ts<br>or Associates | Mortgage & Structured Finance Head Portfolio Manager 4 Strategists 4 Senior Analysts 1 Research Analyst 2 Research Associates Director, MSF Trading 4 MSF Traders/TAs | Fixed Income Tr<br>24 Traders/TAs<br>Director,<br>Portfolio Implemen<br>15 Portfolio Special<br>Director, Operatior<br>Risk Analyst | tation<br>lists |  |
|                            | Quant. Research & Risk A<br>Director<br>2 Associate Directors<br>Director, LDI Solutions<br>Senior Quantitative Analyst<br>7 Quantitative Analysts                       |   | ch<br>ts  | Sovereign Research<br>2 Senior Analysts<br>3 Analysts   |   |                 |  |

As of 9/30/2020. \*Director of LDI Solutions. \*\*Senior Investment Analyst



aum summary

**BOARD Meeting: 1/26/21** Item VII-E Attachment 1 IC Meeting: 12/9-10/20

Attachment 7

AS OF 9/30/2020

#### ASSETS UNDER MANAGEMENT (billions)

#### **ACCOUNTS GAINED/LOST**

| Relative | PM Team* | Firm  |             | Relative     | PM Team* | Firm |
|----------|----------|-------|-------------|--------------|----------|------|
| \$102.3  | \$17.6   | \$328 |             | Return<br>10 | 2        | 62   |
|          |          |       | Losses 3Q20 | 5            | 1        | 36   |
|          |          |       | Total       | 5            | 1        | 26   |

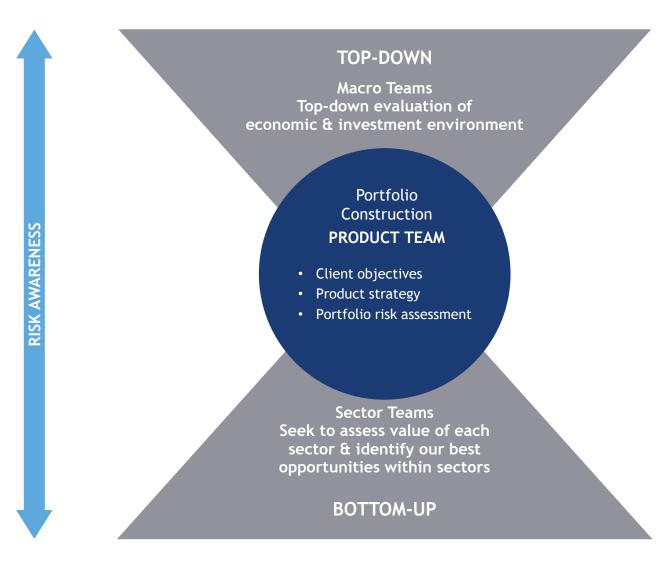
### LACERS ACCOUNT AS A PERCENT OF STRATEGY AUM (RELATIVE RETURN)

| 3Q20 | 2Q20 |
|------|------|
| 0.86 | 0.90 |

\*PM Team refers to assets managed by John Hyll and Neil Burke

LACERS originally hired Loomis Sayles in July of 1980 for Long Duration Fixed Income. The benchmark was the Bloomberg Barclays Govt/Credit. In August of 1993 the benchmark was changed to the Bloomberg Barclays LT Gov Credit. In June of 2000 it was changed to the Bloomberg Barclays US Universal and remained with the management team of John Hyll and Kent Newmark. In June of 2013 it was changed to the Bloomberg Barclays Aggregate and become a Core mandate but remained with the same portfolio management team of John Hyll and Neil Burke.





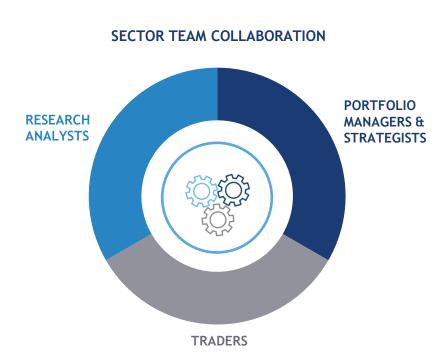


### sector teams

### COLLABORATION OF PORTFOLIO MANAGERS, STRATEGISTS, RESEARCH ANALYSTS AND TRADERS

Discuss, debate and generate investment ideas and themes to enhance our investment decision making process

- Develop top-down and bottom-up valuation framework and market analysis
- Identify where investment value may lie in various markets and/or what we view as the most attractive securities in each sector
- Monitor and measure sector performance and trends including secular changes, corporate events, and ESG factors

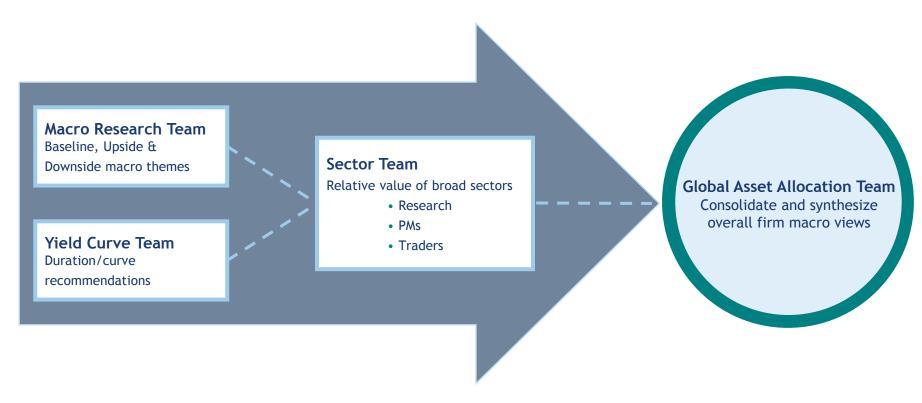


### **SECTOR TEAMS MACRO-FOCUSED** MARKET-FOCUSED · Bank Loans Global Asset Allocation Commodities • US Yield Curve Convertibles · Developed Non-US Markets Emerging Markets Equity · Global Credit · High Yield · Investment Grade Corporate Municipals Mortgage & Structured Finance US Government

# investment process

### **OUR BEST TOP-DOWN IDEAS**

Portfolio Managers gain insight into macro themes and sector preferences leveraging the broader Loomis Sayles macro research effort

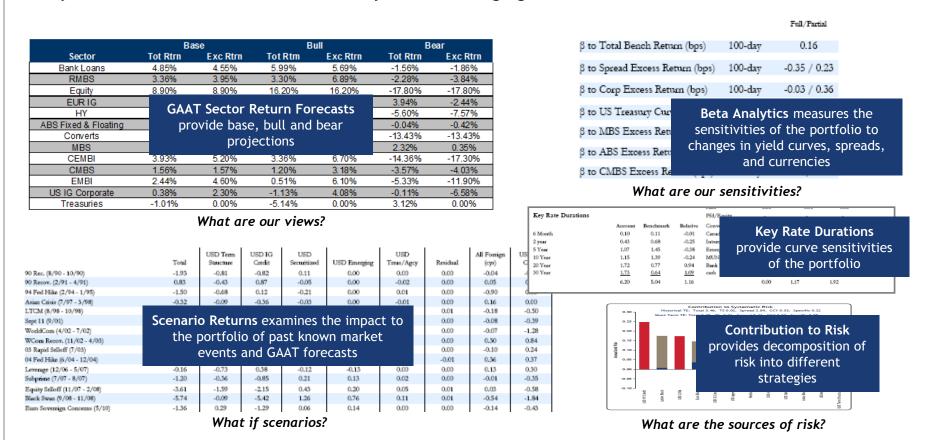




### investment process

### SOPHISTICATED RISK TOOLS USED TO IMPLEMENT & MONITOR TOP DOWN VIEWS

Analyze sources of risk and beta sensitivity while leveraging GAAT sector forecasts



Charts are illustrative for presentation purposes only as a sampling of risk management tool output. Some or all of this information on these charts may be dated, and, therefore, should not be the basis to purchase or sell any securities. The information is not intended to represent any actual portfolio. Scenario analysis has inherent limitations and should not be viewed as predictive of future events. It relies on opinions, assumptions and mathematical models, which can turn out to be incomplete or inaccurate. Actual results will be different.



IC Meeting: 12/9-10/20 Item II Attachment 7

# investment process

### PROPRIETARY RESEARCH: THE CORNERSTONE OF OUR BUSINESS

Objective: Generate good investment ideas and help get them into the portfolios

### Integral to our investment process

- Rigorous fundamentally-driven credit analysis
- Career Analysts
- Team structure provides deep support to Senior Analysts
- Mixture of global and regional industry coverage, depending upon competitive structure and markets served
- Analysts cover their industries/sectors across the credit spectrum
- Analysts integrated into sector teams



### investment process

### **OUR BEST BOTTOM-UP IDEAS**

Portfolio Managers gain insight into individual credits using the broader Loomis Sayles research effort:

| FUNDAMENTAL |
|-------------|
| RESEARCH    |

- · Solvency analysis
- Business outlook
- Management/political

#### **SECTOR TEAM**

- Value of sector
- Subsector preference
- Preferred securities

#### **TRADING**

- Liquidity
- Issuer rating/volatility
- Specific security volatility

#### QUANTITATIVE RESEARCH RISK ANALYSIS (QRRA)

- Fair value
- Portfolio construction
- Risk awareness

Each credit is viewed based on the following framework:

| LS ISSUER<br>RATING |     |  |  |
|---------------------|-----|--|--|
| Higher:             | aaa |  |  |
|                     | aa  |  |  |
|                     | a   |  |  |
| Lower:              | bbb |  |  |

| INDUSTRY<br>VALUATION |
|-----------------------|
| Overperform           |
| Market                |
| Underperform          |
|                       |

| VALUATION BY<br>ISSUER |   |  |  |
|------------------------|---|--|--|
| Undervalued:           | 1 |  |  |
|                        | 2 |  |  |
|                        | 3 |  |  |
| Overvalued:            | 4 |  |  |

| ISSUER<br>VOLATILITY |
|----------------------|
| Core                 |
| Opportunistic        |
| Speculative          |
|                      |

| ISSUER<br>LIQUIDIT | Y |
|--------------------|---|
| Very Liquid:       | 4 |
|                    | 3 |
|                    | 2 |
| Less liquid:       | 1 |

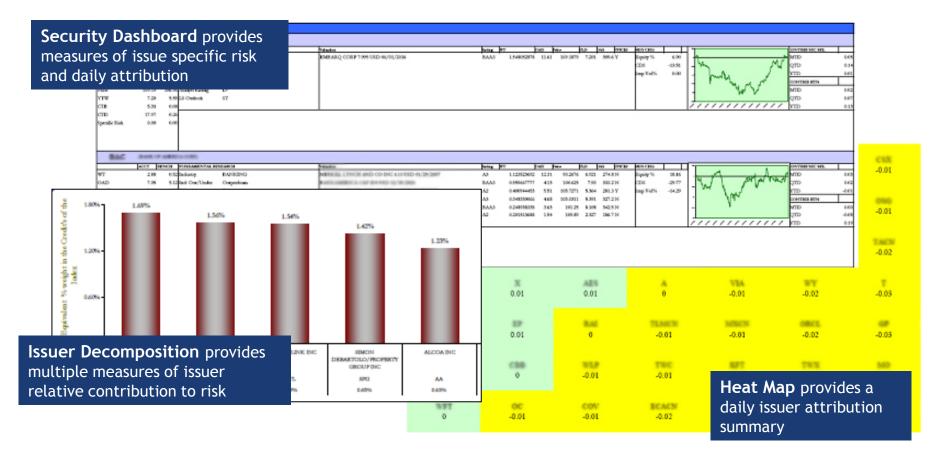




### investment process

### SOPHISTICATED RISK TOOLS USED TO IMPLEMENT & MONITOR BOTTOM UP VIEWS

Issuer exposures and attribution versus customized or standard benchmarks



Charts are illustrative for presentation purposes only as a sampling of risk management tool output. Some or all of this information on these charts may be dated, and, therefore, should not be the basis to purchase or sell any securities. The information is not intended to represent any actual portfolio.



### guideline summary

#### **BENCHMARK**

Bloomberg Barclays Aggregate Index

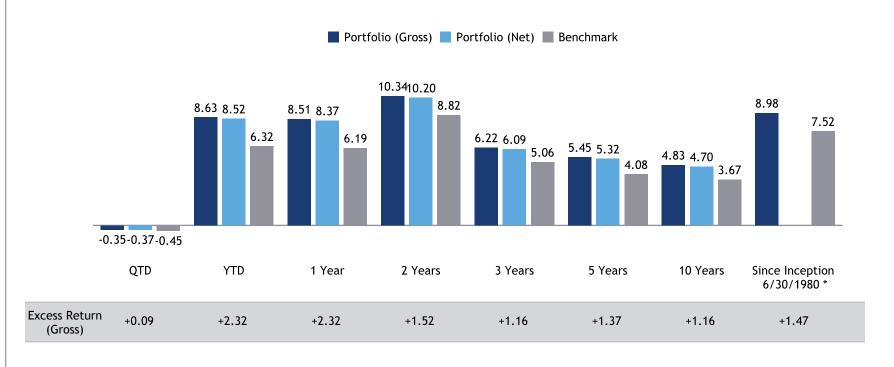
### **DIVERSIFICATION & LIMITATIONS**

- Minimum Credit Quality: Account may not hold securities rated below B3/B- by Moody or S&P.
- Split Rated Securities: Higher rating will govern split-rated securities.
- Issuer: Account may not hold more than 5% MV in any one issuer at time of purchase, excluding U.S. Gov't and Agencies.
- Issuer: Account may not hold more than 10% MV in non-benchmark issuers, excluding 144a's U.S. Gov't and Agencies, at time of purchase.
- Account may hold no more than 10% MV in cash & cash equivalents.
- Bank Loans: Account may invest up to 12.5% MV in the Loomis Sayles Senior Loan Fund, LLC at the time of purchase.
- Private Placements: Account may not hold Private Placement Securities (non-144a).
- Non-dollar: Non-U.S. sovereign debt and non-dollar investment grade corporate bonds are authorized.
- Duration: Maximum spread duration is +30% of the Bloomberg Barclays Aggregate Index.

20

# performance

### **TRAILING RETURNS AS OF 10/31/2020 (%)**



#### PORTFOLIO VALUATION (USD)

|       | Portfolio   |
|-------|-------------|
| Total | 880,916,900 |

Benchmarks: BBG BARC Govt Credit (6/30/1980 - 8/31/1993). BBG BARC LT Govt Credit (8/31/1993 - 6/30/2000). BBG BARC U.S. Universal (6/30/2000 - 6/30/2013). BBG BARC Aggregate (6/30/2013 - 10/31/2020).

The current benchmark is Bloomberg Barclays U.S. Aggregate Index.

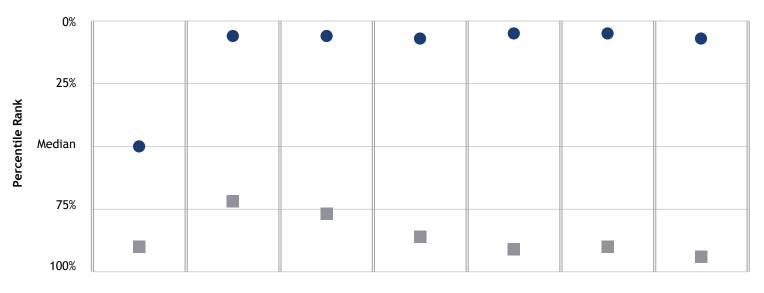
<sup>\*</sup> Net returns only available from 12/31/2000.



# investment performance - supplemental

### LOS ANGELES CITY EMPLOYEES RETIREMENT SYSTEM AS OF 9/30/2020

Trailing Returns (Gross) & Rankings vs Index



|  | Q3 2020          | YTD                     | 1 Year           | 3 Years          | 5 Years          | 7 Years          | 10 Years         |
|--|------------------|-------------------------|------------------|------------------|------------------|------------------|------------------|
| LA City Employees Retirement System Income | 1.10             | 9.02                    | 9.20             | 6.39             | 5.63             | 5.29             | 4.90             |
| % Ranking                                  | 50 <sup>th</sup> | 6 <sup>th</sup>         | 6 <sup>th</sup>  | 7 <sup>th</sup>  | 5 <sup>th</sup>  | 5 <sup>th</sup>  | 7 <sup>th</sup>  |
| Bloomberg Barclays US Aggregate Index      | 0.62             | 6.79                    | 6.98             | 5.24             | 4.18             | 3.97             | 3.63             |
| % Ranking                                  | 90 <sup>th</sup> | <b>72</b> <sup>nd</sup> | 77 <sup>th</sup> | 86 <sup>th</sup> | 91 <sup>st</sup> | 90 <sup>th</sup> | 94 <sup>th</sup> |
| Median                                     | 1.11             | 7.46                    | 7.65             | 5.68             | 4.69             | 4.43             | 4.18             |
| Observations                               | 241              | 241                     | 241              | 237              | 231              | 226              | 218              |
|  |                  |                         |                  |                  |                  |                  |                  |

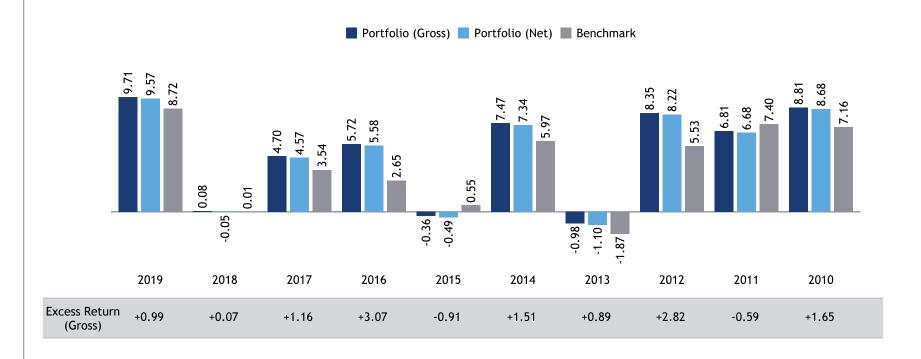
Source: eASE Analytics System; eV estment Alliance is the ranking agency. Universe: eA US Core Fixed Income. This material is provided as supplemental to a full product presentation book. Annualized performance is calculated as the geometric mean of the product's returns with respect to one year. Returns are gross of management fees and net of trading costs. If management fees were included, returns would be lower. Median is the middle value for the observations as of the end of each period shown. Although we believe it is reliable, we cannot guarantee the accuracy of data from a third party source. This information cannot be copied or redistributed in any form. For additional information, including performance, please request a full presentation book.

Past performance is no guarantee of future results.



# performance

### CALENDAR YEAR RETURNS AS OF 10/31/2020 (%)



Benchmarks: BBG BARC Govt Credit (6/30/1980 - 8/31/1993). BBG BARC LT Govt Credit (8/31/1993 - 6/30/2000). BBG BARC U.S. Universal (6/30/2000 - 6/30/2013). BBG BARC Aggregate (6/30/2013 - 10/31/2020).

The current benchmark is Bloomberg Barclays U.S. Aggregate Index.



### performance attribution by sector

12/31/2019 TO 10/31/2020 (%)

#### **EXCESS RETURN ATTRIBUTION BY SECTOR TOTAL RETURNS** Cash & Equivalents 0.07 **Total Return** 0.35 **US Treasurys** Portfolio Return 8.63 Benchmark Return 6.31 **US Agency** 0.00 **Excess Return** 2.32 Securitized Agency -0.19 **EXCESS RETURN ATTRIBUTION** Securitized Credit -0.02 Total Parallel Non-Parallel Government Related 0.06 0.55 Yield Curve 0.77 Municipals 0.03 -0.22 Investment Grade Corporate 1.20 1.20 Allocation Bank Loans -0.02 0.39 High Yield Corporate Selection Other 0.00

Figures on the bar chart may not add up to total excess return as they exclude impact of trading, pricing and currency differences. Excess Return by sector excludes yield curve impact. Values shown include impact of hedging if utilized. Unless otherwise noted, the performance shown is gross of management fees.

The current benchmark is Bloomberg Barclays U.S. Aggregate Index.



### attribution analysis

### 12/31/2019 TO 10/31/2020 (%)

| Sector Distribution        | Portfolio<br>Final Weight | Benchmark<br>Final Weight | Portfolio<br>Average<br>Weight | Benchmark<br>Average<br>Weight | Total Effect |
|----------------------------|---------------------------|---------------------------|--------------------------------|--------------------------------|--------------|
| Cash & Equivalents         | 3.18                      | 0.00                      | 5.11                           | 0.00                           | 0.07         |
| US Treasurys               | 48.25                     | 36.94                     | 44.60                          | 38.47                          | 0.35         |
| US Agency                  | 0.00                      | 1.59                      | 0.00                           | 1.37                           | 0.00         |
| Securitized Agency         | 12.48                     | 27.81                     | 13.26                          | 27.60                          | -0.19        |
| Securitized Credit         | 0.29                      | 1.61                      | 0.31                           | 1.67                           | -0.02        |
| Government Related         | 1.17                      | 3.97                      | 1.23                           | 3.92                           | 0.06         |
| Municipals                 | 0.00                      | 0.72                      | 0.00                           | 0.70                           | 0.03         |
| Investment Grade Corporate | 31.29                     | 27.35                     | 32.40                          | 26.26                          | 1.20         |
| Bank Loans                 | 1.60                      | 0.00                      | 1.56                           | 0.00                           | -0.02        |
| High Yield Corporate       | 1.74                      | 0.01                      | 1.52                           | 0.00                           | 0.10         |
| Other                      | 0.00                      | 0.00                      | 0.01                           | 0.00                           | 0.00         |

Total Effects are impacted by sector returns and allocation shifts. Returns reflect the entire period. Total Effect excludes yield curve impact. Values shown include impact of hedging if utilized. Unless otherwise noted, the performance shown is gross of management fees.

The current benchmark is Bloomberg Barclays U.S. Aggregate Index.



# portfolio summary

12/31/2019 TO 10/31/2020

#### **PORTFOLIO SUMMARY**

|                            |           | 12/31/2019 |            | 10/31/2020 |           |            |  |  |  |
|----------------------------|-----------|------------|------------|------------|-----------|------------|--|--|--|
|                            | Portfolio | Benchmark  | Difference | Portfolio  | Benchmark | Difference |  |  |  |
| Yield to Worst (%)         | 2.33      | 2.31       | 0.02       | 1.30       | 1.24      | 0.06       |  |  |  |
| Maturity (years)           | 8.24      | 7.93       | 0.31       | 8.02       | 8.00      | 0.02       |  |  |  |
| Effective Duration (years) | 5.96      | 5.82       | 0.14       | 5.98       | 6.06      | -0.08      |  |  |  |
| Coupon (%)                 | 2.46      | 3.18       | -0.72      | 2.13       | 2.90      | -0.77      |  |  |  |
| Average Quality            | AA3       | AA2        | -          | AA3        | AA2       | -          |  |  |  |
| OAS (bps)                  | 42        | 39         | 3          | 61         | 55        | 6          |  |  |  |

#### QUALITY SUMMARY (% OF TOTAL MARKET VALUE)

|           |           | 12/31/2019 |            |           | 10/31/2020 |            |
|-----------|-----------|------------|------------|-----------|------------|------------|
|           | Portfolio | Benchmark  | Difference | Portfolio | Benchmark  | Difference |
| AAA       | 71.25     | 72.05      | -0.80      | 65.42     | 69.92      | -4.50      |
| AA        | 1.65      | 3.93       | -2.28      | 3.16      | 4.19       | -1.03      |
| A         | 10.50     | 11.69      | -1.19      | 13.11     | 12.52      | 0.59       |
| BAA       | 13.74     | 11.90      | 1.84       | 15.52     | 13.04      | 2.48       |
| ВА        | 2.09      | 0.05       | 2.05       | 2.22      | 0.00       | 2.22       |
| B & Below | 0.77      | 0.00       | 0.77       | 0.56      | 0.00       | 0.56       |
| NR        | 0.00      | 0.39       | -0.39      | 0.00      | 0.33       | -0.33      |

OAS is option adjusted spread.

Client Guideline Quality Methodology presented.

Maturity distribution is calculated using the years to effective maturity, which takes into account the bonds call date.

The current benchmark is Bloomberg Barclays U.S. Aggregate Index.

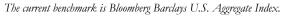


### sector allocation

### 12/31/2019 TO 10/31/2020 (%)

|                                  | 1         | 2/31/2019 | •        | 1         | 0/31/2020 | 0        | Relative |   |
|----------------------------------|-----------|-----------|----------|-----------|-----------|----------|----------|---|
|                                  | Portfolio | Bench     | Relative | Portfolio | Bench     | Relative | Change   |   |
| Cash & Equivalents               | 7.46      | 0.00      | 7.46     | 3.18      | 0.00      | 3.18     | -4.28    | H |
| US Treasurys                     | 48.61     | 39.46     | 9.15     | 48.25     | 36.94     | 11.31    | 2.16     | Г |
| US Inflation Protected Treasurys | 1.70      | 0.00      | 1.70     | 1.65      | 0.00      | 1.65     | -0.05    |   |
| US Treasurys                     | 46.92     | 39.46     | 7.45     | 46.60     | 36.94     | 9.65     | 2.20     |   |
| US Agency                        | 0.00      | 1.18      | -1.18    | 0.00      | 1.59      | -1.59    | -0.41    |   |
| Securitized Agency               | 13.56     | 27.79     | -14.23   | 12.48     | 27.81     | -15.33   | -1.09    | ı |
| Agency CMBS                      | 3.80      | 0.82      | 2.98     | 0.97      | 0.93      | 0.04     | -2.93    |   |
| CMO                              | 9.25      | 0.00      | 9.25     | 2.61      | 0.00      | 2.61     | -6.64    |   |
| MBS Passthrough                  | 0.51      | 26.97     | -26.46   | 8.89      | 26.88     | -17.99   | 8.48     |   |
| Securitized Credit               | 0.33      | 1.70      | -1.37    | 0.29      | 1.61      | -1.31    | 0.06     |   |
| ABS                              | 0.00      | 0.46      | -0.46    | 0.00      | 0.34      | -0.34    | 0.11     |   |
| Covered                          | 0.00      | 0.02      | -0.02    | 0.00      | 0.00      | 0.00     | 0.02     |   |
| Non Agency CMBS                  | 0.33      | 1.22      | -0.89    | 0.29      | 1.26      | -0.97    | -0.07    |   |
| Government Related               | 1.20      | 3.93      | -2.73    | 1.17      | 3.97      | -2.80    | -0.07    | ı |
| Agencies                         | 0.87      | 1.28      | -0.41    | 0.85      | 1.05      | -0.19    | 0.22     |   |
| Local Authorities                | 0.00      | 0.29      | -0.29    | 0.00      | 0.32      | -0.32    | -0.03    |   |
| Sovereign                        | 0.06      | 1.02      | -0.95    | 0.06      | 1.15      | -1.09    | -0.14    |   |
| Supranational                    | 0.27      | 1.35      | -1.08    | 0.25      | 1.46      | -1.20    | -0.13    |   |
| Municipals                       | 0.00      | 0.65      | -0.65    | 0.00      | 0.72      | -0.72    | -0.08    | ı |
| Tax Exempt Muni                  | 0.00      | 0.00      | 0.00     | 0.00      | 0.00      | 0.00     | 0.00     |   |
| Taxable Muni                     | 0.00      | 0.65      | -0.65    | 0.00      | 0.72      | -0.72    | -0.07    |   |
| Investment Grade Corporate       | 25.95     | 25.27     | 0.68     | 31.29     | 27.35     | 3.93     | 3.25     | ı |
| Financial Institutions           | 5.20      | 7.94      | -2.73    | 5.59      | 8.28      | -2.69    | 0.05     |   |
| Industrial                       | 18.67     | 15.47     | 3.21     | 23.20     | 16.84     | 6.35     | 3.15     |   |
| Utility                          | 2.07      | 1.86      | 0.21     | 2.50      | 2.23      | 0.27     | 0.06     |   |
| Bank Loans                       | 1.69      | 0.00      | 1.69     | 1.60      | 0.00      | 1.60     | -0.09    |   |
| Financial Institutions           | 0.17      | 0.00      | 0.17     | 0.18      | 0.00      | 0.18     | 0.01     |   |
| Industrial                       | 1.50      | 0.00      | 1.50     | 1.40      | 0.00      | 1.40     | -0.10    |   |
| Utility                          | 0.02      | 0.00      | 0.02     | 0.02      | 0.00      | 0.02     | 0.00     |   |

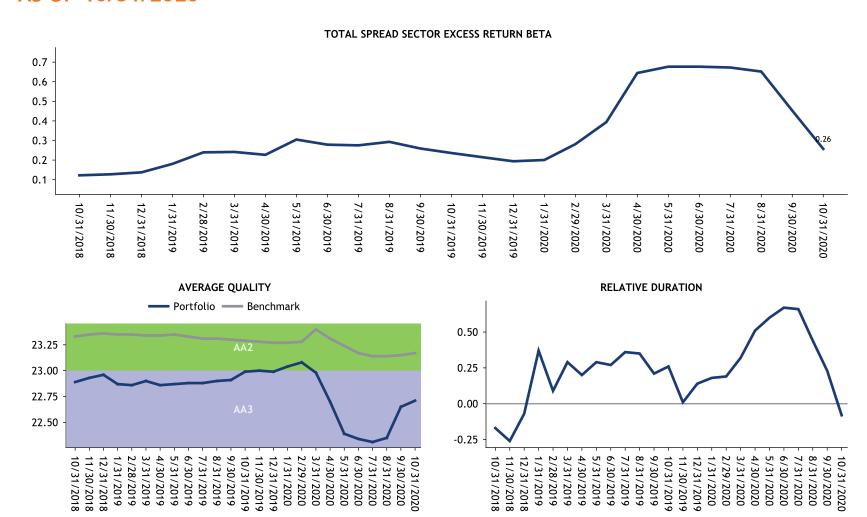
|                        | 1         | 2/31/2019 | )        | 1         | Relative |          |        |
|------------------------|-----------|-----------|----------|-----------|----------|----------|--------|
|                        | Portfolio | Bench     | Relative | Portfolio | Bench    | Relative | Change |
| High Yield Corporate   | 1.19      | 0.01      | 1.18     | 1.74      | 0.01     | 1.73     | 0.55   |
| Financial Institutions | 0.00      | 0.01      | -0.01    | 0.11      | 0.01     | 0.10     | 0.10   |
| Industrial             | 1.19      | 0.00      | 1.19     | 1.64      | 0.00     | 1.63     | 0.45   |





### portfolio history

#### AS OF 10/31/2020

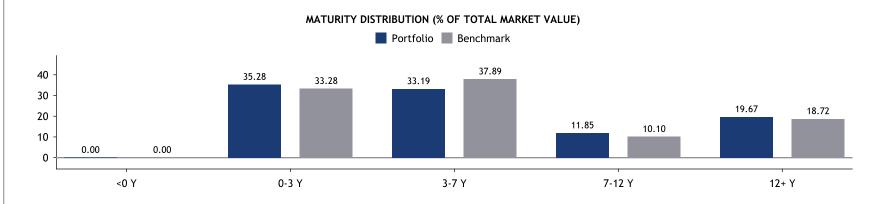


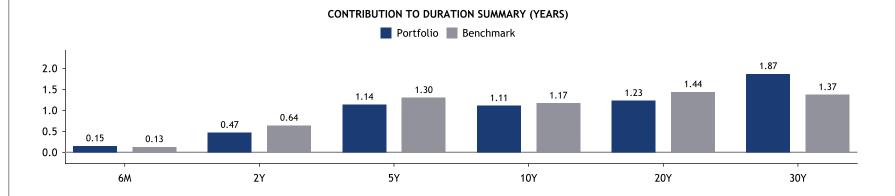
Total Spread Sector Beta capture risk from spread changes to all asset classes. The current benchmark is Bloomberg Barclays U.S. Aggregate Index.



