

**MCERA INVESTMENT RETIREMENT BOARD AGENDA
THURSDAY, JANUARY 23, 2020
MERCED COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
3199 M STREET, MERCED, CA 95348**

Please turn your cell phone or other electronic device to non-audible mode.

CALL TO ORDER: 8:15 A.M.

- ROLL CALL.
- APPROVAL OF MINUTES – January 9, 2020.

PUBLIC COMMENT

Members of the public may comment on any item under the Board's jurisdiction. Matters presented under this item will not be discussed or acted upon by the Board at this time. For agenda items, the public may make comments at the time the item comes up for Board consideration. Persons addressing the Board will be limited to a maximum of five (5) minutes in total. Please state your name for the record.

CLOSED SESSION

As provided in the Ralph M. Brown Act, Government Code sections 54950 et seq., the Board may meet in closed session with members of its staff, county employees and its attorneys. These sessions are not open to the public and may not be attended by members of the public. The matters the Board will meet on in closed session are identified below. Any public reports of action taken in the closed session will be made in accordance with Government Code sections 54957.1.

(1) DISCUSSION AND POSSIBLE ACTION REGARDING THREAT TO PUBLIC SERVICES OR FACILITIES

(Govt. Code § 54957)

Presentation of Confidential Audit findings - Brown Armstrong.

RETURN TO OPEN SESSION

Report on any action taken in closed session.

BOARD ACTION¹/DISCUSSION

Pursuant to Govt. Code § 31594 and MCERA's Investment Objectives & Policy Statement due diligence analysis requirement:

1. Discussion and adoption of annual audit by Brown Armstrong – Brown Armstrong.
2. Discussion and possible action to accept the MCERA CAFR – Staff.
3. Presentation and discussion of the 2019/2020 Monthly Investment Performance Report for November and December with update on capital markets and possible board action on any item or funds/managers – Meketa.
4. Discussion and possible action to adopt Meketa's recommendation to rebalance MCERA's US equity allocation – Meketa.

¹ "Action" means that the Board may dispose of any item by any action, including but not limited to the following acts: approve, disapprove, authorize, modify, defer, table, take no action, or receive and file.

5. Discussion and possible action to update MCERA's benchmarks in the Investment Policy Statement document – Meketa.
6. Discussion and possible action to appoint permanent MCERA Investment Subcommittee – Chair.
7. Discussion and possible action to authorize staff to work with the county to release an RFP for new website design, branding and hosting for MCERA – Staff.
8. Discussion and possible action to approve CPAS contract amount for 2020 which will be paid annually – Staff.
9. Review calendar of any training sessions and authorize expenditures for Trustees and Plan Administrator. Pursuant to Govt. Code § 31522.8 and MCERA's Trustees Education and Training Policy requirements. Examples of upcoming training and educational sessions:
 - a. 2020 PIMCO Institute, Newport Beach, CA: February 24-27, 2020 or June 8-11, 2020 or October 19-22, 2020.
 - b. Carmel Partners Annual Investors Conference, March 5-6, 2020, San Francisco, CA.
 - c. CALAPRS General Assembly, March 7-10, 2020, Rancho Mirage, CA.
 - d. TCV Annual Investor Meeting, March 24, 2020, San Francisco, CA.
 - e. Advanced Principles of Pension Management for Trustees, March 30–April 1, 2020, Los Angeles, CA.
 - f. Pension Bridge Annual Conference, April 14-15, 2020, San Francisco, CA.
 - g. NCPERS Trustee Educational Seminal, May 9-10, 2020, Las Vegas, NV.
 - h. NCPERS Accredited Fiduciary Program (Modules 1&2 and 3&4), May 9-10, 2020, Las Vegas, NV.
 - i. NCPERS Annual Conference & Exhibition, May 10-13, 2020, Las Vegas, NV.
 - j. SACRS Spring Conference, May 12-15, 2020, San Diego, CA.
 - k. KKR's 2020 Global Investor Meeting, July 29 – July 1, 2020, Rancho Palos Verdes, CA.
 - l. SACRS Public Pension Investment Management Program, July 26-29, 2020, Berkeley, CA.
 - m. Principles of Pension Governance for Trustees, August 25-28, 2020 Malibu, CA.
 - n. Nossaman Fiduciary Forum, October 1-2, 2020, Los Angeles, CA.
 - o. SACRS Fall Conference, November 10-13, 2020, Indian Wells, CA.

INFORMATION ONLY

MCERA Upcoming Board Meetings:

Please note: The MCERA Board Meeting and/or Education Day times and dates may be changed in accordance with the Ralph M. Brown Act by the MCERA Board as required.

- February 13, 2020
- February 27, 2020

ADJOURNMENT

All supporting documentation is available for public review in the office of the Merced County Employees' Retirement Association, 3199 M Street, Merced, California, 95348 during regular business hours, 8:00 a.m. – 5:00 p.m., Monday through Friday.

The agenda is available online at www.co.merced.ca.us/retirement

Any material related to an item on this Agenda submitted to the Merced County Employees' Retirement Association, after distribution of the Agenda packet is available for public inspection in the office of the Merced County Employees' Retirement Association.

Persons who require accommodation for a disability in order to review an agenda, or to participate in a meeting of the Merced County Employees' Retirement Association per the American Disabilities Act (ADA), may obtain assistance by requesting such accommodation in writing addressed to Merced County Employees' Association, 3199 M Street, Merced, CA 95348 or telephonically by calling (209) 726-2724. Any such request for accommodation should be made at least 48 hours prior to the scheduled meeting for which assistance is requested.

**MCERA RETIREMENT BOARD MINUTES
ADMINISTRATIVE MEETING
THURSDAY, JANUARY 9, 2020
MERCED COUNTY EMPLOYEES' RETIREMENT ASSOCIATION
3199 M STREET, MERCED, CA 95348**

CALL TO ORDER: 8:15 A.M.

Board Members Present: Scott Johnston, Al Peterson, David Ness, Scott Silveira, Michael Rhodes, Janey Cabral, Darlene Ingersoll. **Counsel:** Forrest Hansen. **Staff:** Kristen Santos, Alexis Curry, Mark Harman, Brenda Mojica, Sheri Villagrana, Ninebra Maryoonani and Martha Sanchez. **Absent:** Karen Adams, Ryan Paskin, Kalisa Rochester, Jason Goins.

APPROVAL OF MINUTES – December 12, 2019.

Motion to approve the December 12, 2019 meeting minutes.

Ingersoll/Cabral U/A (6-0).

PUBLIC COMMENT

None.

CLOSED SESSION

Meeting went into closed session.

RETURN TO OPEN SESSION

DISABILITY RETIREMENT APPLICATIONS: PERSONNEL EXCEPTION

(Govt. Code § § 54957, 31532; Cal Const. art. I, § 1)

No action taken.

CONSENT CALENDAR

RETIREMENTS: Pursuant to Govt. Code § 31663.25 or § 31672

All items of earnable compensation for service or disability retirements listed below are in compliance with the pay code schedule approved by the Board of Retirement. The retirement is authorized; however, administrative adjustments may be necessary to alter the amount due to: audit, late arrival of data, court order, etc.

a.	Bickoff, Harvey	MCMC	6 Yrs. Svc.	Eff. 01/02/2020
b.	Pettygrove, Scott	Human Svc.	3 Yrs. Svc.	Eff. 01/04/2020
c.	Stanton, Nancy	H.S.A	13 Yrs. Svc.	Eff. 12/21/2019
d.	Amos, Carsine	H.S.A	24 Yrs. Svc.	Eff. 01/04/2020
e.	Barajas, Arturo	H.S.A	24 Yrs. Svc.	Eff. 12/27/2019
f.	Lucas, Mollie	H.S.A	6 Yrs. Svc.	Eff. 12/31/2019
g.	Bobbit, Christine	H.S.A	35 Yrs. Svc.	Eff. 01/04/2020
h.	Broughton, Marisa	Sheriff's	10 Yrs. Svc.	Eff. 01/01/2020
i.	Cureton, Michael	Admin/IS	22 Yrs. Svc.	Eff. 12/28/2019
j.	Wheeler, Karla	Juve Hall	20 Yrs. Svc.	Eff. 12/21/2019
k.	De Cocker, Laura	H.S.A	19 Yrs. Svc.	Eff. 12/28/2019
l.	Picciano, Eric	DPW	4 Yrs. Svc.	Eff. 12/31/2019
m.	Wade, Judy	D.A	17 Yrs. Svc.	Eff.01/03/2020
n.	Gomes, Maria	Tax Collector	20 Yrs. Svc.	Eff. 12/31/2019
o.	Manuel Contreras	H.S.A	14 Yrs. Svc.	Eff. 01/04/2020

YTD fiscal year 2019/2020 retirees: ~~051~~ 050* minutes corrected with removal of member Marisa Broughton

YTD fiscal year 2018/2019 retirees: 101

YTD fiscal year 2017/2018 retirees: 082

REFUND OF SERVICE PURCHASE: None

DEATH BENEFIT: None

MONTHLY BUDGET REPORT: Submitted

Motion to approve Consent Calendar.

