LACERS
LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

Investment Committee Agenda

REGULAR MEETING

TUESDAY, JANUARY 14, 2020

TIME: 10:30 A.M. OR IMMEDIATELY FOLLOWING THE REGULAR BOARD MEETING

MEETING LOCATION:

LACERS Ken Spiker Boardroom
202 West First Street, Suite 500
Los Angeles, CA 90012-4401

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

Chair: Sung Won Sohn

Committee Members: Elizabeth Lee
Nilza R. Serrano

Manager-Secretary: Lita Payne

Executive Assistant: Ani Ghoukassian

Legal Counselor: City Attorney's Office
Public Pensions General Counsel Division

Sign Language Interpreters, Communication Access Real-Time Transcription, Assistive Listening Devices, 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) 473-7169.

I. PUBLIC COMMENTS ON MATTERS WITHIN THE COMMITTEE'S JURISDICTION

II. APPROVAL OF MINUTES FOR THE REGULAR MEETING OF DECEMBER 10, 2019 AND POSSIBLE COMMITTEE ACTION

III. CHIEF INVESTMENT OFFICER VERBAL REPORT

IV. CONTINUED DISCUSSION OF FINALIST FIRMS OF THE ACTIVE U.S. SMALL CAP EQUITIES INVESTMENT MANAGER SEARCH AND POSSIBLE COMMITTEE ACTION

V. SEMI-FINALISTS OF THE ACTIVE EMERGING MARKETS SMALL CAP EQUITIES INVESTMENT MANAGER SEARCH AND POSSIBLE COMMITTEE ACTION

VI. INVESTMENT MANAGER CONTRACT WITH PRINCIPAL GLOBAL INVESTORS, LLC REGARDING THE MANAGEMENT OF AN ACTIVE MID CAP CORE EQUITIES PORTFOLIO AND POSSIBLE COMMITTEE ACTION

VII. INVESTMENT MANAGER CONTRACT WITH PGIM, INC. REGARDING THE MANAGEMENT OF AN ACTIVE EMERGING MARKET DEBT PORTFOLIO AND POSSIBLE COMMITTEE ACTION

VIII. INVESTMENT MANAGER CONTRACT WITH DIMENSIONAL FUND ADVISORS LP REGARDING THE MANAGEMENT OF AN ACTIVE EMERGING MARKETS VALUE PORTFOLIO AND POSSIBLE COMMITTEE ACTION

IX. INVESTMENT MANAGER CONTRACT WITH DIMENSIONAL FUND ADVISORS LP REGARDING THE MANAGEMENT OF A U.S. TREASURY INFLATION PROTECTED SECURITIES (TIPS) PORTFOLIO AND POSSIBLE COMMITTEE ACTION

X. PRESENTATION ON CRYPTOCURRENCY

XI. OTHER BUSINESS

XII. NEXT MEETING: The next Regular Meeting of the Investment Committee is scheduled for Tuesday, February 11, 2020, in the LACERS Ken Spiker Boardroom, 202 West First Street, Suite 500, Los Angeles, CA 90012-4401.

XIII. ADJOURNMENT

LACERS
LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

Board of Administration Agenda

SPECIAL MEETING	President: Cynthia M. Ruiz
TUESDAY, JANUARY 14, 2020	Vice President: Michael R. Wilkinson
TIME: 10:30 A.M. OR IMMEDIATELY FOLLOWING THE REGULAR BOARD MEETING	Commissioners: Annie Chao, Elizabeth Lee, Sandra Lee, Nilza R. Serrano, Sung Won Sohn
MEETING LOCATION:	Manager-Secretary: Lita Payne
LACERS Ken Spiker Boardroom 202 West First Street, Suite 500 Los Angeles, CA 90012-4401	Executive Assistant: Ani Ghoukassian
Live Committee Meetings can be heard at: (213) 621-CITY (Metro), (818) 904-9450 (Valley), (310) 471-CITY (Westside), and (310) 547-CITY (San Pedro Area).	Legal Counsel: City Attorney's Office Public Pensions General Counsel Division
	Sign Language Interpreters, Communication Access Real-Time Transcription, Assistive Listening Devices, 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) 473-7169.

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XIII. ADJOURNMENT

MINUTES OF THE REGULAR MEETING
INVESTMENT COMMITTEE
LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

LACERS Ken Spiker Boardroom
202 West First Street, Suite 500
Los Angeles, California

December 10, 2019

1:45 p.m.

Agenda of: <u>Jan. 14, 2020</u>

Item No: <u>II</u>

PRESENT:	Chair:	Sung Won Sohn
	Committee Members:	Elizabeth Lee Nilza R. Serrano
	Manager-Secretary:	Lita Payne
	Executive Assistant:	Ani Ghoukassian
	Legal Counselor:	James Napier

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

I

PUBLIC COMMENTS ON MATTERS WITHIN THE COMMITTEE'S JURISDICTION – Chair Sohn asked if any persons wished to speak on matters within the Committee's jurisdiction, to which there was no response and no public comment cards received.

II

APPROVAL OF MINUTES FOR THE REGULAR MEETING OF NOVEMBER 12, 2019 AND THE SPECIAL MEETING OF DECEMBER 2, 2019 AND POSSIBLE COMMITTEE ACTION – Chair Sohn stated both the November 12th and December 2nd Meetings were Special Meetings. Committee Member Serrano moved approval of the minutes for the Special Meetings of November 12, 2019 and December 2, 2019, and adopted by the following vote: Ayes, Committee Members Elizabeth Lee, Serrano and Chair Sohn -3; Nays, None.

III

CHIEF INVESTMENT OFFICER VERBAL REPORT – Rod June, Chief Investment Officer, presented the Committee with the 12-month forward calendar.

IV

PRESENTATION BY NORTHERN TRUST REGARDING SECURITIES LENDING ACTIVITY REPORT FOR THE PERIOD JULY 1, 2018 TO JUNE 30, 2019 – Bryan Fujita, Chief Operating Officer and Eduardo Park, Investment Officer I introduced this item to the Committee and invited the following staff from Northern Trust to present to the Committee: Senior Vice Presidents, Don Anderson, Gary Guibert, and Anton J. Britton. This item was discussed with the Committee for 44 minutes.

V

OTHER BUSINESS – There was no other business.

VI

NEXT MEETING: The next Regular Meeting of the Investment Committee is scheduled for Tuesday, January 14, 2020, in the LACERS Ken Spiker Boardroom, 202 West First Street, Suite 500, Los Angeles, CA 90012-4401.

VII

ADJOURNMENT – There being no further business before the Committee, Chair Sohn adjourned the Meeting at 2:32 p.m.

Sung Won Sohn
Chair

Lita Payne
Manager-Secretary

LACERS
LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

REPORT TO INVESTMENT COMMITTEE
From: Lita Payne, Executive Officer Lita Payne

MEETING: JANUARY 14, 2020
ITEM: IV

SUBJECT: **CONTINUED DISCUSSION OF FINALIST FIRMS OF THE ACTIVE U.S. SMALL CAP EQUITIES INVESTMENT MANAGER SEARCH AND POSSIBLE COMMITTEE ACTION**

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

Recommendation

That the Committee recommend to the Board the following five firms as finalists for the Active U.S. Small Cap Equities Mandate search:

1) Core: Copeland Capital Management, LLC
2) Growth: EAM Investors, LLC (emerging manager and current LACERS manager)
   Granahan Investment Management (emerging manager)
3) Value: Bernzott Capital Advisors (emerging manager)
   Segall Bryant & Hamill

Executive Summary

On December 2, 2019, the Committee heard presentations from the five proposed finalists firms for the Active U.S. Small Cap Equities Mandate search and requested further information regarding each firm's ability to manage risk. NEPC, LLC (NEPC), LACERS' General Fund Consultant, prepared the attached report in response to the Committee's request.

Discussion

On December 2, 2019, the Committee heard presentations from the five proposed finalists firms for the Active U.S. Small Cap Equities Mandate search. As requested by the Committee, the attached report by NEPC provides additional information on each firm regarding strategy and downside risk management.

Staff recommends all five firms as finalists for hire; the approximate proposed allocation to each firm and proposed effective fees are presented in the following table.

Style	Manager	Approximate Allocation % of Domestic Equity Portfolio	Approximate Allocation $ in millions	Proposed Effective Fee
Core	Copeland Capital Management, LLC	5.0%	$175	0.47%
Growth	EAM Investors, LLC	2.4%	$85*	0.73%
Growth	Granahan Investment Management	2.3%	$80	0.77%
Value	Bernzott Capital Advisors	4.1%	$140	0.59%
Value	Segall Bryant & Hamill	1.9%	$70	0.68%

*The approximate allocation represents a reduction to the $142 million EAM Investors, LLC currently manages.

As discussed at the December 2, 2019 Committee meeting, the allocations were determined by a risk budget analysis of the domestic equity portfolio using the Board-approved asset class risk budget of 0.75%. The funding for these strategies would be derived primarily from assets currently held in the passive small cap core, growth, and value strategies. Approximately $200 million (or 5.7% of the domestic equity portfolio) would be retained in the passive small cap core strategy to comply with the risk budget. NEPC concurs with this recommendation.

Strategic Plan Impact Statement

The Request for Proposal (RFP) for active U.S. small cap equities investment management assists the fund with optimizing long-term risk adjusted investment returns (Goal IV). Implementing a competitive bidding process by issuing an RFP upholds good governance practices which affirm transparency, accountability, and fiduciary duty (Goal V).

Prepared by: Barbara Sandoval, Investment Officer II

RJ/BF/BS:sg

Attachment: 1. Small Cap Investment Manager Search Report by NEPC, LLC

LACERS
LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

REPORT TO INVESTMENT COMMITTEE
From: Lita Payne, Executive Officer Lita Payne

MEETING: JANUARY 14, 2020
ITEM: VI

SUBJECT: **INVESTMENT MANAGER CONTRACT WITH PRINCIPAL GLOBAL INVESTORS, LLC REGARDING THE MANAGEMENT OF AN ACTIVE MID CAP CORE EQUITIES PORTFOLIO AND POSSIBLE COMMITTEE ACTION**

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

Recommendation

That the Committee recommend to the Board a three-year contract renewal with Principal Global Investors, LLC for management of an active U.S. mid cap core equities portfolio.

Executive Summary

Principal Global Investors, LLC (Principal) has managed an active U.S. mid cap core equities portfolio for LACERS since July 2014. LACERS' portfolio was valued at $209 million as of November 30, 2019. Principal is in compliance with the LACERS Manager Monitoring Policy and staff recommends a three-year contract renewal.

Discussion

Background
Principal manages an active U.S. mid cap core equities portfolio for LACERS benchmarked against the Russell Midcap Index. Principal's investment strategy is driven by fundamental research and seeks companies with strong competitive advantages trading at discounts to intrinsic values, as determined by free cash flows. The portfolio is managed by Bill Nolin, Chief Investment Officer, and Thomas Rozycki, Head of Research, who are supported by a team of six research analysts. LACERS' portfolio was valued at approximately $209 million as of November 30, 2019.

Principal was hired through the 2013 Active U.S. Mid Cap Core Equities search process and the Board authorized a three-year contract on January 28, 2014. Subsequently, the Board authorized a three-year contract renewal on January 24, 2017. The current contract expires on June 30, 2020.

Organization
Principal is headquartered in Des Moines, Iowa and has approximately 1,828 employees of which 580 are investment personnel. The firm is the wholly-owned global investment management business of

Principal Financial Group, Inc., a publicly-traded financial services company (NYSE ticker symbol PFG). As of September 30, 2019, Principal managed $459.3 billion in total assets, with $24.9 billion in the mid cap equities strategy.

Due Diligence
Principal's investment philosophy, strategy, and process have not changed over the contract period.

Performance
As of November 30, 2019, Principal has outperformed its benchmark, net-of-fees, for most time periods with the exception of the 3-month period, as presented in the table below.

Annualized Performance as of 11/30/19 (Net-of-Fees)						
	3-Month	1-Year	2-Year	3-Year	5-Year	Since Inception[1]
Principal	5.71	30.05	15.83	19.37	13.89	14.25
Russell Midcap Index	6.72	14.96	8.23	11.63	8.88	9.10
% of Excess Return	*-1.01*	*15.09*	*7.60*	*7.74*	*5.01*	*5.15*

[1]Performance inception date: 7/24/14. Strategy was funded after contract inception date of 7/1/14.

Calendar year performance is presented in the table below.

Calendar Year Performance as of 11/30/19 (Net-of-Fees)						
	1/1/19-11/30/19	2018	2017	2016	2015	7/24/14-12/31/14
Principal	42.09	-5.56	25.56	10.96	2.35	6.65
Russell Midcap Index	27.61	-9.06	18.52	13.80	-2.44	4.40
% of Excess Return	*14.48*	*3.50*	*7.04*	*-2.83*	*4.79*	*2.25*

Principal is in compliance with the LACERS Manager Monitoring Policy.