### maturity & duration break-down

AS OF 10/31/2020



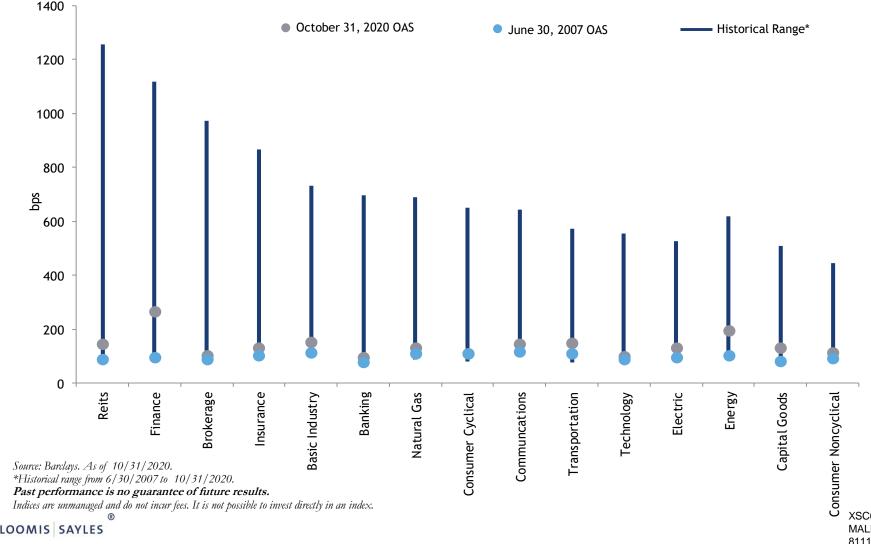


Maturity distribution is calculated using the years to effective maturity, which takes into account the bonds call date. The current benchmark is Bloomberg Barclays U.S. Aggregate Index.



### bond market environment

### US IG CREDIT SECTORS: CURRENT SPREAD LEVELS VS HISTORICAL HIGH AND LOW

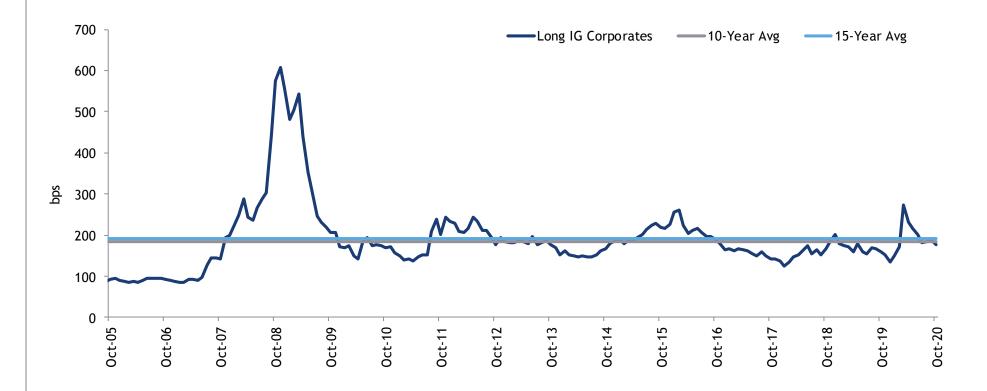




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### bond market environment

### LONG-TERM INVESTMENT GRADE SECTOR SPREADS



#### **CURRENT SPREAD CURRENT SPREAD**

|                     | 10/30/2020 | 10 YR AVG | 15 YR AVG | TO 10 YR AVG | TO 15 YR AVG |
|---------------------|------------|-----------|-----------|--------------|--------------|
| Long IG Financials  | 169        | 199       | 214       | (30)         | (45)         |
| Long IG Industrials | 181        | 184       | 191       | (3)          | (9)          |
| Long IG Utilities   | 161        | 152       | 166       | 9            | (5)          |
| Long IG Corporates  | 177        | 183       | 192       | (6)          | (15)         |

Source: Barclays. As of 10/31/2020. Averages computed by Loomis Sayles.

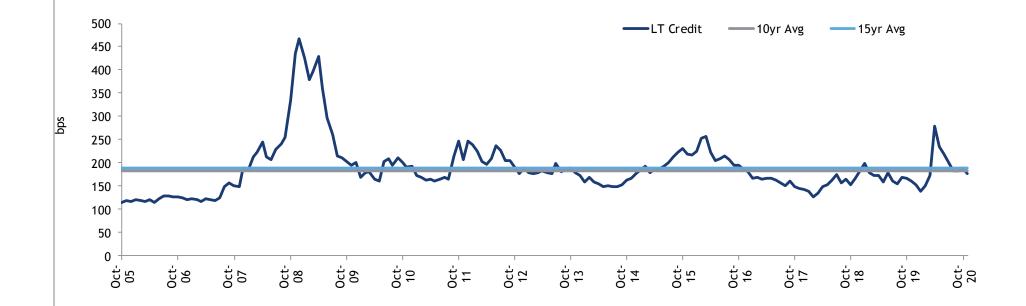
Past performance is no guarantee of future results. Indices are unmanaged and do not incur fees. It is not possible to invest directly in an index.



Attachment 7

### bond market environment

### LONG-TERM CREDIT SPREADS



#### **CURRENT SPREAD CURRENT SPREAD**

| 10/30/2020 | 10-YEAR AVG | 15-YEAR AVG | TO 10-YEAR AVG | TO 15-YEAR AVG |
|------------|-------------|-------------|----------------|----------------|
|------------|-------------|-------------|----------------|----------------|

| LT Credit | 177 | 183 | 189 | (6)  | (11) |
|-----------|-----|-----|-----|------|------|
| LT Aaa    | 90  | 92  | 96  | (2)  | (6)  |
| LT Aa     | 131 | 129 | 134 | 2    | (2)  |
| LT A      | 144 | 155 | 168 | (12) | (24) |
| LT Baa    | 217 | 224 | 229 | (6)  | (11) |

Source: Barclays. As of 10/31/2020. Averages computed by Loomis Sayles.

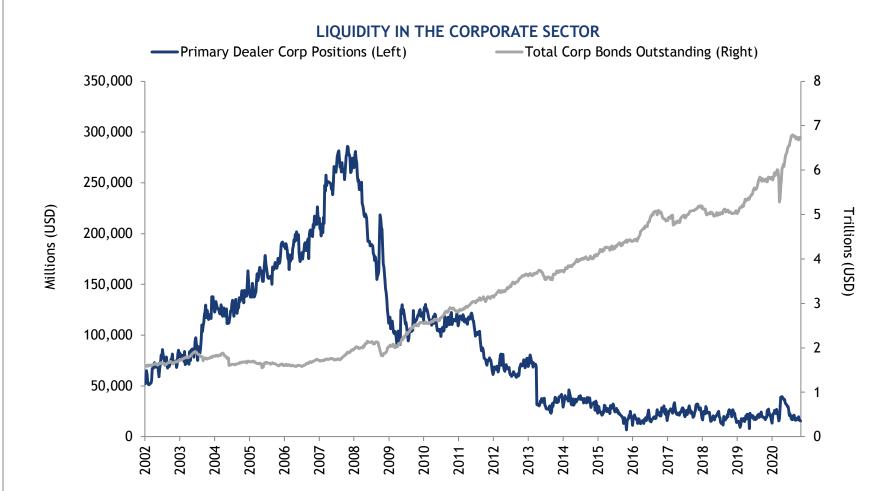
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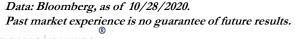
Indices are unmanaged and do not incur fees. It is not possible to invest directly in an index.



# liquidity in the corporate sector

### MARKET ILLIQUIDITY REMAINS A CONCERN

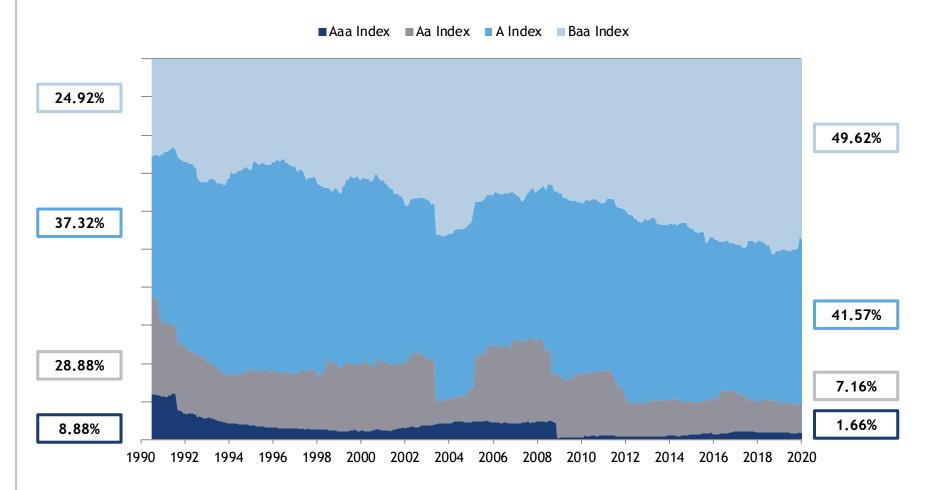






# the case of the shrinking AA bucket

### **QUALITY ANALYSIS OF BARCLAYS CREDIT INDEX, 1989 - 2020\***



Data: Bloomberg, \*data from 1/31/1990 through 10/31/2020.

The percentages on the left of the chart represent the start date and the percentages on the right represent the end date. Each side totals 100%. Indices are unmanaged and do not incur fees. It is not possible to invest directly in an index.

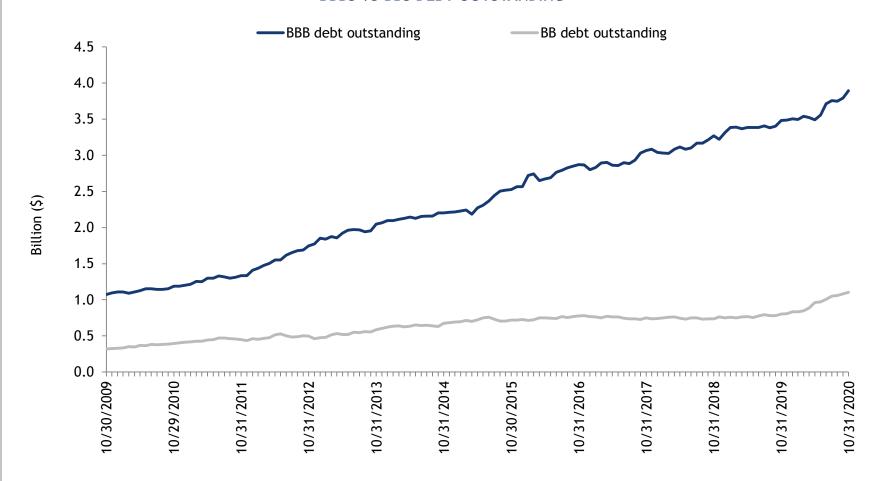
Past performance is no guarantee of future results.



IC Meeting: 12/9-10/20 Item II Attachment 7

# growth in BBB debt significantly outpaced BB's over the last 10 years

#### BBBS VS BBS DEBT OUTSTANDING



Data: Barclays Point, as of 10/31/2020

Note: BBB debt is based on BBB rated bonds in Barclays US Credit Corp +144A index. BB debt is based on BB rated bonds in Barclays US HY +144A index.

Past market experience is no guarantee of future results.



# BOARD Meeting: 1/26/21 IC Meeting: 12/9-10/20 MCCOCCONOMIC ENVIRONMENT ON Attachment 7

| YEAR-END FORECAST                     | US DO | US DOMESTIC |       | GLOBAL WE |       | WESTERN EUROPE |       | ASIA PACIFIC |       | LATIN AMERICA |  |
|---------------------------------------|-------|-------------|-------|-----------|-------|----------------|-------|--------------|-------|---------------|--|
|                                       | 2020  | 2021        | 2020  | 2021      | 2020  | 2021           | 2020  | 2021         | 2020  | 2021          |  |
| Real GDP Growth                       | -3.5% | 3.5%        | -3.9% | 5.1%      | -7.7% | 5.0%           | -0.6% | 4.7%         | -7.0% | 4.3%          |  |
| Headline CPI Inflation                | 1.2%  | 1.9%        | 2.2%  | 2.6%      | 0.4%  | 1.1%           | 1.8%  | 2.1%         | 7.7%  | 8.5%          |  |
| Current Account Balance (% GDP)       | -3.2% | -3.3%       | -     | -         | -     | -              | -     | -            | -     | -             |  |
| Interest Rates (10-year); End Of Year | 0.9%  | 1.4%        | -     | -         | -     | -              | -     | -            | -     | -             |  |

#### US EXITING A SHARP, BUT SHORT-LIVED DOWNTURN

- 2020 real GDP could be around -3.5%, after a stronger than expected Q3
  (+33.1% q/q saar). Growth should remain positive as we look towards the end
  of 2020 and move into 2021.
- Unemployment peaked at almost 15% in April. However, it dropped more quickly than expected and is now below 7%. We expect continued improvement as we push forward in the cycle.
- Easing of lockdowns helped data bounce back, but the recovery could be tempered as virus cases rise through the Fall and Winter.
- The virus negatively impacted prices given the drop in demand. We expect inflation to remain limited in the near term, keeping the Fed on hold.

#### **COVID-19 REMAINS TOP-OF-MIND**

- Virus spread has been rampant throughout much of Europe, causing major economies like Germany, France and UK to reinstate lockdowns, though they are not quite as severe as the ones we saw in the Spring.
- Covid-19 cases continue to pick up in the US as well; strict national lockdowns
  are not currently expected, but localized or regionalized lockdowns are not
  unfeasible.
- Positive vaccine news from Pfizer and Moderna could help investors feel more confident about the "light at the end of the tunnel" as 2021 rolls on.
- Manufacturing PMIs point towards ongoing recovery, but services have been (and will likely be) hit harder by containment measures.

#### CORPORATE PROFIT GROWTH HELPS DRIVE THE ECONOMIC CYCLE

- A revival in corporate profits is integral for the economic recovery. We saw earnings estimates plunge earlier in the year, but things have been turning up since then.
- Profits are set to tumble in 2020 with Q2 being the worst quarter. A strong earnings recovery (+ 20% to 30% for S&P 500) is anticipated in 2021, bringing earnings back near 2019 levels.
- Risks to small businesses with less access to capital markets are prevalent, but we do not believe the impact will be large enough to bring down the economy.

#### MONETARY POLICY, FISCAL POLICY, AND VACCINE HOPES ARE KEY

- The Fed cut rates to zero and announced unlimited QE in an effort to mitigate the negative impacts. Other global central banks have pursued aggressive monetary policy as well, which helps provide liquidity and support the global market. We expect monetary support to continue.
- We've seen strong responses from fiscal authorities around the world, which should help bridge the gap until social distancing comes to an end.
   We anticipate further stimulus from the US government by the end of Q1 2021.
- Vaccine distribution in 2021 would allow social distancing to begin to ease by the summer and help the economy normalize.

Data as of 11/13/2020: Loomis Sayles Macro Strategies Group. This material is provided for informational purposes only and should not be construed as investment advice. The forecasted views and opinions expressed reflect those of the authors and do not necessarily reflect the views of Loomis, Sayles & Company L.P. All statements are made as of the date of the presentation and are subject to change at any time without notice.



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# why loomis sayles?

#### Rich Resources

- Tremendous breadth and depth of fundamental research
- Security-specific analysis complemented by global macro and quantitative research
- Stable, long-term management at both firm and portfolio levels

#### **Collaborative Process**

- Continuous collaboration between portfolio managers, strategists, research analysts and traders
- Investment decisions made by small, accountable portfolio management teams acting with conviction
- Proactive engagement with clients to help deliver compelling solutions

#### Commitment to Performance

- Trusted reputation since 1926
- Embrace intelligent risk to optimize opportunity

#### Client Focused

- Experienced client service continuously sharing portfolio insight and market perspective
- A culture of integrity, transparency and commitment to our clients



BOARD Meeting: 1/26/21 Item VII-E Attachment 1 IC Meeting: 12/9-10/20 Item II Attachment 7

### disclosure

Past performance is no guarantee of future results.

This is not an offer of, or a solicitation of an offer for, any investment strategy or product. Any investment that has the possibility for profits also has the possibility of losses.

Gross returns are net of trading costs. Net returns are gross returns less effective management fees. Returns for multi-year periods are annualized.

Indices are unmanaged and do not incur fees. It is not possible to invest directly in an index.

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Principal Investment Risks: Investments in bonds can lose their value. When interest rates rise, bond prices usually fall and vice versa. High yield securities are subject to a high degree of market and credit risk, including risk of default. In addition, the secondary market for these securities may lack liquidity which, in turn, may adversely affect the value of these securities and that of the portfolio. Foreign investments involve special risks including greater economic, political and currency fluctuation risks, which may be even greater in emerging markets. Currency exchange rates between the US dollar and foreign currencies may cause the value of the investments to decline. Commodity-related investments, including derivatives, may be affected by a number of factors including commodity prices, world events, import controls and economic conditions and therefore may involve substantial risk of loss. Equity securities are volatile and can decline significantly in response to broad market and economic conditions. Diversification does not ensure a profit or guarantee against a loss.

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An electronic version of this presentation book is available upon request.



# contacts

#### RELATIONSHIP MANAGEMENT

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BOARD Meeting: 1/26/21 Item VII-E

IC Meeting: 12/9-10/20

Attachment 1





# Los Angeles City Employees' Retirement System Core Bond Strategy

December 10, 2020



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Firm & Team Overview

# Structured to Deliver Compelling Results Over The Long-term

Clients partner with us for innovative investment solutions to achieve their unique objectives

#### Aligned and Engaged

100% independent, employee-owned; invest alongside clients

#### **Global Capabilities**

Offices across 24 countries, with 18 portfolio management centers

#### **Breadth of Independent Perspectives**

663 investment professionals connected across public and private markets, equity, fixed income, alternatives and real estate

#### **Experienced and Stable**

25+ year average industry experience for lead PMs; 96% annualized retention rate of senior investment professionals<sup>1</sup>

#### **Deep Resources**

Extensive fundamental research, data science capabilities, innovative ESG approach and sophisticated risk management

#### Leader in ESG

Member of the PRI 2020 Leaders' Group, a designation awarded to fewer than 1% of investment firms for excellence in ESG practices

#### Long-term Outperformance<sup>2</sup>



#### Institutional-oriented public markets equity

Percentage of institutional-oriented AUM outperforming benchmark since inception ended September 30, 2020



#### Institutional-oriented fixed income

Percentage of institutional-oriented AUM outperforming benchmark since inception ended September 30, 2020



#### Private equity

Percentage of NB Private Equity funds raised between 2009 – 2018 (since inception performance) outperforming benchmark Net MOIC

<sup>1.</sup> Retention of MD and SVP level since becoming an independent company in 2009.

<sup>2.</sup> Institutional-oriented equity and fixed income assets under management ("AUM") includes the firm's equity and fixed income institutional separate account ("ISA"), registered fund, and managed account/wrap ("MAG") offerings and are based on the overall performance of each individual investment offering against its respective benchmark. High net worth/private asset management ("HNW") AUM is excluded. If HNW AUM were included, the percentage of AUM outperforming the benchmark since inception period would have been 85% for equities and 96% for fixed income. Equity and Fixed Income AUM outperformance results are asset-weighted so individual offerings with the largest amount of assets under management have the largest impact on the results. Please see additional disclosures for important information regarding Private Equity methodology. All performance data for NB Private Equity funds, private equity indices data is as of December 31, 2019. Results are shown gross of fees. Individual offerings may have experienced negative performance during certain periods of time. See Additional Disclosures for additional information regarding the outperformance statistics shown (including 3-, 5- and 10-yr statistics for institutional-oriented equity and fixed income). Indexes are unmanaged and are not available for direct investment. Investing entails risks, including possible loss of principal. Past performance is no quarantee of future results.

## Employee Ownership Fosters Team Stability and Alignment with Clients

Industry-leading experience, retention and culture

**Ownership Structure** 

100%

independent, employee-owned Manager Experience

99%

of clients' assets managed by lead PMs who have 20+ years of industry experience

#### **Alignment With Clients**

~\$4bn

invested by Neuberger Berman employees alongside clients<sup>1</sup>

100%

deferred cash compensation directly linked to team and firm strategies

#### **Retention Levels For Senior Investment Professionals**

|      | Managing Directors (includes retirements) | Managing Directors (competitor departures only) |
|------|---|---|
| 2015 | 99%                                       | 100%  |
| 2016 | 91%                                       | 99%   |
| 2017 | 94%                                       | 100%  |
| 2018 | 97%                                       | 99%   |
| 2019 | 96%                                       | 100%  |

#### **Our Culture**



2014



2017



2015



2018



2016



2019

<sup>1.</sup> Employee assets include current and former employees and their family members.

# Our Comprehensive Investment Offering Spans All Major Asset Classes

Investing \$374bn for clients globally

| PUBLIC<br>MARKETS  | EQUITIES  |   | FIXED INCOME   | FIXED INCOME HEDGE FUNDS & LIQUID ALTERNATION |   | REAL ESTATE  |
|--------------------|---|---|--|---|---|--|
| \$289bn            | FUNDAMENTAL Global U.S. EAFE / Japan Emerging Markets - China Thematic Strategies MLPs            | QUANTITATIVE Global U.S. Emerging Markets Custom Beta | Global Investment Grade Global Non-Investment Grade Emerging Markets Municipals Multi-Sector Currency  | FUNDAMENTAL Hedge Funds Liquid Alternatives   | QUANTITATIVE Commodities Options Global Macro Risk Parity Risk Premia | Global<br>U.S.<br>Long/Short – Almanac                   |
|                    | \$101bn   |   | \$168bn  | \$18bn  |   | \$2bn  |
| PRIVATE<br>MARKETS | PRIVATE EQUITY  |   | PRIVATE CREDIT   | SPECIALTY ALTERNATIVES                        |   | PRIVATE REAL ESTATE                                      |
| \$85bn             | Primaries Co-Investments Secondaries Specialty Strategies Alternative Asset Manager Stakes – Dyal |   | Private Debt Credit Opportunities Special Situations Residential Loans Specialty Finance European Private Loans  Insurance-Linked Strategies Late Stage Pre-IPO SPACs  SPACs |   | tegies  | Private Real Estate – Almanac<br>Real Estate Secondaries |
|                    | \$69bn  |   | \$9bn  | \$3bn   |   | \$4bn  |
|                    |   | ESG INTEGI  | RATION GLOBAL RESEARCH   | I CAPABILITIES                                | DATA SCIEN  | CE   |

# Our Approach to Fixed Income Investing

Our strength lies in our fundamental research and the breadth of the team to seek to achieve client defined objectives

#### **Integrated Global Platform**

- A senior leadership team defined by their experience, collaboration and continuity
- 170+ investment professionals covering all sectors & geographies of the fixed income markets
- Global perspective with local presence: investment teams located in 8 cities on 3 continents



#### **High Quality Alpha Sources**

- Steadfast commitment to fundamental research
- Belief that security selection is a repeatable and a high quality alpha source through cycles
- Broad range of proprietary credit, macroeconomic and quantitative tools help inform our fundamental research



#### Consistent Approach to Portfolio Construction

- Focus investments in sectors offering attractive relative value
- Utilize consistent methodologies to value fixed income markets
- Emphasis on understanding tail risks in determining our level of confidence in an investment outcome

#### **Complete Suite of Focused Strategies**

Global and diverse nature of our investment process enables our team to offer a variety of solutions based on specific investor needs.

#### **Consistent Client Alignment**

We continuously evolve to meet and anticipate client objectives such as the incorporation of ESG Investing, quantitative tools, as well as combination of investing in public and private markets.

As of September 30, 2020. This material is intended as a broad overview of the Portfolio Manager's style, philosophy and investment process and is subject to change without notice. Portfolio Manager's views may differ from that of other portfolio managers as well as the views of the firm. Information is intended to be a general overview of the process, is as of the date of this presentation, and is subject to change without notice. See Additional Disclosures at the end of this material, which are an important part of this presentation.

#### A Global Fixed Income Platform

Globally integrated team managing \$168bn across all fixed income markets

| North America                  |
|--------------------------------|
| <b>\$80bn</b> AUM              |
| CHICAGO<br>NEW YORK<br>ATLANTA |
| 111 Investment Professionals   |





98% Assets Managed by Lead PMs with 20+ Years Experience

97% AUM Exceeding Benchmark Returns Since Inception

Source: Neuberger Berman. As of September 30, 2020. Assets under management figures are based on client domicile. Past performance is not indicative of future results.

RESEARCH LEADERSHIP

# Fixed Income Organization

Our global platform is comprised of over 170 investment professionals, including 76 research analysts

#### BRAD TANK, CIO of Fixed Income ASHOK BHATIA, Deputy CIO

| MULTI-SECTOR              | INVESTMENT<br>GRADE         | NON-INVESTMENT<br>GRADE | EMERGING<br>MARKETS DEBT           | MUNICIPALS   | PRIVATE<br>CREDIT <sup>1</sup> |
|---------------------------|-----------------------------|-------------------------|------------------------------------|--------------|--------------------------------|
| \$14bn                    | \$75bn                      | \$37bn                  | \$25bn                             | \$12bn       | \$9bn                          |
| BRAD TANK<br>ASHOK BHATIA | THANOS BARDAS<br>DAVE BROWN | JOE LYNCH               | ROB DRIJKONINGEN<br>GORKY URQUIETA | JAMES ISELIN |                                |

#### SENIOR PORTFOLIO MANAGERS

| SEMIORI ORTI GEIGI   | WINTOLING  |   |  |   |   |  |
|--|--|---|--|---|---|--|
| Global / US Opportunistic Strategies Thanos Bardas Ashok Bhatia Dave Brown Adam Grotzinger Jon Jonsson Norman Milner Inflation / Liability Aware Thanos Bardas Olumide Owolabi Insurance Solutions Jason Pratt Currency Ugo Lancioni | Rates Thanos Bardas Anthony Woodside Credit Dave Brown Julian Marks Bob Summers Securitized Jason Smith Tom Sontag Core/Core Plus Thanos Bardas Dave Brown Adam Grotzinger Nate Kush European Patrick Barbe Vito Cavaliere Yanick Loirat Antonio Serpico | High Yield Russ Covode Dan Doyle Chris Kocinski Joseph Lind  European High Yield/Loans Vivek Bommi Simon Matthews  Senior Floating Rate Loans / Structured Credit Stephen Casey Joe Lynch Pim van Schie  European Private Loans Pieter D'Hoore Philip Ortner Peer Rosenberg | Hard Currency Bart van der Made Local Currency Raoul Luttik Corporates Jennifer Gorgoll Nish Popat Asian Fixed Income Prashant Singh China Fixed Income Peter Ru | Cash/Short Duration Kristian Lind Intermediate James Iselin S. Blake Miller High Income James Iselin S. Blake Miller Eric Pelio | Special Situations Michael Holmberg John Humphrey Brendan McDermott Ravi Soni Residential Loans Dmitry Gasinsky | Multi-Sector David Tang Investment Grade Steve Flaherty Non-Investment Grade Steve Ruh Rachel Young Emerging Markets Debt Puay Yeong Goh Vera Kartseva Kaan Nazli Municipals James Lyman |

As of September 30, 2020.