Rhodes/Peterson U/A (6-0).

REGULAR CALENDAR

BOARD ACTION¹/DISCUSSION

1. Discussion and possible action to increase licensing agreement fee with CPAS (owned by Avenu Insights & Analytics) in the amount of \$43,825 (onetime payment) to cover licensing overages and reflect room for 3% growth in MCERA membership – Staff.
The MCERA Board voted to approve the increase in licensing fee with room for 3% growth in the amount of \$43,825. Ness/Cabral U/A (6-0).
2. Discussion and possible action on quarterly budget report – Staff.
No action taken.
3. Discussion and possible action on update of property purchase located at 690 W 19th Street, Merced, CA – Staff.
Subcommittee met to discuss parking issues of current preliminary design. Update on 501(c)25 formation – MCERA still in discussion with Nossaman, LLP.
4. Review calendar of any training sessions and authorize expenditures for Trustees and Plan Administrator. Pursuant to Govt. Code § 31522.8 and MCERA’s Trustees Education and Training Policy requirements. Examples of upcoming training and educational sessions:
 - a. NCPERS Legislative Conference, January 26-28, 2020, Washington, DC.
 - b. 2020 PIMCO Institute, Newport Beach, CA: February 24-27, 2020 or June 8-11, 2020 or October 19-22, 2020.
 - c. Carmel Partners Annual Investors Conference, March 5-6, 2020, San Francisco, CA.
 - d. CALAPRS General Assembly, March 7-10, 2020, Rancho Mirage, CA.
 - e. TCV Annual Investor Meeting, March 24, 2020, San Francisco, CA.
 - f. Advanced Principles of Pension Management for Trustees, March 30-April 1, 2020, Los Angeles, CA.
 - g. Pension Bridge Annual Conference, April 14-15, 2020, San Francisco, CA.
 - h. NCPERS Trustee Educational Seminal, May 9-10, 2020, Las Vegas, NV.
 - i. NCPERS Accredited Fiduciary Program (Modules 1&2 and 3&4), May 9-10, 2020, Las Vegas, NV.
 - j. NCPERS Annual Conference & Exhibition, May 10-13, 2020, Las Vegas, NV.
 - k. SACRS Spring Conference, May 12-15, 2020, San Diego, CA.
 - l. KKR’s 2020 Global Investor Meeting, July 29 – July 1, 2020, Rancho Palos Verdes, CA.

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- m. SACRS Public Pension Investment Management Program, July 26-29, 2020, Berkeley, CA.
- n. Principles of Pension Governance for Trustees, August 25-28, 2020 Malibu, CA.
- o. Nossaman Fiduciary Forum, October 1-2, 2020, Los Angeles, CA.
- p. SACRS Fall Conference, November 10-13, 2020, Indian Wells, CA.

No action Taken.

INFORMATION ONLY

- **Trustee Ingersoll will not be present for the February 13, 2020 meeting due to a prior commitment.**
- **Staff Ninebra Maryoonani brought cookies for Trustees.**

ADJOURNMENT

The meeting adjourned at 8:44 A.M.

Respectfully submitted,

Ryan Paskin, Chair

Al Peterson, Secretary

Date

Merced County Employees' Retirement Association



Board of Retirement Presentation of the Results of the June 30, 2019 Year End Financial Statement Audit


Brown Armstrong Accountancy Corporation

4200 Truxtun Avenue, Suite 300 | Bakersfield, CA 93309 | 661.324.4971 | Fax 661.324.4997

Presented By: Andrew J. Paulden, CPA
Partner

Colin Lo, CPA
Audit Senior

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—
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ACCOUNTANTS



January 23, 2020

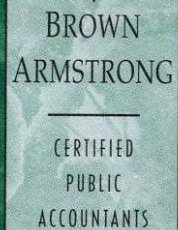
The Board of Retirement of the
Merced County Employees' Retirement Association
3199 M Street
Merced CA 95348

We are pleased to present to you the results of our audit of the Merced County Employees' Retirement Association (MCERA) financial statements for the year ended June 30, 2019.

We look forward to presenting the results of the audit and addressing your questions.

Sincerely,

Andrew J. Paulden, CPA/Partner
Brown Armstrong Accountancy Corporation



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Scope of Services Recap

- ❖ Audit of MCERA's financial statements in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards (GAS)*, issued by the Comptroller General of the United States
- ❖ Other communications and reports required by professional standards including:
 - Required Communication at the Conclusion of an Audit in Accordance with Professional Standards (SAS 114)
 - Report on Internal Control Over Financial Reporting and on Compliance and Other Matters in Accordance with GAS

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Audit Timeline/Critical Dates List

- **First Week of Fieldwork – July 15, 2019**
 - On-Site Testing of Internal Controls
 - Walkthroughs and Understanding of Key Accounting Areas
 - Update Minutes and Agreements
- **Second Week of Fieldwork – September 30, 2019**
 - Substantiate all Accounts and Balances
 - Review Confirmation Responses
- **Audit Wrap Up Conference Call to Discuss Results of Fieldwork – November 7, 2019**
- **CAFR Review and Draft Reports – November/December 2019**
- **Audit Opinions Issued - December 27, 2019 Issued Timely**

Audit Areas of Focus

Significant Risk Areas	Brown Armstrong's Response
Revenue recognition	<ul style="list-style-type: none">• Test of controls was performed over contribution amounts as part of participant data• Confirmations from third parties• Other substantive analytics were also performed
Management override of controls	<ul style="list-style-type: none">• An understanding of controls over journal entries was obtained and a sample of individual journal entries was performed• Inquiries performed with individual(s) involved in the financial reporting process, and ensuring no inappropriate or unusual activity was noted relating to journal entry processing• Performed walkthroughs of significant audit areas to review adequate segregation of duties.

Audit Areas of Focus

Significant Audit Areas	Brown Armstrong's Response
Investments and related earnings	<ul style="list-style-type: none"> • Walkthrough of controls performed • High level analytics performed on investment income • Confirmation with custodian, managers, and consultants • Reviewed GASB Statement No. 72 valuation inputs and testing of Level determinations • Obtained audited financial statements and SOC reports
Participant data and actuary	<ul style="list-style-type: none"> • Walkthrough and test of controls • Testing of participant data, including active and terminated members, and employer payroll <ul style="list-style-type: none"> • Confirmed with actuary • Confirmed with employers • GASB Statement No. 67/68 <ul style="list-style-type: none"> • Money-weighted return • RSI schedules
Benefit payments	<ul style="list-style-type: none"> • Walkthrough and test of controls • Testing of benefit payments • High level analytics
Employer and employee contributions	<ul style="list-style-type: none"> • Walkthrough and test of controls • Confirmed with employers • High level analytics



Results of the Audit

Required Audit Reports Issued	Summary
Report on Financial Statements (Opinion)	Unmodified
Required Communication to the Board of Retirement in Accordance with Professional Standards (SAS 114)	<p>Significant Estimates Reviewed</p> <ul style="list-style-type: none"> • Fair Value of Investments • Net Pension Liability Estimates <ul style="list-style-type: none"> ✓ Based on actuary assumptions <p>Corrected and Uncorrected Misstatements - None Disagreements with Management - None</p>
Report on Internal Control Over Financial Reporting and on Compliance and Other Matters Based on an Audit of Financial Statements Performed in Accordance With <i>Government Auditing Standards</i>	<p>No noncompliance noted No material weaknesses, significant deficiencies, or control deficiencies identified</p>

Results of the Audit

Other Reports Issued	Summary
Agreed Upon Conditions Report Designed to Increase Efficiency, Internal Controls, and/or Information Technology (Management Letter for IT)	Current year status of agreed upon condition and recommendation identified in the prior year



Financial Statement Review

- Review Process
- GFOA Award
- Questions on the CAFR

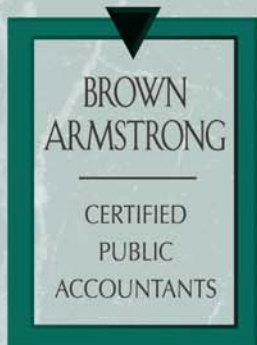
Thank Staff/Questions?