Fees
LACERS pays Principal an effective fee of 37.4 basis points (0.374%), which is approximately $800,000 annually based on the value of LACERS' assets as of November 30, 2019. The fee ranks in the 11th percentile of fees charged by similar managers in the eVestment U.S. Mid Cap Core Equity Universe (i.e., 89% of like-managers have higher fees).

General Fund Consultant Opinion
NEPC, LLC, LACERS' General Fund Consultant, concurs with this recommendation.

<u>Strategic Plan Impact Statement</u>

A contract renewal with Principal will allow the fund to maintain a diversified exposure to domestic equity markets, which is expected to help optimize long-term risk adjusted investment returns (Goal IV). The discussion of the investment manager's profile, strategy, performance, and management fee structure are consistent with Goal V (uphold good governance practices which affirm transparency, accountability, and fiduciary duty).

Prepared By: Barbara Sandoval, Investment Officer II, Investment Division
Ellen Chen, Investment Officer I, Investment Division
Jeremiah Paras, Investment Officer I, Investment Division

RJ/BF/BS:sg

Attachments: 1. Consultant Recommendation – NEPC, LLC

NEPC, LLC

To: Los Angeles City Employees' Retirement System Investment Committee

From: NEPC, LLC

Date: January 14, 2020

Subject: Principal Global Investors, LLC – Contract Renewal

Recommendation

NEPC recommends Los Angeles City Employees' Retirement System (LACERS) renew the contract with Principal Global Investors, LLC ('Principal') for a period of three years from the date of contract expiry.

Background

Principal was funded on July 24, 2014 to provide the Plan with exposure to middle capitalization equity exposure within the Plan's U.S. Equity asset class. As of November 30, 2019, Principal managed $208.5 million, or 1.1% of Plan assets. The performance objective is to outperform the Russell MidCap Index, net of fees, annualized over a full market cycle (normally three-to-five years). The account is currently in good standing based on LACERS' Manager Monitoring Policy.

Principal is a wholly-owned, indirect subsidiary of Principal Financial Group, Inc., a public company listed on the Nasdaq. Principal Financial Group, Inc. was founded in 1879, began managing retirement assets in 1941, and today operates four primary business segments: Principal Global Investors, Retirement and Investor Services, Principal International and Insurance Solutions. Principal Global Investors, LLC was formed as a Delaware Limited Liability Company in 1998 and became a registered investment advisor with the SEC on October 26, 1998. The portfolio is managed by a team led by Bill Nolin supported by Thomas Rozycki who are both supported by a team of six equity research professionals. As of September 30, 2019, the firm had $459.3 billion in assets under management.

Principal's investment philosophy believes that individual stock selection based on in-depth original fundamental research results in superior investment returns over market cycles. They believe in long-term, low turnover, purely bottom-up fundamental investing. The firm's strategy focuses on the following four pillars of investing:

1) High quality companies with sustainable competitive advantages – The focus is on fundamental research and investing in companies that possess sustainable competitive advantages such as: industry leadership, innovation, low-cost production, barriers to entry, and efficient capital allocation.

2) Owner-operator management and culture – Through understanding who is managing the companies in prospective investments and a preference toward management teams with

CEOs that have substantial ownership stakes, Principal believes they can identify alpha opportunities. Their belief is that owner-operators have incentives that are aligned with outside shareholders and run efficient organizations allocating capital in a counter-cyclical fashion. Principal prefers management teams that clearly exhibit an owner-operator mentality. For example, one metric considered with every prospective name for the portfolio is the 'Aligned Ratio' which compares the CEO's ownership stake in the company's stock to the amount of cash compensation they receive per year.

3) Valuation discipline builds a margin of safety – Principal relies on a discounted cash flow assessment process whereby the goal is to identify companies selling at a discount to long term intrinsic value, thereby providing not only appreciation potential, but also a margin of safety to dampen potential volatility relative to the market.

4) Focus on risk reduction – Principal seeks to reduce risk through company selection, that is, through owning companies with sustainable competitive advantages that have lower business risk, less financial risk and less accounting risk.

On May 11, 2018, LACERS relaxed investment guidelines related to the management of the portfolio. The amended guidelines removed a restriction defining the market capitalization range of allowed investments as well as increased the range around sector exposures allowed in the portfolio from +/-10% to +/-20%. We believe that these changes will allow Principal more flexibility to execute on their mandate.

Performance

Referring to Exhibit 1, since August 1, 2014 (the first full month of performance after the account inception date of July 24, 2014), the Principal portfolio has outperformed the Russell MidCap Index by 5.08%, returning 14.15%, net of fees, through September 30, 2019. In the five-year period ended September 30, 2019, the portfolio outperformed the index by 5.16% (14.26% vs. 9.10%). In the one-year period ended September 30, 2019, the portfolio outperformed the benchmark by 14.87% returning 18.06%. The portfolio has an information ratio of 1.23 and active risk as measured by tracking error was 4.14% since inception ending September 30, 2019. The portfolio's Sharpe Ratio since inception was 1.01 versus the index of 0.64 indicating that active portfolio management has produced returns per unit of risk much better than the benchmark.

Referring to Exhibit 2, on a cumulative basis, the portfolio has added cumulative gains since inception with only three of the last 12 quarters underperforming, which is well below the allowed limit of eight underperforming quarters as written in LACERS' Manager Monitoring Policy. Strong outperformance, over the past five years, was driven primarily by security selection and to a much lesser extent, sector allocation contributed positively to relative outperformance versus the index. Security selection within Consumer Discretionary, Industrials and Real Estate contributed to the strong outperformance and a meaningful underweight to the Energy sector was the primary contributor to outperformance on a sector allocation basis versus the index.

Fees

The Principal portfolio has an asset-based fee of 0.37% annually. The fee ranks in the 11th percentile among its peers in the eVestment U.S. MidCap Core Equity Universe. In other words, 89% of the 65 products included in the peer universe have a higher fee than the LACERS account.

Conclusion

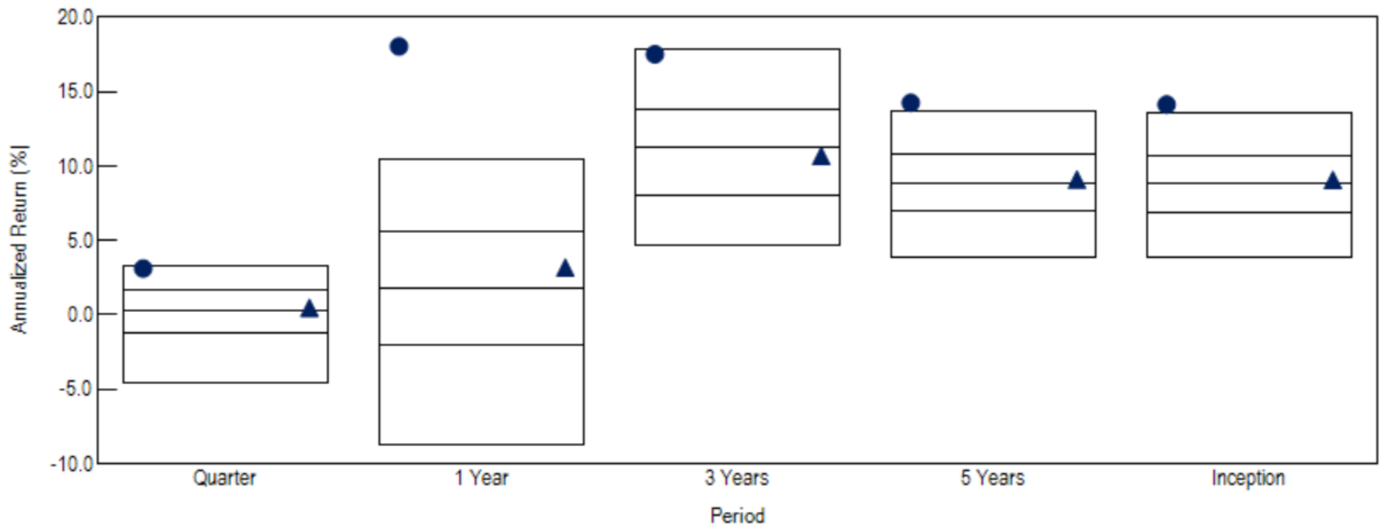
The Plan has experienced strong outperformance from the Principal portfolio as compared to its benchmark index over the past five years and since inception ended September 30, 2019. The firm's research-driven bottom-up approach to middle capitalization domestic equities investing is supported by a large stable organization while executing the investment strategy through a small and focused team environment. NEPC recommends a three-year contract renewal.

The following tables provide specific performance information, net of fees referenced above.

NEPC, LLC

Exhibit 1

eV US Mid Cap Equity Net Return Comparison
Ending September 30, 2019

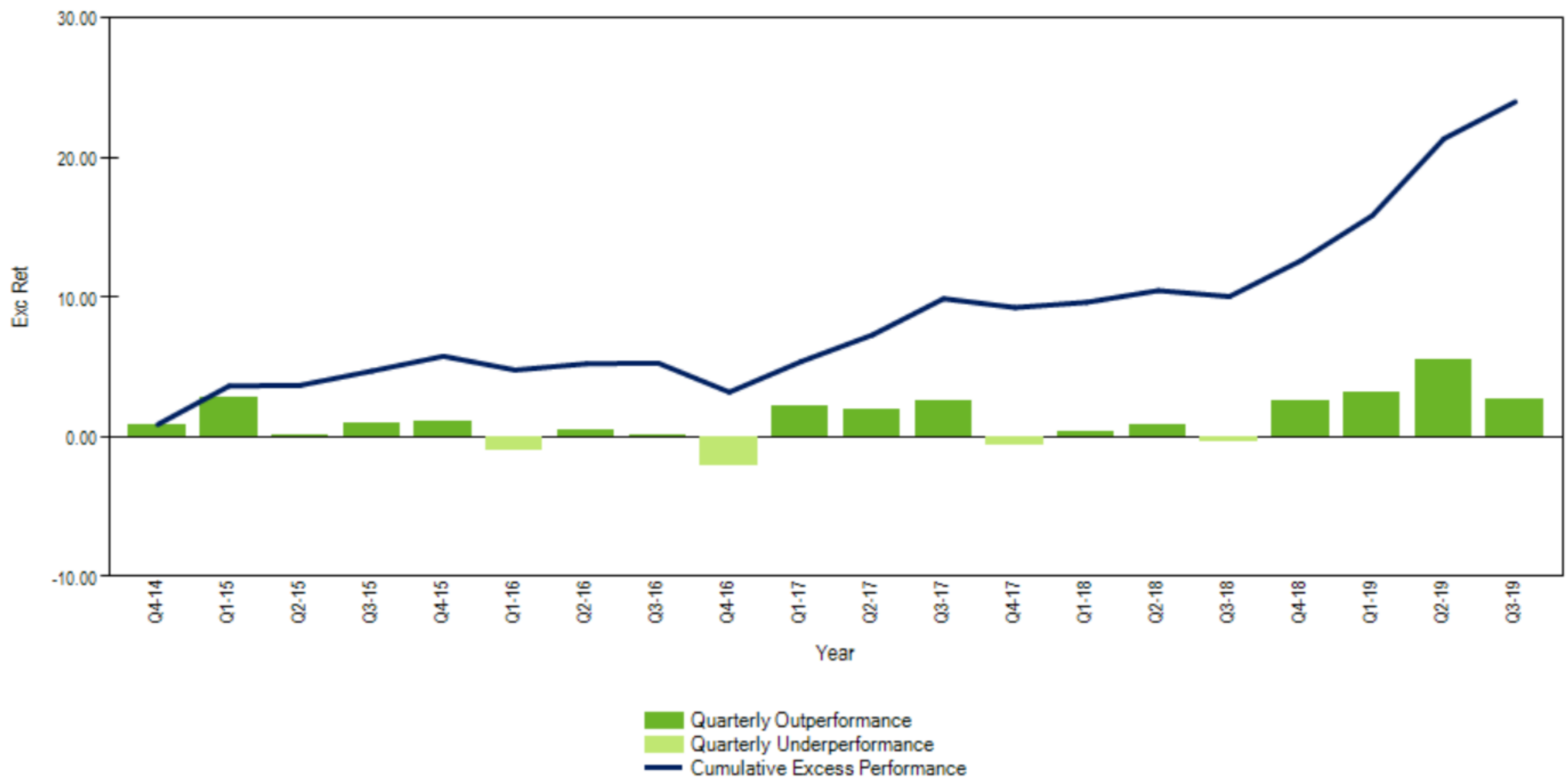


	Return (Rank)									
5th Percentile	3.31		10.44		17.90		13.73		13.58	
25th Percentile	1.69		5.61		13.83		10.81		10.74	
Median	0.27		1.79		11.28		8.89		8.83	
75th Percentile	-1.18		-2.04		8.03		7.00		6.83	
95th Percentile	-4.52		-8.79		4.63		3.87		3.89	
# of Portfolios	175		173		170		165		163	
● Principal Global Investors	3.12	(7)	18.06	(1)	17.53	(7)	14.26	(3)	14.15	(3)
▲ Russell MidCap	0.48	(46)	3.19	(41)	10.69	(55)	9.10	(48)	9.07	(46)

NEPC performance record starts from the first full month of performance.