Combined investment professionals of the firm and affiliated investment management entities.

<sup>&</sup>lt;sup>1</sup> Private Credit additionally includes Private Debt, Credit Opportunities, and Specialty Finance.
Fixed Income assets under management excludes fixed income assets (\$6bn) managed by private wealth management and quantitative multi-asset class teams and includes broad mandate sleeves (\$1bn).

# Experienced and Stable Fixed Income Team

Experienced investment team leverages the depth of insights from across the NB FI platform

#### **Portfolio Managers**



Thanos Bardas 22 Yrs of Exp. 22 Yrs at Firm



Dave Brown 29 Yrs of Exp. 27 Yrs at Firm



Nate Kush 19 Yrs of Exp. 19 Yrs at Firm

#### Supported By Global Fixed Income Team With Over 170 Professionals



| Global Investment<br>Grade Credit      | Securitized                            | Developed Market<br>Sovereign Debt                                | Diversified<br>Currency                  | Global Non-<br>Investment Grade       | Emerging Market<br>Debt  | Municipal<br>Bonds                       |
|--|--|---|--|---------------------------------------|--|--|
| Lead PM (Yrs Exp.):<br>Dave Brown (29) | Lead PM (Yrs Exp.):<br>Tom Sontag (38) | Lead PM (Yrs Exp.):<br>Patrick Barbe (32)<br>& Thanos Bardas (22) | Lead PM (Yrs Exp.):<br>Ugo Lancioni (25) | Lead PM (Yrs Exp.):<br>Joe Lynch (24) | Lead PMs (Yrs Exp.):<br>Rob Drijkoningen (30)<br>& Gorky Urquieta (26) | Lead PM (Yrs Exp.):<br>James Iselin (27) |
| 39 Investment Resources                | 15 Investment Resources                | 16 Investment Resources   | 9<br>Investment Resources                | 52 Investment Resources               | 34 Investment Resources  | 16 Investment Resources                  |

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Investment Philosophy and Process

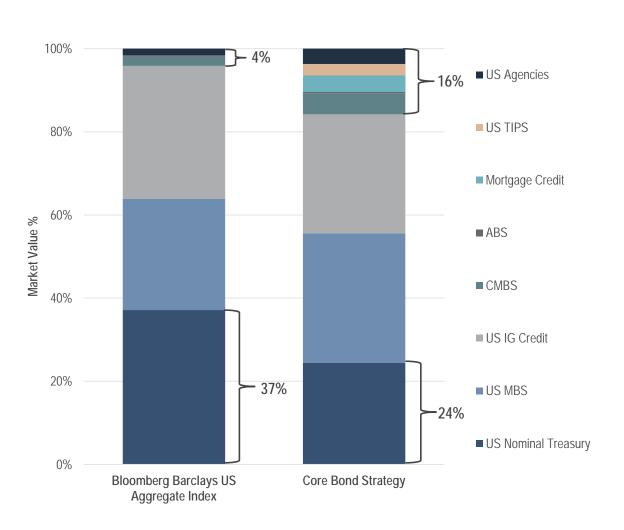
# Core Bond Strategy Overview

# A clearly defined approach with an extensive track record

|   | CORE BOND   |
|---|---|
| Benchmark   | Bloomberg Barclays U.S. Aggregate Index   |
| Tracking error range (Over a three to five year market cycle) | 75 to 125 basis points  |
| Volatility range (Over a three to five year market cycle)     | Similar to benchmark  |
| Investment universe   | Diversified portfolio of government-related, corporate, mortgage-backed and asset-backed securities |
|   | Primarily: sector allocation/rotation and security selection  |
| Potential alpha sources                                       | Secondarily: duration/yield curve positioning   |
|   | Thirdly: if permitted, currency exposures   |
| Duration flexibility  | Typically +/- 1 year vs. benchmark  |
| Credit rating focus   | Investment grade rated securities   |
| Regional focus  | Domestically focused, similar to benchmark  |
| Non-U.S. dollar exposure                                      | None, fully hedged or limited   |
| Other vehicles  | Mutual Fund and Collective Investment Trust   |
| Composite AUM & composite inception date                      | \$5,963 mm (1/1/82)   |
| Source: Neuberger Berman. As of September 30, 2020.           |   |

# An Active Approach to Address Today's Fixed Income Markets

Our Core Bond strategy incorporates a broader scope of high quality, investment grade sectors than the index and also seeks to add value through security selection and, to a lesser extent, duration management



# Research drives high conviction security selection

72

IG Corporate Issuers vs. 947 for the Benchmark

# Interest rate risk is actively managed

-0.9 to +0.5 years

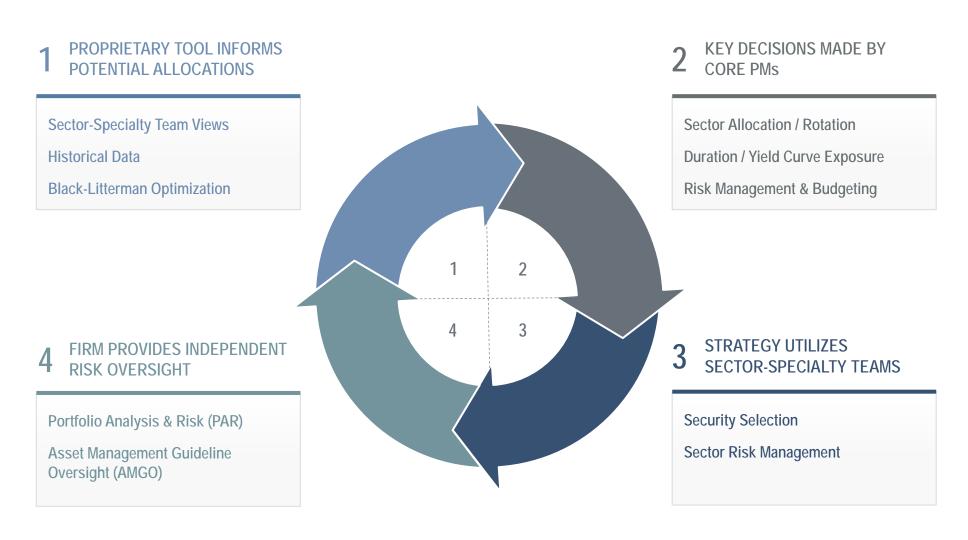
Active Duration vs. the Benchmark (Last 5 Years)

Source: Neuberger Berman. Data as of 9/30/20. Data shown excludes cash and net unsettled positions.

- Historical range is for the following time period: October 2015 September 2020.
- 2. Benchmark shown is the Bloomberg Barclays U.S. Aggregate Bond Index.

#### **Investment Process**

Proven approach to building diversified and dynamic portfolios

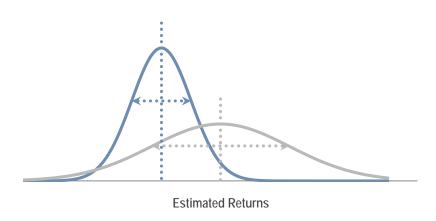


This material is provided for informational purposes only, is as of the date hereof and is subject to change without notice. Neuberger Berman advisors and portfolio managers may make recommendation or take positions contrary to the views expressed. Nothing herein constitutes a prediction or projection of future events or future market behavior. Due to a variety of factors, actual events or market behavior may differ significantly from any views expressed.

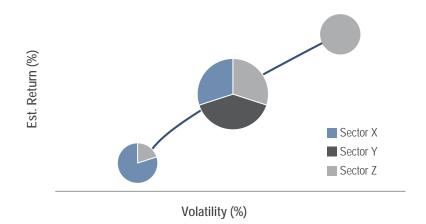
# Proprietary Asset Allocation Tool: Sector-Specialty Views & Optimization

Sector-specialty portfolio managers provide forward-looking views for their sectors which are used as key inputs for a proprietary portfolio optimization tool

Sector-specialty PMs estimate sector returns under various scenarios and assign probabilities to those outcomes



Proprietary optimization tool generates potential allocations, and Core PMs overlay judgement to finalize positioning



- Estimated returns and probabilities are used to create an estimated return and confidence level for each sector
- A key metric measured is view uncertainty, i.e. expected risk
- Scenarios vary across sectors, reflecting that different factors drive different sector returns (economic growth, inflation, prepayment speeds, etc.)
- Process is designed to account for both probable and extreme outcomes, i.e. tail risks
- Combined with correlation matrices and return distributions for historical time periods, sector-specialty team views are inputs for a portfolio optimization which generates potential allocations
- We believe this process serves as a disciplined approach to comparing relative value across disparate sectors and aims to minimize tail risk
- Optimization results are a key consideration, but Core PMs ultimately decide the final portfolio allocation

#### Global Investment Grade Credit: Sector Investment Process

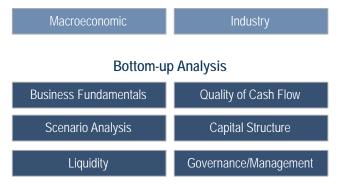
We believe consistently attractive returns are the result of a focus on practical research, managing tail risk and capitalizing on mispricings

#### **Deep and Experienced Team**

- 39 total investment resources primarily in Chicago & London
- 24 years average experience for lead Portfolio Managers
- 14 years average experience at Neuberger Berman for lead PM's

"Credit Best Practices" Checklist

#### **Top-down Analysis**



#### **Keys to Success**

- Disciplined investment process that combines qualitative and quantitative analysis
- · Risk management is central to our philosophy
- · Internally generated practical and insightful research
- · Highly diversified portfolios seek to minimize individual issuer credit risk

#### **Five Components to Construct Credit Portfolios**



Data as of September 30, 2020.

#### Securitized Products: Sector Investment Process

Loan level collateral performance forecasting is the foundation of fundamental analysis

#### Deep and Experienced Team

- 15 total investment resources in Chicago & London
- 33 years average experience for lead Portfolio Managers
- 22 years average experience at Neuberger Berman for lead PM's

#### **CMBS Analytical Framework**



#### Agency MBS Portfolio Construction Process

# Treasury Yield Curve Forward Segments Original Maturity: 30-year, 15-year Origination: FHA / VA, Conventional Coupon Intervals Analyze Index Construct Active Exposures Investment Insights Risk Management Agency MBS Portfolio

#### Loan Level Non-Agency RMBS Model

| Loan Characteristics | Borrower Profile              | Macro Environment |
|----------------------|-------------------------------|-------------------|
|                      | pagragii                      |                   |
|                      | Proprietary Forecasting Model |                   |
|                      | OUTPUT                        |                   |
| Non-payment          | Cure                          | Payoff            |

Data as of September 30, 2020.

# Developed Market Sovereign Debt: Sector Investment Process

Approach incorporates views and signals across three horizons – strategic, tactical and short term

#### **Deep and Experienced Team**

- 16 total investment resources in Chicago & London
- 27 years average experience for lead Portfolio Managers
- 14 years average experience at Neuberger Berman for lead PM's

#### Tactical: Intermediate Term Horizon

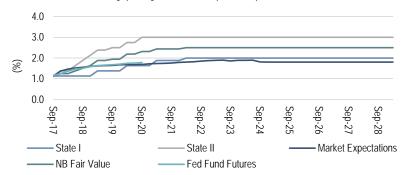
• Cross-market signals, such as momentum indicators, used to evaluate directional trends in rates and inflation



Data as of September 30, 2020.

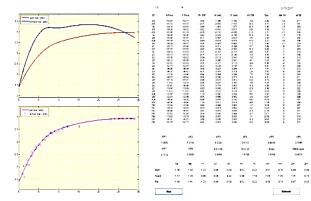
#### Strategic: Twelve to Eighteen Month Horizon

· Outlook for monetary policy and the expected path of inflation



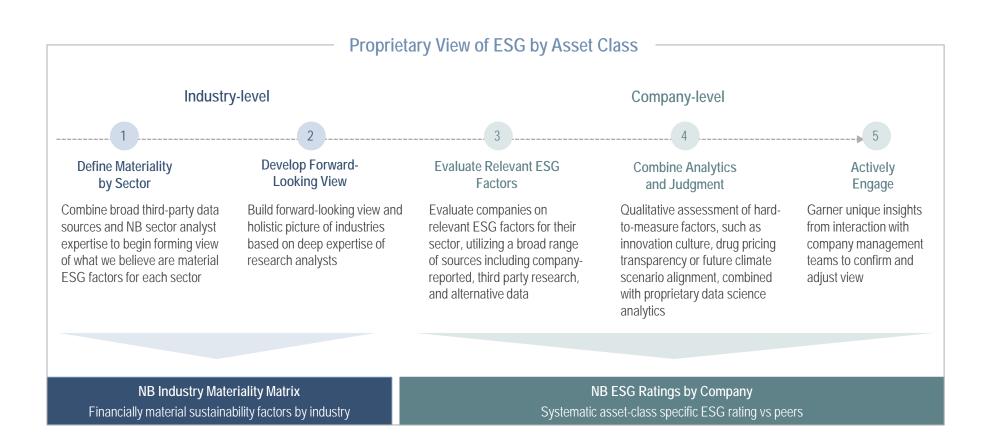
#### **Short Term Horizon**

• Security selection seeks to capture short term, idiosyncratic dislocations



# ESG Investment Process Emphasizes Identifying Financially Material ESG Factors

Research teams leverage proprietary in-house research tools to develop a data-driven, differentiated view



This material is intended as a broad overview of the portfolio managers' style, philosophy and process and is subject to change without notice. The portfolio managers' views may differ from those of other portfolio managers as well as the views of Neuberger Berman. Portfolio characteristics are subject to change without notice. See Additional Disclosures at the end of this piece, which are an important part of this presentation.

# Attachment 8

# Develop Forward-Looking Views On What We Believe Are Financially Material ESG Factors by Industry

#### Proprietary NB industry materiality matrix enhances company ESG analysis

- Guides ESG investment analysis and engagement in a consistent and comparable way, accommodating real-time insights from sector experts
- Application to asset classes and investment strategies with limited research coverage, including private markets

|         |                                     | Enviror   | nmental             | Social                     |                         | Workforce          |                              | Supply Chain                  |                       | Leadership & Governance |                             |
|---------|-------------------------------------|-----------|---------------------|----------------------------|-------------------------|--------------------|------------------------------|-------------------------------|-----------------------|-------------------------|-----------------------------|
|         | Factor                              | Emissions | Water<br>Management | Data Privacy<br>& Security | Pricing<br>Transparency | Health &<br>Safety | Human Capital<br>Development | Product Safety<br>& Integrity | Materials<br>Sourcing | Innovation              | Policy &<br>Regulation Risk |
|         | Consumer Goods                      |           |                     |                            |                         |                    |                              |                               |                       |                         |                             |
|         | Extractives & Mineral<br>Processing |           |                     |                            |                         |                    |                              |                               |                       |                         |                             |
|         | Financials                          |           |                     |                            |                         |                    |                              |                               |                       |                         |                             |
|         | Food & Beverage                     |           |                     |                            |                         |                    |                              |                               |                       |                         |                             |
| SS      | Health Care                         |           |                     |                            |                         |                    |                              |                               |                       |                         |                             |
| SECTORS | Infrastructure                      |           |                     |                            |                         |                    |                              |                               |                       |                         |                             |
|         | Renewable Resources                 |           |                     |                            |                         |                    |                              |                               |                       |                         |                             |
|         | Resource<br>Transformation          |           |                     |                            |                         |                    |                              |                               |                       |                         |                             |
|         | Services                            |           |                     |                            |                         |                    |                              |                               |                       |                         |                             |
|         | Technology &<br>Communication       |           |                     |                            |                         |                    |                              |                               |                       |                         |                             |
|         | Transportation                      |           |                     |                            |                         |                    |                              |                               |                       |                         |                             |

Legend

Likely to be Material

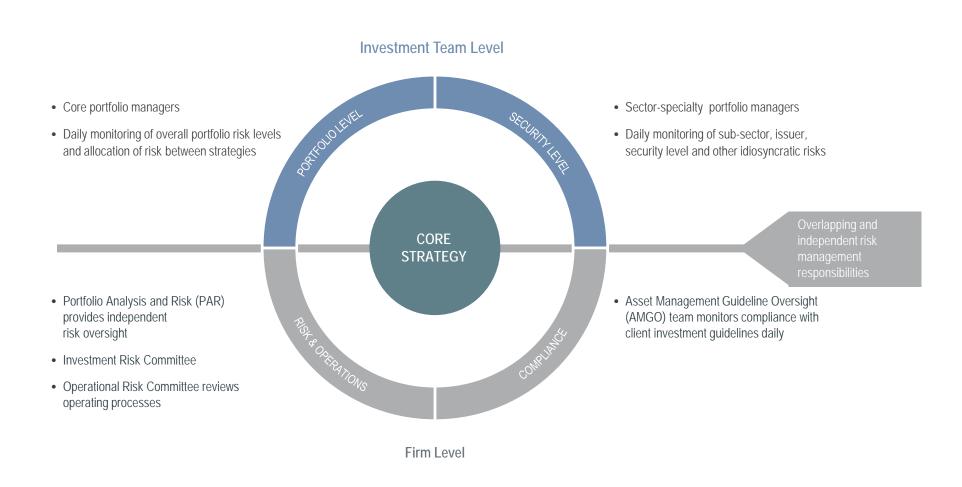
Unlikely to be Material

Source: Neuberger Berman Materiality, As of May 12, 2020.

Materiality Matrix is as of the date indicated and subject to change without notice. This material is intended as a broad overview of the portfolio managers' style, philosophy and process and is subject to change without notice. Please note ESG integration is only one input in the credit analysis and is not solely determinative of whether an asset will be purchased. See Additional Disclosures at the end of this piece, which are an important part of this presentation.

# Risk Management

Multi layered approach – security level, portfolio construction and independent oversight



This material is intended as a broad overview of the portfolio managers' style, philosophy and investment process and is subject to change without notice.

# Keys to Core Bond Management Success

| REQUIREMENT                | RATIONALE   |        | OUR ADVANTAGE  |
|----------------------------|---|--------|--|
| Extensive Resources        | Needed to cover complex and dynamic markets                           | $\sum$ | 170+ Member Fixed Income Team  |
|                            |   |        |  |
| Global Perspective         | As markets and economies are increasingly interconnected              | $\sum$ | Integrated investment platform with presence in the US, Europe and Asia          |
|                            |   |        |  |
| Asset Allocation Expertise | To navigate changing market environments                              | $\sum$ | A well-defined and time tested process   |
|                            |   |        |  |
| Deep Fundamental Research  | Key to uncovering market mispricings and generating alpha             | $\sum$ | Sector specialty teams of dedicated experts                                      |
|                            |   |        |  |
| Focus on Risk Management   | To understand downside and meet client objectives                     | $\sum$ | Multi-layered risk management approach with independent oversight                |
|                            | Desfermence is critical but allows acquire f                          |        | Direct access to partfalia managers, their unique                                |
| A Trusted Partnership      | Performance is critical, but clients require more from their managers | $\sum$ | Direct access to portfolio managers, their unique insights and knowledge sharing |

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Portfolio Review

#### Investment Performance

As of September 30, 2020

| Periods Ending September 30, 2020            | Los Angeles<br>City Employees'<br>Retirement System<br>(Gross of Fees) <sup>1</sup> | Los Angeles<br>City Employees'<br>Retirement System<br>(Net of Fees) <sup>1</sup> | Bloomberg<br>Barclays U.S.<br>Custom Index <sup>2</sup> | Difference<br>(Gross of Fees) | Difference<br>(Net of Fees) |
|--|---|---|---|-------------------------------|-----------------------------|
| Third Quarter 2020                           | 0.81%   | 0.77%   | 0.62%   | +0.19%                        | +0.15%                      |
| Year to Date 2020                            | 7.81%   | 7.69%   | 6.79%   | +1.02%                        | +0.90%                      |
| One Year                                     | 8.11%   | 7.95%   | 6.98%   | +1.13%                        | +0.97%                      |
| Three Years                                  | 5.67%   | 5.51%   | 5.24%   | +0.43%                        | +0.27%                      |
| Five Years                                   | 4.65%   | 4.49%   | 4.18%   | +0.47%                        | +0.31%                      |
| Seven Years                                  | 4.33%   | 4.18%   | 3.97%   | +0.36%                        | +0.21%                      |
| Ten Years                                    | 4.45%   | 4.32%   | 3.77%   | +0.68%                        | +0.55%                      |
| Since Inception<br>(11/01/1990 - 09/30/2020) | 6.85%   | 6.77%   | 6.11%   | +0.74%                        | +0.66%                      |

<sup>1.</sup> Preliminary returns; not yet reconciled. Gross returns do not reflect the deduction of advisory fees and other expenses, which will reduce returns. This supplemental report is provided for informational purposes only; please refer to your account statement(s) or other statement provided by your custodian for the official records of your account(s). Investing entails risks, including possible loss of principal. Past performance is no guarantee of future results. See Additional Disclosures at the end of this presentation.

<sup>2.</sup> Returns reflect the Barclays Government/Credit Index from inception to 10/1/97; the Barclays Aggregate Index from 10/1/97 – 6/30/00; the Barclays Universal Index from 7/1/00 to 6/30/13 and the Bloomberg Barclays Aggregate Index 7/1/13 forward.

#### Performance Attribution

#### As of September 30, 2020

Year to Date Return Attribution

ABS/CMBS

Total

|                            | Jan - Mar<br>2020 | Apr - Jun<br>2020 | Jul - Sep<br>2020 | YTD<br>2020 |
|----------------------------|-------------------|-------------------|-------------------|-------------|
| U.S. Rates                 | +19               | +14               | +1                | +36         |
| Non-U.S. DM & EM Sovereign | +0                | 0                 | +0                | +0          |
| TIPS                       | -31               | +10               | +5                | -16         |
| IG Credit                  | +1                | +95               | -4                | +93         |
| Security Selection         | -33               | +86               | -1                | +52         |
| Sector Allocation          | +33               | +9                | -3                | +40         |
| Agency MBS                 | -19               | +10               | +4                | -6          |
| Non-Agency MBS             | -37               | +30               | +3                | -4          |
|                            |                   |                   |                   |             |

-34

-102

+24

+182

+9

+19

+102

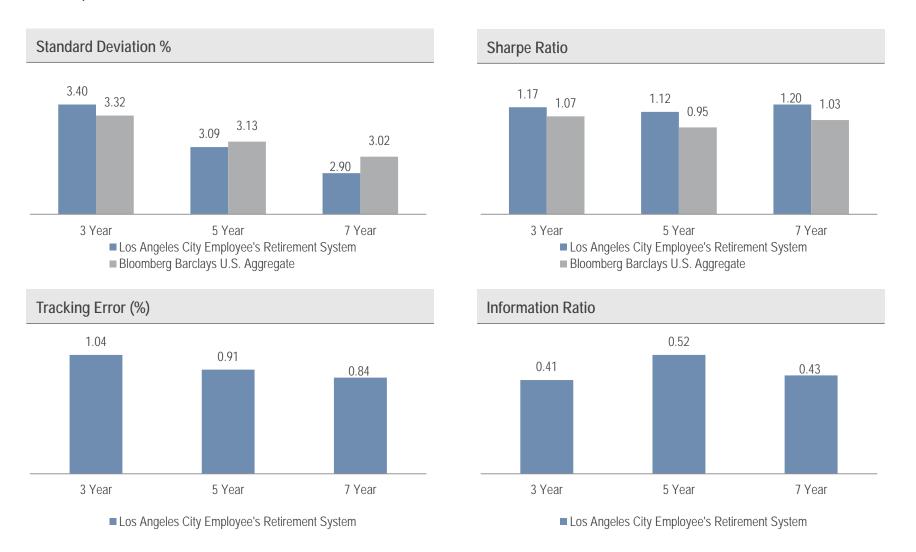
| HISTORICAL RETURN ATTRIBUTION |      |      |      |      |      |  |  |
|-------------------------------|------|------|------|------|------|--|--|
|                               |      |      |      |      |      |  |  |
|                               | 2019 | 2018 | 2017 | 2016 | 2015 |  |  |
| U.S. Rates                    | -15  | +54  | -5   | -7   | -1   |  |  |
| Non-U.S. DM & EM Sovereign    | -3   | -84  | +6   | -16  | +1   |  |  |
| TIPS                          | +4   | -4   | +5   | +32  | -15  |  |  |
| IG Credit                     | +57  | -7   | +9   | +56  | +23  |  |  |
| Security Selection            | +59  | -12  | +12  | +62  | +25  |  |  |
| Sector Allocation             | -3   | +4   | -3   | -6   | -2   |  |  |
| Agency MBS                    | +9   | -10  | +1   | -7   | +8   |  |  |
| Non-Agency MBS                | +1   | 0    | +2   | +1   | +1   |  |  |
| ABS/CMBS                      | +15  | -1   | +12  | +10  | +1   |  |  |
| Total                         | +68  | -52  | +30  | +69  | +18  |  |  |

Historical Poturn Attribution

Preliminary returns; not yet reconciled. Gross returns do not reflect the deduction of advisory fees and other expenses, which will reduce returns. This supplemental report is provided for informational purposes only; please refer to your account statement(s) or other statement provided by your custodian for the official records of your account(s). Investing entails risks, including possible loss of principal. Past performance is no guarantee of future results. See Additional Disclosures at the end of this presentation.

#### Historical Risk

#### As of September 30, 2020

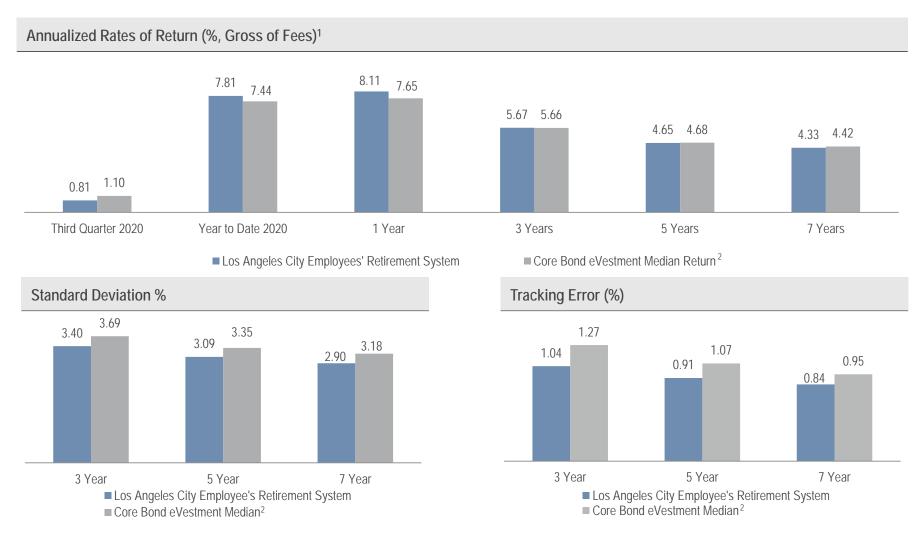


Source: Neuberger Berman.

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## Investment Performance vs. Peer Group

As of September 30, 2020



<sup>1.</sup> Preliminary returns; not yet reconciled. Gross returns do not reflect the deduction of advisory fees and other expenses, which will reduce returns. This supplemental report is provided for informational purposes only; please refer to your account statement(s) or other statement provided by your custodian for the official records of your account(s). Investing entails risks, including possible loss of principal. Past performance is no guarantee of future results. See Additional Disclosures at the end of this presentation.

<sup>2.</sup> Core Bond eVestment Median Returns represent the median manager return values for all funds within eVestment's Core Bond universe.