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BROWN ARMSTRONG

Certified Public Accountants

INDEPENDENT AUDITOR'S REPORT

To the Board of Retirement of the
Merced County Employees' Retirement Association
Merced, California

Report on the Basic Financial Statements and Other Information

We have audited the accompanying Statements of Fiduciary Net Position of the Merced County Employees' Retirement Association (MCERA), a component unit of the County of Merced, as of June 30, 2019 and 2018, the related Statements of Changes in Fiduciary Net Position for the fiscal years then ended, and the related notes to the basic financial statements, which collectively comprise MCERA's basic financial statements as listed in the table of contents. We have also audited the Schedule of Cost Sharing Employer Allocations and the Schedule of Employer Pension Amounts Allocated by Cost Sharing Plan totals for all entities of the columns titled net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense excluding that attributable to employer-paid member contributions (specified column totals) as of and for the fiscal year ended June 30, 2019, listed as other information in the table of contents.

Management's Responsibility for the Basic Financial Statements and Other Information

MCERA's management is responsible for the preparation and fair presentation of these basic financial statements and other information 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 basic financial statements and other information that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express opinions on these basic financial statements and other information based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the basic financial statements and other information are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the basic financial statements and other information. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the basic financial statements and other information, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to MCERA's preparation and fair presentation of the basic financial statements and other information in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of

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expressing an opinion on the effectiveness of MCERA'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 basic financial statements and other information.

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 basic financial statements and other information referred to above present fairly, in all material respects, the fiduciary net position of MCERA as of June 30, 2019 and 2018; its changes in fiduciary net position for the fiscal years then ended; and the Schedule of Cost Sharing Employer Allocations and the Schedule of Employer Pension Amounts Allocated by Cost Sharing Plan totals for all entities of the columns titled net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense excluding that attributable to employer-paid member contributions (specified column totals) as of and for the fiscal year ended June 30, 2019, in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and required supplementary information as listed in the table of contents 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 (GASB), 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 management's discussion and analysis and 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 and other information. 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.

Additional Information

Our audit was conducted for the purpose of forming opinions on the basic financial statements that collectively comprise MCERA's basic financial statements and other information. The other supplemental schedules and the introductory, investment, actuarial, and statistical sections, as listed in the table of contents, are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The other 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 other information 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 other supplemental schedules are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

The introductory, investment, actuarial, and statistical sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements and other information and, accordingly, we do not express an opinion or provide any assurance on them.

Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated December 23, 2019, on our consideration of MCERA's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and agreements, and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of MCERA's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering MCERA's internal control over financial reporting and compliance.

Restriction on Use

Our report is intended solely for the information and use of the Board of Retirement, management of MCERA, and MCERA employers and their auditors and is not intended to be, and should not be, used by anyone other than these specified parties.

BROWN ARMSTRONG
ACCOUNTANCY CORPORATION

*Brown Armstrong
Accountancy Corporation*

Bakersfield, California
December 23, 2019

**Merced County Employees'
Retirement Association**

2019

**Comprehensive Annual Financial Report
For the fiscal years ended June 30, 2019 and 2018**

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Comprehensive Annual Financial Report

For the Fiscal Years Ended June 30, 2019 and 2018

Issued by:

Kristen Santos

Plan Administrator

Mark A. Harman

Fiscal Manager

Merced County Employees' Retirement Association

A Pension Trust Fund of the County of Merced, California

3199 M Street, Merced, CA 95348

(209) 726-2724

www.co.merced.ca.us/2145/Retirement

mcera | Merced County Employees'
Retirement Association

MCERA's mission is to provide benefits to its members, to manage assets prudently in accordance with plan provisions, and to provide competent and efficient services to our members

Merced County Employees' Retirement Association

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Merced County Employees' Retirement Association

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Merced County Employees' Retirement Association

Letter of Transmittal

December 23, 2019

Dear Board Members:

As the administrator of the Merced County Employees' Retirement Association (MCERA, or the Association), I am pleased to present this Comprehensive Annual Financial Report (CAFR) for the fiscal years ended June 30, 2019 and 2018. This report is intended to provide readers with complete and reliable information about MCERA's financial status, compliance with the law and MCERA policies. This is MCERA's 69th year of operation.

MCERA's Mission Statement and Core Values

MCERA's mission is to provide benefits to its members, manage assets prudently in accordance with plan provisions, and provide competent and efficient services to our members.

The Comprehensive Annual Financial Report (CAFR)

MCERA management is responsible for both the accuracy of the data and the completeness and fairness of the financial information contained in this CAFR. The Comprehensive Annual Financial Report is presented in five sections:

- The **Introductory Section** describes MCERA's management and organizational structure, identifies the members of the MCERA Board of Retirement (Board), provides a listing of professional consultants utilized by MCERA, and presents this Letter of Transmittal.
- The **Financial Section** presents the report of the independent auditor, Brown Armstrong Accountancy Corporation, along with MCERA management's discussion and analysis, basic financial statements, required supplementary schedules, other supplemental schedules, and other information.
- The **Investment Section** contains a report on MCERA's investment performance from MCERA's investment consultant, Meketa Investment Group, along with information regarding MCERA's investment policies, asset allocation, investment holdings, and investment management fees.
- The **Actuarial Section** contains the independent actuary's certification letter from MCERA's actuary, Cheiron, Inc., along with a summary of actuarial assumptions and funding methods, and actuarial statistics.
- The **Statistical Section** presents information pertaining to MCERA's operations on a multi-year basis. The financial and operating information provides contextual data for MCERA's fiduciary net position, contributions, refunds, and different types of retirement benefits.

MCERA and its Services

MCERA is a public employee retirement system established by the County of Merced on July 1, 1950. MCERA is administered by the MCERA Board of Retirement to provide retirement, disability, death, and survivor benefits for eligible employees of the County of Merced, Superior Court of California for the County of Merced, Merced Cemetery District, and Regional Waste Management Authority for Merced County pursuant to the California Constitution, the County Employees' Retirement Law of 1937, Government Code Section 31450 et. seq. (the 1937 Act), and the by-laws, policies, and procedures adopted by the MCERA Board. The County of Merced Board of Supervisors may also adopt resolutions, as permitted by the 1937 Act, which may affect benefits of MCERA members.

Merced County Employees' Retirement Association

Letter of Transmittal (continued)

The MCERA Board is responsible for the general management of the association, including making benefit determinations and managing the investment of the Association's assets. The day-to-day management of MCERA is vested in an administrator appointed by the Board.

The Board is comprised of nine members and two alternates; two elected by the active general membership, one regular and one alternate elected by the active safety membership, one regular and one alternate elected by the retired membership, four appointed by the County of Merced Board of Supervisors, and the County of Merced Treasurer, who serves as an ex-officio member. With the exception of the County Treasurer, Board members serve three-year terms, with no term limits.

Financial Information

A review of MCERA's fiscal affairs for the years ended June 30, 2019 and 2018 is presented in Management's Discussion and Analysis (MD&A), which is located in the Financial Section of this CAFR. Together, the MD&A and this Letter of Transmittal provide an expanded overview of MCERA's financial activities for the fiscal years reported.

The audit of MCERA's financial statements has been performed by an independent auditor, Brown Armstrong Accountancy Corporation, who has opined that the financial statements are presented in conformity with Generally Accepted Accounting Principles (GAAP) and are free of material misstatement and that sufficient internal controls exist to provide reasonable assurance regarding the safekeeping of assets and fair presentation of the financial statements and supporting schedules. This document has been prepared in compliance with the Governmental Accounting Standards Board (GASB) Statement No. 82 and all prior and relevant standards.

Management is responsible for establishing and maintaining appropriate internal controls to ensure that MCERA's assets are protected from loss, theft, or misuse. MCERA recognizes that even sound internal controls have inherent limitations. We believe that internal controls are designed to provide reasonable, but not absolute, assurance that these objectives are met. The concept of reasonable assurance recognizes that the cost of control should not exceed the benefits to be derived and the assessment of control should not exceed the benefits to be derived and the assessment of costs and benefits requires estimates and judgments by management.

As of June 30, 2019, MCERA's fiduciary net position restricted for pension benefits totaled approximately \$866.5 million reflecting an increase of approximately \$39.8 million or 4.8% in fiduciary net position from the end of the previous fiscal year. This was primarily attributable to increase in fair value of investments.