Exhibit 2

Quarterly and Cumulative Excess Performance



LACERS

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

REPORT TO INVESTMENT COMMITTEE
From: Lita Payne, Executive Officer Lita Payne

MEETING: JANUARY 14, 2020
ITEM: VII

SUBJECT: **INVESTMENT MANAGER CONTRACT WITH PGIM, INC. REGARDING THE MANAGEMENT OF AN ACTIVE EMERGING MARKET DEBT PORTFOLIO AND POSSIBLE COMMITTEE ACTION**

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

Recommendation

That the Committee recommend to the Board a one-year contract extension with PGIM, Inc. for management of an active emerging market debt portfolio.

Executive Summary

PGIM, Inc. (PGIM) has managed an active emerging market hard currency debt portfolio for LACERS since March 2014. LACERS' portfolio was valued at $425 million as of November 30, 2019. PGIM is in compliance with the LACERS Manager Monitoring Policy; staff recommends a one-year contract extension pending the outcome of the emerging market debt blended hard and local currency investment manager search currently in progress.

Discussion

Background
PGIM manages an active emerging market hard currency debt portfolio for LACERS benchmarked against the J.P. Morgan Emerging Market Bond Index (EMBI) Global Diversified Index. PGIM's investment approach is top-down and starts with defining the macroeconomic environment, followed by regional country analysis, and ends with security selection. The strategy is jointly managed by David Bessey and Cathy Hepworth, Co-Heads of Emerging Markets Debt. They are supported by seven portfolio managers specializing in various facets of emerging market debt investing (e.g., foreign exchange rates, global interest rates, etc.). LACERS' portfolio was valued at approximately $425 million as of November 30, 2019.

PGIM was hired through the 2013 Active Emerging Market Debt manager search process and the Board authorized a three-year contract on July 23, 2013. Subsequently, the Board authorized a three-year contract renewal on November 15, 2016. The current contract expires on February 28, 2020.

On October 23, 2018, the Board approved an investment manager search for an emerging market blended hard and local currency debt strategy. This mandate will replace the hard currency only emerging market debt mandate currently managed by PGIM. The search was published on June 10, 2019, and is currently in progress; staff expects the search to be completed prior to fiscal year end 2020. PGIM is a participant in this search. Accordingly, staff recommends a one-year extension to PGIM's current contract.

Organization
PGIM has approximately 1,702 employees and is headquartered in Newark, New Jersey. The firm is the wholly-owned global investment management business of Prudential Financial, Inc., a publicly-traded financial services company (NYSE ticker symbol PRU). As of September 30, 2019, PGIM managed $1.3 trillion in total assets, with $26.3 billion in the emerging market hard currency debt strategy.

Due Diligence
David Bessey, Co-Head of Emerging Markets Debt, will be retiring at the end of March 2020, upon which Cathy Hepworth, the lead portfolio manager for the LACERS portfolio, will take over as the sole Head of Emerging Markets Debt. Staff and NEPC, LLC (NEPC), LACERS' General Fund Consultant, consider this personnel transition to have no material impact to the strategy. PGIM's investment philosophy, strategy, and process have not changed over the contract period.

Performance
As of November 30, 2019, PGIM has outperformed its benchmark, net-of-fees, over all time periods as presented in the table below.

Annualized Performance as of 11/30/19 (Net-of-Fees)						
	3-Month	1-Year	2-Year	3-Year	5-Year	Since Inception[1]
PGIM	0.30	15.92	4.64	7.61	5.75	5.55
JPMorgan EMBI Global Diversified Index	-0.65	14.29	4.29	6.45	5.32	5.14
% of Excess Return	*0.95*	*1.63*	*0.35*	*1.16*	*0.43*	*0.41*

[1]*Performance Inception Date: 6/30/2014. Strategy was funded after contract inception date of 3/1/14.*

Calendar year performance is presented in the table below.

Calendar Year Performance as of 11/30/19 (Net-of-Fees)						
	1/1/19-11/30/19	2018	2017	2016	2015	6/30/14-12/31/14
PGIM	14.24	-4.90	12.72	9.97	0.39	-0.92
JPMorgan EMBI Global Diversified Index	12.77	-4.26	10.26	10.15	1.18	-1.14
% of Excess Return	*1.47*	*-0.64*	*2.46*	*-0.18*	*-0.79*	*0.22*

PGIM is in compliance with the LACERS Manager Monitoring Policy.

Fees
LACERS pays PGIM an effective fee of 39.1 basis points (0.391%), which is approximately $1.7 million annually based on the value of LACERS' assets as of November 30, 2019. The fee ranks in the 28th percentile of fees charged by similar managers in the eVestment Global Emerging Markets Fixed Income Hard Currency Universe (i.e., 72% of like-managers have higher fees).

General Fund Consultant Opinion
NEPC concurs with this recommendation.

Strategic Plan Impact Statement

A contract extension with PGIM will allow the fund to maintain a diversified exposure to emerging markets debt, which is expected to optimize long-term risk adjusted investment returns (Goal IV). The discussion of the investment manager's profile, strategy, performance, and management fee structure are consistent with Goal V (uphold good governance practices which affirm transparency, accountability, and fiduciary duty).

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

RJ/BF/JW/JP:sg

Attachments: 1. Consultant Recommendation – NEPC, LLC

NEPC, LLC

To: Los Angeles City Employees' Retirement System Investment Committee

From: NEPC, LLC

Date: January 14, 2020

Subject: PGIM, Inc – Contract Extension

Recommendation

NEPC recommends Los Angeles City Employees' Retirement System (LACERS) extend the contract that is currently in place with PGIM, Inc ('PGIM') for a period of one year from the date of contract expiry pending the outcome of the current emerging market debt blended currency investment manager search.

Background

PGIM was funded on May 27, 2014 to provide the Plan with exposure to emerging markets debt exposure within the Plan's Credit Opportunities asset class. As of November 30, 2019, PGIM managed $425.1 million, or 2.3% of Plan assets. The performance objective is to outperform the JP Morgan EMBI Global Diversified Index, net of fees, annualized over a full market cycle (normally three-to-five years). The account is currently in good standing based on LACERS' Manager Monitoring Policy.

Prudential Financial, Inc. ('PFI') traces its origins to 1875 with the founding of its insurance affiliate. PFI became a publicly-held company in December 2001. PFI of the United States is not affiliated in any manner with Prudential plc, a company incorporated in the United Kingdom. PGIM, Inc. ('PGIM') is the largest investment adviser within PFI. PGIM has been registered as an investment adviser with the U.S. Securities and Exchange Commission ('SEC') since December 1984. PGIM or one of its predecessors has been managing proprietary fixed income portfolios since 1875 and accounts for institutional clients since 1928.

As of September 30, 2019, the firm had $1.3 trillion in assets under management. PGIM Fixed Income had $838 billion in assets under management including $354 billion in institutional assets, $152 billion in retail assets and $332 billion in proprietary assets. PGIM Fixed Income has over 750 institutional clients with 888 employees. The team managing the LACERS portfolio is headed by Cathy Hepworth, Sr. Portfolio Manager and is primarily located in Newark, New Jersey but does utilize teams located in emerging market offices around the globe. Ms. Hepworth is supported by seven portfolio managers covering major regions across the Latin America, Europe, Middle East, Africa, and Asia in addition to being supported by a global research team.

PGIM's investment philosophy believes that the global appetite for risk is a primary contributor to both market volatility and market opportunity. Therefore, assessing the psychology of market participants related to market cycles is an important step in the process. In addition, country allocation is a primary driver of emerging market debt returns and will factor heavily into the investment process and active decisions. They also believe that research-driven security selection is the most consistent strategy for adding value to client portfolios. The firm complements that base strategy with active sector rotation, duration management and trade execution. Risk budgeting is central to their approach as relatively large research teams implement management systems and establish research-driven insights on sovereign and corporate issuers.

The strategy will invest in sovereign, quasi-sovereign and corporate issuers across both hard and local currency markets. Country allocation, security selection, opportunistic positioning and other non-benchmark allocations are all utilized as sources of excess return. Above all else, the strategy places an emphasis on assessing the 'global appetite for risk' which is used to set tracking error targets and return expectations in a given period.
The investment process defines the global backdrop to capital markets by assessing the appetite for risk based on macroeconomic analysis, interest rate views and risk posture of investors. A good example of this part of the process was PGIM's belief that deleveraging would be a global phenomenon during the credit crisis of 2008, and as such, emerging markets would be impacted by its effects. Coincident and leading indicators such as commodity markets, equity markets and credit markets factor into the analysis, with a focus on commodities as a driver of strong emerging markets performance. After defining the global investment environment, country selection is the next part of Prudential's investment process. A blend of fundamental factors, relative value factors, and technical factors are reviewed to express views on countries. Score cards and a relative value matrix are constructed to help compare the opportunities across the 40+ countries that define the investment category. A view of positive/neutral/negative is defined for each country, in both hard currency and local currency markets. Criteria such as country solvency, liquidity, economic activity, politics, policy consistency and structural imbalances are evaluated.
With respects to security selection, PGIM will utilize several different strategies. In higher risk countries during volatile periods, the team prefers to use low dollar price securities with longer maturities and higher liquidity and in less volatile situations, exploit inefficiencies resulting from new issue versus secondary supply, segmented investor bases, fixed versus floating rate securities, less liquid securities and mispriced embedded options. Corporate issuers may also be selected when valuations and opportunities warrant the additional credit risk. Corporates will average about 15% of the total portfolio and enhance yield relative to sovereign issuers. In performing credit research on corporates, the team assesses the economic climate in which the company is operating, focusing on issuers with strong sponsorship. The issuer's competitiveness combined with following global trend's in the company's industry are also part of the "top down" view of a credit. Further bottom-up fundamental research that evaluates cash flow, capital structure, earnings trends, FX exposure, and balance sheet health rounds out the corporate research process. The team has a dedicated emerging corporate research analyst, along with portfolio managers that vet portfolio candidates. In markets where liquid local currency instruments are available, PGIM analyzes currencies using trend models to determine what the equilibrium price should be, and what the market is expecting. Active currency positions will range between 0-10%.

Performance

Referring to Exhibit 1, since June 1, 2014 (the first full month of performance after the account inception date of May 27, 2014), the PGIM portfolio has outperformed the JP Morgan EMBI Global Diversified Index by 0.38%, returning 5.71%, net of fees, through September 30, 2019. In the five-year period ended September 30, 2019, the portfolio outperformed the index by 0.44% (6.18% vs. 5.74%). In the one-year period ended September 30, 2019, the portfolio outperformed the benchmark by 1.39% returning 12.96%. The portfolio has an information ratio of 0.35 and active risk as measured by tracking error was 1.09% since inception ending September 30, 2019. The portfolio's Sharpe Ratio since inception was 0.85 versus the index of 0.82 indicating that active portfolio management has produced returns per unit of risk better than the benchmark.

Referring to Exhibit 2, on a cumulative basis, the portfolio has added cumulative gains since inception with only three of the last 12 quarters underperforming, which is well below the allowed limit of eight underperforming quarters as written in LACERS' Manager Monitoring Policy. Meaningful outperformance, year-to-date in 2019, was driven by country selection and issue selection in Europe and the Middle East. Underweight positions in Lebanon and Poland and overweights to Ukraine and Greece contributed positively. An overweight position to Argentina detracted meaningfully from performance but was largely balanced out by zero exposure to Venezuela (an underweight relative the benchmark). Large benchmark-relative drawdowns in 2015 were primarily driven by having zero exposure (underweight positioning) to surging markets in Argentina and Venezuela.

Fees

The PGIM portfolio has an asset-based fee of 0.39% annually. The fee ranks in the 28th percentile among its peers in the eVestment Global Emerging Markets Fixed Income Hard Currency Universe. In other words, 72% of the 77 products included in the peer universe have a higher fee than the LACERS account.