# LACERS Manager Monitoring Policy

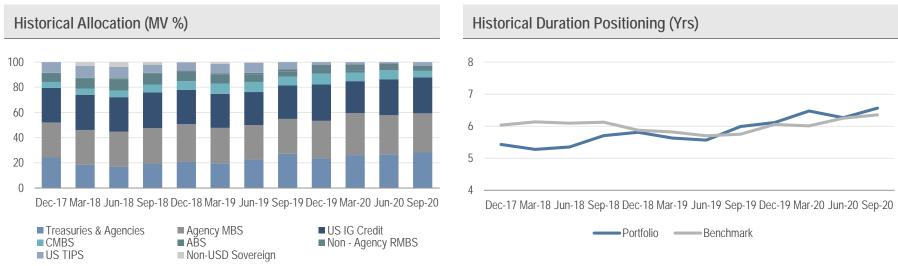
# Quantitative Factors

| Factor  | Trigger   |  | Date       | Actual  |
|---|---|--|------------|---|
| Annualized <u>net</u> performance relative to its benchmark for trailing <u>3-years</u> | Underperforms (net of fees) in 8 of 12 previous quarters            |  | 9/30/2020  | Underperformed (net of fees) in 4 of 12 previous quarters |
|   |   |  | 12/31/2019 | +0.10%  |
| Annualized <u>net</u> performance relative  | Underperforms (not of face)   |  | 3/31/2020  | -0.10%  |
| to its benchmark for trailing <u>5-years</u>  | Underperforms (net of fees)   |  | 6/30/2020  | +0.22%  |
|   |   |  | 9/30/2020  | +0.31%  |
| Moving average tracking error (TE) for 3 years  | Greater than two standard deviations from 'Since Inception' mean TE |  | 9/30/2020  | < 2 standard deviations                                   |
| Moving average tracking error (TE) for 5 years  | Greater than two standard deviations from 'Since Inception' mean TE |  | 9/30/2020  | < 2 standard deviations                                   |
| Moving average <u>net</u> Information Ratio for trailing <u>5-years</u>                 | Falls below 0.20 AND failing another quantitative factor            |  | 9/30/2020  | +0.35   |

<sup>1.</sup> Preliminary returns; not yet reconciled.

# Positioning Themes

| Key Exposure              |                     |                      |              |                       |                      |                |                  |                          |                     |               |          |
|---------------------------|---------------------|----------------------|--------------|-----------------------|----------------------|----------------|------------------|--------------------------|---------------------|---------------|----------|
|                           |                     | Duration<br>+0.2 yrs |              |                       | ,                    | Yield Cu       | ırve             |                          | U.                  | S. TIPS       |          |
| Interest Rate Positioning | Active Exposure     |                      |              |                       | <u>0-3 Yr</u><br>0.0 | 5-10 Y<br>+0.1 | <u>r 1</u> !     | <del>5+ Yr</del><br>-0.2 | +3.1%               | +0.4 y        | rs       |
|                           |                     | CMBS +3.5% Mortgage  |              | Mortgage Credit +4.4% |                      | 1%             | Agency MBS +7.9% |                          | %                   |               |          |
| Securitized               | Active Market Value | AAA<br>+2.6%         | AA<br>+0.9%  | ,<br>o                | CRTs<br>+2.6%        | 6              | Non-Ag<br>+1.8   | ency<br>%                | Pools/TBAs<br>+6.2% | IOs<br>+1.69  |          |
|                           |                     | Total Banking +1.4%  |              |                       | Mid                  | stream         | +1.4%            | Ted                      | chnol               |               |          |
| Corporate Credit          | Active Market Value | +4.5%                | JPM<br>+0.8% | MS<br>+0.7%           | ST +0.6              |                | ETP<br>0.7%      | MPLX<br>+0.7%            |                     | AVGO<br>+1.0% | FI<br>+0 |



Data as of September 30, 2020. Source: Neuberger Berman.

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#### Portfolio Characteristics

#### As of September 30, 2020

| Portfolio Statistics  |   |                                      |
|-----------------------|---|--------------------------------------|
|                       | Los Angeles<br>City Employees'<br>Retirement System | Bloomberg Barclays<br>U.S. Aggregate |
| Duration (yrs)        | 6.57  | 6.36                                 |
| Spread Duration (yrs) | 4.75  | 3.81                                 |
| Yield to Worst (%)    | 1.51  | 1.16                                 |
| OAS (bps)             | 85  | 59                                   |
| S&P Rating            | AA-   | AA-                                  |
| Corporate Issuers     | 72  | 947                                  |

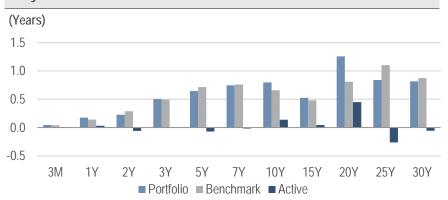
| 1 Ortiono Statistics  |   |                                      |
|-----------------------|---|--------------------------------------|
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| S&P Rating            | AA-   | AA-                                  |
| Corporate Issuers     | 72  | 947                                  |

# Historical Yield to Worst (%) Dec-17 Mar-18 Jun-18 Sep-18 Dec-18 Mar-19 Jun-19 Sep-19 Dec-19 Mar-20 Jun-20 Sep-20 ——Portfolio ——Benchmark

#### Portfolio Credit Ratings<sup>1</sup>

|                         | Los Angeles       |                    |
|-------------------------|-------------------|--------------------|
|                         | City Employees'   | Bloomberg Barclays |
| (%)                     | Retirement System | U.S. Aggregate     |
| AAA or Above            | 67.92             | 69.91              |
| AA Rated                | 4.10              | 3.15               |
| A Rated                 | 9.28              | 12.19              |
| BBB                     | 18.33             | 14.48              |
| BB Rated and Below      | 0.25              | 0.00               |
| Not Rated               | 0.12              | 0.28               |
| Cash / Cash Equivalents | 0.00              | 0.00               |
| Total                   | 100.00            | 100.00             |

#### **Key Rate Duration Contribution**



<sup>1.</sup> Bloomberg Barclays methodology based on the conservative average of Moody's, S&P, and Fitch expressed in S&P's nomenclature. If Moody's, S&P and Fitch all provide a credit rating, the Index Rating is the median of the three agency ratings. If only two agencies provide ratings, the Index Rating is the more conservative rating. If only one agency provides a rating, the Index Rating reflects that agency's rating. Source: Aladdin. Portfolio characteristics are as of the date indicated and subject to change without notice. Components are rounded to 2 decimal places and may incorporate immaterial rounding differences as a result. This is provided for informational purposes only. Investing entails risks, including possible loss of principal. Past performance is no guarantee of future results. See Additional Disclosures at the end of this presentation.

BOARD Meeting: 1/26/21 IC M Item VII-E Attachment 1

IC Meeting: 12/9-10/20 Item II Attachment 8

Fixed Income Market Outlook

#### Sector Outlook – Our Views and Comments

| ◆ Negative Neutral Neutral | Positive - |  |
|----------------------------|------------|--|
| Asset Class                | Our View   | Comments   |
| Interest Rates             |            | Front end rates stay pinned; path of inflation will determine long end dynamics  |
| Inflation-Linked           | +          | Extraordinarily accommodative policy backdrop should lift inflation expectations, particularly in the U.S.   |
| Investment Grade Credit    | +          | Record supply post-COVID shock gives way to light issuance calendar; focus on industry and issuer specific opportunities                               |
| Agency MBS                 | +          | Central bank purchases, heightened need for high-quality spread and increased Treasury issuance are constructive for MBS; prepayment risk remains      |
| Credit Risk Transfers      | +          | Various housing indicators near post-GFC highs signal strength in the housing market; we prefer more seasoned vintages for their superior fundamentals |

As of October 14, 2020 and subject to change without notice. Estimates may not materialize. This material is intended as a broad overview of the Portfolio Manager's views and is subject to change without notice. Portfolio Manager's views may differ from that of other portfolio managers as well as the views of the firm. See Additional Disclosures at the end of this material, which are an important part of this presentation. Nothing herein constitutes a prediction or projection of future events or future market behavior. Due to a variety of factors, actual events or market behavior may differ significantly from any views expressed.

BOARD Meeting: 1/26/21 Item VII-E Attachment 1

IC Meeting: 12/9-10/20 Item II Attachment 8

Appendices

#### **Detailed Asset Allocation**

### As of September 30, 2020

|                         |           | Market \  | Value % | Duration Contribution |           |           | n      | Spread Duration Contribution |           |           |        |             |
|-------------------------|-----------|-----------|---------|-----------------------|-----------|-----------|--------|------------------------------|-----------|-----------|--------|-------------|
|                         | Portfolio | Benchmark | Active  | 3M Δ Active           | Portfolio | Benchmark | Active | 3M Δ Active                  | Portfolio | Benchmark | Active | 3M △ Active |
| Government Related      | 34.37     | 38.71     | -4.34   | 4.25                  | 2.39      | 2.78      | -0.39  | -0.05                        | 0.12      | 0.06      | 0.06   | 0.02        |
| Agencies                | 4.09      | 1.60      | 2.49    | 3.17                  | 0.12      | 0.06      | 0.06   | 0.02                         | 0.12      | 0.06      | 0.06   | 0.02        |
| Treasuries              | 30.28     | 37.11     | -6.83   | 1.08                  | 2.27      | 2.72      | -0.45  | -0.07                        | -         | -         | -      | -           |
| US Treasury Bullets     | 27.21     | 37.11     | -9.91   | -0.84                 | 2.19      | 2.72      | -0.53  | -0.25                        | -         | -         | -      | -           |
| US Treasury TIPS        | 3.07      | -         | 3.07    | 1.92                  | 0.43      | -         | 0.43   | 0.19                         | -         | -         | -      | -           |
| Treasury Futures        | -         | -         | -       | -                     | -0.35     | -         | -0.35  | -0.01                        | -         | -         | -      | -           |
| Global Treasuries       | -         | -         | -       | -                     | -0.00     | -         | -0.00  | 0.00                         | -         | -         | -      | -           |
| Securitized             | 45.04     | 29.30     | 15.74   | -1.74                 | 1.13      | 0.83      | 0.30   | 0.04                         | 1.71      | 1.11      | 0.59   | -0.00       |
| Credit Risk Transfer    | 2.60      | -         | 2.60    | 0.23                  | 0.00      | -         | 0.00   | -0.00                        | 0.08      | -         | 0.08   | 0.03        |
| ABS                     | 0.40      | 0.34      | 0.06    | -1.08                 | 0.00      | 0.01      | -0.01  | -0.00                        | 0.00      | 0.01      | -0.00  | -0.02       |
| Non - Agency RMBS       | 1.75      | -         | 1.75    | -0.22                 | 0.02      | -         | 0.02   | -0.04                        | 0.03      | -         | 0.03   | -0.04       |
| US MBS                  | 34.63     | 26.76     | 7.87    | 1.29                  | 0.87      | 0.70      | 0.17   | 0.21                         | 1.36      | 0.99      | 0.37   | 0.16        |
| CMBS                    | 5.66      | 2.19      | 3.46    | -1.96                 | 0.23      | 0.12      | 0.11   | -0.13                        | 0.23      | 0.11      | 0.11   | -0.13       |
| Investment Grade Credit | 31.80     | 31.96     | -0.16   | 1.04                  | 3.05      | 2.74      | 0.31   | 0.20                         | 2.92      | 2.64      | 0.28   | 0.19        |
| Corporate               | 31.80     | 27.30     | 4.50    | 1.11                  | 3.05      | 2.42      | 0.63   | 0.21                         | 2.92      | 2.33      | 0.59   | 0.19        |
| Financial               | 8.58      | 8.29      | 0.29    | -0.19                 | 0.52      | 0.56      | -0.03  | -0.02                        | 0.51      | 0.54      | -0.03  | -0.02       |
| Industrial              | 21.78     | 16.79     | 4.99    | 1.51                  | 2.33      | 1.61      | 0.72   | 0.26                         | 2.22      | 1.54      | 0.68   | 0.24        |
| Utilities               | 1.44      | 2.23      | -0.79   | -0.22                 | 0.19      | 0.25      | -0.06  | -0.03                        | 0.18      | 0.24      | -0.06  | -0.03       |
| Non-Corporate           | -         | 4.65      | -4.65   | -0.06                 | -         | 0.32      | -0.32  | -0.01                        | -         | 0.31      | -0.31  | -0.01       |
| High Yield              | -         | 0.03      | -0.03   | -0.03                 | -         | 0.00      | -0.00  | -0.00                        | -         | 0.00      | -0.00  | -0.00       |
| Net Unsettled Positions | -11.21    | -         | -11.21  | -3.52                 | -0.00     | -         | -0.00  | -0.00                        | -         | -         | -      | -           |
| Cash / Cash Equivalents | -         | -         | -       | -0.01                 | -         | -         | -      | -                            | -         | -         | -      | -           |
| Total                   | 100.00    | 100.00    | 0.00    | 0.00                  | 6.57      | 6.36      | 0.21   | 0.19                         | 4.75      | 3.81      | 0.93   | 0.20        |

Source: Aladdin.

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# Detailed Credit Exposure

As of September 30, 2020

#### Top 10 / Bottom 10 Sectors by Active Duration Contribution (yrs)

|                         | Dı                |                    |            |               |
|-------------------------|-------------------|--------------------|------------|---------------|
|                         | Los Angeles       | Bloomberg Barclays |            | _             |
|                         | City Employees'   | U.S. Aggregate     |            | Active Market |
| Top 10                  | Retirement System | Index              | Difference | Value (%)     |
| Technology              | 0.40              | 0.22               | 0.18       | 1.28          |
| Cable/Media             | 0.29              | 0.12               | 0.17       | 1.15          |
| Telecom                 | 0.32              | 0.15               | 0.17       | 0.84          |
| Midstream               | 0.25              | 0.08               | 0.16       | 1.36          |
| Integrated              | 0.18              | 0.06               | 0.12       | 0.86          |
| Food and Beverage       | 0.20              | 0.11               | 0.09       | 0.22          |
| Manufacturing/Machinery | 0.14              | 0.07               | 0.07       | 0.42          |
| Tobacco                 | 0.09              | 0.03               | 0.06       | 0.57          |
| Banking                 | 0.38              | 0.34               | 0.04       | 1.40          |
| Pharmaceuticals         | 0.20              | 0.17               | 0.04       | 0.36          |

| Bottom 10   |  |  |  |  |
|---|--|--|--|--|
| Non-Corporate   | 0.00   | 0.32   | -0.32  | -4.68  |
| Railroads   | 0.00   | 0.05   | -0.05  | -0.41  |
| Consumer Cyclical Service   | 0.00   | 0.05   | -0.05  | -0.48  |
| Utility   | 0.19   | 0.23   | -0.04  | -0.63  |
| Retailers   | 0.04   | 0.08   | -0.04  | 0.40   |
| Chemicals   | 0.00   | 0.04   | -0.04  | -0.41  |
| Health Insurance  | 0.00   | 0.04   | -0.04  | -0.34  |
| Insurance   | 0.05   | 0.09   | -0.04  | -0.61  |
| Healthcare  | 0.09   | 0.12   | -0.03  | 0.29   |
| Metals and Mining   | 0.00   | 0.02   | -0.02  | -0.24  |
| Utility Retailers Chemicals Health Insurance Insurance Healthcare | 0.19<br>0.04<br>0.00<br>0.00<br>0.00<br>0.05<br>0.09 | 0.23<br>0.08<br>0.04<br>0.04<br>0.09<br>0.12 | -0.04<br>-0.04<br>-0.04<br>-0.04<br>-0.04<br>-0.03 | -0.63<br>0.40<br>-0.41<br>-0.34<br>-0.61<br>0.29 |

#### Top 25 Issuers by Active Duration Contribution (yrs)

|                             | Dı                | _                  |            |               |
|-----------------------------|-------------------|--------------------|------------|---------------|
|                             | Los Angeles       | Bloomberg Barclays |            |               |
|                             | City Employees'   | U.S. Aggregate     |            | Active Market |
|                             | Retirement System | Index              | Difference | Value (%)     |
| AT&T Inc.                   | 0.22              | 0.06               | 0.16       | 0.66          |
| Anheuser-Busch Inbev        | 0.13              | 0.04               | 0.09       | 0.49          |
| Exxon Mobil Corp.           | 0.10              | 0.02               | 0.09       | 0.48          |
| General Electric Capital    | 0.11              | 0.02               | 0.09       | 0.55          |
| T-Mobile USA Inc.           | 0.09              | 0.01               | 0.08       | 0.82          |
| BAT Intl Finance Plc        | 0.09              | 0.01               | 0.08       | 0.77          |
| Fiserv Inc.                 | 0.08              | 0.01               | 0.08       | 0.57          |
| MPLX LP                     | 0.08              | 0.01               | 0.07       | 0.66          |
| Oracle Corp.                | 0.10              | 0.03               | 0.07       | 0.18          |
| Broadcom Limited            | 0.08              | 0.01               | 0.07       | 1.01          |
| Fox Corp.                   | 0.07              | 0.00               | 0.07       | 0.38          |
| Apple Inc.                  | 0.10              | 0.03               | 0.07       | 0.20          |
| Energy Transfer Partners    | 0.07              | 0.01               | 0.06       | 0.75          |
| Gilead Sciences Inc.        | 0.07              | 0.01               | 0.06       | 0.40          |
| Charter Communications      | 0.07              | 0.02               | 0.05       | 0.45          |
| Comcast Corporation         | 0.10              | 0.05               | 0.05       | 0.54          |
| Morgan Stanley              | 0.07              | 0.02               | 0.05       | 0.73          |
| Coca-Cola Co.               | 0.06              | 0.01               | 0.05       | 0.27          |
| Berkshire Hathaway Inc.     | 0.05              | 0.01               | 0.04       | 0.21          |
| Pacific Gas & Electric Co   | 0.05              | 0.01               | 0.04       | 0.19          |
| Abbvie Inc.                 | 0.07              | 0.03               | 0.04       | 0.74          |
| Cigna Corp.                 | 0.05              | 0.01               | 0.04       | 0.87          |
| Enterprise Products.        | 0.05              | 0.01               | 0.04       | 0.18          |
| Volkswagen Group Of America | 0.04              | 0.00               | 0.04       | 0.60          |
| Chevron Corp.               | 0.04              | 0.01               | 0.03       | 0.27          |

Source: Aladdin.

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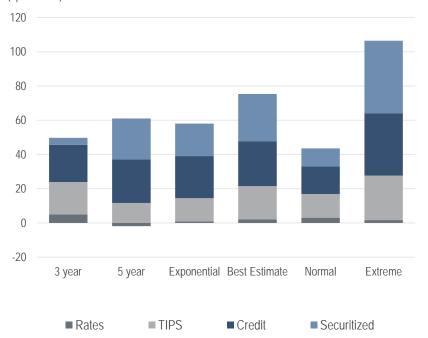
## Risk Management Snapshot

## Multi-faceted risk management with a focus on tail events

## **Proprietary Risk Model**

 Proprietary model used to evaluate tracking error, VaR and CVaR across various historical time horizons and under different market environments

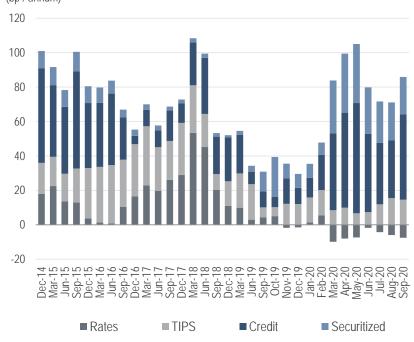
Tracking Error (bp / annum)



#### Aladdin Risk Model

 Third-party system used as a supplementary method for monitoring risk, including tracking error and scenario analysis

Tracking Error (bp / annum)



IC Meeting: 12/9-10/20 Item II Attachment 8

Biographies

#### PORTFOLIO MANAGEMENT TEAM



Brad C. Tank, Managing Director, joined the firm in 2002 and is the Chief Investment Officer and Global Head of Fixed Income. He is a member of Neuberger Berman's Operating, Investment Risk, Asset Allocation Committees and Fixed Income's Investment Strategy Committee, and leads the Fixed Income Multi-Sector Group. From inception in 2008 through 2015, Brad was also Chief Investment Officer of Neuberger Berman's Multi-Asset Class Investment business and remains an important member of that team along with the firm's other CIOs. From 1990 to 2002, Brad was director of fixed income for Strong Capital Management in Wisconsin. He was also a member of the Office of the CEO and headed institutional and intermediary distribution. In 1997, Brad was named "Runner Up" for Morningstar Mutual Fund Manager of the Year. From 1982 to 1990, he was a vice president at Salomon Brothers in the government, mortgage and financial institutions areas. Brad earned a BBA and an MBA from the University of Wisconsin.



David M. Brown, CFA, Managing Director, rejoined the firm in 2003. Dave is Global Co-Head of Investment Grade and acts as Senior Portfolio Manager on both Global Investment Grade and Multi-Sector Fixed Income strategies. He is a member of the Fixed Income Investment Strategy Committee and the Fixed Income Multi-Sector Group. Dave also leads the Investment Grade Credit team in determining credit exposures across both Global Investment Grade and Multi-Sector Fixed Income strategies. Dave initially joined the firm in 1991 after graduating from the University of Notre Dame with a BA in Government and subsequently received his MBA in Finance from Northwestern University. Prior to his return, he was a senior credit analyst at Zurich Scudder Investments and later a credit analyst and portfolio manager at Deerfield Capital. Dave has been awarded the Chartered Financial Analyst designation.



Nathan Kush, Managing Director, joined the firm in 2001. Nathan is a Portfolio Manager for the firm's Global Investment Grade strategies. Additionally, he is involved in investment grade credit research and, previously, covered the banking, brokerage, finance, insurance and REIT sectors. Before joining the investment grade team, he spent three years in Debt Capital Markets in the Investment Banking Division of Lehman Brothers. Nathan earned a BS in Finance and Accounting from Tulane University and an MBA from the University of Chicago.

## Biographies

#### RELATIONSHIP MANAGEMENT TEAM



Paul Sauer, CFA, Managing Director, joined the firm in 2013. Paul is a Client Advisor who is responsible for West Coast Public Institutions as part of the North American Client Coverage Team. Prior to joining Neuberger Berman, Paul was a managing director and head of BlackRock's Endowment and Foundation institutional sales team, and began his financial services career at Goldman Sachs and Credit Suisse in the Equities Division. Paul also served 10 years in the US Navy as a Flight Officer deploying to Southwest Asia. Paul earned a BS from California State University at Northridge, an MBA from USC's Marshall School of Business, and has been awarded the Chartered Financial Analyst designation.



Jennifer Laird, CAIA, Senior Vice President, joined the firm in 2006. Jennifer is a Client Service Manager who leads the North American institutional client service team. Prior to joining the firm, she held various positions at ABN AMRO Asset Management specifically as a client service associate and a portfolio operations analyst. Jennifer received a BS in Finance from the University of Illinois at Urbana-Champaign and an MBA in Finance from DePaul University. In addition, Jennifer has obtained the Chartered Alternative Investment Analyst designation.

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Additional Disclosures and Index Definitions

## Core Composite (Inception 1/1/1982)

Investment Performance Results – As of September 30, 2020

|                  | Composite                             |                                     | Benchmark  | Composite          |                         |                                  |                     |                        | 3 Year Standard Deviation |  |
|------------------|---------------------------------------|-------------------------------------|--|--------------------|-------------------------|----------------------------------|---------------------|------------------------|---------------------------|--|
|                  | Total Return<br>(%, Gross<br>of Fees) | Total Return<br>(%, Net<br>of Fees) | Bloomberg<br>Barclays U.S.<br>Aggregate Index<br>(%) | No. of<br>Accounts | Market Value<br>(\$, m) | Total Firm<br>Assets<br>(\$, bn) | % of Firm<br>Assets | Internal<br>Dispersion | Composite<br>(%)          | Bloomberg<br>Barclays U.S.<br>Aggregate Index<br>(%) |
| YTD Sep-<br>2020 | 8.05                                  | 7.91                                | 6.79   | 17                 | 5,963.5                 |                                  |                     |                        | 3.70                      | 3.32   |
| 2019             | 9.81                                  | 9.60                                | 8.72   | 15                 | 5,193.8                 | 355.8                            | 1.46                | 0.27                   | 2.66                      | 2.87   |
| 2018             | -0.31                                 | -0.51                               | 0.01   | 16                 | 5,336.9                 | 304.1                            | 1.75                | 0.32                   | 2.53                      | 2.84   |
| 2017             | 4.22                                  | 4.03                                | 3.54   | 17                 | 5,453.6                 | 295.2                            | 1.85                | 0.32                   | 2.41                      | 2.78   |
| 2016             | 3.48                                  | 3.30                                | 2.65   | 15                 | 5,835.3                 | 255.2                            | 2.29                | 0.32                   | 2.63                      | 2.98   |
| 2015             | 0.55                                  | 0.37                                | 0.55   | 19                 | 7,133.1                 | 240.4                            | 2.97                | 0.17                   | 2.75                      | 2.88   |
| 2014             | 5.84                                  | 5.67                                | 5.97   | 18                 | 7,802.3                 | 250.0                            | 3.12                | 0.13                   | 2.74                      | 2.63   |
| 2013             | -1.68                                 | -1.82                               | -2.02  | 17                 | 7,054.7                 | 241.7                            | 2.92                | 0.34                   | 2.89                      | 2.71   |
| 2012             | 6.22                                  | 6.08                                | 4.21   | 18                 | 7,926.4                 | 205.0                            | 3.87                | 0.84                   | 2.47                      | 2.38   |
| 2011             | 6.90                                  | 6.76                                | 7.84   | 19                 | 9,154.3                 | 193.1                            | 4.74                | 0.32                   | 3.73                      | 2.78   |
| 2010             | 9.25                                  | 9.13                                | 6.54   | 15                 | 6,026.2                 | 80.1                             | 7.53                | 0.90                   | 5.47                      | 4.17   |

IC Meeting: 12/9-10/20 Attachment 8

## Core Composite

### Investment Performance Disclosure Statement

#### Compliance Statement

- Neuberger Berman Group LLC ("NB", "Neuberger Berman" or the "Firm") claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS® standards. Neuberger Berman has been independently verified for the period January 1, 2011 to December 31, 2019. Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS® standards on a firm-wide basis and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS® standards. The NB Core composite has been examined for the periods January 1, 1996 to December 31, 2019. The verification and performance examination reports are available upon request.
- The GIPS® firm definition was redefined effective January 1, 2011. For prior periods there were two separate firms for GIPS® firm definition purposes and such firms were independently verified for the periods January 1, 1997. to December 31, 2010 and January 1, 1996 to December 31, 2010, respectively.

#### Definition of the Firm

The firm is currently defined for GIPS® purposes as Neuberger Berman Group LLC, ("NB", "Neuberger Berman" or the "Firm"), and includes the following subsidiaries and affiliates: Neuberger Berman Investment Advisers LLC, Neuberger Berman Europe Ltd., Neuberger Berman Asia Ltd., Neuberger Berman Asia Ltd., Neuberger Berman East Asia Ltd., Neuberger Ber Berman Trust Company N.A., Neuberger Berman Trust Company of Delaware N.A., NB Alternatives Advisers LLC Neuberger Berman Breton Hill ULC, Neuberger Berman Loan Advisers LLC and Neuberger Berman Loan Advisers II LLC.

#### **Policies**

Policies for valuing portfolios, calculating performance, and preparing compliant presentations are available upon reguest.

#### Composite Description

The Core Composite (the "Composite") includes the performance of all fee-paying Core portfolios, with no minimum investment, managed on a fully discretionary basis by the Investment Grade Fixed Income team. The Core strategy is designed for investors who seek returns from a portfolio that has broad discretion to invest in investment grade taxable bonds. The emphasis is on bond selection, sector rotation, and duration/yield curve positioning. The Core strategy may use futures on an infrequent basis for hedging purposes. The Composite creation date is December 2004 and performance inception date is January 1982. A complete list of Neuberger Berman's composites is available upon request.

#### **Primary Benchmark Description**

The benchmark is the Bloomberg Barclays U.S. Aggregate Index (the "Index"). The Index represents securities that are SEC-registered, taxable, and dollar denominated. The index covers the U.S. investment grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities. These major sectors are subdivided into more specific indices that are calculated and reported on a regular basis.

#### Reporting Currency

Valuations are computed and performance is reported in U.S. Dollars. Performance includes reinvestment of dividends and other earnings.

 Composite Gross of Fee returns are the return on investments reduced by any trading expenses incurred during the period. Composite Net of Fee returns are the Gross of Fee returns reduced by investment advisory fees. Fee Schedule

• The annual investment advisory fee, generally payable guarterly, is as follows: 0.30% on the first \$50mn; 0.25% on the next \$100mn; 0.20% on the next \$100mn; 0.15% on the next \$250mn; 0.12% thereafter.

Internal Dispersion

Internal dispersion is calculated using the asset-weighted standard deviation of annual gross returns of those portfolios that were in the Composite for the entire year. Internal dispersion is not calculated if the Composite does not contain at least 6 portfolios for the entire year.