Actuarial Funding Status

MCERA's funding objective is to meet long-term benefit obligations by maintaining a well-funded plan and obtaining optimum investment returns consistent with a prudent level of risk. The higher the level of plan funding, the larger the ratio of assets accumulated to actuarial accrued liability and the higher the level of investment return potential.

Pursuant to provisions in the 1937 Act, MCERA engages an independent actuarial firm to perform annual actuarial valuations of the Association. As part of the valuation, economic assumptions are reviewed and, in addition, every three years a triennial experience study of MCERA membership is conducted and non-economic assumptions are reviewed and modified as necessary. The most recent triennial experience study was conducted in 2016. As a result of the study, several economic and non-economic assumptions were changed. The impact of the changes were significant, so they are being phased in over two years. The most recent actuarial valuation as of June 30, 2018, reported the Association's actuarial funding status (the ratio of actuarial assets to actuarial liabilities) is 63.5%. This increase in funding ratio (63.5% from 59.8%

Merced County Employees' Retirement Association

Letter of Transmittal (continued)

as of June 30, 2017) was primarily due to MCERA's investment returns meeting the actuarial assumptions.

Investments

The Board has exclusive control of all investments of the Association and is responsible for establishing investment objectives, strategies, and policies. Pursuant to the California Constitution and the 1937 Act, the Board is authorized to invest in any form or type of investment to create a portfolio deemed prudent in the informed judgement of the Board. In making decisions regarding the MCERA investment portfolio, the Board acts in a fiduciary capacity and must discharge its duties in accordance with fiduciary principles. In carrying out its investment responsibilities, the Board receives guidance from professional investment consultants, Meketa Investment Group, Inc. and Cliffwater, LLC.

The Board of Retirement has adopted an Investment Policy, which provides the framework for the management of MCERA's investments. The Investment Policy establishes the investment program goals, asset allocation policies, performance objectives, investment management policies, and risk controls.

The Investment Policy also delineates the principal fiscal duties of the Board, MCERA's custodial bank, MCERA staff, and investment managers.

The asset allocation plan adopted by the Board is an integral part of MCERA's investment program. It is designed to provide an optimum mix of asset classes with return expectations to satisfy expected liabilities while minimizing risk exposure. A summary of the asset allocation plan is located in the Investment Section of this CAFR.

The assets of MCERA are exclusively managed by external professional investment management firms. A listing of the investment service providers and investment fees is located on pages 76 and 75, respectively.

For the fiscal year ended June 30, 2019, MCERA's investment return, net of fees, was a positive 5.2% and the annualized rate of return over the last three and five years was a positive 8.9% and 5.9%, respectively.

Service Efforts and Accomplishments

- Adopted and implemented a cost-of-living adjustment (COLA) of 3% effective April 1, 2019 for Tier 1 retired members.
- For the fifteenth consecutive year, MCERA was awarded the GFOA Certificate of Achievement for Excellence in Financial Reporting for MCERA's 2017-2018 Comprehensive Annual Financial Report.
- Approved subscriptions in the following hedge funds:
 - Laurion Capital Fund — \$5,000,000
 - Taconic Opportunity Fund II — \$10,000,000
- Approved commitments for each of the following private investments (regardless of funding progress at June 30, 2019):
 - Angelo Gordon Realty Value Fund X — \$5,000,000
 - Ardian Infrastructure Fund V — \$5,000,000
 - BlackRock Global Energy & Power Infrastructure Fund III F — \$5,000,000
 - Carmel Partners Investment Fund VII — \$5,000,000
 - Genstar Capital Partners IX — \$8,000,000
 - Rockpoint Real Estate Fund VI — \$5,000,000

Merced County Employees' Retirement Association

Letter of Transmittal Continued

- Spark Capital VI — \$3,000,000
 - Spark Capital Growth Fund III — \$6,000,000
 - Summit Partners Growth Equity X — \$8,000,000
 - Tailwater Energy Fund IV — \$5,000,000
- Adopted the 2018 annual valuation report as presented by Cheiron, Inc.

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 MCERA for its CAFR for the Fiscal Year Ended June 30, 2018. The Certificate of Achievement is a prestigious national award that recognizes conformance with the highest standards for preparation of state and local government financial reports.

In order to be awarded a Certificate of Achievement, a government unit must publish an easily readable and efficiently organized comprehensive annual financial report, whose contents conform to program standards. The CAFR must satisfy both generally accepted accounting principles and applicable legal requirements. A Certificate of Achievement is valid for a period of one year only. This is MCERA's fifteenth Certificate of Achievement for excellence in Financial Reporting. We believe our current report continues to conform to the Certificate of Achievement program requirements.

Acknowledgements

The compilation of this report reflects the dedicated efforts of MCERA staff and, in particular, MCERA's Mark Harman and Adriana Valdez. I would like to express my great appreciation for their hard work. I would also like to thank MCERA's professional consultants; our actuary, our investment consultants, and our auditor for their generous and invaluable assistance. Finally, I would like to acknowledge the Board for its leadership and commitment to the highest fiduciary standards.