Conclusion

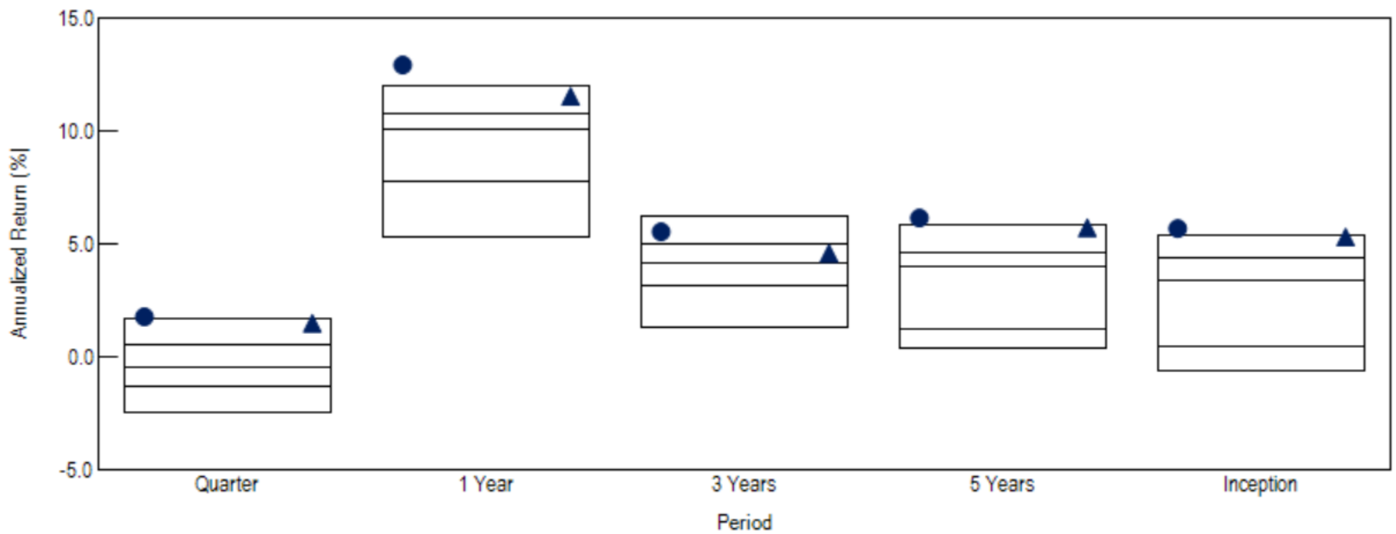
PGIM has outperformed its benchmark index over the past five years and since inception ended September 30, 2019. The firm's understandable research-driven approach to emerging market debt investing is supported by a large stable global team. The Plan is currently conducting a search for an emerging market debt blended currency investment manager and therefore, NEPC recommends a one-year contract extension.

The following tables provide specific performance information, net of fees referenced above.

NEPC, LLC

Exhibit 1

eV Emg Mkt Fixed Inc Hedged Net Return Comparison
Ending September 30, 2019



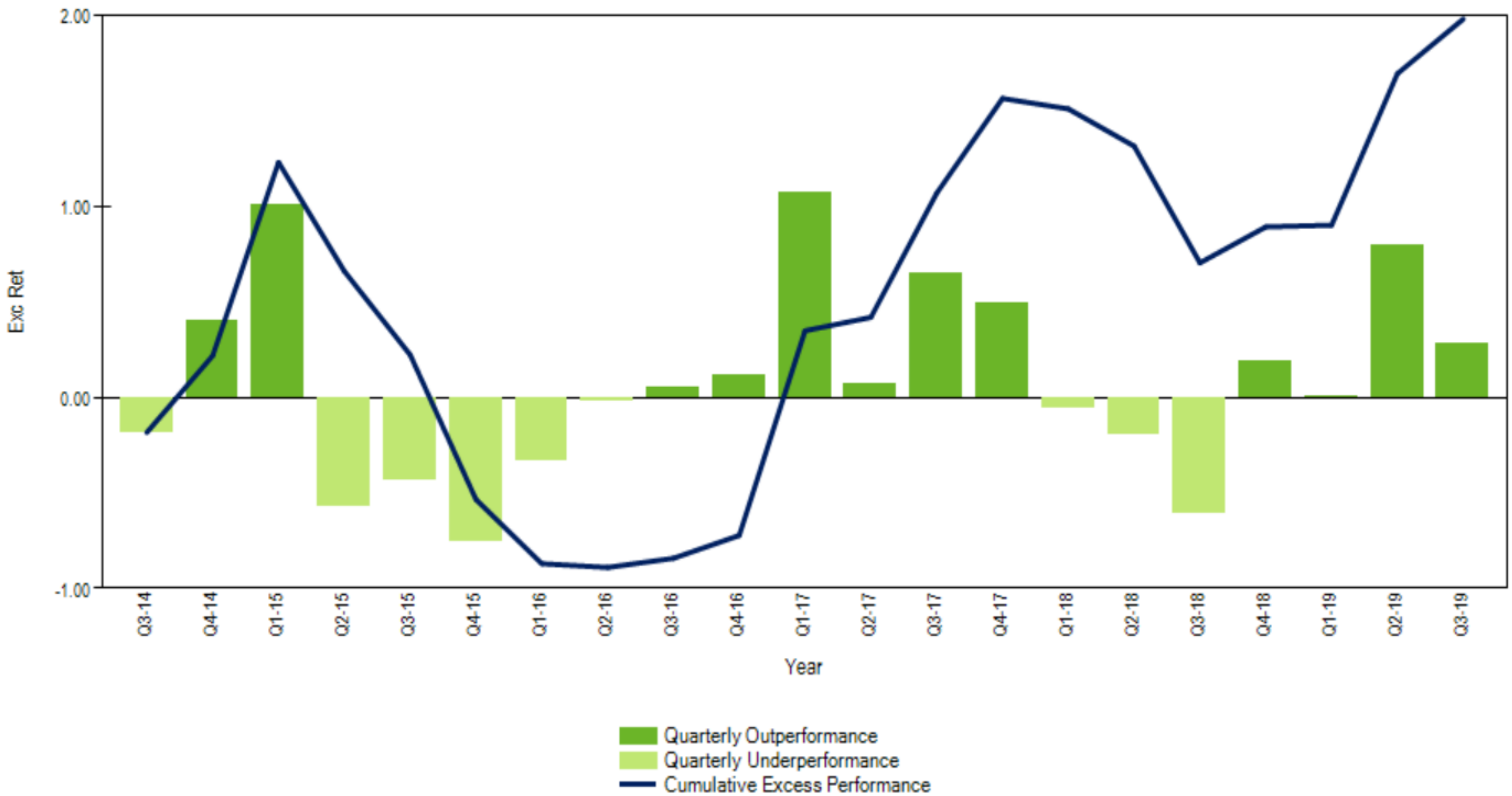
Return (Rank)	Quarter		1 Year		3 Years		5 Years		Inception	
5th Percentile	1.74		12.02		6.26		5.85		5.38	
25th Percentile	0.54		10.79		5.05		4.65		4.44	
Median	-0.42		10.10		4.18		4.05		3.41	
75th Percentile	-1.31		7.79		3.15		1.21		0.49	
95th Percentile	-2.48		5.33		1.30		0.39		-0.58	
# of Portfolios	38		37		35		28		27	
● Prudential Emerging Markets	1.79	(5)	12.96	(3)	5.56	(17)	6.18	(3)	5.71	(3)
▲ JP Morgan EMBI Global Diversified	1.50	(13)	11.57	(13)	4.61	(39)	5.74	(6)	5.33	(6)

NEPC performance record starts from the first full month of performance.

NEPC, LLC

Exhibit 2

Quarterly and Cumulative Excess Performance



LACERS
LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

REPORT TO INVESTMENT COMMITTEE
From: Lita Payne, Executive Officer Lita Payne

MEETING: JANUARY 14, 2020
ITEM: VIII

SUBJECT: **INVESTMENT MANAGER CONTRACT WITH DIMENSIONAL FUND ADVISORS LP REGARDING THE MANAGEMENT OF AN ACTIVE EMERGING MARKETS VALUE PORTFOLIO AND POSSIBLE COMMITTEE ACTION**

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

Recommendation

That the Committee recommend to the Board a three-year contract renewal with Dimensional Fund Advisors LP for management of an active emerging markets value equities portfolio.

Executive Summary

Dimensional Fund Advisors LP (DFA) has managed an active emerging markets value equities portfolio for LACERS since July 2014. LACERS' portfolio was valued at $427 million as of November 30, 2019. DFA is in compliance with the LACERS Manager Monitoring Policy and staff recommends a three-year contract renewal.

Discussion

Background
DFA manages an active emerging markets value equities portfolio for LACERS benchmarked against the MSCI Emerging Markets Value Index. DFA's strategy provides diversified exposure to deep value emerging markets stocks and invests across all market capitalizations with a tilt to small capitalization stocks. DFA believes consistent exposure to the market, value, and size risk premiums are compensated with increased expected returns. The portfolio is managed by a team of over 30 portfolio management professionals led by Jed Fogdall, who has 25 years of industry experience. LACERS' portfolio was valued at $427 million as of November 30, 2019.

DFA was hired through the 2013 Active Non-U.S. Equity Emerging Markets Value manager search process and the Board authorized a three-year contract on February 25, 2014. Subsequently, the Board authorized a three-year contract renewal on January 24, 2017. The current contract expires on June 30, 2020.

Organization
DFA is headquartered in Austin, Texas, and has more than 1,000 employees globally. As of November 30, 2019, the firm managed approximately $595 billion in total assets, with $23 billion in the emerging markets value equities strategy.

Due Diligence
In February 2019, Joseph Chi, Co-head of Portfolio Management and Chairman of the Investment Committee, left the firm. Jeff Fogdall assumed the sole role of Head of Portfolio Management and Chairman of the Investment Committee. Staff and NEPC, LLC (NEPC), LACERS' General Fund Consultant, consider this personnel transition to have no material impact to the firm or investment strategy. DFA's investment philosophy, strategy, and process have not changed over the contract period.

Performance
As of November 30, 2019, DFA has outperformed the benchmark, net-of-fees, for most time periods with the exception of the 1- and 2-year period, as presented in the table below.

Annualized Performance as of 11/30/19 (Net-of-Fees)						
	3-Month	1-Year	2-Year	3-Year	5-Year	Since Inception[1]
DFA	5.96	1.24	-3.15	6.56	1.76	-0.31
MSCI EM Value Index	4.98	2.24	-1.36	6.41	1.20	-0.48
% of Excess Return	*0.98*	*-1.00*	*-1.79*	*0.15*	*0.56*	*0.17*

[1]*Performance inception date: 7/24/14. Strategy was funded after contract inception date of 7/1/14.*

DFA's calendar year performance is presented in the table below.

Calendar Year Performance as of 11/30/19 (Net-of-Fees)						
	1/1/19 – 11/30/19	2018	2017	2016	2015	7/28/14 – 12/31/14
DFA	3.04	-12.46	32.59	17.86	-19.26	-13.57
MSCI EM Value Index	4.58	-10.72	28.07	14.90	-18.57	-12.89
% of Excess Return	*-1.54*	*-1.74*	*4.52*	*2.96*	*-0.69*	*-0.68*

DFA is in compliance with the LACERS Manager Monitoring Policy.

Fees
LACERS pays DFA an effective fee of 51.2 basis points (0.512%), which is approximately $2.2 million annually based on the value of LACERS' assets as of November 30, 2019. The fee ranks in the 19th percentile among its peers in the eVestment U.S. Global Emerging Markets All Cap Value Equity Universe (i.e., 81% of like-managers have higher fees).

General Fund Consultant Opinion
NEPC concurs with this recommendation.

Strategic Plan Impact Statement

A contract renewal with DFA will allow the fund to maintain a diversified exposure to the non-U.S. equities emerging markets, which is expected to optimize long-term risk adjusted investment returns (Goal IV). The discussion of the investment manager's profile, strategy, performance, and management fee structure are consistent with Goal V (uphold good governance practices which affirm transparency, accountability, and fiduciary duty).

Prepared By: Eduardo Park, Investment Officer II

RJ/BF/WL/EP:sg

Attachments: 1. Consultant Recommendation – NEPC, LLC

NEPC, LLC

To: Los Angeles City Employees' Retirement System Investment Committee

From: NEPC, LLC

Date: January 14, 2020

Subject: Dimensional Fund Advisers LP – Emerging Market Value Contract Renewal

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Recommendation

NEPC recommends Los Angeles City Employees' Retirement System (LACERS) renew the contract with Dimensional Fund Advisers, LP ('DFA') for a period of three years from the date of contract expiry.

Background

DFA was funded on July 24, 2014 to provide the Plan with exposure to emerging markets exposure within the Plan's Public Equity asset class. As of November 30, 2019, DFA managed $427.3 million, or 2.3% of Plan assets. The performance objective is to outperform the MSCI Emerging Markets Value Index, net of fees, annualized over a full market cycle (normally three-to-five years). The account is currently in good standing based on LACERS' Manager Monitoring Policy.