#### **Annualized Standard Deviation**

The three-year annualized standard deviation measures the variability of the Composite and the benchmark returns over the preceding 36-month period. The standard deviation is not required for periods prior to 2011.

## **Index Definitions**

ABS – This index is the ABS component of the Bloomberg Barclays U.S. Aggregate index. The index includes pass-through, bullet, and controlled amortization structures. The ABS Index includes only the senior class of each ABS issue and the ERISA-eligible B and C tranche.

Agencies – The Bloomberg Barclays U.S. Agency Bond Index measures the performance of the agency sector of the U.S. government bond market and is comprised of investment-grade native-currency U.S. dollar-denominated debentures issued by government and government-related agencies, including the Federal National Mortgage Association ("FNMA" or "Fannie-Mae"). The Index includes both callable and non-callable agency securities that are publicly issued by U.S. government agencies, quasi-federal corporations, and corporate and foreign debt guaranteed by the U.S. government.

Aggregate – The Bloomberg Barclays U.S. Aggregate Index covers the USD-denominated, investment-grade, fixed-rate, taxable bond market of SEC-registered securities. The index includes bonds from the Treasury, Government-Related, Corporate, MBS (agency fixed-rate and hybrid ARM passthroughs), ABS, and CMBS sectors. The U.S. Aggregate Index is a component of the U.S. Universal Index in its entirety. The index was created in 1986, with index history backfilled to January 1, 1976.

Senior Floating Rate Loans – The US High-Yield Loans Index, also known as the Senior Floating Loan Index, provides broad and comprehensive total return metrics of the universe of syndicated term loans. To be included in the index, a senior floating rate loan must be dollar denominated, have at least \$150 million funded loan, a minimum term of one year, and a minimum initial spread of LIBOR+125.

CMBS - The Bloomberg Barclays Commercial Mortgage-Backed Securities (CMBS) Index family consists of four components: CMBS Investment-Grade Index, CMBS High-Yield Index, CMBS Interest-Only Index, and Commercial Conduit Whole Loan Index (all bond classes and interest-only classes). The CMBS Investment-Grade Index is further subdivided into two components: The U.S. Aggregate-eligible component that contains bonds that are ERISA eligible under the underwriter's exemption and the non-U.S. Aggregate-eligible component that consists of bonds that are not ERISA eligible. The CMBS Indices were launched on January 1, 1997.

Corporates - The Bloomberg Barclays Investment Grade Credit Index is publicly issued U.S. corporate and specified foreign debentures and secured notes that meet the specified maturity, liquidity, and quality requirements. To qualify, bonds must be SEC-registered.

EMD (CEMBI) - J.P. Morgan's Corporate Emerging Markets Bond Index (CEMBI) is a global, liquid corporate emerging markets benchmark that tracks U.S.-denominated corporate bonds issued by emerging markets entities. The corporate CEMBI is a liquid basket of emerging markets corporate issues with strict liquidity criteria for inclusion in order to provide replicability, tradability, robust pricing and data integrity.

EMD (EMBI Global) - The EMBI Global Diversified limits the weights of the J.P. Morgan Emerging Markets Bond Index Global ("EMBI Global") index countries with larger debt stocks by only including a specified portion of these countries' eligible current face amounts of debt outstanding. The EMBI Global index tracks total returns for traded external debt instruments in the emerging markets, and is an expanded version of the JPMorgan EMBI+. As with the EMBI Global includes U.S. dollar-denominated Brady bonds, loans, and Eurobonds with an outstanding face value of at least \$500 million. It covers more of the eligible instruments than the EMBI+ by relaxing somewhat the strict EMBI+ limits on secondary market trading liquidity.

EMD (GBI Global) - GBI-EM Global is an investable benchmark that includes only those countries that are directly accessible by most of the international investor base. The GBI-EM GLOBAL excludes countries with explicit capital controls, but does not factor in regulatory/tax hurdles in assessing eligibility. Specifically, it includes all GBI-EM countries, as well as the Brazil NTN-F, LTN, and the Colombia local TES tasa fija bond.

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## Index Definitions (continued)

Global Aggregate Index (USD 300 million), the Pan-European Aggregate Index (EUR 300 million), and the Asian-Pacific Aggregate Index (JPY 35 billion). In addition to securities from these three benchmarks (94.9% of the overall Global Aggregate market value), the Global Aggregate Index includes Global Treasury, Eurodollar (USD 300 million), Euro-Yen (JPY 35 billion), Canadian (USD 300 million) equivalent), and Investment-Grade 144A (USD 300 million) index-eligible securities not already in the three regional aggregate indices. The Global Aggregate Index was created in 1999, with index history backfilled to January 1, 1990.

HY – The Bloomberg Barclays U.S. Corporate High-Yield Index the covers the USD-denominated, non-investment grade, fixed-rate, taxable corporate bond market. Securities are classified as high-yield index the middle rating of Moody's, Fitch, and S&P is Ba1/BB+/BB+ or below. The index excludes Emerging Markets debt. The index was created in 1986, with index history backfilled to January 1, 1983. The U.S. Corporate High-Yield Index is part of the U.S. Universal and Global High-Yield Indices.

Long BBB Credit – This is the long component of the Bloomberg Barclays U.S. Credit Baa index. The index includes publicly issued U.S. corporate and specified foreign debentures and secured notes that meet the specified maturity, liquidity, and quality requirements. To qualify, bonds must be SEC-registered. The U.S. Credit Index is the same as the former U.S. Corporate Investment Grade Index, which has been renamed as the U.S. Credit Index. The name change is effective as of 6/1/00 (for statistics) and as of 7/1/00 (for returns).

Long Corporates – The Bloomberg Barclays U.S. Long Credit index includes investment grade corporate and non-corporate credit bonds that are dollar denominated and have a remaining maturity of greater than or equal to 10 years. As of December 31, 2008, the Index included 965 issues with an average dollar-weighted maturity of 24.39 years.

Long Govt/Credit – The Bloomberg Barclays U.S. Long Government/Credit Bond Index measures performance of U.S. dollar denominated U.S. Treasuries, government-related, and investment grade U.S. corporate securities that have a remaining maturity of greater than or equal to 1 year. In addition, the securities have \$250 million or more of outstanding face value, and must be fixed rate and non-convertible.

Mortgages – The Bloomberg Barclays Mortgage Backed Securities Index is an unmanaged index of mortgage pools of the Government National Mortgage Association, Federal Home Loan Mortgage Corporation and Federal National Mortgage Association.

TIPS - The Bloomberg Barclavs U.S. Treasury Inflation Protected Securities, ("TIPS") Index measures the performance of intermediate (1-10 year) U.S. Treasury Inflation Protected Securities,

## Additional Disclosures

eVestment is an innovative, Web-based provider of comprehensive investment information and analytic technology. eVestment delivers extensive data through robust, user-friendly products with an unparalleled commitment to client service. Through its online Global Database, eVestment captures the most comprehensive dataset in the industry and distributes all information via its fully Web-based Analytics system, a platform which has set the software standard for online manager comparisons, research and competitive intelligence. Drawing upon its data management expertise, eVestment also offers its powerful Omni system to address the industry's redundant data request problems by automating the transformation and precise update of manager data to multiple databases. With better data, more flexible analytics and custom data automation and delivery platforms, eVestment's robust tools enable clients to conduct more thorough research, generate more insightful analysis, and significantly improve their overall efficiency.

Peer Rankings: eVestment collects information directly from investment management firms and other sources believed to be reliable; however, eVestment does not guarantee or warrant the accuracy, timeliness, or completeness of the information provided and is not responsible for any errors or omissions. Performance results may be provided with additional disclosures available on eVestment's systems and other important considerations such as fees that may be applicable. Not for general distribution. All categories not necessarily included. Totals may not equal 100%. Copyright 2013-2019 eVestment Alliance, LLC. All Rights Reserved. Neuberger Berman Investment Advisers LLC composite peer rankings represent percentile rankings which are based on monthly gross of fee returns and reflect where those returns fall within the indicated eVestment's universe. eVestment provides third party databases, including the institutional investment database from which the presented information was extracted. The eVestment institutional investment database consists of over 1,500 active institutional managers, investment consultants, plan sponsors, and other similar financial institutions actively reporting on over 10,000 products. Additional information regarding eVestment rankings for year to date and since inception performance of the composites is available on eVestment's website.

#### eVestment Traditional Universes Definitions:

US Core Fixed Income: US Fixed Income products that primarily invest in a broad duration of Investment Grade bonds. Common benchmarks include the Bloomberg Barclays US Aggregate and Bloomberg Barclays US Govt/Credit.

US TIPS / Inflation Fixed Income: US Fixed Income products that follow the general methodology of an index but will make modest active investments outside of this index in an effort to generate alpha

US Corporate Fixed Income: US Fixed Income products that invest principally in broad duration, Investment Grade, Corporate bonds. Common benchmarks include the Bloomberg Barclays US Credit and BofA US Corporate.

US Securitized Fixed Income – Mortgage: US Fixed Income products that invest principally in Investment Grade Mortgage-Backed Securities (MBS). Common benchmarks include the Bloomberg Barclays US Mortgage Backed Securities and Barclays Capital Mortgage

Securitized Fixed Income - Non-Traditional: US Fixed Income products that invest in securitized loans outside of Investment Grade, Mortgage-Backed Securities (MBS). Common examples include Asset-Backed Securities (ABS), Commercial Mortgage-Backed Securities (CMBS), and Residential Mortgage-Backed Securities (RMBS).

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## Additional Disclosures (continued)

Institutional-Oriented Equity and Fixed Income AUM Benchmark Outperformance Note: Institutional-oriented equity and fixed income assets under management ("AUM") includes the firm's equity and fixed income institutional separate account ("ISA"), registered fund, and managed account/wrap ("MAG") offerings and are based on the overall performance of each individual investment offering against its respective benchmark. High net worth/private asset management ("HNW") AUM is excluded. For the period ending March 31, 2019, the percentage of total institutional-oriented equity AUM outperforming the benchmark was as follows: Since Inception: 89%; 10-year: 72%; 5-year: 69%; and 3-year: 75%; and total institutional-oriented fixed income AUM outperforming was as follows: Since Inception: 94%, 10-year: 52%; 5-year: 73%; and 3-year: 61%. If HNW AUM were included, total equity AUM outperforming the benchmark was as follows: Since Inception: 86%; 10-year: 46%; 5-year: 48%; and 3-year: 53%; and total fixed income AUM outperforming was as follows: Since Inception: 94%; 10-year: 52%; 5-year: 73%; and 3-year: 61%. Equity and Fixed Income AUM outperformance results are asset weighted so individual offerings with the largest amount of assets under management have the largest impact on the results. As of 3/31/2019, six equity teams/strategies accounted for approximately 52% of the total firm equity (ISA, MAG and mutual fund combined) assets reflected, and nine strategies accounted for approximately 52% of the total firm fixed income (ISA, MAG and mutual fund combined) assets reflected. Performance for the individual offerings are not reflected in the AUM outperformance results shown. AUM outperformance is based on gross of fee returns. Gross of fee returns do not reflect the deduction of investment advisory fees and other expenses. If such fees and expenses were reflected, AUM outperformance results would be lower. Investing entails risk, including possible loss of principal. Past performance is no guarantee of future results.

Private Equity Outperformance Note: The performance information includes all funds, both commingled and custom, managed by NB Alternatives Advisers LLC with vintage years of 2005 – 2016, with the exception of a closed-end, public investment company registered under the laws of Guernsey (the "Funds"). Accounts that are only monitored are excluded. Vintage years post 2016 are excluded as benchmark information is not yet available. Please note that private debt funds are also excluded as benchmark data is not yet available for the applicable vintages.

Percentages are based on the number of funds, calculated as the total number of funds whose performance exceeds their respective benchmarks divided by the total number of all funds with vintage years of 2005 through 2016. Performance is measured by net IRR, MOIC, and DPI and is compared to the respective index's median net IRR, MOIC and DPI, respectively. The Cambridge Secondary Index was used for secondary-focused funds; the Cambridge Buyout and Growth Equity for US and Developed Europe was used for co-investment-focused funds; the Cambridge Fund of Funds Index was used for commingled funds and custom portfolios comprised of primaries, secondaries and co-investments; and the Cambridge Global Private Equity was used for strategies focused on minority stakes in asset managers fund and healthcare credit.

The Cambridge Associates LLC indices data is as of September 30, 2018, which is the most recent data available. The Cambridge Associates Fund of Funds Index is the benchmark recommended by the CFA Institute for benchmarking overall private equity fund of funds performance. The benchmark relies on private equity funds self-reporting data for compilation and as such is subject to the quality of the data provided. The median net multiple of Cambridge Associates Fund of Funds Index is presented for each vintage year as of September 30, 2018, the most recent available. Cambridge Associates data provided at no charge.

While one of the secondary funds closed in 2008, Cambridge Associates classifies that particular fund as a 2007 vintage year fund (the year of its formation) and, therefore, the Cambridge Associates benchmarks used herein are for 2007 vintage year funds.

Private Offerings: Certain strategies referenced herein may only be available through a private offering of interests made pursuant to offering and subscription documents, which will be furnished solely to qualified investors on a confidential basis at their request for their consideration in connection with an offering. These documents will contain information about the investment objective, terms and conditions of an investment in such vehicle and will also contain tax information and risk disclosures that are important to an investment decision. Any decision to invest in such vehicle should be made after a careful review of these documents, the conduct of such investigations as an investor deems necessary or appropriate and after consultation with legal, accounting, tax and other advisors in order to make an independent determination of the suitability and consequences of an investment in such vehicle.

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## Additional Disclosures (continued)

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Portfolio performance is calculated utilizing a total return methodology. The total return calculation is the combination of the change in price of the investments plus any income (or other distributions); it is expressed as a percentage gain or loss in the investment's value. Any segment level performance shown (equity only or fixed income only) is presented gross of fees and focuses exclusively on the investments in that particular segment of the portfolio being measured (equity or fixed income holdings) and excludes cash. Specific securities identified and described do not represent all of the securities purchased, sold or recommended for advisory clients. It should not be assumed that any investments in securities, companies, sectors or markets identified and described were or will be profitable.

Credit quality generally reflects the average credit quality of three Nationally Recognized Statistical Ratings Organizations (NRSROs), S&P, Moody's and Fitch, as calculated internally by the investment adviser. Holdings that are unrated by any NRSRO may be assigned an equivalent rating by the investment manager. If NRSRO ratings differ for a particular holding, the average rating is generally used. No NRSRO has been involved with the calculation of average credit quality and the ratings of underlying portfolio holdings should not be viewed as a rating of the portfolio holdings, underlying ratings of holdings and average credit may change materially overtime.

Representative portfolio information (characteristics, holdings, weightings, etc.) is based upon the composite or a representative/model account. Representative accounts are selected based on such factors as size, length of time under management and amount of restrictions. Any segment level performance shown (equity only or fixed income only) is presented gross of fees and focuses exclusively on the investments in that particular segment of the portfolio being measured (equity or fixed income holdings) and excludes cash. Client accounts are individually managed and may vary significantly from composite performance and representative portfolio information. Specific securities identified and described do not represent all of the securities purchased, sold or recommended for advisory clients. It should not be assumed that any investments in securities, companies, sectors or markets identified and described were or will be profitable.

A bond's value may fluctuate based on interest rates, market conditions, credit quality and other factors. You may have a gain or loss if you sell your bonds prior to maturity. Of course, bonds are subject to the credit risk of the issuer. If sold prior to maturity, municipal securities are subject to gain/losses based on the level of interest rates, market conditions and the credit quality of the issuer. Income may be subject to the alternative minimum tax (AMT) and/or state and local taxes, based on the investor's state of residence. High-yield bonds, also known as "junk bonds," are considered speculative and carry a greater risk of default than investment-grade bonds. Their market value tends to be more volatile than investment-grade bonds and may fluctuate based on interest rates, market conditions, credit quality, political events, currency devaluation and other factors. High yield bonds are not suitable for all investors and the risks of these bonds should be weighed against the potential rewards. Neither Neuberger Berman nor its employees provide tax or legal advice. You should contact a tax advisor regarding the suitability of tax-exempt investments in your portfolio.

Gross returns do not reflect the deduction of advisory fees and other expenses, which will reduce returns. Investment advisory fees have a compounding effect on cumulative results. For example, assume Neuberger Berman achieves a 10% annual return prior to the deduction of fees each year for a period of ten years. If an annual advisory fee of 1.00% of assets under management for the ten-year period were charged, the resulting annual average return after fees would be reduced to 8.90%. Performance results will vary based upon the period measured. Additional information regarding fees can be found in Neuberger Berman's Form ADV, Part 2, which is available upon request.

Statements contained herein are based on current expectations, estimates, projections, opinions and/or beliefs of Neuberger Berman. Such statements involve known and unknown risks, uncertainties and other factors, and undue reliance should not be placed thereon. Moreover, certain information contained herein constitutes "forward looking" statements, which often can be identified by the use of forward looking terminology such as "may," "will," "seek," "should," "expect," "anticipate," "project," "estimate," "intend," "continue," "larget," "plan" or "believe" or the negatives thereof or other variations thereon or comparable terminology. Such statements are necessarily speculative in nature, as they are based on certain assumptions. It can be expected that some or all of the assumptions underlying such statements will not reflect actual conditions. Accordingly, there can be no assurance that any estimated projections, forecast or estimates will be realized or that the forward looking statements will materialize. Due to various risks and uncertainties, including those set forth herein, actual events or results or the actual performance of any security referenced herein may differ materially from those reflected or contemplated in such forward looking statements.

All information as of the date indicated. Firm data, including employee and assets under management figures, reflect collective data for the various affiliated investment advisers that are subsidiaries of Neuberger Berman Group LLC (the "firm"). Firm history and timelines include the history and business expansions of all firm subsidiaries, including predecessor entities and acquisition entities. Investment professionals referenced include portfolio managers, research analysts/associates, traders, and product specialists and team dedicated economists/strategists.

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## Additional Disclosures (continued)

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This material is general in nature and is not directed to any category of investors and should not be regarded as individualized, a recommendation, investment advice or a suggestion to engage in or refrain from any investment-related course of action. Investment decisions and the appropriateness of this material should be made based on an investor's individual objectives and circumstances and in consultation with his or her advisors.

Recipients should not rely on this material in making any future investment decision. We do not represent that the information contained herein is accurate or complete, and it should not be relied upon as such. Opinions expressed herein are subject to change without notice. Certain information contained herein (including any forward-looking statements and economic and market information) has been obtained from published sources and/or prepared by third parties and in certain cases has not been updated through the date hereof. While such sources are believed to be reliable, Neuberger Berman and its affiliates do not assume any responsibility for the accuracy or completeness of such information. Portfolio characteristics, positions held and the opinions expressed herein are as of the date of this report and are subject to change without notice. Any views or opinions expressed may not reflect those of the firm as a whole. Investing entails risks, including possible loss of principal. Past Performance is not indicative of future results.

Performance information provided for intervals of quarters or years (i.e. 3 month, 1 Year, 2 Year, 3 Year, 5 Year, and 10 Year time periods) are calculated to the most recent month- end. Therefore if this review is effective for a midmonth period (i.e. the 15th of the month) then these time periods will be calculated to the prior month end. Annualized return information for a certain length of time will be available only if the account has been open longer than that designated period of time. For example, an account open for eleven months will not display a one year annualized return. Performance information may also be provided at custom intervals. Past performance is no guarantee of future results.

Any estimated returns and volatility shown reflect hypothetical assumptions that are for discussion purposes only and are not intended to represent, and should not be construed to represent, predictions of future rates of return or volatility. Actual returns and volatility may vary significantly. The forward-looking estimates/assumptions include only the benchmark return associated with the asset classes and do not reflect the alpha from the underlying product strategies within each asset class. Information is not intend to be representative of any investment product or strategy and does not reflect the fees and expenses associated with managing a portfolio. Estimated returns and/or standard deviation are hypothetical and generated by Neuberger Berman based on various assumptions, including current market conditions and historical market conditions. Neuberger Berman makes no representation regarding the reasonableness or completeness of any such assumptions. Assumptions and estimates are periodically revised and are subject to change without notice. Estimated returns and volatility are not meant to be a representation of, nor should they be interpreted as Neuberger Berman investment recommendations. Estimated returns and volatility should not be used, or relied upon, to make investment decisions.

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REPORT TO INVESTMENT COMMITTEE MEETING: JANUARY 12, 2021

From: Neil M. Guglielmo, General Manager ITEM: VI

nefm. Day like

SUBJECT: CORE FIXED INCOME MANAGER ALLOCATION PLAN AND POSSIBLE

**COMMITTEE ACTION** 

ACTION: ☑ CLOSED: ☐ CONSENT: ☐ RECEIVE & FILE: ☐

#### **Recommendation**

That the Committee recommend the proposed core fixed income manager allocation plan to the Board for approval.

#### **Discussion**

At special meetings held on December 9 and 10, 2020, the Committee interviewed seven finalist firms for the Core Fixed Income Manager Search. Following a discussion with staff and NEPC, LLC (NEPC), LACERS General Fund Consultant, the Committee selected the following five firms to advance to the Board for possible contract award: Robert W. Baird & Co., Inc. (Baird), Garcia Hamilton & Associates, L.P. (GHA), Income Research & Management (IRM), J.P. Morgan Asset Management (JPMAM), and Loomis, Sayles & Company, L.P. (Loomis Sayles). The Committee instructed staff and NEPC to return with a recommendation for allocating the mandate among the five selected managers.

In accordance with the Core Fixed Income asset class target allocation of 13.75% and LACERS' total portfolio market value of approximately \$21 billion as of December 31, 2020, approximately \$2.88 billion will be allocated to this mandate. Based upon a risk budget optimization analysis of the five finalist managers (Attachment 1), staff and NEPC propose the allocation plan as presented in the following table for the Committee's consideration.

|   | Proposed Allocation as a | Proposed Allocation |
|---|--------------------------|---------------------|
| Manager                                     | % of Asset Class         | in \$               |
| Robert W. Baird & Co., Inc. <sup>^</sup>    | 25.00%                   | \$720 million       |
| Loomis, Sayles & Company, L.P. <sup>^</sup> | 25.00%                   | \$720 million       |
| Garcia Hamilton & Associates, L.P.          | 16.67%                   | \$480 million       |
| Income Research & Management                | 16.67%                   | \$480 million       |
| J.P. Morgan Asset Management                | 16.67%                   | \$480 million       |
| Total                                       | 100.00%                  | \$2.88 billion      |

<sup>^</sup>Incumbent LACERS core fixed income managers

This proposed allocation, identified as Portfolio 12 in Attachment 1, yields a substantial improvement in expected risk-return metrics versus LACERS' current allocation as summarized in the following table. Additionally, this proposed allocation has an expected tracking error of 0.68%, which is well within the bounds of the Board's adopted tracking error risk budget of 1.75% for the Core Fixed Income asset class.

| Risk-Return Metrics     | Current Allocation | <b>Proposed Allocation</b> |  |  |
|-------------------------|--------------------|----------------------------|--|--|
| Expected Excess Return  | 0.53%              | 0.71%                      |  |  |
| Expected Tracking Error | 0.70%              | 0.68%                      |  |  |
| Information Ratio       | 0.75               | 1.04                       |  |  |

From a qualitative perspective, this proposed allocation expresses LACERS' experience and confidence with the two incumbent managers, Baird and Loomis Sayles, by allocating half of the mandate evenly between them. It expresses a small risk adjustment for establishing new relationships with GHA, IRM, and JPMAM by splitting the other half of the mandate evenly among these three managers, resulting in smaller allocations than those of the incumbent managers.

The current total market value of assets managed by LACERS' current stable of active core fixed income managers is approximately \$2.5 billion. To fully fund the mandate size of \$2.88 billion, the remaining balance of \$380 million would be drawn from the passive core fixed income fund managed by State Street Global Advisors Trust Company, which is currently being used a placeholder for unfunded active fixed income strategies. Staff requests that the Committee consider this proposed allocation plan and recommend it to the Board for possible approval.

## **Strategic Alignment**

The RFP for core fixed income investment managers aligns with the Strategic Plan Goal to optimize long-term risk adjusted investment returns (Goal IV).

<u>Prepared by:</u> Barbara Sandoval, Investment Officer II, Investment Division Jeremiah Paras, Investment Officer I, Investment Division

NMG/RJ/BF/BS/JP:rm

Attachment: 1. Core Fixed Income Manager Analysis and Risk Budget Optimization by NEPC, LLC

IC Meeting: 1/12/21 Item VI Attachment 1

# CORE FIXED INCOME MANAGER ANALYSIS AND RISK BUDGET OPTIMIZATION



LOS ANGELES CITY EMPLOYEES'
RETIREMENT SYSTEM

**January 12, 2020** 



IC Meeting: 1/12/21 Item VI Attachment 1

## CORE FIXED INCOME MANAGER ALLOCATION

### Recommendation

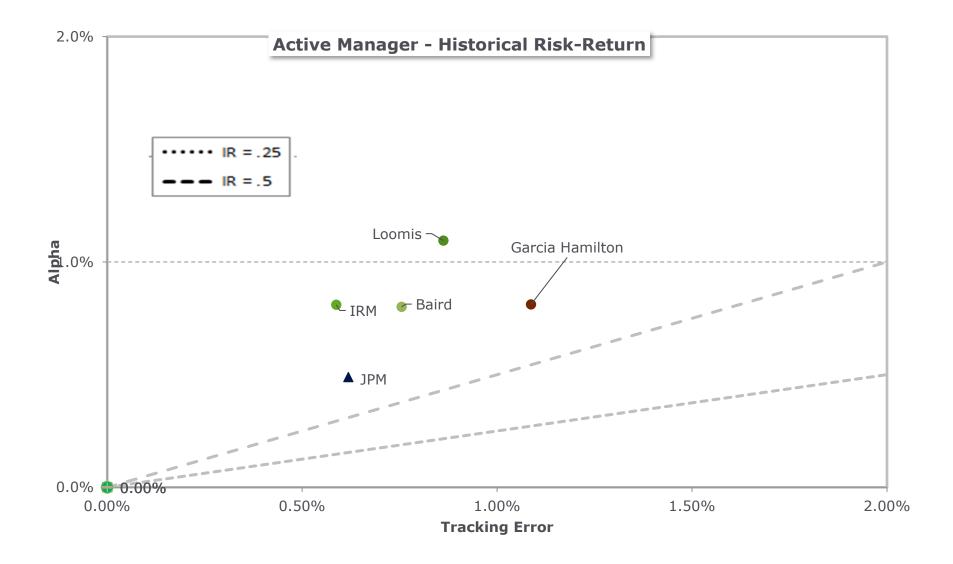
- Allocate 50% of the core fixed income allocation to the two incumbent managers
  - 25% Baird Advisors
  - 25% Loomis Sayles & Company, L.P.
- Split the remaining 50% of the core fixed income allocation between the three new managers
  - 17% Garcia Hamilton & Associates, L.P.
  - 17% Income Research & Management
  - 17% J.P. Morgan Asset Management

### Rationale

- After conducting a risk budgeting optimization exercise, there is no material difference between the expected risk, expected return and expected information ratio of various combinations of the five managers selected
- LACERS has long-term relationships with both Baird and Loomis Sayles and therefore, our recommendation uses these two managers as the anchor to LACERS core fixed income allocation
- Each of the new managers brings something different to the table and therefore, we favor an equal weighting to each



## **ACTIVE MANAGER RETURNS - 7 YR**





IC Meeting: 1/12/21 Item VI Attachment 1

## **ALPHA CORRELATIONS - 7 YR**

| Alpha Correlations | Loomis | Baird | Garcia Hamilton | IRM  | ЈРМ  |
|--------------------|--------|-------|-----------------|------|------|
| Loomis             | 1.00   |       | 0.31            |      | 0.59 |
| Baird              |        | 1.00  | 0.39            |      | 0.51 |
| Garcia Hamilton    | 0.31   | 0.39  | 1.00            | 0.38 | 0.28 |
| IRM                | 0.91   | 0.88  | 0.38            | 1.00 | 0.50 |
| JPM                |        |       | 0.28            | 0.50 | 1.00 |

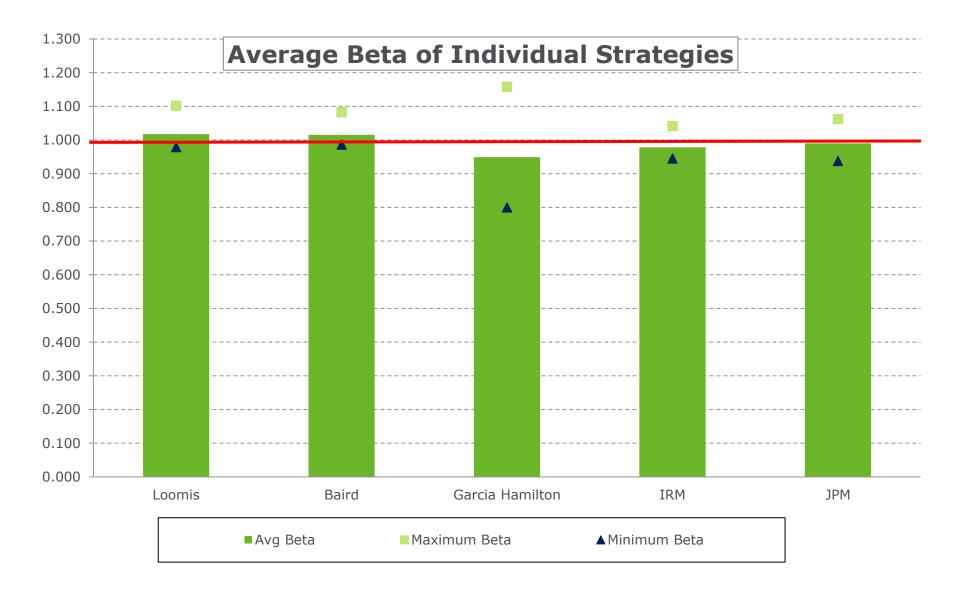
Highly Negative (<-0.25) Relatively Uncorrelated (-0.25 – 0.25) Moderately Positive (0.25 – 0.50) Highly Positive (>0.50)

Based on a 7 year look-back ended 9/30/2020. Benchmark is BBG BC US Agg.