Respectfully submitted,



Kristen Santos
Plan Administrator



Government Finance Officers Association

Certificate of
Achievement
for Excellence
in Financial
Reporting

Presented to

Merced County

Employees' Retirement Association

California

For its Comprehensive Annual
Financial Report
for the Fiscal Year Ended

June 30, 2018

Christopher P. Morill

Executive Director/CEO

Merced County Employees' Retirement Association

Members of the Board of Retirement

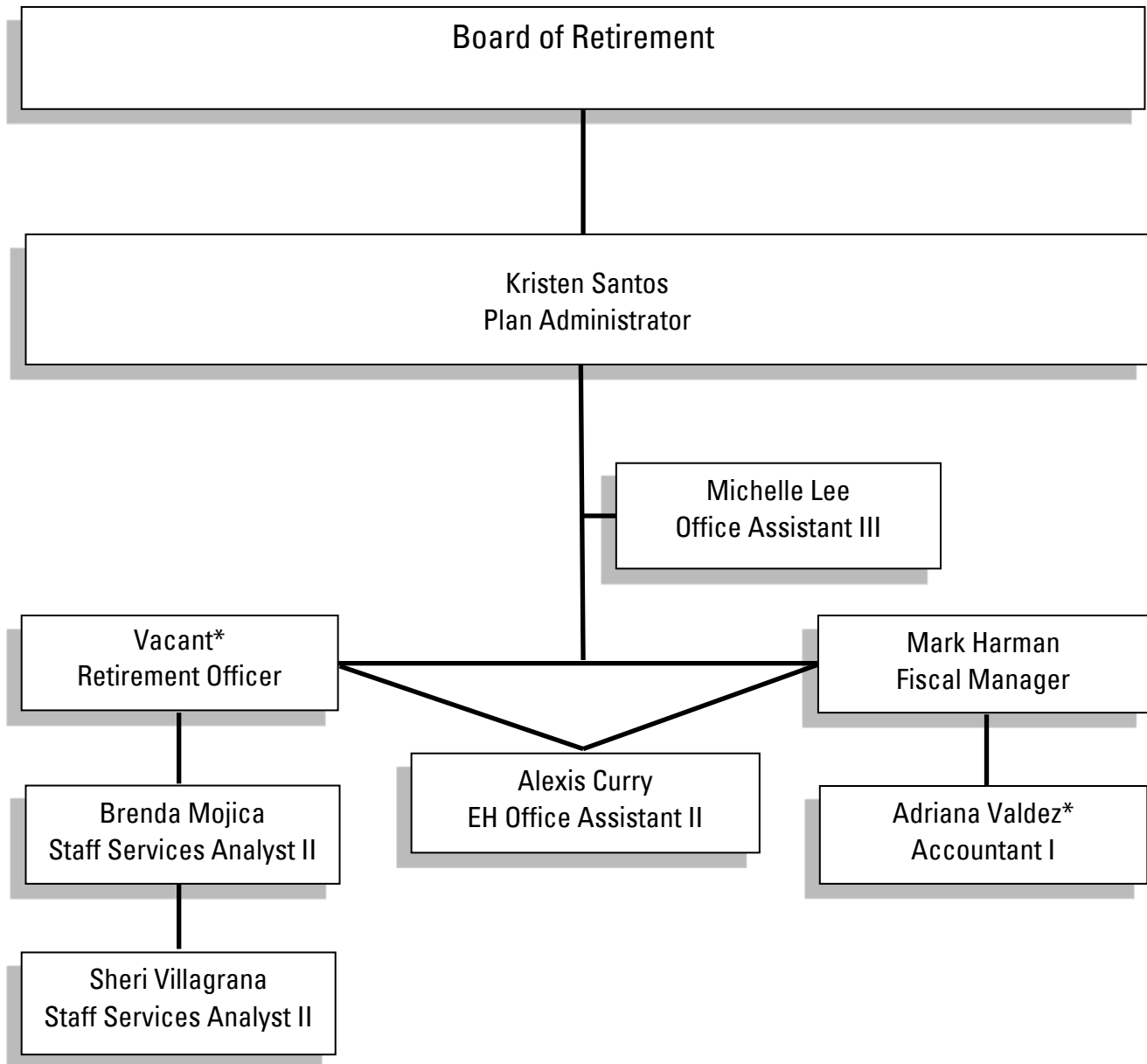
As of June 30, 2019

<u>Trustees</u>	<u>Term Expiration</u>	<u>Appointed/Elected by</u>
Darlene Ingersoll, Chair	December 31, 2019	General Members
Ryan Paskin, Vice Chair	December 31, 2019	Board of Supervisors
Alfonse Peterson, Secretary	December 31, 2021	Board of Supervisors
Karen Adams, County Treasurer	Permanent by office	Ex-officio Member
Janey Cabral	December 31, 2020	General Members
David Ness	December 31, 2019	Board of Supervisors
Scott Silveira	December 31, 2021	Board of Supervisors
Jason Goins	December 31, 2019	Safety Members
Vacant, Alternate	December 31, 2019	Safety Members
Michael Rhodes	December 31, 2020	Retired Members
Scott Johnston, Alternate	December 31, 2020	Retired Members

Merced County Employees' Retirement Association

Administrative Organization Chart

As of June 30, 2019



*Since June 30th, MCERA hired Martha Sanchez on September 30, 2019 to the position of Benefits and Administration Manager, filling the vacancy left by the Retirement Officer, Angelo Lamas, who retired on April 19th, 2019. The Retirement Officer position has been replaced by the aforementioned position. Adriana Valdez was promoted to Accountant II in September 2019 and, subsequently left service with MCERA on November 8th, 2019 for a new opportunity. Ninebra Maryoonani was hired to replace Ms. Valdez on November 12, 2019.

Merced County Employees' Retirement Association

List of Professional Consultants

As of June 30, 2019

Consulting Services

Investment Consultant

Meketa Investment Group, Inc.
Cliffwater, LLC

Actuary

Cheiron, Inc.
Segal Consulting

Auditor

Brown Armstrong Accountancy Corporation

Master Custodian

Northern Trust Corporation

Electronic Systems Services

Merced County Information Systems

Legal Counsel

Merced County Counsel
Ted Cabral
Nossaman LLP
Public Pension Consultants, Inc.
Hanson Bridgett LLP

Medical Advisor

National Disability Evaluations, Inc.

Commission Recapture Brokers

ConvergEx Group
Capital Institutional Services, Inc.

Merced County Employees' Retirement Association

List of Professional Consultants (continued)

As of June 30, 2019

Investment Services

Fixed Income

Barrow, Hanley, Mewhinney & Strauss, Inc.

Vanguard

PIMCO Investment Management

GoldenTree Asset Management LP

Domestic Equity

Mellon Capital Management

Dimensional Fund Advisors

PanAgora Asset Management, Inc.

International Equity

Mellon Capital Management

Wells Capital Management

Acadian Asset Management

Driehaus Capital Management

Real Asset Proxy

SSgA

Private Equity

Adams Street Partners, LLC

Pantheon Ventures, Inc.

Invesco Private Capital

Ocean Avenue Capital Partners

Raven Capital Management

Davidson Kempner Capital Management LP

GTCR LLC

Carrick Capital Management Company

Cressey & Company LP

Technology Crossover Ventures (TCV)

Real Estate

UBS Global Asset Management

Greenfield Partners

Patron Capital

The Carlyle Group

Taconic Capital Advisors LP

Carmel Partners, Inc

Angelo Gordon

Hedge Fund

Och-Ziff Capital Management

Wellington Alternative Investments

Graham Capital Management

KLS Diversified Asset Management

Winton Group, Ltd

Marshall Wace, LLP

Silver Point Capital, L.P.

Taconic Capital Advisors LP

Laurion Capital Management LP

Infrastructure

KKR & Co. L.P.

Morgan Stanley

ISquared Capital

Ardian

BlackRock, Inc

Natural Resources

GSO Energy Select Opportunities Assc, LLC

Taurus Funds Management

EnCap Investments L.P.

Commission Recapture Brokers

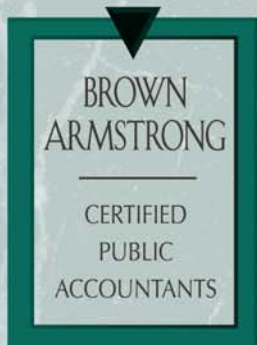
ConvergEx Group

Capital Institutional Services, Inc.

Note: Fees to investment professionals are reported in the investment section on page 75.

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BROWN ARMSTRONG

Certified Public Accountants

INDEPENDENT AUDITOR'S REPORT

To the Board of Retirement of the
Merced County Employees' Retirement Association
Merced, California

Report on the Basic Financial Statements and Other Information

We have audited the accompanying Statements of Fiduciary Net Position of the Merced County Employees' Retirement Association (MCERA), a component unit of the County of Merced, as of June 30, 2019 and 2018, the related Statements of Changes in Fiduciary Net Position for the fiscal years then ended, and the related notes to the basic financial statements, which collectively comprise MCERA's basic financial statements as listed in the table of contents. We have also audited the Schedule of Cost Sharing Employer Allocations and the Schedule of Employer Pension Amounts Allocated by Cost Sharing Plan totals for all entities of the columns titled net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense excluding that attributable to employer-paid member contributions (specified column totals) as of and for the fiscal year ended June 30, 2019, listed as other information in the table of contents.

Management's Responsibility for the Basic Financial Statements and Other Information

MCERA's management is responsible for the preparation and fair presentation of these basic financial statements and other information 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 basic financial statements and other information that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express opinions on these basic financial statements and other information based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the basic financial statements and other information are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the basic financial statements and other information. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the basic financial statements and other information, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to MCERA's preparation and fair presentation of the basic financial statements and other information in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of

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expressing an opinion on the effectiveness of MCERA'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 basic financial statements and other information.

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 basic financial statements and other information referred to above present fairly, in all material respects, the fiduciary net position of MCERA as of June 30, 2019 and 2018; its changes in fiduciary net position for the fiscal years then ended; and the Schedule of Cost Sharing Employer Allocations and the Schedule of Employer Pension Amounts Allocated by Cost Sharing Plan totals for all entities of the columns titled net pension liability, total deferred outflows of resources, total deferred inflows of resources, and total pension expense excluding that attributable to employer-paid member contributions (specified column totals) as of and for the fiscal year ended June 30, 2019, in accordance with accounting principles generally accepted in the United States of America.

Other Matters

Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis and required supplementary information as listed in the table of contents 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 (GASB), 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 management's discussion and analysis and 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 and other information. 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.

Additional Information

Our audit was conducted for the purpose of forming opinions on the basic financial statements that collectively comprise MCERA's basic financial statements and other information. The other supplemental schedules and the introductory, investment, actuarial, and statistical sections, as listed in the table of contents, are presented for purposes of additional analysis and are not a required part of the basic financial statements.

The other 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 other information 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 other supplemental schedules are fairly stated, in all material respects, in relation to the basic financial statements as a whole.

The introductory, investment, actuarial, and statistical sections have not been subjected to the auditing procedures applied in the audit of the basic financial statements and other information and, accordingly, we do not express an opinion or provide any assurance on them.

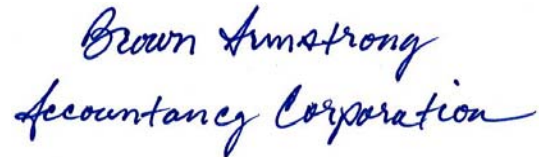
Other Reporting Required by *Government Auditing Standards*

In accordance with *Government Auditing Standards*, we have also issued our report dated December 23, 2019, on our consideration of MCERA's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and agreements, and other matters. The purpose of that report is solely to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on the effectiveness of MCERA's internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering MCERA's internal control over financial reporting and compliance.

Restriction on Use

Our report is intended solely for the information and use of the Board of Retirement, management of MCERA, and MCERA employers and their auditors and is not intended to be, and should not be, used by anyone other than these specified parties.