DFA was founded in 1981 by University of Chicago MBA students David Booth and Rex Sinquefield, whose intention was to start a fund management firm that would rely fully on academic theories of efficient markets. Papers from Finance Professors Eugene Fama and Kenneth French framed their thinking. Eugene Fama and Kenneth French remain Directors and Consultants to the company today, and the firm maintains its ties to the University of Chicago. Other notable Board Members include George Constantinides of the University of Chicago, Robert Merton of Harvard University, Myron Scholes of Stanford University, and Roger Ibbotson of Yale. Mr. Booth remains at the firm as Founder and Executive Chairman and Mr. Sinquefield retired in 2005. The firm is a private company owned primarily by employees, directors and former employees (70%) and outside investors (30%). Headquartered in Austin, Texas, the firm has offices around the globe and as of September 30, 2019, the firm had $579 billion in assets under management ('AUM') with over 1,400 employees. Approximately $503 billion is managed in mutual funds, $70.8 billion in separately managed accounts and the remainder in commingled investments.

The firm's core philosophy is to focus on a rules-based systematic investment approach that combines academic theory and empirical research. DFA believes that prices in liquid and competitive markets reflect available information about fundamental values and the aggregate risk and return expectations of market participants. They believe that diversification helps reduce uncertainty, manage risk, increase the reliability of outcomes and provide flexibility. They identify and focus on the tradeoffs that matter to targeting market premiums efficiently.

The strategy is designed to cost-effectively target premiums along the dimensions of expected returns. The strategy invests in value stocks across all market capitalizations within eligible emerging markets and offers broad diversification across and within countries. Within the value universe, securities with smaller market caps or higher profitability trading at lower relative prices are emphasized. Country weights are based broadly on the free-float adjusted market capitalization of the eligible universe (index). Exposure to individual countries may be capped, subject to the discretion of the firm's Investment Committee. The strategy invests across the entire size spectrum including large, mid, small and micro-cap stocks in approved countries; with a minimum market capitalization of $50 million (USD). Within each eligible country, relative price screens are applied to capture approximately the lowest third of the universe by price-to-book ratio. Within the small cap portion of the selected emerging markets stocks with low profitability trading at high relative prices are excluded from purchase. Over time, DFA has been relaxing their limit on their allowable allocation to China. The original limit of 12.5% started in the 1990s and was increased in 2010 and 2016 to 15% and 17.5% respectively. In the third quarter of 2019 the limit was removed, allowing exposures to be more in line with the benchmark, as DFA has become more comfortable with China market risks from trading and market mechanisms related to accounting and fundamentals. Within the large cap portion, securities with higher expected returns, that is, lower relative price, higher profitability and lower market capitalization are emphasized relative to their respective market weights. To ensure portfolios remain broadly diversified and fully invested, holdings in a single industry are generally limited to a maximum of 25% and individual security weights are based on free-float adjusted market capitalization and eligibility criteria. The current maximum security weight is 5% at time of purchase. Cash is kept at nominal levels with the goal of remaining fully invested.

DFA uses a team approach to investment management. The Investment Policy Committee focuses on any changes to long-term investment strategy through the combined contributions of Portfolio Research, Portfolio Management, and Trading. The Investment Committee supervises day-to-day investment management operations for all portfolios. They do not employ a traditional portfolio manager / research analyst structure. Investment Associates and Portfolio Analysts are part of the team that assists Portfolio Managers in the implementation of policies and procedures for the strategies. DFA's internal research team is comprised of research professionals engaged in academic research and product development.

In February of 2019, Joseph Chi, Co-Head of Portfolio Management and Chairman of the Investment Committee, left the firm. Mr. Chi stayed on as an ex officio member of the investment committee until August, 2019. Jed Fogdall, Co-Head of Portfolio Management and Vice President assumed the sole role of Head of Portfolio Management and Chairman of the Investment Committee. Additions to the Investment Committee over the year ended December 31, 2019 were Allen Pu and Joel Schneider. Additionally, Steve Clark rejoined the Investment Committee in January 2019, after stepping aside in October 2015 to take on additional responsibilities for the firm.

Performance

Referring to Exhibit 1, since August 1, 2014 (the first full month of performance after the account inception date of July 24, 2014), the DFA portfolio has outperformed the MSCI Emerging Markets Value Index by 0.04%, returning -0.80%, net of fees, through September 30, 2019. In the five-year period ended September 30, 2019, the portfolio outperformed the index by 0.38% (0.76% vs. 0.38%). In the one-year period ended September 30, 2019, the portfolio underperformed the benchmark by 1.79% returning -6.82%. The portfolio has an information ratio of 0.02 and active risk as measured by tracking error was 2.22% since inception ending September 30, 2019. The portfolio's Sharpe Ratio since inception was -0.10 versus the index of -0.11 indicating that the portfolio has produced returns per unit of risk slightly better than the benchmark.

Referring to Exhibit 2, on a cumulative basis, the portfolio has added cumulative gains since inception with six of the last 12 quarters underperforming, which is below the allowed limit of eight underperforming quarters as written in LACERS' Manager Monitoring Policy. The portfolio's value, size and profitability bias has detracted from relative returns in the shorter-run as markets have not rewarded fundamentals-driven investing.

Fees

The DFA portfolio has an asset-based fee of 0.51% annually. The fee ranks in the 19th percentile among its peers in the eVestment Global Emerging Markets All Cap Value Equity Universe. In other words, 81% of the 34 products included in the peer universe have a higher fee than the LACERS account.

Conclusion

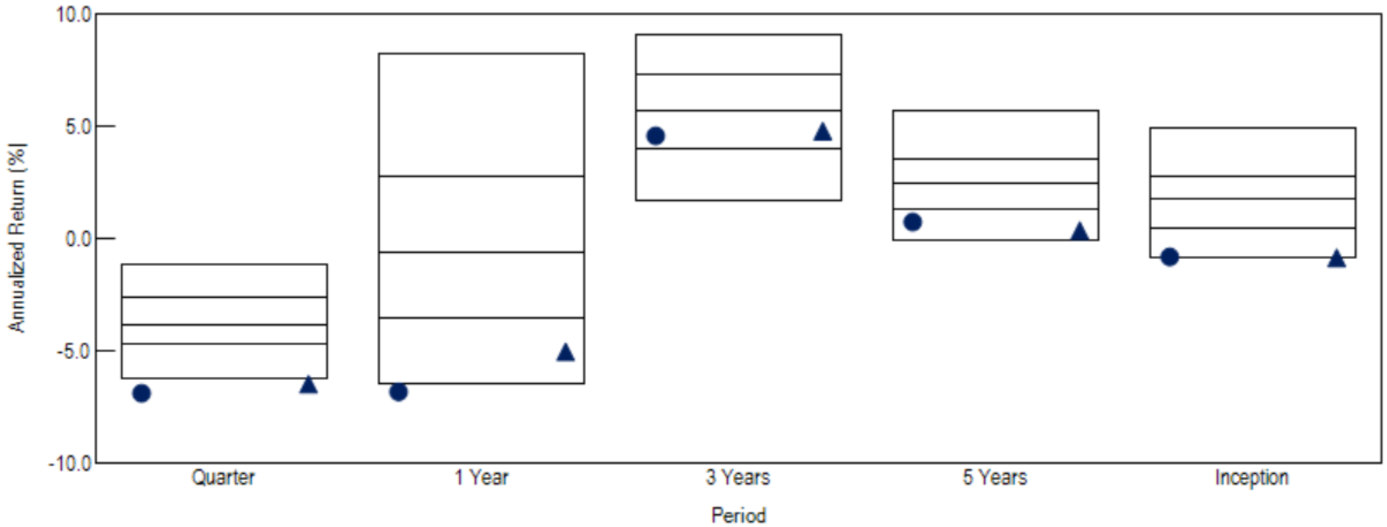
DFA has outperformed its benchmark index over the past five years and since inception ended September 30, 2019. The team has been relatively stable in the past three-to-five years. The firm's understandable systematic approach to fundamental investing may lead to favorable outcomes in the long-run. NEPC recommends a three-year contract renewal.

The following tables provide specific performance information, net of fees referenced above.

NEPC, LLC

Exhibit 1

eV Emg Mkts Equity Net Return Comparison
Ending September 30, 2019



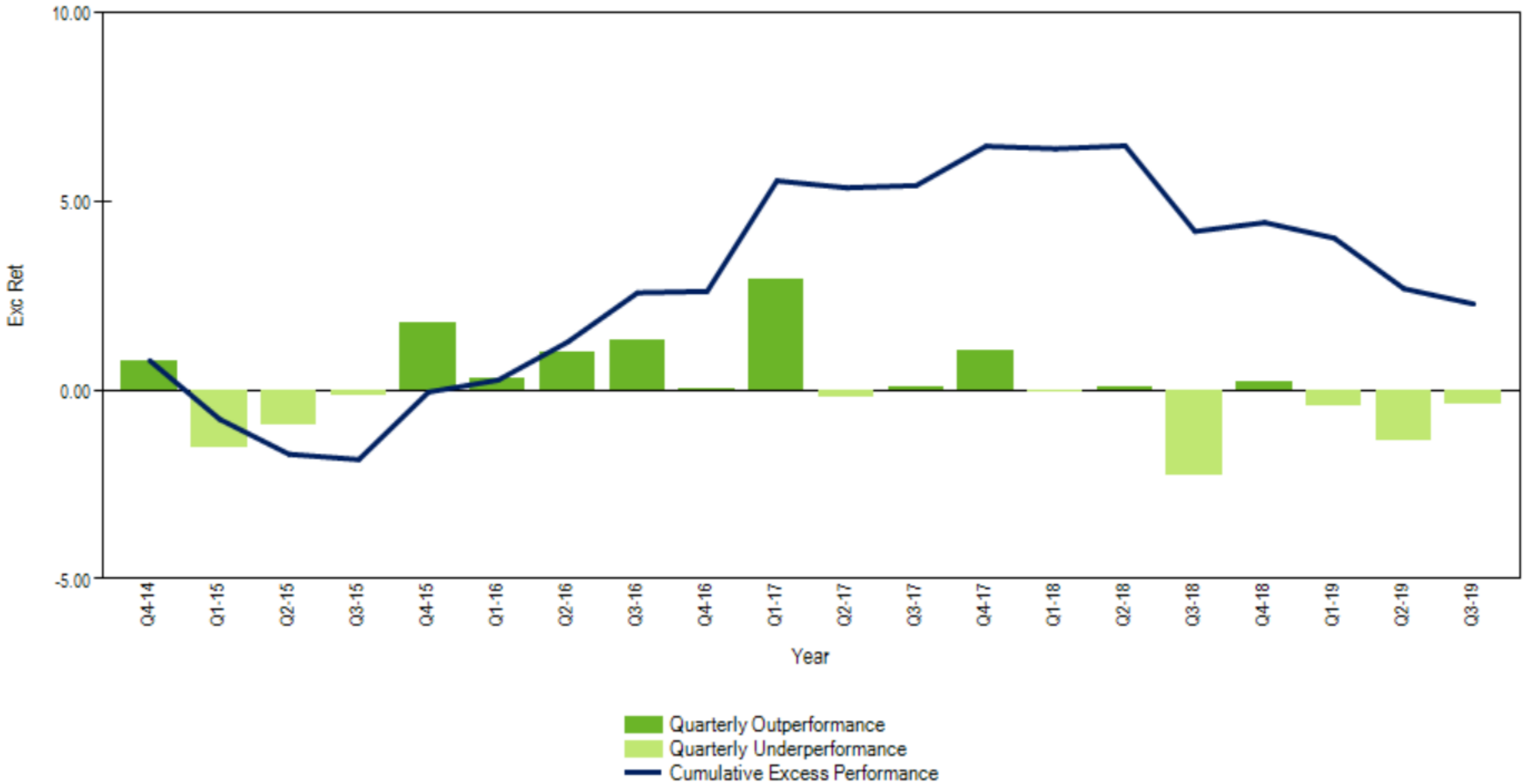
	Return (Rank)									
5th Percentile	-1.12		8.30		9.10		5.74		4.91	
25th Percentile	-2.61		2.78		7.33		3.53		2.77	
Median	-3.81		-0.56		5.71		2.47		1.77	
75th Percentile	-4.72		-3.49		4.06		1.33		0.49	
95th Percentile	-6.24		-6.49		1.74		-0.04		-0.86	
# of Portfolios	209		201		188		165		161	
● DFA Emerging Markets	-6.88	(99)	-6.82	(98)	4.60	(66)	0.76	(88)	-0.80	(95)
▲ MSCI Emerging Markets Value NR USD	-6.48	(98)	-5.03	(90)	4.81	(62)	0.38	(91)	-0.84	(95)

NEPC performance record starts from the first full month of performance.