IC Meeting: 1/12/21 Item VI Attachment 1

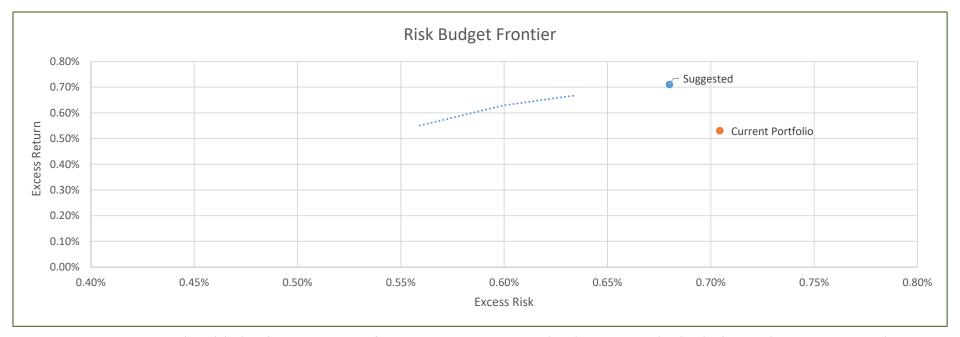
## **BETA PROFILES**





## **RISK BUDGET OPTIMIZATION**

| Portfolio              | Current Allocation | Expected Excess<br>Return (%) | Tracking Error (%) | Current Excess<br>Risk<br>Contribution<br>(%) |       | Suggested Excess<br>Risk Conribution<br>(%) |
|------------------------|--------------------|-------------------------------|--------------------|---|-------|---|
| Loomis                 | 28%                | 0.90%                         | 0.90%              | 34%   | 25%   | 31%   |
| NB                     | 27%                | 0.55%                         | 1.15%              | 43%   |       |   |
| Baird                  | 12%                | 0.80%                         | 0.80%              | 12%   | 25%   | 27%   |
| Garcia Hamilton        | 0%                 | 0.60%                         | 1.15%              |   | 17%   | 17%   |
| IRM                    | 0%                 | 0.65%                         | 0.65%              |   | 17%   | 14%   |
| JPM                    | 0%                 | 0.45%                         | 0.65%              |   | 17%   | 11%   |
| LM                     | 12%                | 0.30%                         | 0.80%              | 11%   |       |   |
| SSGA                   | 21%                | 0.00%                         | 0.00%              | 0%  |       |   |
| Expected Excess Return | 0.53%              |                               |                    |   | 0.71% |   |
| Expected Excess Risk   | 0.70%              |                               |                    |   | 0.68% |   |
| Information Ratio      | 0.75               |                               |                    |   | 1.04  |   |





Note: The risk budget frontier optimizes information ratio across excess risk and excess return levels. The frontier above is unconstrained. When we apply constraints we can marginally increase the excess return and excess risk profile at a marginal degradation of information ratio.

IC Meeting: 1/12/21 Item VI Attachment 1

## **OPTIMIZATION DATA**

|                           | Portfo                    | lios on Efficient Fi      | ontier                    | Portfolios not found on Efficient Frontier                       |  |  |              |  |
|---------------------------|---------------------------|---------------------------|---------------------------|--|--|--|--------------|--|
|                           | Max Info<br>Unconstrained | Max Info<br>Unconstrained | Max Info<br>Unconstrained | Max<br>Information<br>Ratio Min<br>Allocation 10%<br>Constrained | Max<br>Information<br>Ratio Min<br>Allocation 18%<br>Constrained | Max<br>Information<br>Ratio Max<br>Allocation 25%<br>Constrained | Suggested    |  |
|                           | Portfolio 1               | Portfolio 2               | Portfolio 3               | Portfolio 4  | Portfolio 7  | Portfolio 10   | Portfolio 12 |  |
| Loomis Sayles             | 0%                        | 0%                        | 5%                        | 11%  | 24%  | 24%  | 25%          |  |
| Baird                     | 0%                        | 21%                       | 30%                       | 26%  | 18%  | 25%  | 25%          |  |
| Garcia Hamilton           | 6%                        | 6%                        | 6%                        | 10%  | 18%  | 9%   | 17%          |  |
| IRM                       | 46%                       | 49%                       | 41%                       | 37%  | 22%  | 25%  | 17%          |  |
| J.P. Morgan               | 48%                       | 24%                       | 18%                       | 16%  | 18%  | 17%  | 17%          |  |
| Expected Excess<br>Return | 0.55%                     | 0.63%                     | 0.67%                     | 0.68%  | 0.69%  | 0.71%  | 0.71%        |  |
| Expected Excess<br>Risk   | 0.56%                     | 0.60%                     | 0.64%                     | 0.65%  | 0.67%  | 0.67%  | 0.68%        |  |
| Info Ratio                | 0.98                      | 1.05                      | 1.05                      | 1.05   | 1.04   | 1.05   | 1.04         |  |



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## **APPENDIX**

NEPC, LLC -

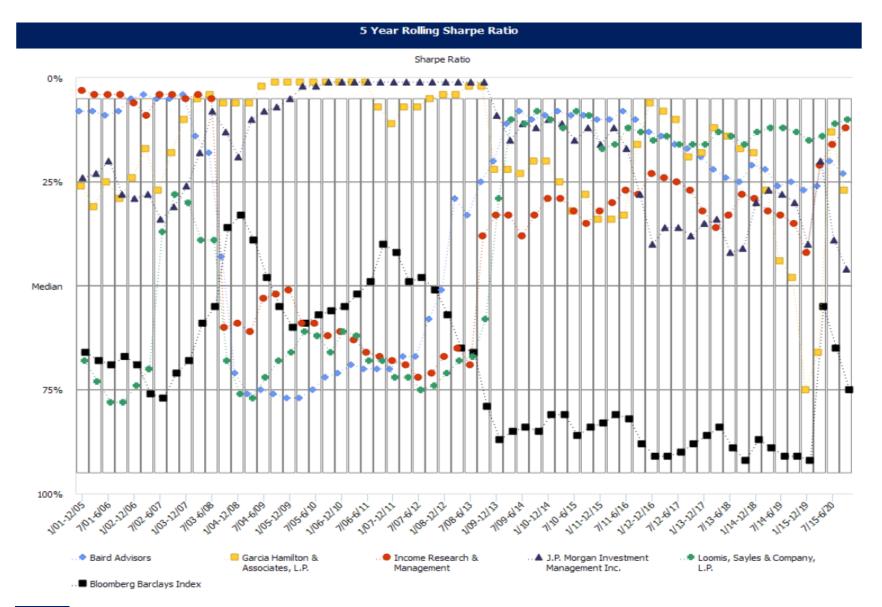
## PERFORMANCE SUMMARY





IC Meeting: 1/12/21 Item VI Attachment 1

## SHARPE RATIO UNIVERSE COMPARISON





## CONTRACT AUTHORIZATION ROBERT W. BAIRD & CO., INC. ACTIVE CORE FIXED INCOME PORTFOLIO MANAGEMENT

### PROPOSED RESOLUTION

WHEREAS, on October 23, 2018, the Board of Administration (Board) authorized a Request for Proposal (RFP) process to evaluate the current marketplace for active core fixed income investment managers pursuant to the asset allocation policy approved by the Board on April 10, 2018; and,

WHEREAS, the RFP was issued on August 19, 2019, and closed on October 4, 2019; and,

WHEREAS, on September 8, 2020, the Investment Committee reviewed NEPC's evaluation report of the 57 proposals and concurred with the staff recommendation to advance eight firms as semi-finalists in the search; and,

WHEREAS, staff and NEPC conducted further due diligence on the eight semi-finalists; and,

WHEREAS, on December 9 and 10, 2020, the Investment Committee interviewed the seven finalists recommended by staff and selected five investment managers including Robert W. Baird & Co., Inc. (Baird) for Board consideration for hire and directed staff to propose a core fixed income allocation plan; and,

WHEREAS, on January 12, 2021, the Investment Committee reviewed the core fixed income allocation plan proposed by staff and NEPC and concurred with an approximate \$720 million allocation to Baird; and,

WHEREAS, on January 26, 2021, the Board approved the Investment Committee's recommendation to award a contract to Baird with a contract size of approximately \$720 million.

NOW, THEREFORE, BE IT RESOLVED, that the Board hereby authorizes the General Manager to execute the necessary documents, subject to satisfactory business and legal terms and consistent with the following services and terms:

<u>Company Name</u>: Robert W. Baird & Co., Inc.

<u>Service Provided</u>: Active Core Fixed Income Portfolio Management

Estimated Effective Date: May 1, 2021 through April 30, 2024

<u>Duration</u>: Three years

Benchmark: Bloomberg Barclays U.S. Aggregate Bond Index

Estimated Allocation: \$720 million

January 26, 2021

## CONTRACT AUTHORIZATION LOOMIS, SAYLES & COMPANY, L.P. ACTIVE CORE FIXED INCOME PORTFOLIO MANAGEMENT

#### PROPOSED RESOLUTION

WHEREAS, on October 23, 2018, the Board of Administration (Board) authorized a Request for Proposal (RFP) process to evaluate the current marketplace for active core fixed income investment managers pursuant to the asset allocation policy approved by the Board on April 10, 2018; and,

WHEREAS, the RFP was issued on August 19, 2019, and closed on October 4, 2019; and,

WHEREAS, on September 8, 2020, the Investment Committee reviewed NEPC's evaluation report of the 57 proposals and concurred with the staff recommendation to advance eight firms as semi-finalists in the search; and,

WHEREAS, staff and NEPC conducted further due diligence on the eight semi-finalists; and,

WHEREAS, on December 9 and 10, 2020, the Investment Committee interviewed the seven finalists recommended by staff and selected five investment managers including Loomis, Sayles & Company, L.P. (Loomis Sayles) for Board consideration for hire and directed staff to propose a core fixed income allocation plan; and,

WHEREAS, on January 12, 2021, the Investment Committee reviewed the core fixed income allocation plan proposed by staff and NEPC and concurred with an approximate \$720 million allocation to Loomis Sayles; and,

WHEREAS, on January 26, 2021, the Board approved the Investment Committee's recommendation to award a contract to Loomis Sayles with a contract size of approximately \$720 million.

NOW, THEREFORE, BE IT RESOLVED, that the Board hereby authorizes the General Manager to execute the necessary documents, subject to satisfactory business and legal terms and consistent with the following services and terms:

<u>Company Name</u>: Loomis, Sayles & Company, L.P.

<u>Service Provided</u>: Active Core Fixed Income Portfolio Management

Estimated Effective Date: May 1, 2021 through April 30, 2024

Duration: Three years

Benchmark: Bloomberg Barclays U.S. Aggregate Bond Index

Estimated Allocation: \$720 million

January 26, 2021

## CONTRACT AUTHORIZATION GARCIA HAMILTON & ASSOCIATES, L.P. ACTIVE CORE FIXED INCOME PORTFOLIO MANAGEMENT

#### PROPOSED RESOLUTION

WHEREAS, on October 23, 2018, the Board of Administration (Board) authorized a Request for Proposal (RFP) process to evaluate the current marketplace for active core fixed income investment managers pursuant to the asset allocation policy approved by the Board on April 10, 2018; and,

WHEREAS, the RFP was issued on August 19, 2019, and closed on October 4, 2019; and,

WHEREAS, on September 8, 2020, the Investment Committee reviewed NEPC's evaluation report of the 57 proposals and concurred with the staff recommendation to advance eight firms as semi-finalists in the search; and,

WHEREAS, staff and NEPC conducted further due diligence on the eight semi-finalists; and,

WHEREAS, on December 9 and 10, 2020, the Investment Committee interviewed the seven finalists recommended by staff and selected five investment managers including Garcia Hamilton & Associates, L.P. (GHA) for Board consideration for hire and directed staff to propose a core fixed income allocation plan; and,

WHEREAS, on January 12, 2021, the Investment Committee reviewed the core fixed income allocation plan proposed by staff and NEPC and concurred with an approximate \$480 million allocation to GHA; and,

WHEREAS, on January 26, 2021, the Board approved the Investment Committee's recommendation to award a contract to GHA with a contract size of approximately \$480 million.

NOW, THEREFORE, BE IT RESOLVED, that the Board hereby authorizes the General Manager to execute the necessary documents, subject to satisfactory business and legal terms and consistent with the following services and terms:

Company Name: Garcia Hamilton & Associates, L.P.

<u>Service Provided</u>: Active Core Fixed Income Portfolio Management

Estimated Effective Date: May 1, 2021 through April 30, 2024

<u>Duration</u>: Three years

Benchmark: Bloomberg Barclays U.S. Aggregate Bond Index

Estimated Allocation: \$480 million

January 26, 2021

## CONTRACT AUTHORIZATION INCOME RESEARCH & MANAGEMENT ACTIVE CORE FIXED INCOME PORTFOLIO MANAGEMENT

### PROPOSED RESOLUTION

WHEREAS, on October 23, 2018, the Board of Administration (Board) authorized a Request for Proposal (RFP) process to evaluate the current marketplace for active core fixed income investment managers pursuant to the asset allocation policy approved by the Board on April 10, 2018; and,

WHEREAS, the RFP was issued on August 19, 2019, and closed on October 4, 2019; and,

WHEREAS, on September 8, 2020, the Investment Committee reviewed NEPC's evaluation report of the 57 proposals and concurred with the staff recommendation to advance eight firms as semi-finalists in the search; and,

WHEREAS, staff and NEPC conducted further due diligence on the eight semi-finalists; and,

WHEREAS, on December 9 and 10, 2020, the Investment Committee interviewed the seven finalists recommended by staff and selected five investment managers including Income Research & Management (IRM) for Board consideration for hire and directed staff to propose a core fixed income allocation plan; and,

WHEREAS, on January 12, 2021, the Investment Committee reviewed the core fixed income allocation plan proposed by staff and NEPC and concurred with an approximate \$480 million allocation to IRM; and,

WHEREAS, on January 26, 2021, the Board approved the Investment Committee's recommendation to award a contract to IRM with a contract size of approximately \$480 million.

NOW, THEREFORE, BE IT RESOLVED, that the Board hereby authorizes the General Manager to execute the necessary documents, subject to satisfactory business and legal terms and consistent with the following services and terms:

Company Name: Income Research & Management

<u>Service Provided</u>: Active Core Fixed Income Portfolio Management

Estimated Effective Date: May 1, 2021 through April 30, 2024

<u>Duration</u>: Three years

Benchmark: Bloomberg Barclays U.S. Aggregate Bond Index

Estimated Allocation: \$480 million

January 26, 2021

## CONTRACT AUTHORIZATION J.P. MORGAN ASSET MANAGEMENT ACTIVE CORE FIXED INCOME PORTFOLIO MANAGEMENT

### PROPOSED RESOLUTION

WHEREAS, on October 23, 2018, the Board of Administration (Board) authorized a Request for Proposal (RFP) process to evaluate the current marketplace for active core fixed income investment managers pursuant to the asset allocation policy approved by the Board on April 10, 2018; and,

WHEREAS, the RFP was issued on August 19, 2019, and closed on October 4, 2019; and,

WHEREAS, on September 8, 2020, the Investment Committee reviewed NEPC's evaluation report of the 57 proposals and concurred with the staff recommendation to advance eight firms as semi-finalists in the search; and,

WHEREAS, staff and NEPC conducted further due diligence on the eight semi-finalists; and,

WHEREAS, on December 9 and 10, 2020, the Investment Committee interviewed the seven finalists recommended by staff and selected five investment managers including J.P. Morgan Asset Management (JPMAM) for Board consideration for hire and directed staff to propose a core fixed income allocation plan; and,

WHEREAS, on January 12, 2021, the Investment Committee reviewed the core fixed income allocation plan proposed by staff and NEPC and concurred with an approximate \$480 million allocation to JPMAM; and,

WHEREAS, on January 26, 2021, the Board approved the Investment Committee's recommendation to award a contract to JPMAM with a contract size of approximately \$480 million.

NOW, THEREFORE, BE IT RESOLVED, that the Board hereby authorizes the General Manager to execute the necessary documents, subject to satisfactory business and legal terms and consistent with the following services and terms:

Company Name: J.P. Morgan Asset Management

Service Provided: Active Core Fixed Income Portfolio Management

Estimated Effective Date: May 1, 2021 through April 30, 2024

<u>Duration</u>: Three years

Benchmark: Bloomberg Barclays U.S. Aggregate Bond Index

Estimated Allocation: \$480 million

January 26, 2021





#### REPORT TO BOARD OF ADMINISTRATION

From: Investment Committee MEETING: JANUARY 26, 2021

Sung Won Sohn, Chair ITEM: VII – F

Elizabeth Lee Nilza R. Serrano

SUBJECT: CONSIDERATION OF INVESTMENT COMMITTEE RECOMMENDATION

REGARDING DISCUSSION OF INVESTMENT POLICY MANUAL REVIEW AND

POSSIBLE BOARD ACTION

ACTION: ☑ CLOSED: ☐ CONSENT: ☐ RECEIVE & FILE: ☐

#### **Recommendation**

That the Board approve the proposed revisions to the Private Equity Investment Policy, as redlined in Attachment 1 of this report.

## **Executive Summary**

On January 12, 2021, the Committee considered and concurred with staff's proposed revisions to the Private Equity Investment Policy.

### **Discussion**

LACERS maintains a comprehensive Investment Policy (IP) pursuant to Section 1106 of the Charter of the City of Los Angeles for the systematic administration of the City Employees' Retirement Fund to "...provide benefits to system participants and their beneficiaries and to assure prompt delivery of those benefits and related services; to minimize City contributions; and to defray the reasonable expenses of administering the system."

Pursuant to Section V.I of the IP, the Board shall review the IP at least annually, with the assistance of staff and investment consultants, and revise as necessary. As part of the Board's 2020 annual IP review, staff and LACERS' private equity consultant, Aksia TorreyCove Partners LLC, propose amendments to the Private Equity Investment Policy (Policy), as contained in the attached redline document (Attachment 1). These amendments are intended to clarify the investment guidelines, risk diversification, and roles and responsibilities associated with implementing co-investments and secondary transactions.

On January 12, 2021, the Committee reviewed and discussed the proposed revised Policy (Attachment 1) with staff. The proposed revised Policy incorporates a change that the Committee requested on December 8, 2020, when the Committee reviewed and provided comments on an initial draft. The Committee directed staff to remove the proposed language limiting co-investment opportunities to existing general partner relationships in order to broaden the co-investment opportunity set; no other changes were requested.

The Committee concurs with staff's proposed revisions and recommends that the Board approve these amendments to the Policy. Upon the Board's approval, staff may make additional minor administrative edits to be incorporated in the revised version of the IP.

# **Strategic Alignment**

Revising the LACERS Investment Policy Statement aligns with the Strategic Plan Goals to optimize long-term risk adjusted investment returns (Goal IV), to uphold good governance practices which affirm transparency, accountability, and fiduciary duty (Goal V), and to maximize organizational effectiveness and efficiency (Goal VI).

Prepared By: Clark Hoover, Investment Officer I, Investment Division

NMG/RJ/BF/WL/CH:jp

Attachments:

- 1. Private Equity Investment Policy Proposed Revisions (Redline Version)
- 2. Private Equity Investment Policy Proposed Revisions (Clean Version)
- 3. Private Equity Investment Policy Current Board Approved Version

BOARD Meeting: 1/26/21 Item VII-F Attachment 1

ARTICLE III. BOARD INVESTMENT POLICIES

#### Section 5 PRIVATE EQUITY INVESTMENT POLICY

#### X. PRIVATE EQUITY INVESTMENT POLICY

#### A. Introduction

This Private Equity Investment Policy ("Private Equity Policy") sets forth guidelines that provide a general framework for selecting, building, and managing LACERS' investments in private equity, including corporate finance/buyout, special situations (including distressed debt, distressed turnaround and mezzanine strategies), venture capital <u>and growth equitypartnerships</u>, co-investments, <u>secondaries secondary market transactions</u>, and other privately structured investments with <u>like-the</u> return and risk characteristics of private equity.

#### B. Investment Objectives

#### 1. Return

On a relative basis, the return objective for the LACERS' private equity portfolio ("Private Equity Portfolio") is 300 bps over the Russell 3000 Index net of fees, expenses, and carried interest.

Returns are measured over the life of the partnership and become meaningful for periods past the J-Curve. The valuation methodology used by general partners should conform to industry and regulatory standards. Performance will be measured using standard industry metrics such as IRR (internal rate of return), TVPI (total value to paid in capital), and MOIC (multiple on invested capital.) Additionally, the IRR performance in the first few years of a partnership's life may be negative due to the J-curve effect.

#### 2. Risk

Private equity investments are illiquid and have a long-term holding period. When invested alongside publicly traded assets, the asset class increases diversification and reduces risk at the System level. Nonetheless, LACERS expects that the Private Equity Consultant will take all appropriate measures to <a href="reduce-assume">reduce-assume</a> risks that are <a href="not-sufficiently">not-sufficiently</a> compensated <a href="adequately-for-by">adequately for-by</a> expected return. Such measures include, but are not limited to, diversification (as detailed in Section X.D.3 below) and due diligence.

#### C. Scope

The Private Equity Consultant, with Staff concurrence, is engaged by LACERS to shall select new investments, monitor and advise on the sale of existing private equity investments, monitor existing investments, and provide recommendations and program advice in accordance with the Private Equity Policy. This The Private Equity Policy establishes the framework for the management of the Private Equity Portfolio. The Private Equity Consultant will be evaluated annually as consultant and investment manager for the Private Equity Portfolio based upon the following factors: -portfolio performance; quality of analytical and technical work; expertise in the private equity asset class; responsiveness to requests from the LACERS Board of Administration ("Board") and LACERS Investment Staff ("Staff"); availability to attend Board meetings and meetings with Staff with reasonable advance notice; consulting and advising on LACERS' portfolio, including information on selected private equity

BOARD Meeting: 1/26/21 Item VII-F Attachment 1

ARTICLE III. BOARD INVESTMENT POLICIES

# Section 5 PRIVATE EQUITY INVESTMENT POLICY

related topics; identifying and mitigating risks; and proactively informing Staff of new investment opportunities or risks in the marketplace.

The Private Equity Consultant has discretion to buy, sell, or otherwise effect will evaluate and recommend investment transactions pursuant to the roles and responsibilities defined in Section X.F., With Staff concurrence on a recommendation from the Private Equity Consultant, LACERS may effect investments infor all new partnerships up to and including \$50 million and for all follow-on partnerships up to and including \$100 million. With Staff concurrence, recommended investments Recommendations in excess of these that exceed those amounts must be presented by the Private Equity Consultant to Staff for review and evaluation, and to the Board for approval. Non-U.S. dollar commitments to private equity partnerships shall be equal or less than the maximum U.S. dollar-equivalent limits as of the day Staff concurs with the Private Equity Consultant. However neon-U.S. dollar commitments to private equity partnerships may exceed the U.S. dollar currency equivalent maximum commitment limits after the date of Staff's concurrence due to foreign currency exchange rate fluctuations, and require no further Board approval.

#### D. Investment Guidelines

#### 1. Eligible Investments

LACERS will invest in top tier limited partnership interests of pooled vehicles as well as separate accounts, funds of one (or similar structures together with a limited number of other LPs), special purpose vehicles (SPVs), and other investment structures such as limited liability companies, investment trusts, and other corporate structures (unless otherwise stated in this Policy) covering the broad spectrum of private investments as follows:

- a) Private equity partnerships <u>Investments inincluding</u> corporate finance/buyout, special situations, <u>and</u> venture capital <u>and growth equity</u>, <u>secondaries</u>, <u>and co-investment funds</u>. Special situations is a broad investment strategy, which includes mezzanine and distressed debt partnerships, fund-of-funds (both direct and secondary), industry-focused, and multi-stage <u>"generalist"</u> partnerships;
- b) Direct co-investments Investments made alongside general partners directly in underlying assets and securities, usually with discounted management fees and carried interest. Co-investments may be structured as securities held directly by LACERS ("direct co-investments") or as an interest in a vehicle managed by a General Partner that invests in such underlying assets and securities.

<u>Direct co-investments shall be made on the same or better terms as provided</u> to the Limited Partnership that is investing in the same transaction.

Co-investing can increase concentration risk because the company in which the limited partner is investing directly may also be a company held in a private equity fund in which the limited partner has also invested. Therefore, the

# Section 5 PRIVATE EQUITY INVESTMENT POLICY

Private Equity Consultant will monitor co-investments for concentration risk and recommend adjustments in the private equity portfolio as needed in order to adequately manage such risk. The Private Equity Consultant will address concentration risk in the Annual Private Equity Strategic Plan.

It may be necessary for LACERS to incur due diligence costs, expenses (including legal counsel), and break-up fees on potential Co-investments. The estimated magnitude of these items shall 1) be reasonable and consistent with industry standards as determined by the Private Equity Consultant; and, 2) be approved by the Chief Investment Officer in advance of any commitment.

c) Secondary market purchases – purchases of private equity related interests in which one or more of the original parties sells their ownership stake(s) or interests, as a single interest or a pool of interests. Such interests can take the form of: 1) Limited Partnership Interests; 2) Co-investments; 3) General Partner interests; 4) Separately Managed Accounts; 5) Direct Ownership of Portfolio Companies; or 6) a combination of the above.

It may be necessary for LACERS to incur due diligence costs, expenses (including legal counsel and broker-dealers), and break-up fees on potential secondary transactions. The estimated magnitude of these items shall 1) be reasonable and consistent with industry standards as determined by the Private Equity Consultant; and, 2) be approved by the Chief Investment Officer in advance of any commitment.

- d) LACERS will also consider sales of partnership fund interests on the secondary market or to other limited partner(s) or potential buyer(s).
- e) Other privately structured investments deemed appropriate within LACERS' risk profile as determined by the Private Equity Consultant.
- b) Co-investments direct investments made alongside a partnership;
- c) Direct secondary purchases purchases of an existing partnership interest or pool of partnership interests from an investor;
- d) Other privately structured investments that are deemed appropriate within LACERS' risk profile that may include direct investments;
- e)f) Consider sale of partnership fund interest on the secondary market or to other limited partner(s) or potential buyer(s).

#### 2. Limitation on Percent of Partnership's Total Commitment

LACERS' commitment to any given partnership shall not exceed 20% of total commitments (by all limited partners and any other investors including the GP, excluding any co-investments) in that partnership. Any commitments in excess of this threshold will require pre-approval by the Board's total commitments without the Board's approval.

#### Section 5 PRIVATE EQUITY INVESTMENT POLICY

These limitations shall not apply to specially constructed partnerships (such as a fund of one or two); or separately managed accounts (SMAs) where LACERS is the sole limited partner.

#### 3. Diversification

The Private Equity Consultant, on behalf of LACERS, will <u>seek to appropriately</u> diversify the <u>following sources of risk in the Private Equity Portfolio in order to manage risk based on the following guidelines:-</u>

- a) Up to 15% of the Private Equity Portfolio's total exposure (fair market value plus unfunded commitments) may be attributable to partnerships by the same manager at the time the commitment is made.
- b) Up to 25% of the Private Equity Portfolio's total exposure (fair market value plus unfunded commitments) may consist of co-investments and secondary opportunities.
- c) The Private Equity Consultant shall appropriately diversify the Portfolio across vintage years when possible.
- d) The Private Equity Consultant shall appropriately diversify the Portfolio with respect to geographic distribution.
- e) The Private Equity Consultant shall monitor Portfolio investments with respect to GICS industry sector exposure as compared to the Cambridge Associates US Private Equity Index with the understanding that industry sector exposure at an investment fund level will be managed at the discretion of the general partner.

#### f) Private Equity Sub-asset Classes

- (1) Assets committed to venture capital shall be appropriately diversified across the stages of venture capital (e.g., early-stage, mid-stage, late-stage, and growth equity).
- (2) Assets committed to corporate finance/buyouts shall be appropriately diversified by target company size (e.g., mega, large, mid, and small).