BROWN ARMSTRONG
ACCOUNTANCY CORPORATION

A handwritten signature in blue ink that reads "Brown Armstrong Accountancy Corporation". The signature is written in a cursive style and is positioned below the printed name of the firm.

Bakersfield, California
December 23, 2019

Merced County Employees' Retirement Association

Management's Discussion and Analysis

We are pleased to provide this overview and analysis of the financial activities of the Merced County Employees' Retirement Association (MCERA, or the Association) for fiscal years ended June 30, 2019 and 2018. We encourage readers to consider the information presented here in conjunction with the additional information furnished in the Letter of Transmittal and the financial statements following this section.

Financial Highlights

- At the close of the fiscal year June 30, 2019, MCERA's fiduciary net position restricted for pensions totaled \$866.5 million. All of the fiduciary net position is available to meet MCERA's ongoing obligations to plan participants and their beneficiaries.
- During fiscal year 2019, MCERA's fiduciary net position restricted for pensions increased by \$39.8 million. This change mostly reflects the increase in fair value of investments.
- MCERA's funding objective is to meet long-term benefit obligations through contributions and investment income. As of June 30, 2018, the date of MCERA's last actuarial funding valuation, MCERA's funded ratio was 63.5%. In general, this indicates that for every one dollar of benefits due, MCERA has approximately \$0.63 of assets available for payment.
- Additions, as reflected in the Statements of Changes in Fiduciary Net Position, were \$117.0 million in the fiscal year ended June 30, 2019. These additions include employer and employee contributions of \$77.3 million, investment income of \$9.1 million, other income of \$0.1 million, a net appreciation in the fair value of investments of \$33.8 million, and investment expenses of \$3.3 million.
- Deductions, as reflected in the Statements of Changes in Fiduciary Net Position, increased from \$73.0 million to \$77.2 million in the current fiscal year (an increase of approximately 5.7%). This increase was primarily due to benefits paid.

Overview of the Financial Statements

The following discussion and analysis are intended to help the reader understand the purpose and meaning of the key components within the financial section. The financial statements are comprised of the **Statements of Fiduciary Net Position** and the **Statements of Changes in Fiduciary Net Position**.

The **Statements of Fiduciary Net Position** are a snapshot of account balances as of the fiscal year ends. They indicate the assets available for future payment to retirees and any current liabilities. The difference between assets and liabilities represents the fiduciary net position restricted for pensions. The statements also present prior year-end balances for comparative purposes.

The **Statements of Changes in Fiduciary Net Position** provide a view of the current year additions to and deductions from the Association that caused the change in the net position during the fiscal years.

MCERA's financial statements are in compliance with the generally accepted accounting principles in the United States of America (GAAP) and reporting guidelines set for in Governmental Accounting Standards Board (GASB) Statement Nos. 28, 34, 40, 44, 51, 53, 63, 67, 72, and 82. These pronouncements require certain disclosures, and also require that defined pension plans of state and local governments report using the full accrual method of accounting. MCERA complies with all material requirements of these pronouncements.

Merced County Employees' Retirement Association

Management's Discussion and Analysis

These financial statements report information about MCERA's financial activities. As previously noted, the statements include all assets and liabilities using the full accrual basis of accounting. The current year's additions are recognized when earned and deductions are recognized when incurred regardless of when cash is received or paid. Investment gains or losses are shown at the trade date, not the settlement date. In addition, both realized and unrealized gains and losses are reported. All capital assets are depreciated over their useful lives.

The information reported regarding MCERA's fiduciary net position restricted for pensions is generally considered to be a good measure of MCERA's financial position. Over time, increases or decreases in the Association's net position is one indicator of whether the Association's financial health is improving or deteriorating. Other factors however, such as investment market conditions and the employers' net pension liability, should also be considered in measuring the Association's overall health.

The **Notes to Basic Financial Statements** are an integral part of the financial report and provide additional information that is essential to a full understanding of the data provided in the financial statements.

In addition to the financial statements and accompanying notes, this report presents certain required supplementary information. The **Required Supplementary Information** includes the Schedules of Changes in Net Pension Liability and Related Ratios, Schedules of Employer Contributions, and the Schedules of Investment Returns. The Schedules of Changes in Net Pension Liability and Related Ratios present the changes in the employers' net pension liability. The Schedules of Employer Contributions provide historical information about actuarial determined contributions of the employer and the actual contributions made. The Schedules of Investment Returns represent the investment returns weighted by the cash inflows and outflows from the investment funds. Together, these schedules and the supporting **Notes to Required Supplementary Information** provide information to help promote understanding of the Association's fiduciary net position in relation to the total pension liability, employers' actual contributions and investment returns over time. **Other Supplemental Schedules** represent information concerning MCERA's operations on a multi-year basis. Finally, **Other Information** consists of two schedules pertaining to GASB Statement No. 68, *Accounting and Financial Reporting for Pensions—an Amendment of GASB Statement No. 27*. The two schedules include the Schedule of Employer Pension Amounts Allocated by Cost Sharing Plan and the Schedule of Cost Sharing Employer Allocations. Under GASB Statement No. 68, plan sponsors are required to report Net Pension Liability on their balance sheets and changes in Net Pension Liability on their operating statements as pension expenses, deferred inflows of resources, and deferred outflows of resources.

Financial Analysis

As previously noted, the Net Position may serve over time as a useful indication of MCERA's financial position. At the close of the fiscal year June 30, 2019, MCERA's net position exceeded its liabilities by \$866.5 million. All of the Net Position is available to meet MCERA's ongoing obligations to plan participants and their beneficiaries. As of June 30, 2019, the Net Position totaled \$866.5 million, which is \$39.8 million more than the prior year. This result essentially reflects the increase in net investment income at fair value, regardless of the increase in benefits and administrative expenses.

MCERA's Management believes that the Association remains in a financial position that will enable MCERA to meet its future obligations to participants and beneficiaries. MCERA remains focused on the long-term performance of the fund, dependent on a strong and successful investment program, risk management, and strategic planning.

Merced County Employees' Retirement Association

Management's Discussion and Analysis

MCERA's Fiduciary Net Position

For Fiscal Years Ended June 30, 2019 and 2018:

	2019	2018	Increase/ (Decrease) Amount	% Change
Current and Other Assets	\$22,944,456	\$30,099,764	\$(7,155,308)	-23.8%
Investments at Fair Value	845,415,437	796,055,093	49,360,344	6.2%
Capital Assets/Prepaid Expenses	1,653,115	1,884,965	(231,850)	-12.3%
Total Assets	870,013,008	828,039,822	41,973,186	5.1%
Total Liabilities	3,509,724	1,385,852	2,123,872	153.3%
Fiduciary Net Position Restricted for Pensions	\$866,503,284	\$826,653,970	\$39,849,314	4.8%

For Fiscal Years Ended June 30, 2018 and 2017:

	2018	2017	Increase/ (Decrease) Amount	% Change
Current and Other Assets	\$30,099,764	\$13,651,586	\$16,448,178	120.5%
Investments at Fair Value	796,055,093	738,615,821	57,439,272	7.8%
Capital Assets/Prepaid Expenses	1,884,965	2,208,948	(323,983)	-14.7%
Total Assets	828,039,822	754,476,355	73,563,467	9.8%
Total Liabilities	1,385,852	707,027	678,825	96.0%
Fiduciary Net Position Restricted for Pensions	\$826,653,970	\$753,769,328	\$72,884,642	9.7%

The decrease in current and other assets during the June 30, 2019 fiscal year is mostly attributable to a large reduction in distributions receivable year-over-year. The increase in total liabilities during the June 30, 2019 fiscal year is mostly due to pending securities purchases and capital calls.

Reserves

Reserves are not required, nor recognized, under GAAP. These are not shown separately on the Statements of Fiduciary Net Position, but they equate to, and are accounts within, the Fiduciary Net Position Restricted for Pensions and are vital to MCERA's operations. MCERA's reserves are established from contributions and accumulation of investment income after satisfying investment and administrative expenses. Under GAAP, including Governmental Accounting Standards Board (GASB) Statement No. 67, *Financial Reporting for Pension Plans*, investments are stated at fair value rather than at cost, and fair value includes the recognition of unrealized gains and losses in the current period. These unrealized gains

Merced County Employees' Retirement Association

Management's Discussion and Analysis

and losses are tracked in a reserve account called the Market Value Fluctuation Reserve. The Market Value Fluctuation Reserve increased by \$2.88 million in the current fiscal year as a result of the financial markets and investment decisions.