NEPC, LLC

Exhibit 2

Quarterly and Cumulative Excess Performance



LACERS
LOS ANGELES CITY EMPLOYEES'
RETIREMENT SYSTEM

REPORT TO INVESTMENT COMMITTEE
From: Lita Payne, Executive Officer Lita Payne

MEETING: JANUARY 14, 2020
ITEM: IX

SUBJECT: **INVESTMENT MANAGER CONTRACT WITH DIMENSIONAL FUND ADVISORS LP REGARDING THE MANAGEMENT OF A U.S. TREASURY INFLATION PROTECTED SECURITIES (TIPS) PORTFOLIO AND POSSIBLE COMMITTEE ACTION**

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

Recommendation

That the Committee recommend to the Board a three-year contract renewal with Dimensional Fund Advisors LP for management of a U.S. Treasury Inflation Protected Securities portfolio.

Executive Summary

Dimensional Fund Advisors LP (DFA) has managed an active U.S. Treasury Inflation Protected Securities (TIPS) portfolio for LACERS since July 2014. LACERS' portfolio was valued at $753 million, as of November 30, 2019. DFA is in compliance with the LACERS Manager Monitoring Policy and staff recommends a three-year contract renewal.

Discussion

Background
DFA manages a U.S. TIPS portfolio for LACERS benchmarked against the Bloomberg Barclays U.S. TIPS Index. DFA's strategy provides protection against inflation by investing in inflation-linked bonds issued by the U.S. Treasury. The strategy offers benchmark-like duration and adds incremental value through yield curve positioning and low portfolio turnover. The portfolio is managed by a team of nine portfolio management professionals led by Alan Hutchinson, Vice President and Portfolio Manager, who has worked at DFA since 2006.

DFA was hired through the 2013 Active U.S. and Global Inflation-Linked manager search process and the Board authorized a three-year contract on February 25, 2014. Subsequently, the Board authorized a three-year contract renewal on January 24, 2017. The current contract expires on June 30, 2020.

Organization
DFA is headquartered in Austin, Texas and has more than 1,000 employees globally. As of November 30, 2019, the firm managed approximately $595 billion in total assets, with $4.6 billion in the TIPS strategy.

Due Diligence
In February 2019, Joseph Chi, Co-head of Portfolio Management and Chairman of the Investment Committee, left the firm. Jeff Fogdall assumed the sole role of Head of Portfolio Management and Chairman of the Investment Committee. Staff and NEPC, LLC (NEPC), LACERS' General Fund Consultant, consider this personnel transition to have no material impact to the firm or investment strategy. DFA's investment philosophy, strategy, and process have not changed over the contract period.

Performance
As of November 30, 2019, DFA has outperformed the benchmark, net-of-fees, on a 3-year, 5-year, and since inception time period, as presented in the table below.

Annualized Performance as of 11/30/19 (Net-of-Fees)						
	3-Month	1-Year	2-Year	3-Year	5-Year	Since Inception[1]
DFA	-1.29	8.53	3.74	3.22	2.47	2.03
Bloomberg Barclays U.S. TIPS Index	-0.96	8.61	3.75	3.15	2.31	1.92
% of Excess Return	*-0.33*	*-0.08*	*-0.01*	*0.07*	*0.16*	*0.11*

[1]Performance inception date: 7/17/14. Strategy was funded after contract inception date of 7/1/14.

DFA's calendar year performance is presented in the table below.

Calendar Year Performance as of 11/30/19 (Net-of-Fees)						
	1/1/19 – 11/30/19	2018	2017	2016	2015	7/17/14 – 12/31/14
DFA	7.96	-1.15	3.22	5.13	-0.94	-2.86
Bloomberg Barclays U.S. TIPS Index	8.02	-1.26	3.01	4.68	-1.44	-2.31
% of Excess Return	*-0.06*	*0.11*	*0.21*	*0.45*	*0.50*	*-0.55*

DFA is in compliance with the LACERS Manager Monitoring Policy.

Fees
LACERS pays DFA an effective fee of 5.3 basis points (0.053%), which is approximately $400,000 annually based on the value of LACERS' assets as of November 30, 2019. The fee ranks in the 2nd percentile among its peers in the eVestment U.S. TIPS / Inflation Fixed Income Universe (i.e., 98% of like-managers have higher fees).

General Fund Consultant Opinion
NEPC concurs with this recommendation.

Strategic Plan Impact Statement

A contract renewal with DFA will allow the fund to maintain a diversified exposure to public real assets, which is expected to optimize long-term risk adjusted investment returns (Goal IV). The discussion of the investment manager's profile, strategy, performance, and management fee structure are consistent with Goal V (uphold good governance practices which affirm transparency, accountability, and fiduciary duty).

Prepared By: Barbara Sandoval, Investment Officer II, Investment Division
Ellen Chen, Investment Officer I, Investment Division

RJ/BF/BS/EC:sg

Attachments: 1. Consultant Recommendation – NEPC, LLC

NEPC, LLC

To: Los Angeles City Employees' Retirement System Investment Committee

From: NEPC, LLC

Date: January 14, 2020

Subject: Dimensional Fund Advisers LP – U.S. TIPS Contract Renewal

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Recommendation

NEPC recommends Los Angeles City Employees' Retirement System (LACERS) renew the contract with Dimensional Fund Advisers, LP ('DFA') for a period of three years from the date of contract expiry.

Background

DFA was funded on July 17, 2014 to provide the Plan with exposure to U.S. Treasury Inflation Protected Securities (U.S. TIPS) within the Plan's Public Real Assets asset class. As of November 30, 2019, DFA managed $753.2 million, or 4.1% of Plan assets. The performance objective is to outperform the Bloomberg Barclays U.S. TIPS Index, net of fees, annualized over a full market cycle (normally three-to-five years). The account is currently in good standing based on LACERS' Manager Monitoring Policy.

DFA was founded in 1981 by University of Chicago MBA students David Booth and Rex Sinquefield, whose intention was to start a fund management firm that would rely fully on academic theories of efficient markets. Papers from Finance Professors Eugene Fama and Kenneth French framed their thinking. Eugene Fama and Kenneth French remain Directors and Consultants to the company today, and the firm maintains its ties to the University of Chicago. Other notable Board Members include George Constantinides of the University of Chicago, Robert Merton of Harvard University, Myron Scholes of Stanford University, and Roger Ibbotson of Yale. Mr. Booth remains at the firm as Founder and Executive Chairman and Mr. Sinquefield retired in 2005. The firm is a private company owned primarily by employees, directors and former employees (70%) and outside investors (30%). Headquartered in Austin, Texas, the firm has offices around the globe and as of September 30, 2019, the firm had $579 billion in assets under management ('AUM') with over 1,400 employees. Approximately $503 billion is managed in mutual funds, $70.8 billion in separately managed accounts and the remainder in commingled investments.

The firm's core philosophy is to focus on a rules-based systematic investment approach that combines academic theory and empirical research. DFA believes that prices in liquid and competitive markets reflect available information about fundamental values and the aggregate risk and return expectations of market participants. They believe that diversification helps reduce uncertainty, manage risk, increase the reliability of outcomes and provide flexibility. They identify and focus on the tradeoffs that matter to targeting market premiums efficiently.

The strategy focuses on securities in the middle range of the universe's available maturities, between five and 20 years from the date of settlement, excluding both very short and very long securities, although it may continue to hold securities as their maturities fall below five years. The rationale for this approach is that there are substitutes such as short Treasuries that provide fairly good protection versus inflation over time and secondly investing beyond 20 years' maturity may provide less favorable returns.

The strategy employs a constant-maturity, low-turnover approach which can generally be described as a buy and hold strategy. The strategy does not seek to replicate the benchmark but instead provide systematic exposure to the asset class in a thoughtful, market-driven, and cost-effective manner. For the portfolio there is one issuer, the U.S. Treasury and there is no limitation on the investments of this issuer. Individual security weightings will be determined to target the duration of the Bloomberg Barclays U.S. TIPS Index.

DFA uses a team approach to investment management. The Investment Policy Committee focuses on any changes to long-term investment strategy through the combined contributions of Portfolio Research, Portfolio Management, and Trading. The Investment Committee supervises day-to-day investment management operations for all portfolios. They do not employ a traditional portfolio manager / research analyst structure. Investment Associates and Portfolio Analysts are part of the team that assists Portfolio Managers in the implementation of policies and procedures for the strategies. DFA's internal research team is comprised of research professionals engaged in academic research and product development.

In February of 2019, Joseph Chi, Co-Head of Portfolio Management and Chairman of the Investment Committee, left the firm. Mr. Chi stayed on as an ex officio member of the investment committee until August, 2019. Jed Fogdall, Co-Head of Portfolio Management and Vice President assumed the sole role of Head of Portfolio Management and Chairman of the Investment Committee. Additions to the Investment Committee over the year ended December 31, 2019 were Allen Pu and Joel Schneider. Additionally, Steve Clark rejoined the Investment Committee in January 2019, after stepping aside in October 2015 to take on additional responsibilities for the firm.

Performance

Referring to Exhibit 1, since August 1, 2014 (the first full month of performance after the account inception date of July 17, 2014), the DFA portfolio has outperformed the Bloomberg Barclays U.S. TIPS Index by 0.10%, returning 2.05%, net of fees, through September 30, 2019. In the five-year period ended September 30, 2019, the portfolio outperformed the index by 0.15% (2.60% vs. 2.45%). In the one-year period ended September 30, 2019, the portfolio outperformed the benchmark by 0.56% returning 7.69%. The portfolio has an information ratio of 0.13 and active risk as measured by tracking error was 0.70% since inception ending September 30, 2019. The portfolio's Sharpe Ratio since inception was 0.28 versus the index of 0.28 indicating that the portfolio has produced returns per unit of risk taken approximately equal to the benchmark.

Referring to Exhibit 2, on a cumulative basis, the portfolio has added cumulative gains since inception with six of the last 12 quarters underperforming, which is below the allowed limit of eight underperforming quarters as written in LACERS' Manager Monitoring Policy. Issue selection and curve positioning have been the largest contributors to returns versus the benchmark.

Fees

The DFA portfolio has an asset-based fee of 0.05% annually. The fee ranks in the 2nd percentile among its peers in the eVestment U.S. TIPS/ Inflation Fixed Income Universe. In other words, 98% of the 37 products included in the peer universe have a higher fee than the LACERS account.

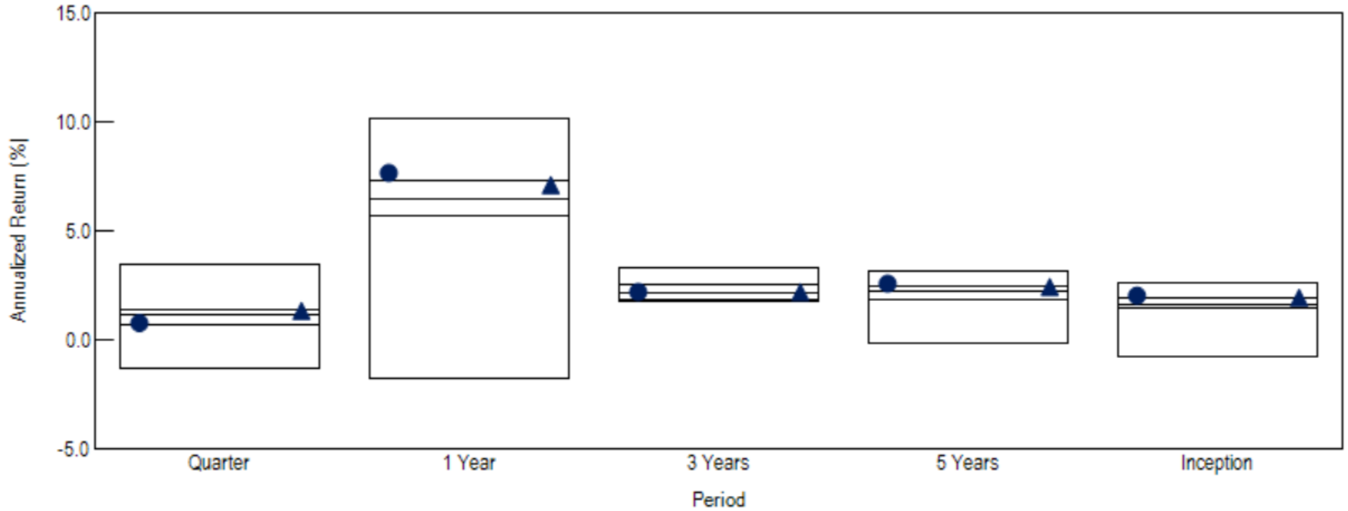
Conclusion

DFA has outperformed its benchmark index over the past five years and since inception ended September 30, 2019. The team has been relatively stable in the past three-to-five years. The firm's understandable systematic approach to fundamental investing may lead to favorable outcomes in the long-run. NEPC recommends a three-year contract renewal.

The following tables provide specific performance information, net of fees referenced above.