#### a) Partnerships

- (1) No more than 15% of the Private Equity Portfolio's total exposure (market value plus unfunded commitments) to private equity may be attributable to partnerships by the same manager at the time the commitment is made.
- (2) The Private Equity Consultant shall diversify the Portfolio across vintage years when possible.
- (3) The geographic distribution of investments shall be monitored for diversification by the Private Equity Consultant.

#### Section 5 PRIVATE EQUITY INVESTMENT POLICY

The Private Equity Consultant shall monitor investments with respect to industry. In the event that the current cost basis associated with a single industry exceeds 25% of the cost basis of the Private Equity Portfolio, the Private Equity Consultant shall attempt to reduce this exposure by limiting future commitments to partnerships with an explicit focus on the industry in question and with the understanding that industry exposure at an investment level will be managed at the discretion of the general partner.

#### b) Sub-asset Classes

- (1) Assets committed to venture capital shall be diversified across the stages of venture capital (e.g., early-stage, mid-stage, late-stage, and growth equity).
- (2) Assets committed to corporate finance/buyouts shall be diversified by target company size (e.g., mega, large, mid, and small).

In addition to the diversification criteria listed above, LACERS' Board along with the Private Equity Consultant will adopt optimal sub-asset allocation targets, which will be updated <u>pursuant to the Annual Private Equity Strategic Planperiodically to reflect general changes in the economy</u>.

The current optimal sub-asset class allocation ranges and targets for LACERS' private equity investments are highlighted in the most recent Private Equity Annual Strategic Plan.

#### 4. Illiquidity

Private equity investments are not designed to meet the short-term liquidity needs of LACERS. The investments in this asset class are illiquid until the <u>general partner, subject</u> to the provisions of the partnership agreement, decides topartnerships, at their discretion, sell <u>fund</u> investments and distribute proceeds to <u>limited partners</u>.

#### 5. Distributions

Staff is responsible for the final disposition of distributions from partnerships.

#### E. Review of Investment Guidelines

The Private Equity Consultant and Staff periodically will review the above private equity investment guidelines as set forth in Section X.D (above) and recommend changes if necessary.

ARTICLE III. BOARD INVESTMENT POLICIA Rachment 1

# Section 5 PRIVATE EQUITY INVESTMENT POLICY

# F. Roles and Responsibilities

|                 | Role of the Board  | Role of Staff   | Role of the Private Equity Consultant   |
|-----------------|--|---|---|
| Strategy/Policy | <ul> <li>Select Private Equity Consultant.</li> <li>Approve asset class funding level.</li> <li>Review and approve the Private Equity<br/>Annual Strategic Plan which includes<br/>allocation targets and ranges.</li> </ul> | In consultation wWith Private Equity Consultant and General Fund Consultant, develop policies, procedures, guidelines, allocation targets, ranges, assumptions for recommendation to the Board. | With staff and General Fund Consultant,     Help develop policies, procedures,     guidelines, allocation targets, ranges,     assumptions for recommendation to the Board. |

# Item VII-F

# Section 5 PRIVATE EQUITY INVESTMENT POLICY

| Role of the Board  | Role of Staff   | Role of the Private Equity Consultant  |
|--|---|--|
| Investment Selection  Review investment analysis reports. Review and approve investments in new management groupspartnerships of amounts greater than \$50 million prior to investment. Review and approve investments in follow-on partnerships of amounts greater than \$100 million prior to investment. Review and approve direct co-investment opportunities that exceed \$50 million. Review and approve the sale of any one existing partnership fund on the secondary market exceeding \$50 million in Fair Market Value. Review and approve a simultaneous sale of multiple partnership fund interests in a packaged structure. | Role of Staff  Refer investments and forward to Private Equity Consultant for preliminary screening. Conduct meetings with prospective potentialor existing general partners representing new investment opportunities new investments prior to recommending to the Board, if practical. Conduct due diligence with general partners to better ascertain risk and return profile, as determined by the Chief Investment Officer. In conjunction with Private Equity Consultant, invest up to and including \$50 million for new partnerships, and up to and including \$100 million for follow-on funds without Board approval. If staff_Staff opposes and Private Equity Consultant disagrees, refer to Board for decision. In conjunction with Private Equity Consultant, make recommendations to Board for approval for investments over \$50 million in new partnerships, or over \$100 million in follow-on funds. Execute agreements_In conjunction with Private Equity Consultant, review and concur with direct co-investment opportunities up to and including \$50 million. In conjunction with Private Equity Consultant, review and concur with the approval of sale of existing partnership funds on the secondary market up to and including \$50 million in Fair Market Value. 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 | <ul> <li>Role of the Private Equity Consultant</li> <li>Conduct extensive appropriate analysis and due diligence on investments.</li> <li>Prepare investment reportsRecommend for Board consideration on appreval investments exceeding ever \$100 million for new managers, or exceedingever \$100 million in follow-on funds.</li> <li>With staff Staff concurrence, approve investments of up to and including \$50 million for new partnerships, and up to and including \$100 million in follow-on funds.</li> <li>With Staff concurrence, approve direct coinvestment opportunities up to and including \$50 million.</li> <li>Present to Staff recommendations pertaining to the sale of existing partnership funds on the secondary market exceeding \$50 million in Fair Market Value. Such transactions shall be brought to the Board for review and approval.</li> <li>Provide investment analysis reports for each new investment and for sales of partnership fund interest on the secondary market or to other limited partner(s) or potential buyer(s).</li> <li>Communicate with staff Staff regarding potential investment opportunities undergoing extensive analysis and due diligence.</li> <li>Coordinate meetings with general partners at the request of between staff Staff, Board, and general partner upon request.</li> <li>Advise on and Nnegotiate legal documents investment terms.</li> </ul> |

# Section 5 PRIVATE EQUITY INVESTMENT POLICY

| Role of the Board   | Role of Staff   | Role of the Private Equity Consultant   |
|---|---|---|
| Investment  Management and Monitoring  - Review quarterly, annual, and other periodic monitoring reports and plans.  Review Commitment Notification Reports.  - Approve sale of partnership fund interest on the secondary market or to other limited partner(s) or potential buyer(s). | <ul> <li>Review quarterly, annual and other periodic monitoring reports prepared by the Private Equity Consultant.</li> <li>Conduct meetings with existing managers periodically.</li> <li>Attend annual partnership meetings when appropriate.</li> <li>Fund capital calls and manage distributions.</li> <li>Review Private Equity Consultant's recommendations on partnership amendments and consents.</li> <li>Execute partnership amendments to agreements and consents.</li> <li>Manage and approve the wind-down and/or dissolve private equity fund investment(s) with private equity consultant's concurrence.</li> <li>Manage and execute the sale of partnership interest on the secondary market or to other limited partner(s) or potential buyer(s).</li> <li>Prepare Commitment Notification Reports for Board.</li> </ul> | <ul> <li>Maintain regular contact with existing managers in the portfolio to ascertain significant events within the portfolio.</li> <li>Recommend amendments and consents to staff_Staff for approval.</li> <li>Provide quarterly, annual, and other periodic monitoring reports and plans.</li> </ul> |

# Section 5 PRIVATE EQUITY INVESTMENT POLICY

#### X. PRIVATE EQUITY INVESTMENT POLICY

#### A. Introduction

This Private Equity Investment Policy ("Private Equity Policy") sets forth guidelines that provide a general framework for selecting, building, and managing LACERS' investments in private equity, including corporate finance/buyout, special situations (including distressed debt, distressed turnaround and mezzanine strategies), venture capital and growth equity, coinvestments, secondary market transactions, and other privately structured investments with the return and risk characteristics of private equity.

#### B. Investment Objectives

#### 1. Return

On a relative basis, the return objective for the LACERS' private equity portfolio ("Private Equity Portfolio") is 300 bps over the Russell 3000 Index net of fees, expenses, and carried interest.

Returns are measured over the life of the partnership and become meaningful for periods past the J-Curve. The valuation methodology used by general partners should conform to industry and regulatory standards. Performance will be measured using standard industry metrics such as IRR (internal rate of return), TVPI (total value to paid in capital), and MOIC (multiple on invested capital.) Additionally, the IRR performance in the first few years of a partnership's life may be negative due to the J-curve effect.

#### 2. Risk

Private equity investments are illiquid and have a long-term holding period. When invested alongside publicly traded assets, the asset class increases diversification and reduces risk at the System level. Nonetheless, LACERS expects that the Private Equity Consultant will take all appropriate measures to assume risks that are sufficiently compensated by expected return. Such measures include, but are not limited to, diversification (as detailed in Section X.D.3 below) and due diligence.

#### C. Scope

The Private Equity Consultant, with Staff concurrence, shall select new investments, monitor and advise on the sale of existing private equity investments, and provide recommendations and program advice in accordance with the Private Equity Policy. The Private Equity Policy establishes the framework for the management of the Private Equity Portfolio. The Private Equity Consultant will be evaluated annually as consultant and investment manager for the Private Equity Portfolio based upon the following factors: portfolio performance; quality of analytical and technical work; expertise in the private equity asset class; responsiveness to requests from the LACERS Board of Administration ("Board") and LACERS Investment Staff ("Staff"); availability to attend Board meetings and meetings with Staff with reasonable advance notice; consulting and advising on LACERS' portfolio, including information on

# Section 5 PRIVATE EQUITY INVESTMENT POLICY

selected private equity related topics; identifying and mitigating risks; and proactively informing Staff of new investment opportunities or risks in the marketplace.

The Private Equity Consultant will evaluate and recommend investment transactions pursuant to the roles and responsibilities defined in Section X.F. With Staff concurrence on a recommendation from the Private Equity Consultant, LACERS may effect investments in new partnerships up to and including \$50 million and for all follow-on partnerships up to and including \$100 million. With Staff concurrence, recommended investments in excess of these amounts must be presented to the Board for approval. Non-U.S. dollar commitments to private equity partnerships shall be equal or less than the maximum U.S. dollar-equivalent limits as of the day Staff concurs with the Private Equity Consultant. However non-U.S. dollar commitments to private equity partnerships may exceed the U.S. dollar currency equivalent maximum commitment limits after the date of Staff's concurrence due to foreign currency exchange rate fluctuations, and require no further Board approval.

#### D. Investment Guidelines

#### 1. Eligible Investments

LACERS will invest in limited partnership interests of pooled vehicles as well as separate accounts, funds of one (or similar structures together with a limited number of other LPs), special purpose vehicles (SPVs), and other investment structures such as limited liability companies, investment trusts, and other corporate structures (unless otherwise stated in this Policy) covering the broad spectrum of private investments as follows:

- a) Private equity partnerships Investments in corporate finance/buyout, special situations, venture capital and growth equity, secondaries, and co-investment funds. Special situations is a broad investment strategy, which includes mezzanine and distressed debt partnerships, fund-of-funds (both direct and secondary), industry-focused, and multi-stage partnerships;
- b) Direct co-investments Investments made alongside general partners directly in underlying assets and securities, usually with discounted management fees and carried interest. Co-investments may be structured as securities held directly by LACERS ("direct co-investments") or as an interest in a vehicle managed by a General Partner that invests in such underlying assets and securities.

Direct co-investments shall be made on the same or better terms as provided to the Limited Partnership that is investing in the same transaction.

Co-investing can increase concentration risk because the company in which the limited partner is investing directly may also be a company held in a private equity fund in which the limited partner has also invested. Therefore, the Private Equity Consultant will monitor co-investments for concentration risk and recommend adjustments in the private equity portfolio as needed in order to adequately manage such risk. The Private Equity Consultant will address concentration risk in the Annual Private Equity Strategic Plan.

# Section 5 PRIVATE EQUITY INVESTMENT POLICY

It may be necessary for LACERS to incur due diligence costs, expenses (including legal counsel), and break-up fees on potential Co-investments. The estimated magnitude of these items shall 1) be reasonable and consistent with industry standards as determined by the Private Equity Consultant; and, 2) be approved by the Chief Investment Officer in advance of any commitment.

- c) Secondary market purchases purchases of private equity related interests in which one or more of the original parties sells their ownership stake(s) or interests, as a single interest or a pool of interests. Such interests can take the form of: 1) Limited Partnership Interests; 2) Co-investments; 3) General Partner interests; 4) Separately Managed Accounts; 5) Direct Ownership of Portfolio Companies; or 6) a combination of the above.
  - It may be necessary for LACERS to incur due diligence costs, expenses (including legal counsel and broker-dealers), and break-up fees on potential secondary transactions. The estimated magnitude of these items shall 1) be reasonable and consistent with industry standards as determined by the Private Equity Consultant; and, 2) be approved by the Chief Investment Officer in advance of any commitment.
- d) LACERS will also consider sales of partnership fund interests on the secondary market or to other limited partner(s) or potential buyer(s).
- e) Other privately structured investments deemed appropriate within LACERS' risk profile as determined by the Private Equity Consultant.

#### 2. Limitation on Percent of Partnership's Total Commitment

LACERS' commitment to any given partnership shall not exceed 20% of total commitments (by all limited partners and any other investors including the GP, excluding any co-investments) in that partnership. Any commitments in excess of this threshold will require pre-approval by the Board.

These limitations shall not apply to specially constructed partnerships (such as a fund of one or two); or separately managed accounts (SMAs) where LACERS is the sole limited partner.

#### 3. Diversification

The Private Equity Consultant, on behalf of LACERS, will seek to appropriately diversify the Private Equity Portfolio in order to manage risk based on the following guidelines:

a) Up to 15% of the Private Equity Portfolio's total exposure (fair market value plus unfunded commitments) may be attributable to partnerships by the same manager at the time the commitment is made.

# Section 5 PRIVATE EQUITY INVESTMENT POLICY

- b) Up to 25% of the Private Equity Portfolio's total exposure (fair market value plus unfunded commitments) may consist of co-investments and secondary opportunities.
- c) The Private Equity Consultant shall appropriately diversify the Portfolio across vintage years when possible.
- d) The Private Equity Consultant shall appropriately diversify the Portfolio with respect to geographic distribution.
- e) The Private Equity Consultant shall monitor Portfolio investments with respect to GICS industry sector exposure as compared to the Cambridge Associates US Private Equity Index with the understanding that industry sector exposure at an investment fund level will be managed at the discretion of the general partner.
- f) Private Equity Sub-asset Classes
  - (1) Assets committed to venture capital shall be appropriately diversified across the stages of venture capital (e.g., early-stage, mid-stage, late-stage, and growth equity).
  - (2) Assets committed to corporate finance/buyouts shall be appropriately diversified by target company size (e.g., mega, large, mid, and small).

In addition to the diversification criteria listed above, LACERS' Board will adopt optimal sub-asset allocation targets, which will be updated pursuant to the Annual Private Equity Strategic Plan.

#### 4. Illiquidity

Private equity investments are not designed to meet the short-term liquidity needs of LACERS. The investments in this asset class are illiquid until the general partner, subject to the provisions of the partnership agreement, decides to sell fund investments and distribute proceeds to limited partners.

#### 5. Distributions

Staff is responsible for the final disposition of distributions from partnerships.

#### E. Review of Investment Guidelines

The Private Equity Consultant and Staff periodically will review the above private equity investment guidelines and recommend changes if necessary.

ARTICLE III. BOARD INVESTMENT POLICIA Rachment 2

# Section 5 PRIVATE EQUITY INVESTMENT POLICY

# F. Roles and Responsibilities

|                 | Role of the Board   | Role of Staff  | Role of the Private Equity Consultant        |
|-----------------|---|--|--|
| Strategy/Policy | . ,   | In consultation with Private Equity  | Help develop policies, procedures,           |
|                 | Approve asset class funding level.  | Consultant and General Fund Consultant,  | guidelines, allocation targets, ranges,      |
|                 | Review and approve the Private Equity     Annual Strategic Plan which includes     allocation targets and ranges. | develop policies, procedures, guidelines, allocation targets, ranges, assumptions for recommendation to the Board. | assumptions for recommendation to the Board. |

# Section 5 PRIVATE EQUITY INVESTMENT POLICY

|                         | Role of the Board  | Role of Staff  | Role of the Private Equity Consultant   |
|-------------------------|--|--|---|
| Investment<br>Selection | <ul> <li>Review investment analysis reports.</li> <li>Review and approve investments in new partnerships of amounts greater than \$50 million prior to investment.</li> <li>Review and approve investments in follow-on partnerships of amounts greater than \$100 million prior to investment.</li> <li>Review and approve direct co-investment opportunities that exceed \$50 million.</li> <li>Review and approve the sale of any one existing partnership fund on the secondary market exceeding \$50 million in Fair Market Value.</li> <li>Review and approve a simultaneous sale of multiple partnership fund interests in a packaged structure.</li> </ul> | <ul> <li>Refer investments and forward to Private Equity Consultant for preliminary screening.</li> <li>Conduct meetings with prospective or existing general partners representing new investment opportunities.</li> <li>Conduct due diligence with general partners to better ascertain risk and return profile, as determined by the Chief Investment Officer.</li> <li>In conjunction with Private Equity Consultant, invest up to and including \$50 million for new partnerships, and up to and including \$100 million for follow-on funds without Board approval. If Staff opposes and Private Equity Consultant disagrees, refer to Board for decision.</li> <li>In conjunction with Private Equity Consultant, make recommendations to Board for approval for investments over \$50 million in new partnerships, or over \$100 million in follow-on funds.</li> <li>In conjunction with Private Equity Consultant, review and concur with direct co-investment opportunities up to and including \$50 million.</li> <li>In conjunction with Private Equity Consultant, review and concur with the approval of sale of existing partnership funds on the secondary market up to and including \$50 million in Fair Market Value.</li> <li>General Manager or designee with signature authority will execute agreements and other legal or business documents to effectuate the transaction closing.</li> <li>Ensure review of relevant fund documents by the City Attorney and/or external legal counsel.</li> </ul> | <ul> <li>Conduct appropriate analysis and due diligence on investments.</li> <li>Prepare investment reports for Board consideration on investments exceeding \$50 million for new managers, or exceeding \$100 million in follow-on funds.</li> <li>With Staff concurrence, approve investments of up to and including \$50 million for new partnerships, and up to and including \$100 million in follow-on funds.</li> <li>With Staff concurrence, approve direct coinvestment opportunities up to and including \$50 million.</li> <li>Present to Staff recommendations pertaining to the sale of existing partnership funds on the secondary market exceeding \$50 million in Fair Market Value. Such transactions shall be brought to the Board for review and approval.</li> <li>Provide investment analysis reports for each new investment and for sales of partnership fund interest on the secondary market or to other limited partner(s) or potential buyer(s).</li> <li>Communicate with Staff regarding potential investment opportunities undergoing analysis and due diligence.</li> <li>Coordinate meetings with general partners at the request of Staff.</li> <li>Advise on and negotiate investment terms.</li> </ul> |

# Section 5 PRIVATE EQUITY INVESTMENT POLICY

|  | Role of the Board  | Role of Staff   | Role of the Private Equity Consultant   |
|--|--|---|---|
| Investment<br>Management<br>and Monitoring | Review quarterly, annual, and other periodic monitoring reports and plans.     Review Commitment Notification Reports. | <ul> <li>Review quarterly, annual and other periodic monitoring reports prepared by the Private Equity Consultant.</li> <li>Conduct meetings with existing managers periodically.</li> <li>Attend annual partnership meetings when appropriate.</li> <li>Fund capital calls and manage distributions.</li> <li>Review Private Equity Consultant's recommendations on partnership amendments and consents.</li> <li>Execute partnership amendments and consents.</li> <li>Manage and approve the wind-down and/or dissolve private equity fund investment(s) with private equity consultant's concurrence.</li> <li>Manage and execute the sale of partnership interest on the secondary market or to other limited partner(s) or potential buyer(s).</li> <li>Prepare Commitment Notification Reports for Board.</li> </ul> | <ul> <li>Maintain regular contact with existing managers in the portfolio to ascertain significant events within the portfolio.</li> <li>Recommend amendments and consents to Staff for approval.</li> <li>Provide quarterly, annual, and other periodic monitoring reports and plans.</li> </ul> |

**Attachment 3** 

ARTICLE III. BOARD INVESTMENT POLICIES

#### Section 5 PRIVATE EQUITY INVESTMENT POLICY

#### X. PRIVATE EQUITY INVESTMENT POLICY

#### A. Introduction

This Private Equity Investment Policy ("Private Equity Policy") sets forth guidelines that provide a general framework for selecting, building, and managing LACERS' investments in private equity, including corporate finance/buyout, special situations (including distressed debt, distressed turnaround and mezzanine strategies), venture capital partnerships, co-investments, secondaries, and other privately structured investments with like return and risk characteristics of private equity.

#### **B. Investment Objectives**

#### 1. Return

On a relative basis, the return objective for the LACERS' private equity portfolio ("Private Equity Portfolio") is 300 bps over the Russell 3000 Index net of fees, expenses, and carried interest.

Returns are measured over the life of the partnership and become meaningful for periods past the J-Curve. The valuation methodology used by general partners should conform to industry and regulatory standards. Additionally, the IRR performance in the first few years of a partnership's life may be negative due to the J-curve effect.

#### 2. Risk

Private equity investments are illiquid and have a long-term holding period. When invested alongside publicly traded assets, the asset class increases diversification and reduces risk at the System level. Nonetheless, LACERS expects that the Private Equity Consultant will take all appropriate measures to reduce risks that are not compensated adequately for by expected return. Such measures include, but are not limited to, diversification (as detailed in Section X.D.3 below) and due diligence.

#### C. Scope

The Private Equity Consultant is engaged by LACERS to select new investments, monitor existing investments, and provide advice in accordance with the Private Equity Policy. This Private Equity Policy establishes the framework for the management of the Private Equity Portfolio. The Private Equity Consultant will be evaluated annually as consultant and investment manager for the Private Equity Portfolio based upon the following: portfolio performance; quality of analytical and technical work; expertise in the private equity asset class; responsiveness to requests from the LACERS Board of Administration ("Board") and LACERS Investment Staff ("Staff"); availability to attend Board meetings and meetings with Staff with reasonable advance notice; consulting and advising on LACERS' portfolio, including information on selected private equity related topics; identifying and mitigating risks; and proactively informing Staff of new investment opportunities or risks in the marketplace.

# Section 5 PRIVATE EQUITY INVESTMENT POLICY

The Private Equity Consultant has discretion to buy, sell, or otherwise effect investment transactions pursuant to the roles and responsibilities defined in Section X.F, for all new partnerships up to and including \$50 million and for all follow-on partnerships up to and including \$100 million. Recommendations that exceed those amounts must be presented by the Private Equity Consultant to Staff for review and evaluation, and to the Board for approval. Non-U.S. dollar commitments to private equity shall be equal or less than the maximum U.S. dollar-equivalent limits as of the day Staff concurs with the Private Equity Consultant. Non-U.S. dollar commitments to private equity may exceed the U.S. dollar currency equivalent maximum commitment limits after the date of Staff's concurrence due to foreign currency exchange rate fluctuations, and require no further Board approval.

#### D. Investment Guidelines

#### 1. Eligible Investments

LACERS will invest in top tier limited partnership interests of pooled vehicles covering the broad spectrum of private investments as follows:

- a) Private equity partnerships including corporate finance/buyout, special situations, and venture capital. Special situations is a broad investment strategy, which includes mezzanine and distressed debt partnerships, fund-offunds (both direct and secondary), industry-focused, and multi-stage "generalist" partnerships;
- b) Co-investments direct investments made alongside a partnership;
- Direct secondary purchases purchases of an existing partnership interest or pool of partnership interests from an investor;
- d) Other privately structured investments that are deemed appropriate within LACERS' risk profile that may include direct investments;
- e) Consider sale of partnership fund interest on the secondary market or to other limited partner(s) or potential buyer(s).

#### 2. Limitation on Percent of Partnership's Total Commitment

LACERS' commitment to any given partnership shall not exceed 20% of that partnership's total commitments without the Board's approval.

#### 3. Diversification

The Private Equity Consultant, on behalf of LACERS, will diversify the following sources of risk in the Private Equity Portfolio.

#### a) Partnerships

(1) No more than 15% of the Private Equity Portfolio's total exposure (market value plus unfunded commitments) to private equity may be attributable to partnerships by the same manager at the time the commitment is made.

**Attachment 3** 

ARTICLE III. BOARD INVESTMENT POLICIES

#### Section 5 PRIVATE EQUITY INVESTMENT POLICY

- (2) The Private Equity Consultant shall diversify the Portfolio across vintage years when possible.
- (3) The geographic distribution of investments shall be monitored for diversification by the Private Equity Consultant.

The Private Equity Consultant shall monitor investments with respect to industry. In the event that the current cost-basis associated with a single industry exceeds 25% of the cost basis of the Private Equity Portfolio, the Private Equity Consultant shall attempt to reduce this exposure by limiting future commitments to partnerships with an explicit focus on the industry in question and with the understanding that industry exposure at an investment level will be managed at the discretion of the general partner.

#### b) Sub-asset Classes

- (1) Assets committed to venture capital shall be diversified across the stages of venture capital (e.g., early-stage, mid-stage, late-stage, and growth equity).
- (2) Assets committed to corporate finance/buyouts shall be diversified by target company size (e.g., mega, large, mid, and small).

In addition to the diversification criteria listed above, LACERS' Board along with the Private Equity Consultant will adopt optimal sub-asset allocation targets, which will be updated periodically to reflect general changes in the economy.

The current optimal sub-asset class allocation ranges and targets for LACERS' private equity investments are highlighted in the most recent Private Equity Annual Strategic Plan.

#### 4. Illiquidity

Private equity investments are not designed to meet the short-term liquidity needs of LACERS. The investments in this asset class are illiquid until the partnerships, at their discretion, sell investments and distribute proceeds.

#### 5. Distributions

Staff is responsible for the final disposition of distributions from partnerships.

#### E. Review of Investment Guidelines

The Private Equity Consultant and Staff periodically will review investment guidelines as set forth in Section X.D (above) and recommend changes if necessary.

# Section 5 PRIVATE EQUITY INVESTMENT POLICY

# F. Roles and Responsibilities

|                      | Role of the Board   | Role of Staff  | Role of the Private Equity Consultant  |
|----------------------|---|--|--|
| Strategy/Policy      | <ul> <li>Select Private Equity Consultant.</li> <li>Approve asset class funding level.</li> <li>Review and approve the Private Equity<br/>Annual Strategic Plan which includes<br/>allocation targets and ranges.</li> </ul>  | With Private Equity Consultant and General Fund Consultant, develop policies, procedures, guidelines, allocation targets, ranges, assumptions for recommendation to the Board.   | develop policies, procedures, guidelines, allocation targets, ranges, assumptions for recommendation to the Board.   |
| Investment Selection | <ul> <li>Review investment analysis reports.</li> <li>Review and approve investments in new management groups of amounts greater than \$50 million prior to investment.</li> <li>Review and approve investments in follow-on partnerships of amounts greater than \$100 million prior to investment.</li> </ul> | <ul> <li>Refer investments and forward to Private Equity Consultant for preliminary screening.</li> <li>Conduct meetings with potential new investments prior to recommending to the Board, if practical.</li> <li>In conjunction with Private Equity Consultant, invest up to \$50 million for new partnerships, and up to \$100 million for follow-on funds without Board approval. If staff opposes, refer to Board for decision.</li> <li>In conjunction with Private Equity Consultant, make recommendations to Board for approval for investments over \$50 million in new partnerships, or over \$100 million in follow-on funds.</li> <li>Execute agreements.</li> </ul> | of up to \$50 million for new partnerships, and up to \$100 million in follow-on funds.  Provide investment analysis report for each new investment and sale of partnership fund interest on the secondary market or to other limited partner(s) or potential buyer(s).  Communicate with staff regarding potential opportunities undergoing extensive analysis and due diligence. |

BOARD Meeting: 1/26/21 Item VII-F

Attachment 3

ARTICLE III. BOARD INVESTMENT POLICIES

# Section 5 PRIVATE EQUITY INVESTMENT POLICY

| Investment<br>Monitoring | <ul> <li>Review quarterly, annual, and other periodic monitoring reports.</li> <li>Approve sale of partnership fund interest</li> </ul> | Review quarterly, annual and other periodic<br>monitoring reports prepared by the Private<br>Equity Consultant. | Maintain regular contact with existing<br>managers in the portfolio to ascertain<br>significant events within the portfolio. |
|--------------------------|---|---|--|
|                          | on the secondary market or to other limited partner(s) or potential buyer(s).   | Conduct meetings with existing managers periodically.   | Recommend amendments and consents to staff for approval.   |
|                          |   | Attend annual partnership meetings when appropriate.  | <ul> <li>Provide quarterly, annual, and other periodic monitoring reports.</li> </ul>  |
|                          |   | Fund capital calls and distributions.   |  |
|                          |   | Review Private Equity Consultant's  |  |
|                          |   | recommendations on amendments and consents.   |  |
|                          |   | Execute amendments to agreements and consents.  |  |
|                          |   | Manage and approve the wind-down and/or   |  |
|                          |   | dissolve private equity fund investment(s)  |  |
|                          |   | with private equity consultant's concurrence.   |  |
|                          |   | Manage and execute the sale of partnership  |  |
|                          |   | interest on the secondary market or to other  |  |
|                          |   | limited partner(s) or potential buyer(s).   |  |

Agenda of: January 26, 2021

Item No: VIII-A

#### **MEMORANDUM**

**TO:** Board of Administration,

Los Angeles City Employees' Retirement System

FROM: Anya Freedman, Assistant City Attorney

Joshua Geller, Deputy City Attorney

**DATE**: January 26, 2021

**RE:** Real Estate and Investments Outside Counsel

CC: Neil Guglielmo, General Manager

#### RECOMMENDATIONS

#### We recommend that the Board:

- 1. Authorize the publication of a Request for Proposals (RFP) for Outside Counsel Specializing in Real Estate and Investments, substantially in the form attached.
- 2. Authorize an amendment to the Board's current contract with Nossaman LLP, currently expiring June 15, 2021, to extend it for one additional year, in case extensions are necessary to ensure continuity of services while the RFP process is underway.