MCERA's Reserves

For Fiscal Years Ended June 30, 2019, 2018, and 2017:

	2019	2018	2017
Active Members' Reserve	\$107,794,921	\$105,474,936	\$102,857,990
Employer Advance Reserve	213,114,049	179,321,591	137,193,734
Retired Members' Reserve	288,219,524	284,111,465	290,581,132
Interest Fluctuation Reserve	81,842,477	85,096,244	96,564,849
Market Value Fluctuation Reserve	175,532,313	172,649,734	126,571,623
Total Reserves at Fair Value	\$866,503,284	\$826,653,970	\$ 753,769,328

MCERA's Activities

A continuation of growth in financial markets resulted in the June 30, 2019 fiscal year increase of \$39.8 million in MCERA's Net Position (an increase of 4.8% from the previous year). The key element of this increase was a moderate rise in the fair value of investments.

Additions to Fiduciary Net Position

The reserves needed to finance retirement benefits are normally accumulated through the collection of employer and employee contributions and through earnings on investment income (net of investment expenses). Additions to the fiduciary net position for the fiscal year ended June 30, 2019 totaled \$117.0 million. Overall, additions for the fiscal year decreased \$28.9 million from the fiscal year ended June 30, 2018 primarily due to reduced growth in the appreciation in fair value of investments year-over-year. In fiscal year 2017-2018, additions totaled \$145.9 million, which was a decrease of \$6.9 million from fiscal year 2016-2017. The employer contribution rate has increased due to the continued impact of changes in actuarial assumptions being phased in due to MCERA's experience study. Additionally, Merced County has contributed an additional 1% in contributions during the current fiscal year. The increased contribution rate resulted in increased employer contributions of approximately \$1.8 million or 2.8% in fiscal year 2018-2019. The affect is considered nominal compared to the prior year. The Investment Section of this report provides a more detailed review of the investment markets and investment performance for the current fiscal year.

Merced County Employees' Retirement Association

Management's Discussion and Analysis

For Fiscal Years Ended June 30, 2019 and 2018:

	2019	2018	Increase/ (Decrease) Amount	% Change
Member Contributions	\$10,695,680	\$10,441,876	\$253,804	2.4%
Employer Contributions	66,586,464	\$64,757,288	1,829,176	2.8%
Net Investment Income	39,728,950	\$70,689,084	(30,960,134)	-43.8%
Total Additions	\$117,011,094	\$145,888,248	\$(28,877,154)	-19.8%

For Fiscal Years Ended June 30, 2018 and 2017:

	2018	2017	Increase/ (Decrease) Amount	% Change
Member Contributions	\$10,441,876	\$9,384,621	\$1,057,255	11.3%
Employer Contributions	\$64,757,288	60,349,189	4,408,099	7.3%
Net Investment Income	\$70,689,084	83,097,416	(12,408,332)	-14.9%
Total Additions	\$145,888,248	\$152,831,226	\$(6,942,978)	-4.5%

Deductions from Fiduciary Net Position

MCERA was created to provide lifetime retirement annuities, survivor benefits, and permanent disability benefits to qualified members and their beneficiaries. The cost of such programs includes recurring benefit payments, as designated by the plan; refunds of contributions to terminated employees; and the cost of administering the Association. Effective for the 2011 fiscal year, the County Employees Retirement Law of 1937 (1937 Act) limits administration costs to the greater of 21/100ths of 1 percent of the Association's accrued actuarial liability or \$2 million, as adjusted annually by the amount of an annual COLA. The 1937 Act also allows for some expenses (such as computer related expenses and actuarial costs) to be excluded from the calculation. Deductions for the current fiscal year totaled \$77.1 million while in fiscal year 2017-2018 deductions totaled \$73.0 million, an increase of 5.7% from the previous year. The increase in deductions can be primarily attributed to the retiree payroll increase of 6.3%.

For Fiscal Years Ended June 30, 2019 and 2018:

	2019	2018	Increase/(Decrease) Amount	% Change
Benefits Paid	\$74,238,692	\$69,836,223	\$4,402,469	6.3%
Refunds of Contributions	571,983	883,987	(312,004)	-35.3%
Administrative Expense	2,271,779	2,177,186	94,593	4.3%
Actuarial Expense	79,326	106,210	(26,884)	-25.3%
Total Deductions	\$77,161,780	\$73,003,606	\$4,158,174	5.7%

Merced County Employees' Retirement Association

Management's Discussion and Analysis

For Fiscal Years Ended June 30, 2018 and 2017:

	2018	2017	Increase/(Decrease) Amount	% Change
Benefits Paid	\$69,836,223	\$66,116,108	\$3,720,115	5.6%
Refunds of Contributions	883,987	788,207	95,780	12.2%
Administrative Expense	2,177,186	1,966,898	210,288	10.7%
Actuarial Expense	106,210	206,509	(100,299)	-48.6%
Total Deduction	\$73,003,606	\$69,077,722	\$3,925,884	5.7%

Change in Fiduciary Net Position

As of June 30, 2019, Fiduciary Net Position increased \$39.8 million, resulting in a 4.8% increase in Fiduciary Net Position over the previous fiscal year. This increase is due primarily to the increase in the fair value of investments. As of June 30, 2018, Fiduciary Net Position increased \$72.9 million, resulting in a 9.7% increase in the Fiduciary Net Position from the previous fiscal year.

MCERA's Fiduciary Responsibilities

MCERA's Board of Retirement and management are fiduciaries of the pension trust fund. Under the California Constitution, the Association's assets must be used exclusively for the benefit of the plan participants and their beneficiaries.

Requests for Information

This financial report is designed to provide MCERA's Board of Retirement, our membership, taxpayers, investment managers, creditors, and others with a general overview of MCERA's financial condition and to demonstrate accountability for the funds MCERA receives and manages. Questions concerning any of the information provided in this report, or requests for additional information should be addressed to:

Merced County Employees' Retirement Association

Attn: Fiscal Operations

3199 M Street

Merced, CA 95348

T: 209.726.2724

F: 209.726.3637

Respectfully Submitted,



Mark A. Harman, MBA

Fiscal Manager

December 23, 2019

Merced County Employees' Retirement Association

Statements of Fiduciary Net Position

As of June 30, 2019 and 2018

<u>Assets</u>	2019	2018
Cash and short-term investments		
Cash invested with Merced County Treasurer	\$5,357,275	\$5,842,004
Cash invested with Northern Trust	12,994,323	10,944,975
Other cash and cash equivalents with Northern Trust	714,829	2,265,078
Total cash and short-term investments	\$19,066,427	19,052,057
Receivables		
Bond interest	695,557	815,971
Dividends	66,725	81,839
Contributions	1,614,362	1,597,575
Distributions	479,675	8,485,104
Securities sold	960,340	-
Other	61,370	67,218
Total receivables	3,878,029	11,047,707
Investments		
U.S. government and agency obligations	31,156,159	72,311,297
Domestic fixed income	176,798,283	95,697,250
Common stock (domestic)	36,017,951	43,334,808
Common stock (index funds)	196,606,512	198,239,163
Common stock (international)	88,893,320	82,837,521
Common stock (international index funds)	86,579,292	115,367,843
Real estate	59,849,041	62,191,187
Alternative investments	169,514,879	126,076,024
Total investments	845,415,437	796,055,093
Prepaid expenses	22,598	35,470
Capital assets: Net of accumulated depreciation of \$1,368,129 and \$1,110,948	1,630,517	1,849,495
Total Assets	870,013,008	828,039,822
<u>Liabilities</u>		
Accounts payable	625,964	715,680
Securities purchased	877,676	557,731
Unclaimed contributions	85,403	112,441
Capital calls	1,920,681	-
Total Liabilities	3,509,724	1,385,852
Fiduciary Net Position Restricted for Pensions	\$866,503,284	\$826,653,970

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

Merced County Employees' Retirement Association

Statements of Changes in Fiduciary Net Position For the fiscal years ended June 30, 2019 and 2018

<u>Additions</u>	2019	2018
Contributions		
Plan members	\$10,695,680	\$10,441,876
Employer	66,586,464	64,757,288
Total contributions	<u>77,282,144</u>	<u>75,199,164</u>
Investment income from investment activities		
Net appreciation in fair value of investments	33,767,403	66,985,136
Investment income	9,130,417	6,926,711
Other income	85,689	42,616
Less investment expenses	<u>(3,254,559)</u>	<u>(3,265,379)</u>
Total net investment income	<u>39,728,950</u>	<u>70,689,084</u>
Total Additions	<u>117,011,094</u>	<u>145,888,248</u>
<u>Deductions</u>		
Benefits paid	74,238,692	69,836,223
Refunds of contributions	571,983	883,987
Administrative expenses	2,271,779	2,177,186
Actuarial expenses	79,326	106,210
Total Deductions	<u>77,161,780</u>	<u>73,003,606</u>
Net increase	39,849,314	72,884,642
Fiduciary Net Position Restricted for Pensions		
Beginning of year	<u>826,653,970</u>	<u>753,769,328</u>
End of year	<u><u>\$866,503,284</u></u>	<u><u>\$826,653,970</u></u>