Exhibit 1

eV US TIPS / Inflation Fixed Inc Net Return Comparison
Ending September 30, 2019



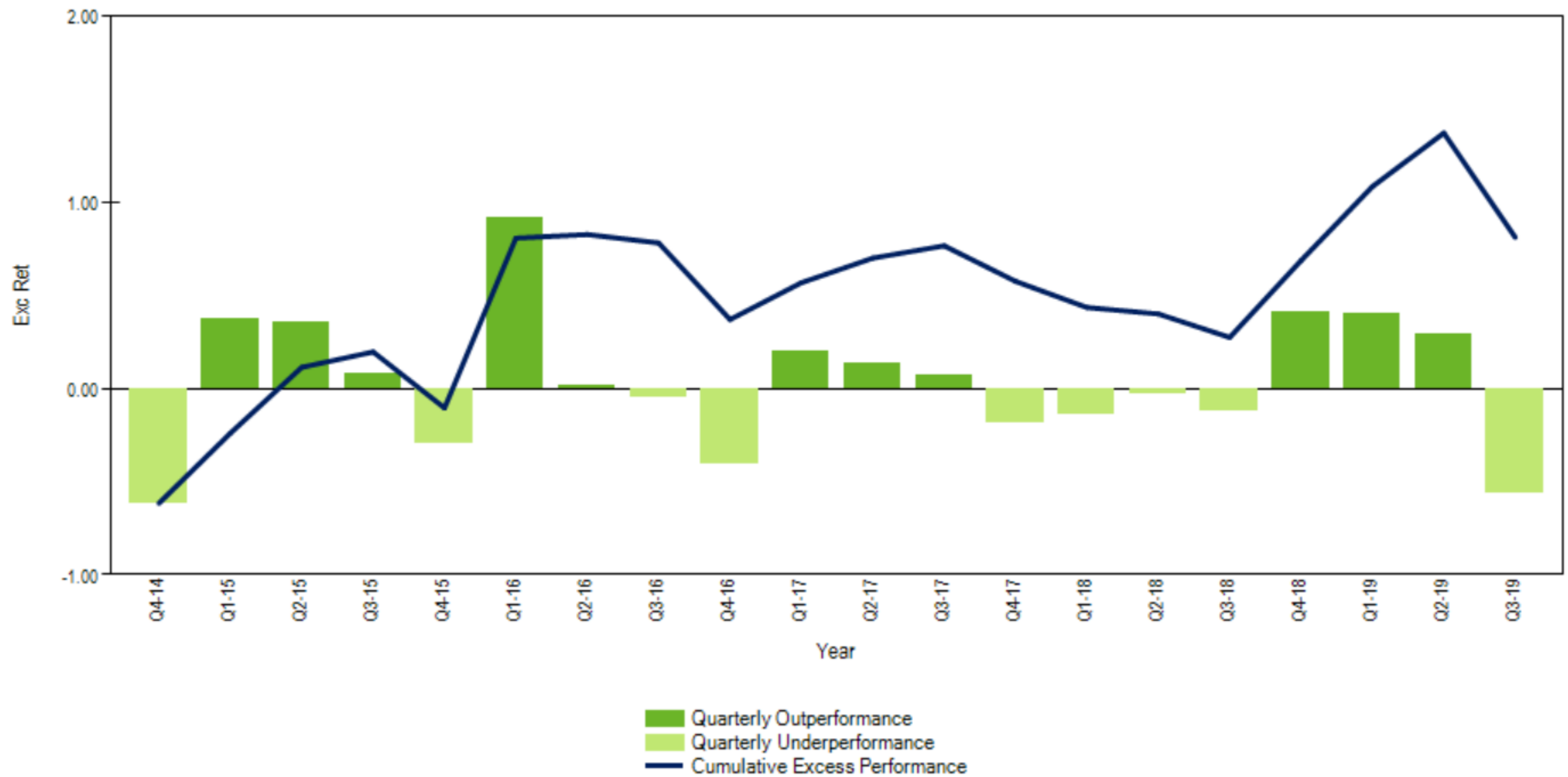
	Return (Rank)									
5th Percentile	3.48		10.20		3.30		3.16		2.62	
25th Percentile	1.41		7.31		2.54		2.45		1.96	
Median	1.18		6.50		2.16		2.26		1.63	
75th Percentile	0.69		5.69		1.87		1.87		1.48	
95th Percentile	-1.32		-1.74		1.76		-0.17		-0.74	
# of Portfolios	20		19		19		18		18	
● DFA US TIPS	0.78	(68)	7.69	(15)	2.21	(41)	2.60	(17)	2.05	(18)
▲ BBgBarc US TIPS TR	1.34	(38)	7.13	(34)	2.21	(41)	2.45	(25)	1.95	(26)

NEPC performance record starts from the first full month of performance.

NEPC, LLC

Exhibit 2

Quarterly and Cumulative Excess Performance



LACERS
LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

REPORT TO INVESTMENT COMMITTEE
From: Lita Payne, Executive Officer Lita Payne

MEETING: JANUARY 14, 2020
ITEM: X

SUBJECT: **PRESENTATION ON CRYPTOCURRENCY**

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

Recommendation

That the Committee receive and file this report.

Discussion

On June 11, 2019, the Committee requested education on cryptocurrency. The attached presentation provides an overview of cryptocurrency, including Bitcoin and Libra; staff will present it during the Committee meeting.

Strategic Plan Impact Statement

Reviewing the development and risks of cryptocurrency will assist LACERS to optimize long-term risk adjusted investment returns (Goal IV) and uphold good governance practices which affirm transparency, accountability and fiduciary duty (Goal V).

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

RJ/BF/WL/JW/RK:sg

Attachment: 1. Cryptocurrency Overview Presentation

IC Meeting: 01/14/20
Item X
Attachment 1

LACERS
LOS ANGELES CITY EMPLOYEES'
RETIREMENT SYSTEM

Cryptocurrency Overview

Presented By: LACERS Investment Division

January 14, 2020

Agenda

- **Blockchain Basics and Key Terms**
  - A brief history of Bitcoin
  - Encryption and Public Key Encryption
  - Distributed Ledger
  - Wallets and Exchanges
  - Blockchain
- **What is Libra?**
  - Libra and Facebook
  - Libra Association Funding
  - Potential Regulatory Issues: Anti-Money Laundering, Monetary Policy, and Financial Stability
  - Libra Current Status
- **What does this mean for LACERS' investments?**

A Brief History of Bitcoin

- "*Bitcoin: A Peer-to-Peer Electronic Cash System*" paper by Satoshi Nakamoto was released on October 31, 2008, and the first block was mined on January 3, 2009.

- The first known transaction was the purchase of two pizzas valued at $30 USD for 10,000 Bitcoin. Today, those 10,000 Bitcoins are worth more than $80 million USD.

- The current circulating supply is about 18 million Bitcoin, and the supply will continue to slowly expand until it reaches the maximum limit of 21 million Bitcoin.

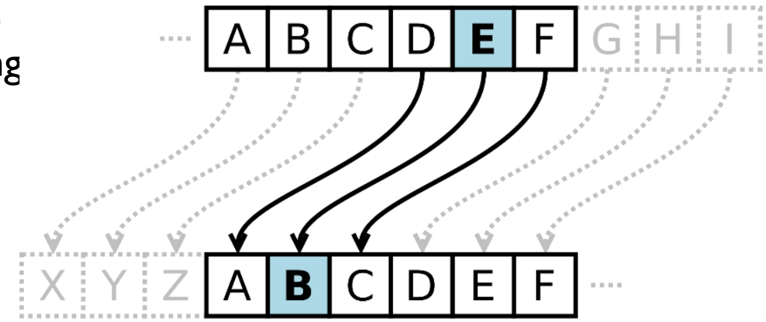
- Bitcoin is the largest cryptocurrency by market capitalization (price x supply), and the total value of all coins is about **$150 billion USD**. More than **$15 billion** USD of Bitcoin change hands every day.

- Bitcoin futures began trading on the Chicago Board Options Exchange and the Chicago Mercantile Exchange during December 2017.

- Bitcoin prices have not yet stabilized and are highly volatile compared to most other assets.

Key Terms: Encryption

Encryption allows information to be hidden so that it cannot be read without special knowledge (such as a password) using a secret code or a cypher.



Encryption has been used for thousands of years, but has become much more important and commonly used because of computers and the internet.

It is possible to decrypt a message without the key, but with modern encryption this is difficult and very time consuming.

- **Symmetric key encryption** uses the **same key** is used to both encrypt and decrypt information. In other words, anyone that possesses the key can read the information.
- **Public key encryption** uses **two keys**, a "**public**" key that can only be used to encrypt information but cannot be used to decrypt the message, and a "**private**" key that can decrypt that information.

Key Terms: Public Key Encryption

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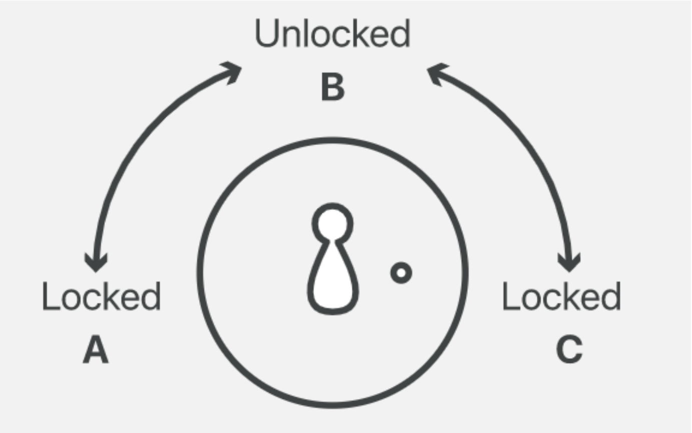


Imagine a trunk with a lock that two people use to ship documents back and forth.

The lock on this trunk has a special lock (shown to the right) with two different keys:

- Key #1 can only turn to the **left**
- Key #2 can only turn to the **right.**

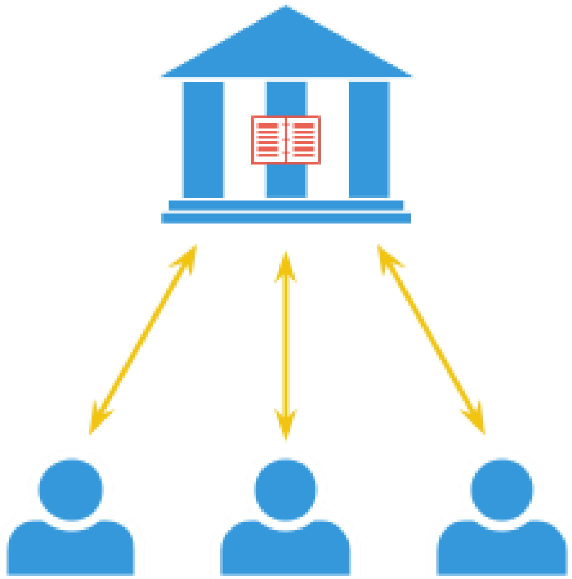
This means that if the trunk is locked in Position A, only Key #2 can unlock it by turning right to Position B (unlocked).

If the trunk is locked in Position C, only Key #1 can unlock it by turning left to Position B (unlocked).

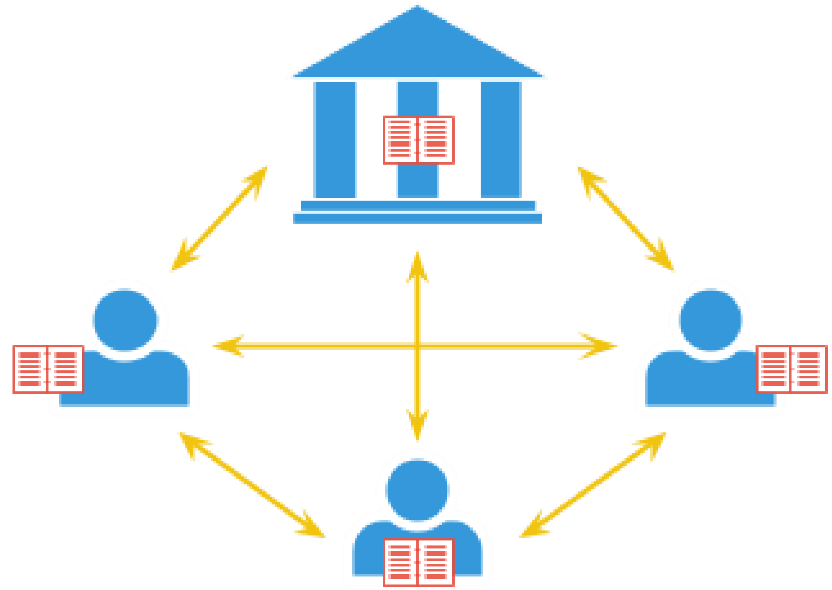
In other words, either key can lock the trunk – but once it is locked, only the other key can unlock it.