#### **DISCUSSION**

# We recommend the publication of an RFP for Outside Counsel Specializing in Real Estate and Investments

Pursuant to City Charter Section 275, the City Attorney's Office has utilized specialized outside counsel for many years to assist our office in providing expert advice and representation to LACERS in real estate and investment matters. We currently have a contract for these services with Nossaman LLP. This contract was awarded following our most recent RFP process, completed in 2016. In 2019, the Board approved two-year extensions of the contract, which is scheduled to expire on June 15, 2021.

Nossaman has served as outside investment and real estate counsel to LACERS for over a decade. In addition to providing advice and negotiating alternative investment transactions, Nossaman has been instrumental in the Board's entry into the private credit asset class and Nossaman attorneys played an indispensable role to facilitate the Broadway Building acquisition.

Expenditures for these legal services are an appropriate and prudent cost of administering the Plan and are critically needed for our office to advise and represent the Plan in the specialized area of investment and real estate matters and to assist staff and the Board in fulfilling their fiduciary obligations.

We recommend continuing the longstanding practice of having staff designated by the Board and the General Manager participate in the selection process, which includes reviewing written proposals, identifying and interviewing finalists, and reaching consensus with our office of a group of firms for the Board to consider for its final selection decision. While Nossaman is currently the only firm providing these legal services to the Board, we continue to believe that LACERS would be well served by a panel of two, or possibly three, law firms with this specialized expertise. We are optimistic that this new RFP will yield a qualified bench of law firms with expertise in these specialized areas of law. We will continue our practice of asking outside counsel for not-to-exceed bids before assigning a project.

A draft of the RFP is enclosed. We would aim to publish the RFP in February, with final selections for new three-year contracts to be executed on or before June 15, 2021.

# We recommend amending the current contract with Nossaman to extend it, if necessary, through June 15, 2022

As mentioned above, the Board's current contract with Nossaman expires June 15, 2021. While we have every intention of completing the RFP process and having new three-year contract(s) in place in advance of that expiration date, in light of our experience and the unprecedented events of the past year, we recommend adopting contingency plans in case events prevent us from completing the RFP process in time. To ensure uninterrupted access to these essential legal services, and to account for potential delays in finalizing contracts following the RFP process, we recommend the Board approve a one-year extension of its contract with Nossaman, with a new expiration date of June 15, 2022. That extension would also require the approval of City Council. Consistent with our longstanding practice, the contract provides for a right to terminate at any time during the contract period, without cause, with thirty days' notice. We would only execute the term extension amendment if it becomes clear that we will not be able to complete the RFP process in time for new contracts to begin before the current contract expires.

Thank you for your consideration of this matter.

AJF/JMG:np Enclosure

# Notice and Request for Proposals by the City of Los Angeles for Legal Services regarding Real Estate and Investment Counsel for City Pension Plans

Proposals Due By: February \_\_\_, 2020

LOS ANGELES CITY ATTORNEY'S OFFICE 200 N. MAIN ST, 8<sup>TH</sup> FLOOR LOS ANGELES, CA 90012 ATTENTION: ANNE HALEY PHONE: (213) 978-8100

FAX: (213) 978-2093

# PRIVILEGED MEMORANDUM FOR POTENTIAL ENGAGEMENT OF COUNSEL

TO: PROSPECTIVE COUNSEL

FROM: LOS ANGELES CITY ATTORNEY'S OFFICE

DATE: February \_\_\_, 2020

RE: REQUEST FOR PROPOSALS FOR LEGAL REPRESENTATION

# 1.0 PROPOSALS

The Los Angeles City Attorney's Office (the "City Attorney's Office") is soliciting proposals for qualified law firms ("proposer" or "firm") to assist the City Attorney's Office in providing legal services to the three Los Angeles City pension plans and their respective boards of trustees: The Fire and Police Pension Plan ("LACERS"), the Los Angeles City Employees' Retirement System ("LACERS"), and the Water and Power Employees' Retirement Plan ("WPERP") (hereinafter referred to collectively as the "Plans"). The City Attorney may choose one or more firms for this role. Counsel should have extensive expertise advising public pension plans in Real Estate and Investment matters.

Please submit your proposals <u>electronically</u>, in <u>one tabbed</u>, <u>searchable pdf</u>, by e-mail, to all of the following:

- (1) anne.haley@lacity.org
- (2) anya.freedman@lacity.org
- (3) joshua.geller@lacity.org
- (4) miguel.bahamon@lacity.org
- (5) nicole.paul@lacity.org
- (6) investments@ladwp.com
- (7) pe@lafpp.com
- (8) lacers.Invest@lacers.org

The subject line of the email must state "RFP for Counsel re: INVESTMENT AND REAL ESTATE FOR CITY OF LOS ANGELES RETIREMENT PLANS"

**Proposals must be received no later than 5:00 p.m. PST on February \_\_\_, 2021.** All submitted materials shall become part of the proposal, and may be incorporated in a subsequent contract between the City of Los Angeles and the selected proposer. It is the proposer's sole responsibility to ensure that the proposal is submitted in a timely manner.

All forms referred to in this Request For Proposals (RFP) are available at

LABAVN.org. You are required to register your firm at LABAVN.org and complete the necessary contracting forms in order to be deemed responsive to this RFP.

Questions regarding this RFP shall be submitted by e-mail and directed only to Deputy City Attorney Josh Geller via e-mail at <a href="mailto:joshua.geller@lacity.org">joshua.geller@lacity.org</a>. All questions must be sent before February , 2021.

# 2.0 SCOPE OF WORK

The Public Pensions General Counsel Division of the City Attorney's Office is general counsel to the Plans. Collectively, the Plans' boards serve as trustees for over \$60 billion in trust fund assets and administer retirement, disability, and health benefits for tens of thousands of Los Angeles City retirees and their beneficiaries.

From time to time, upon recommendation of one of the Plan's retirement boards and the written consent of the Los Angeles City Attorney, pursuant to Section 275 of the City Charter the City may contract with outside counsel to assist the Los Angeles City Attorney's Office in providing certain specialized legal services to the Plans. One of the areas in which specialized legal services are required is real estate and investment legal advice.

The Firm(s) selected for this role will assist the City Attorney's Office, as requested, on a project-specific basis, on behalf of one or more of the Plans, on specialized investment and real property matters, including:

- reviewing, negotiating, and providing legal advice regarding real estate and investment transactions, investment programs and policies, and related agreements and documentation, including matters pertaining to private real estate funds, private credit/private lending programs, private equity, and other investments;
- providing general advice pertaining to real estate and investment matters;
- ownership, development, and operation of real property, including owner-occupied headquarters; and
- representing the Plans in litigation arising from these investment matters.

#### 3.0 **EVALUATION CRITERIA**

The selection of the firm or firms will be based on the experience and capability of each firm to provide the services described above.

All proposals submitted will be reviewed by appropriate City Attorney staff and representatives of the Plans. Thereafter, City Attorney staff will schedule interviews with selected firms. Due to ongoing pandemic and related emergency orders and public health concerns, interviews will be conducted via videoconference. Representatives of the Plans will also participate in the interviews, and each Board reserves the right to conduct interviews with finalists prior to awarding any contracts.

# 4.0 **CONFIDENTIALITY**

Should any attorney or firm receiving this RFP reasonably believe that a waiveable potential conflict may exist by reason of its representation of some other entity, the Los Angeles City Attorney's Office requests that this RFP not be shared with any other represented entity, and if question exists regarding potential conflict of interest pursuant to Rule 3-310 of the California Rules of Professional Conduct, that the firm scrupulously observe the requirements of Section 6068(e) of the California Business and Professions Code and uncompromisingly maintain fully confidentiality of this document. Any questions in connection with issues of conflicts of interest should be addressed to Deputy City Attorney Josh Geller at joshua.geller@lacity.org.

## 5.0 CONTENT OF RESPONSE

## 5.1 <u>Cover Letter</u>

Each response to this RFP must be accompanied by a cover letter that contains a general statement of the purposes for submission and include the following information:

- (a) Name, address, telephone number, and legal business status (individual, limited liability partnership, corporation, etc.) of the proposer.
- (b) Name, title, address and telephone number of the person or persons authorized to represent the proposer in order to enter into negotiations with the City Attorney's Office with respect to the RFP and any subsequently awarded contract. The cover letter shall also indicate any limitation of authority for the person named.
- (c) A representative or officer of the proposer must sign the cover letter. That representative shall have been authorized to bind the firm to all provisions of the RFP, any subsequent changes and to the contract if an award is made.
- (d) If the respondent is a partnership, the response must be signed by a general partner in the name of the partnership. If the respondent is a corporation, the response must be signed on behalf of the corporation by two authorized officers (a Chairman of the Board, President or Vice-President, and a Secretary, Treasurer or Chief Financial Officer) or an officer authorized by the Board of Directors to execute such documents on behalf of the corporation.
- (e) The cover letter should be addressed to:

Anne Haley
Assistant City Attorney
Los Angeles City Attorney's Office
200 North Main Street
8<sup>th</sup> Floor CHE
Los Angeles, California 90012

#### 5.2 Additional Information

- (a) Briefly describe your firm's background, size, and history pertinent to the services requested in this RFP for which your firm is seeking the assignment.
- (b) List the attorneys you expect to be assigned to this relationship and describe the area(s) of specialization of each and his/her relevant experience. Identify the key attorney who will be the primary contact and lead counsel in providing services under this assignment.
- (c) Describe your firm's backup procedures in the event one or more attorneys assigned to this relationship leave the firm.
- (d) Describe the relevant special services your firm provides, particularly those that may not be offered by other law firms.
- (e) Within the past three years, have there been any significant developments in your firm, such as changes in ownership or restructuring? Do you anticipate any significant changes in the future? Please describe.
- (f) Does your firm provide services similar to those for which you seeking assignment in your response to this RFP to any other public sector clients?
- (g) Identify all public sector clients who have terminated their working relationship with your firm in the past three years and a brief statement of your understanding of their reasons for doing so. Provide each such client's in-house counsel's (or, if none, CEO's) name, address, telephone number, and e-mail address.
- (h) How does your firm identify and manage conflicts of interest?
- (i) Within the past five years, has your firm, or a partner or attorney in your firm, been involved in litigation or other legal proceedings relating to provision of legal services? If so, provide an explanation and indicate the current status or disposition.
- (j) Does your firm have a sexual harassment policy? Please describe the policy and summarize any pending or anticipated litigation against the firm, its employees, or partners, involving allegations of sexual harassment or sexual misconduct.
- (k) Describe how your firm has responded to the challenges presented by the novel coronavirus pandemic, including examples demonstrating your firm's ability to use technology to communicate with and serve its clients.

- (I) Within the past five years, has your firm, any partner or owner of the firm, or any attorney employed by or associated with the firm, been the subject of a judgment involving findings of FRCP 11 or similar state court sanctions, violations of state bar rules, material omissions or misrepresentations to the court or a client, violations of state bar rules or other rules governing attorney legal ethics, or any impropriety or non-disclosure? If so, please describe the underlying circumstances and provide an explanation.
- (m)Is your firm presently involved in any litigation involving the City of Los Angeles? If so, provide the jurisdiction, case name and number and a brief description of the matter. In responding to this question, and any other question in this RFP, please include all City entities, including, for example, Los Angeles World Airports, the Los Angeles Department of Water and Power, the Port of Los Angeles, LACERS, LACERS, and WPERP.

# 6.0 QUALIFICATIONS AND HOURLY RATES

All respondents shall have sufficient qualified attorneys, paralegals and other personnel resources to provide the legal services required, as described in this RFP. Please include a statement that details the names, bar numbers, resumes, and relevant expertise of attorneys for the work required under this RFP. Please also submit a statement listing the proposed hourly rates for each attorney referenced in your firm's response to this RFP.

# 7.0 CONFLICTS OF INTEREST

Provide information on whether your firm represents any interests that may constitute a conflict of interest in your representation of the City of Los Angeles (alternatively, the "City"), the Retirement Plans (LACERS, WPERP, LACERS), the Port of Los Angeles, Los Angeles World Airports, the Los Angeles Department of Water and Power, the Community Redevelopment Agency (CRA), the Housing Authority of the City of Los Angeles, the Community Development Department (CDD), or any other City agency or affiliated entity.

# 8.0 MANDATORY CITY REQUIREMENTS

Sections 8.1 through 8.13 describe mandatory requirements for contracting with the City of Los Angeles. Please access more detailed information and forms which must be completed by the proposer at the City's contracting website: LABAVN.org.

#### 8.1 City Contracts Held Within the Last Ten (10) Years:

Please list all of the City contracts held by the respondent within the past ten (10) years, In addition, please specify the following information:

- The City entity or department that administered the contract;
- The contract number:
- The dollar amount of the contract;

- Date and periods during which the contract was in effect; and
- A short description of the services provided.

# 8.2 <u>Information on Business Locations and Workforce</u>

It is the policy of the City of Los Angeles to encourage businesses to locate or remain in the City. Therefore, the Los Angeles City Council requires all City departments to gather information on the headquarters address and certain information on the employees of the firms contracting with the City (Council File No.92-0021). The following information is to be included in each proposal:

- The headquarters address or respondent's firm and the total number of people employed by the firm, regardless of work location;
- The percentage of the respondent's total work force employed within the City of Los Angeles and the percentage residing within the City; and
- The address of any branch offices located within the City of Los Angeles and the total number employed in each Los Angeles branch office. The percentage of the work force in each Los Angeles branch office that is employed within the City and the percentage residing within the City.

#### 8.3 Statement of Non-Collusion

With each response, a statement shall be submitted and signed by the respondent under penalty of perjury that:

- The response is genuine, not a sham or collusive;
- The response is not made in the interest or on behalf of any person not named therein;
- The respondent has not directly or indirectly induced or solicited any person to submit a false or sham response or to refrain from responding; and
- The respondent has not in any manner sought by collusion to secure an advantage over any other respondent.

# 8.4 <u>Minority Business Enterprise (MBE) and Women-owned Business Enterprise (WBE) Program and Other Business Enterprise (OBE) Outreach Requirements</u>

It is the policy of the City to provide Minority Business Enterprises, Women Business Enterprises, and Other Business Enterprises an equal opportunity to participate in the contractual process. All respondents are strongly encouraged to

make an effort to include members of these groups in any subcontracting work to be performed if awarded the contract. Information regarding this policy can be found at the City Attorney Office website, identified above.

# 8.5 <u>Non-Discrimination, Equal Employment Practices and Affirmative</u> Action Policies

Respondent awarded a contract pursuant to the RFP must comply with the Nondiscrimination Policy, Equal Employment Practices and Affirmative Action Programs set forth in Section 10.8 et seq. of the Los Angeles Administrative Code. The respondent must sign and submit with the response a Nondiscrimination, Equal Employment Practices and Affirmative Action Certification Declaration, Composition of Total Work-force Report, and a signed version of one of the following affirmative action plans: a) the respondent's own affirmative action plan which meets all the requirements of the City's Affirmative Action Plan. If the respondent elects to submit its own plan, it must be submitted to the Office of Contract Compliance for approval. Respondents should refer to the City Attorney website identified above for additional information, forms and instructions.

# 8.6 Child Care Policy

It is the policy of the City of Los Angeles to encourage businesses to adopt childcare policies and practices. Consistent with this policy, all responses must contain a completed "Child Care Declaration Statement." Respondents should refer to the City Attorney website identified above for additional information, instructions and the certification.

#### 8.7 Service Contract Worker Retention and Living Wage Ordinances

The Service Contract Worker Retention Ordinance (Los Angeles Administrative Code, Section 10.36 et seq.) and the Living Wage Ordinance (Los Angeles Administrative Code, Section 10.37 et seq.) (collectively, the "Ordinances") provide that all employers (except those specifically exempted) under contracts primarily for the furnishing of services to or for the City and that involve an expenditure or receipt in excess of \$25,000 and a contract term of at least three (3) months, or certain recipients of city financial assistance, shall comply with provisions of said Ordinances. Respondents should refer to the City Attorney website identified above for further information regarding these Ordinances.

#### 8.8 Equal Benefits Ordinance

Unless otherwise exempt, any contract award pursuant to the RFP is subject to the Equal Benefits Ordinance (Los Angeles Administrative Code Section 10.89.2.1 et seq.), which applies to contracts in excess of \$5,000.00 and requires that contractors provide the same benefits to domestic partners of employees that are provided to spouses or employees. Respondents must complete and return with

their response, a Certification of Compliance Form and, if appropriate, the Reasonable Measures Certification or the Substantial Compliance Certification. Respondents should refer to the City Attorney website identified above to access these forms.

## 8.9 Insurance and Indemnification

If awarded a contract, the respondent will furnish the City evidence of insurance coverage as follows: \$1,000,000 for General liability; \$250,000 for Workers' Compensation; and \$300,000 for Automobile Liability. The contractor will be required to indemnify the City in accordance with the provisions set forth in PSC-17 of the Standard Provisions for City Contracts. Details regarding insurance requirements are in the Standard Provisions for City Contracts, which may be accessed at the City Attorney website identified above.

In addition, insurance forms which must be completed and approved by the City Attorney Insurance and Bonds Section prior to contract execution are also available at the website. These forms are for information only and do not need to be returned with the response.

# 8.10 Support Assignment Orders

Respondents are advised that any contract awarded pursuant to this RFP will be subject to the applicable provisions of Los Angeles Administrative Code Section 10.10, Child Support Assignment Orders. Respondents shall access the City Attorney website identified above for further information and must submit it with the response the Certification with Child Support Obligations contained therein.

#### 8.11 Contractor Responsibility Ordinance

Every Request for Proposal, Request for Bid, Request for Qualifications or other procurement process is subject to the provisions of the Contractor Responsibility Ordinance, Section 10.40 et seq., of Article 14, Chapter 1 of Division 10 of the Los Angeles Administrative Code, unless exempt pursuant to the provisions of the Contractor Responsibility Ordinance.

This Contractor Responsibility Ordinance requires that all respondents complete and return, with their response, the responsibility questionnaire for service contracts. This questionnaire, and additional information about the ordinance, may be accessed at the City Attorney website identified above. Failure to return the completed questionnaire may result in the response being deemed non-responsive. The Contractor Responsibility Ordinance also requires that if a contract is awarded pursuant to this procurement, that the contractor must update responses to the questionnaire, within thirty calendar days, after any changes to the responses previously provided if such change would affect contractor's fitness and ability to continue performing the contract. Pursuant to the Contractor Responsibility Ordinance, by executing a contract with the City, the contractor pledges, under

penalty of perjury, to comply with all applicable federal, state and local laws in performance of the contract, including but not limited to laws regarding health and safety, labor and employment, wage and hours, and licensing laws which affect employees. Further, the Contractor Responsibility Ordinance requires each contractor to: (1) notify the awarding authority within thirty calendar days after receiving notification that any governmental agency has initiated an investigation which may result in a finding that the contractor is not in compliance with Section 10.40.3 (a) of the Contractor Responsibility Ordinance; and (2) notify the awarding authority within thirty calendar days of all findings by a government agency or court of competent jurisdiction that the contractor has violated Section 10.40.3 (a) of the Contractor Responsibility Ordinance.

#### 8.12 Americans with Disabilities Act

The City is a covered entity under Title II of the Americans with Disabilities Act, 42 U.S.C.A. Section 12131 et seq. Respondents awarded a contract through this RFP must comply with the Americans with Disabilities Act and execute a certification regarding compliance with the Americans with Disabilities Act prior to the execution of a contract. For further information, respondents should refer to the website identified above (Standard Provisions for City Contracts).

#### 8.13 Recycled Paper

Outside Counsel shall submit all written documents on paper with a minimum of 30 percent post-consumer recycled content. Existing Outside Counsel letterhead or stationery that accompanies these documents is exempt from this requirement. Pages should be double-sided. Neon or fluorescent paper shall not be used in any written documents submitted.

# 9.0 GENERAL CITY RESERVATIONS

- (a) City reserves the right to verify the information in the response.
- (b) If a firm knowingly and willfully submits false information or other data, the City reserves the right to reject that response. If a contract was awarded as a result of false statements or other data submitted in response to this RFP, the City reserves the right to terminate that contract.
- (c) Submission of a response to this RFP shall constitute acknowledgment and acceptance of the terms and conditions set forth herein. Responses and the offers contained therein shall remain valid for a period of one hundred and twenty (120) days from the date set for receipt of responses. Firms awarded a contract pursuant to this RFP will be required to enter into a written contract with the City approved as to form by the City Attorney. This RFP and response, or any parts thereof, may be incorporated into and made a part of the final contract. The City reserves the right to further negotiate the terms and conditions of the

- contract. The final contract offer of the City may contain additional terms or terms different from those set forth herein.
- (d) Late responses will not be considered. The City, in its sole discretion, reserves the right to determine the timeliness of all responses submitted.
- (e) The City reserves the right to waive any informality in the process when to do so is in the best interest of the City.
- (f) The City reserves the right to withdraw this RFP at any time without prior notice and the right to reject any and all Responses. The City makes no representation that any contract will be awarded to any firm responding to this RFP. The City reserves the right to extend the deadline for submission. Firms will have the right to revise their response in the event the deadline is extended. Each proposer must send an e-mail address to nicole.paul@lacity.org as soon as possible, so that the City Attorney may contact proposer if necessary to amend this RFP or for any other reason. Failure to provide such an e-mail address will preclude City Attorney's ability to contact the proposer, but will not excuse the proposer from being required to comply with any amendments. The City would not, in that case, be liable for the proposer's failure to receive such notice and any resultant non-responsiveness or noncompliance on your part. If a proposer does not have an e-mail address, please provide a postal address for this purpose.
- (g) A proposer may withdraw its response prior to the specified due date and time. A written request to withdraw, signed by an authorized representative of the proposer, must be submitted to the City Attorney's Office at the address specified herein for submittal of proposal. After withdrawing a previously submitted proposal, the proposer may submit another proposal at any time prior to the specified submission deadline.
- (h) All costs of response preparation shall be borne by the proposer. The City shall not, in any event, be liable for any pre-contractual expenses incurred by the proposer in the preparation and/or submission of the response.
- (i) Unnecessarily elaborate or lengthy responses or other presentations beyond those needed to give sufficient and clear response to all of the RFP requirements are not desired.
- (j) The response must set forth accurate and complete information as required in this RFP. Unclear, incomplete, and/or inaccurate documentation may not be considered for contract award.
- (k) Responses shall be reviewed and rated by the City as submitted. Firms may make no changes or additions after the deadline for receipt.
- (I) A firm will not be recommended for a contract award, regardless of the merits of the response submitted, if it has a history of contract noncompliance with the City or other funding source or poor past or current performance with the City or other funding source.
- (m)The City reserves the right to retain all responses submitted and the responses shall become the property of the City. Any department or agency of the City has the right to use any of the ideas presented in the responses submitted in

response to this RFP. All responses received by the City will be considered public records subject to disclosure under the Public Records Act. (California Government Code Section 6250 et seq.) Applicants must identify any material they claim is exempt from disclosure under the Public Records Act. In the event such exemption is claimed, the applicant will be required to state in the response that he or she will defend any action brought against the City for its refusal to disclose such material to any party making a request thereof. Failure to include such a statement shall constitute a waiver of proposer's right to exemption from disclosure.

- (n) Upon completion of all work under this contract, ownership and title of all reports, documents, plans, drawings, specifications, and estimates produced as part of this contract will automatically be vested in the City of Los Angeles, and no further agreement will be necessary to transfer ownership to any City agency. Copies made for the contractor's records shall not be furnished to others without written authorization from the City Attorney.
- (o) Any contract awarded pursuant to this RFP is subject to the Contractor Evaluation Ordinance, Los Angeles Administrative Code Section 10.39, which requires awarding authorities to evaluate contractor's performance and retain such evaluative information in a data bank for future reference.
- (p) The contract awarded from this RFP is expected to begin as soon as the selection process is complete and last up to three years.
- (q) The City may award a contract on the basis of proposals submitted, without discussions, or may negotiate further with those proposers within a competitive range. Proposals should be submitted on the most favorable terms the proposer can provide.
- (r) Outside Counsel understands and agrees that it shall not apply for, accept or enter into any contract with any City department or office for any non-outside counsel legal services for the duration of this or any other outside counsel contract with the City, unless Outside Counsel first obtains the written approval of the Chief Deputy of the Office of the City Attorney. This is in addition to the approval by the City awarding authority of the non-outside counsel legal services contract.

#### 10.0 CLARIFICATION

If additional information is needed to interpret this RFP, written questions shall be submitted to joshua.geller@lacity.org. All respondents shall have and provide an active e-mail address to receive responses to the questions.

# 11.0 SIGNATURES AND DECLARATIONS

Each proposal must be signed on behalf of the proposer by and officer authorized to bind the proposer, and must include the following declaration:

"This proposal is genuine, and not sham or collusive, nor made in the

interest or on behalf of any person not named therein; the proposer has not directly or indirectly induced or solicited any other proposer to put in a sham bid, or any other person, firm or corporation to refrain from submitting a proposal, and the proposer has not in any manner sought by collusion to secure for themselves an advantage over any other proposer."

## 12.0 INDEMNIFICATION

In addition to the insurance requirements, as set forth in this RFP, the proposer must undertake and agree to defend, indemnify and hold harmless the City, its Departments and any and all of City's boards, officers, agents, employees, assigns and successors in interest from and against all suits and causes of action, claims, losses, demands and expenses, including, but not limited to, attorney's fees and costs of litigation, damage or liability of any nature whatsoever, for death or injury to any person, including proposer's employees and agents, or damage to or destruction of any property of either party hereto or of third persons, in any manner arising by reasons of or incident to the performance of the contract on the part of proposer, its officers, directors, agents, servants, employees, contractors, whether or not contributed to by any act or omission of the City or any of the City's boards, officers, agents or employees.

# 13.0 EXPENSE, OWNERSHIP AND DISPOSITION

City shall not be responsible in any manner for the costs associated with the submission of the proposals in response to this RFP. All proposals, including all drawings, plans, photos, and narrative material, shall become the property of the City upon receipt by City. City shall have the right to copy, reproduce, publicize, or otherwise dispose of each proposal in any way that City selects. City shall be free to use as its own, without payment of any kind or liability therefore, any idea, concept, scheme, technique, suggestion, or plan received during this proposal process.

#### 14.0 ATTORNEY FEES

If City shall be made a party to any litigation commenced by or against proposer arising out of proposer's operations and as a result of which proposer is held liable, in whole or in part, by settlement, adjudication, or otherwise, then proposer shall pay all costs and reasonable attorney fees incurred by or imposed upon City in connection with such litigation. Each party shall give prompt notice to the other of any claim or suit instituted against it that may affect the other party.

# 15.0 BIDDER CONTRIBUTIONS - CITY CHARTER SECTION 470(C)(12)

Persons who submit a response to this solicitation (bidders) are subject to Charter section 470(c)(12) and related ordinances. As a result, bidders may not make campaign contributions to and or engage in fundraising for certain elected City officials or candidates for elected City office from the time they submit the response until either the contract is approved or, for successful bidders, 12

months after the contract is signed. The bidder's principals and subcontractors performing \$100,000 or more in work on the contract, as well as the principals of those subcontractors, are also subject to the same limitations on campaign contributions and fundraising.

**Bidders must submit CEC Form 50 and CEC Form 55** (available at LABAVN.org) to the awarding authority at the same time the response is submitted. Form 55 requires bidders to identify their principals, their subcontractors performing \$100,000 or more in work on the contract, and the principals of those subcontractors. Bidders must also notify their principals and subcontractors in writing of the restrictions and include the notice in contracts with subcontractors. Responses submitted without completed CEC Forms 50 and 55 shall be deemed nonresponsive. Bidders who fail to comply with City law may be subject to penalties, termination of contract, and debarment. Additional information regarding these restrictions and requirements may be obtained from the City Ethics Commission at (213) 978-1960 or ethics.lacity.org.