Source: Panayotis Vryonis
https://medium.com/@vrypan

Key Term: Distributed Ledger



Centralised: every party is dependent on one central party who hold the **ledger** (e.g. a technology company contracted by the Home Office). The central party has power over the data and can could tamper with it without other parties knowing.



Decentralised: every party holds the **ledger**, reducing the power of any one party over the data and providing accountability over who has altered the data and when.

Source: Open Innovation Team, Government of the United Kingdom
https://openinnovation.blog.gov.uk/2018/02/19/is-distributed-ledger-technology-the-answer/

Key Terms: Wallets and Exchanges

- **Wallets** are software programs that hold the private keys that enable the transfer of cryptocurrency between owners.
  - Like any software, technical skill is required to operate a wallet safely and securely.
  - Managed wallets are being offered as a product for cryptocurrency investors (example: Fidelity Digital Management), enabling less technical investors to also securely hold these assets with less risk.
- **Exchanges** are companies that enable the buying, selling, and trading of cryptocurrencies (example: Coinbase).
  - While exchanges are not required to buy or sell cryptocurrencies, exchanges create a marketplace that improves liquidity and price transparency for the assets.

Key Term: Blockchain

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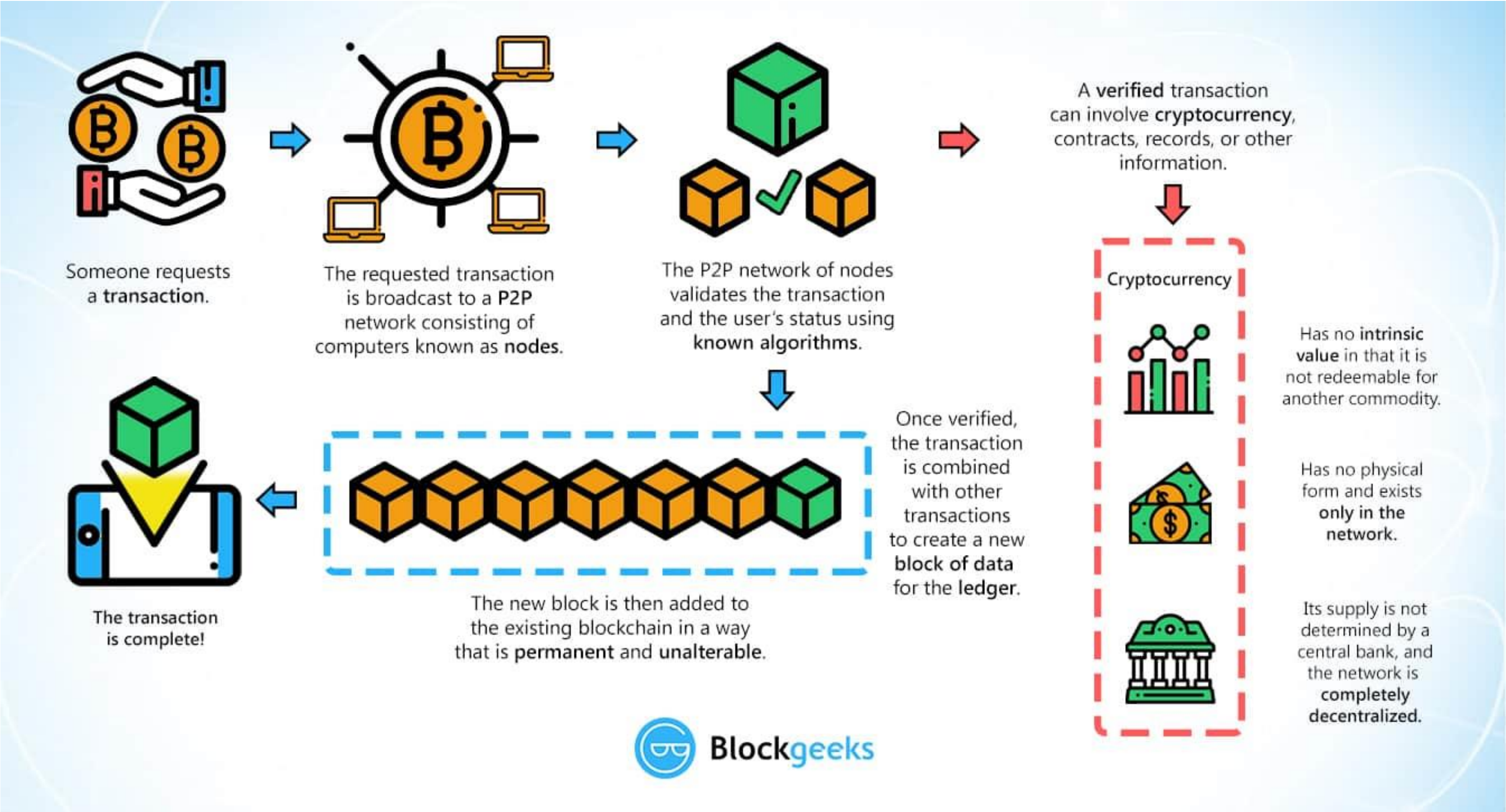

Source: https://blockgeeks.com/guides/what-is-blockchain-technology/

What is Libra?

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- Libra is a digital currency announced on June 18, 2019.
- Libra's purpose is to allow transfer of money around the world cheaper and faster, especially for the 1.7 billion unbanked adults around the world.
- Libra is a pegged-currency, which reflects the value of the underlying assets.
- Libra is controlled through a central organization comprised of industry members.

Libra Association.

- The Libra Association is tasked with governance of the Libra ecosystem, and is comprised of industry, venture, and nonprofit entities. Each member pledged to commit at least $10 million to the project and the desired reserve at launch is one billion dollars.

Libra and Facebook

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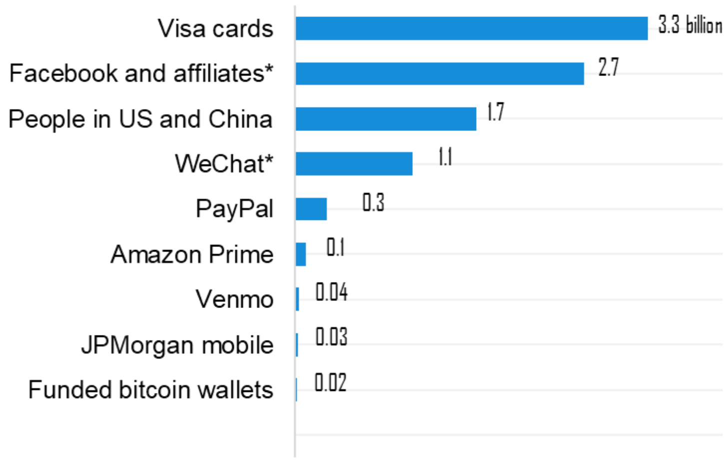
- Although sponsored by the Libra Association, many critics view Facebook as the driving force behind Libra.

- Facebook has been subject to significant controversy, with CEO Mark Zuckerberg testifying before Congress regarding privacy concerns and alleged election interference.

- Leveraging Facebook's existing user base, Libra has the potential to become a sizable global payment system competitive with other world currencies.

- Facebook will benefit by providing simple, secure wallets (Calibra) that can be used to drive targeted advertising.

Population, credit cards, and users



Libra Association Funding

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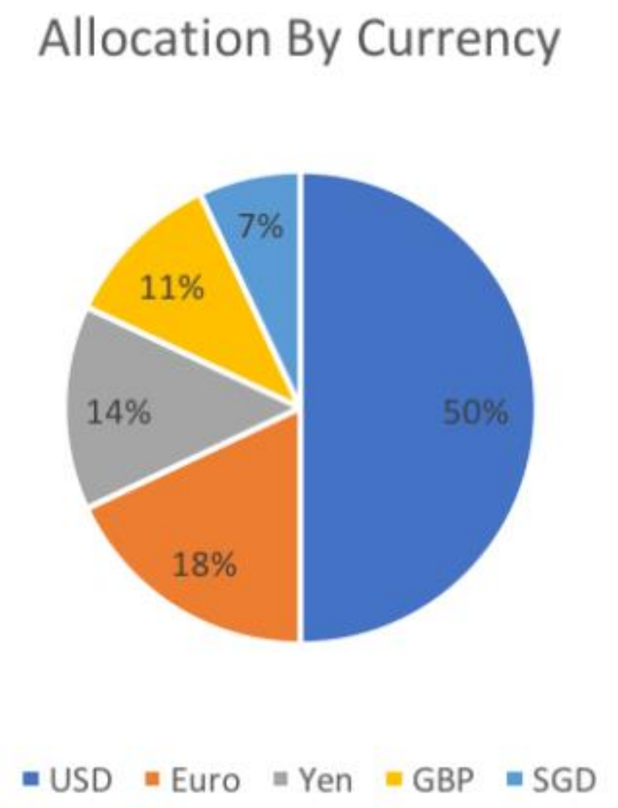
Libra would operate as a "**stablecoin**", backed by a reserve of stable, government-issued currencies and securities.

Operating expenses of the Libra network are planned to be funded by earnings from low risk investments such as government bonds.

The initial reserve fund size is planned to be at least one billion dollars.

Negative interest rates for government bonds are prevalent in many major developed economies, including Japan (14% of planned reserve) and much of Europe (18% of planned reserve)

It is unclear whether this is proposal is sustainable in a very low rate or negative rate environment.



Potential Issues: Anti-Money Laundering

U.S. financial institutions are required by law to take measures against money laundering and prevent access to the payment system by prohibited individuals, companies, or countries. Meeting these requirements is very difficult, typically requires a staff of experienced professionals and a significant investment in technology.

Some of the major requirements include:

- Know Your Customer (KYC)/Customer Identification Program (CIP): Verify identity of customers prior to account opening.
- Customer Due Diligence (CDD)/Enhanced Due Diligence (EDD): Understand the nature and purpose of customer relationships, with a focus on identifying higher risk accounts which may be used for money laundering or terrorist financing.
- Office of Foreign Assets Control ("OFAC") of the US Department of the Treasury administers and enforces economic and trade sanctions based on US foreign policy and national security goals.
    - *Potential Problem*: Accountability for complying with U.S. law is unclear, and this may embolden criminal organizations. Furthermore, Libra payments may potentially undermine the effectiveness of sanctions programs.

Potential Issues: Monetary Policy and Financial Stability

The Federal Reserve's ability to meet its dual mandates of price stability and maximum employment is primarily implemented through **open market operations**, which is dependent on control of the money supply.

- *Potential Problem*: The supply of Libra will not be directly controlled by a central bank, and if it or a similar cryptocurrency dominates the market, the effectiveness of central banks to achieve policy goals will potentially decline.

The Federal Reserve currently has the ability to respond to a financial crisis by creating dollars and lending them through the **Discount Window**.

- *Potential Problem*: Central banks will not have the ability to directly create and lend Libra during a crisis, and will therefore not be as directly able to limit the impact of a financial crisis.

FDIC insurance has substantially reduced the frequency and severity of bank runs which were a significant problem historically. Insured bank deposits are therefore effectively risk free, which may not be true of other similar products without the full faith and credit of the U.S. government.

- *Potential Problem*: While Libra will be backed by low risk investments, deposits are not insured by the FDIC. This leaves Libra open to a potential run during a crisis, similar to money market funds that "broke the buck" during the Great Financial Crisis.

Libra Current Status

The original planned launch date at year-end 2020 will likely delayed due to continued government scrutiny. Of the 28 original founding members of the Libra Association, seven members have dropped out including: Visa, Mastercard, Stripe, eBay, Paypal, and Booking Holdings.

> *"Visa has decided not to join the Libra Association at this time," a spokesperson told Business Insider. "We will continue to evaluate and our ultimate decision will be determined by a number of factors, including the Association's ability to fully satisfy all requisite regulatory expectations. Visa's continued interest in Libra stems from our belief that well-regulated blockchain-based networks could extend the value of secure digital payments to a greater number of people and places, particularly in emerging and developing markets."*

Meanwhile, central banks around the world are developing their own digital currencies:

- Chinese officials have stated that Libra may pose a threat to sovereignty, and as a result China is launching its Digital Currency Electronic Payment (DECP) system soon.

What does this mean for LACERS' investments?

- Cryptocurrency may be disruptive to *some aspects* of the financial system, but this is not necessarily a negative for investment returns.

- Global regulators and central banks are taking this seriously, and likely will find ways to successfully integrate cryptocurrencies into policy and operations.

- No immediate action by LACERS is necessary, although staff will continue to closely monitor the emerging technology and its potential impact on the portfolio.

  - Historically, well diversified portfolios have benefited from general improvements in technology. The adoption of blockchain technology into the infrastructure of many industries will likely result in improved efficiency and lower costs.

- While this technology may be a significant threat to some financial services companies, it is also an opportunity for technology companies.