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

Merced County Employees' Retirement Association

Notes to Basic Financial Statements

June 30, 2019 and 2018

Note 1 - PLAN DESCRIPTION

A. General Information

The Merced County Employees' Retirement Association (MCERA, or the Association) was established July 1, 1950, under and subject to the legislative authority of the State of California as enacted and amended in the County Employees Retirement Act of 1937 (the "1937 Act"). The Association was voter approved by a greater than 2/3 majority of the electorate of Merced County (the County). The Association was integrated with Social Security on January 1, 1956. Members of the Association at that time had a one-time option to convert to the new Association or remain in the previous system. MCERA administers a cost sharing, multiple-employer defined benefit pension plan (the Plan). MCERA's active employers are the County, the Merced Superior Courts, and Merced Cemetery District. MCERA's annual financial statements are included in the County's financial reports as a pension trust fund.

The management of the Association is vested in a Board of Retirement (Board) that consists of nine members and two alternates:

1. County Treasurer
2. Two elected general members
3. Four members appointed by the County Board of Supervisors
4. One elected retired member and one alternate
5. One elected safety member and one alternate

Day to day management of MCERA is vested in a Plan Administrator who is appointed by and serves at the direction of the Board of Retirement.

MCERA, with its own governing board, is an independent governmental entity separate and distinct from the County and derives its authority from California Government Code Section 31450 et seq., and the California Constitution.

B. Membership

Plan members are classified as either General or Safety members. Membership becomes effective on the first day of service. Members include all permanent employees appointed to permanent positions or permanent part-time positions within Merced County, Merced Superior Courts, and the Merced Cemetery District. Newly hired persons age 60 and over and elected officials may waive membership in the Association.

All employees hired prior to June 13, 1994 are members of Tier I. Executive "A" Level management appointed prior to December 31, 2012 per Amendment to County Board of Supervisors Resolution 94-89, effective July 1, 2000 are Tier I. The Tier I retirement benefit is based on the highest one year compensation. The minimum age to retire is 50 or any age with 30 years of service credit (20 years for Safety). General and Safety Tier I members are eligible for post-retirement cost-of-living adjustments (COLA).

The County Board of Supervisors adopted a new retirement tier (Tier II) for both General and Probation Safety members hired after June 13, 1994 and all other Safety members hired after July 1, 1998. Benefits for members under Tier II are based on 3 years final average salary and are not eligible for post-retirement COLAs. The minimum age to retire is 55 for

Merced County Employees' Retirement Association

Notes to Basic Financial Statements (continued)

June 30, 2019 and 2018

General members or any age with 30 years of service credit and 50 for Safety members or any age with 20 years of service credit.

The County Board of Supervisors adopted two more tiers in 2012 for both General and Safety members. Members hired between October 1, 2012 and December 31, 2012 are Tier III. Tier IV was adopted after the State of California approved Assembly Bill (AB) 340, the Public Employee Pension Reform Act of 2013 (PEPRA). New members defined by the new legislation and hired after January 1, 2013 are Tier IV. Both Tier III and Tier IV benefits are based on 3 years final average salary and are not eligible for post-retirement COLAs. For Tier III, the minimum age to retire is 55 for General members or any age with 30 years of service credit and 50 for Safety members or any age with 20 years of service credit. For Tier IV, the minimum age to retire is 52 for General members with 5 years of service credit and 50 for Safety members with 5 years of service credit.

As a result of existing litigation of Assembly Bills 340 and 197 (*Alameda County Deputy Sheriff's Assn. et al v. Alameda County Employees' Retirement Assn., et al. (2018) 19 Cal.App.5th 61*), on February 8, 2018, the Merced County Employees' Retirement Association Board adopted Resolution 2018-01, which made vacation payout earnings pensionable for MCERA legacy members (Tiers I, II, and III), capped at the lesser of a member's annual vacation accrual amount, the leave hours actually included in the member's vacation pay-off, or 160 hours. The Board subsequently adopted Resolution 2018-03 to further clarify certain aspects of its earlier Resolution 2018-01. For Tier I, II, and III members who retired on or after July 12, 2014, the adoption of both Resolutions means that a maximum of 160 hours of vacation leave, a maximum of one year's vacation leave accrual, or the number of vacation hours actually included in the member's vacation pay-off, whichever is less will be added to such retiree's final average compensation, unless an exception applies.

Two new tiers were created for new members who established reciprocity with MCERA on or after February 8, 2018 (the date which Resolution 2018-01 was adopted). Reciprocal members employed by the Merced Superior Court will enter into General Tier II-R and those employed by Merced County will enter into either General Tier III-R or Safety Tier III-R. The benefits of these new tiers are the same as their respective non-reciprocal tiers. However, these reciprocal tier members will not be able to include the additional 160 hours of vacation payout earnings to their final compensation in the calculation of final average compensation. Additionally, the employer and member contribution rates are lower for the new Tiers because the additional up to 160 hours of vacation payout hours is not included in a member's final compensation.

Merced County Employees' Retirement Association

Notes to Basic Financial Statements (continued)

June 30, 2019 and 2018

Membership Structure on June 30, 2019 was as follows:

	General Tiers					Safety Tiers					Total
	I	II	III	III-R	IV	I	II	III	III-R	IV	
Active Members											
Vested	82	804	47	14	140	17	163	6	1	17	1,291
Non-vested	-	10	1	-	770	1	2	-	-	111	895
Inactive Members											
Deferred vested	47	213	17	-	8	1	40	1	-	1	328
Deferred non-vested	3	70	9	-	211	-	7	1	-	35	336
Reciprocity	32	128	-	-	2	7	32	-	-	1	202
Unclaimed members	3	14	-	-	-	-	-	-	-	-	17
Total active and inactive members	167	1,239	74	14	1,131	26	244	8	1	165	3,069
Retired Members											
Service retirements	1,251	407	4	-	-	179	18	-	-	-	1,859
Beneficiaries	190	19	-	-	-	47	1	-	-	-	257
Service connected disability	35	17	-	-	-	65	25	-	-	-	142
Non-service connected disability	31	12	-	-	-	2	1	-	-	-	46
Survivors	15	6	-	-	-	4	2	-	-	-	27
Total retired members	1,522	461	4	-	-	297	47	-	-	-	2,331

Membership Structure on June 30, 2018 was as follows:

	General Tiers					Safety Tiers				Total
	I	II	III	III-R	IV	I	II	III	IV	
Active Members										
Vested	107	866	46	4	53	22	170	6	3	1,277
Non-vested	-	10	8	-	727	-	3	-	116	864
Inactive Members										
Deferred vested	55	194	15	-	4	1	41	1	1	312
Deferred non-vested	3	72	8	-	161	-	8	2	29	283
Reciprocity	37	131	-	-	1	9	31	-	1	210
Unclaimed members	3	15	-	-	-	-	-	-	-	18
Total active and inactive members	205	1,288	77	4	946	32	253	9	150	2,964
Retired Members										
Service retirements	1,243	365	4	-	-	179	15	-	-	1,806
Beneficiaries	194	16	-	-	-	45	1	-	-	256
Service connected disability	37	14	-	-	-	67	21	-	-	139
Non-service connected disability	31	12	-	-	-	2	1	-	-	46
Survivors	15	6	-	-	-	4	2	-	-	27
Total retired members	1,520	413	4	-	-	297	40	-	-	2,274

Merced County Employees' Retirement Association

Notes to Basic Financial Statements (continued)

June 30, 2019 and 2018

C. Benefit Provisions

- Safety members and General Tier I members with ten years of service and who have attained the minimum age of 50 are eligible to receive a lifetime monthly retirement benefit.
- General members with 10 years of service who have attained the minimum age of 55 in Tiers II, II-R, III and III-R are eligible to receive a lifetime benefit.
- Safety members with 20 years of service, regardless of age, are eligible for lifetime monthly retirement benefits for Tiers I, II, III, and III-R
- General members with 30 years of service, regardless of age, are eligible for lifetime monthly retirement benefits for Tiers I, II, II-R, III, and III-R.
- Members who are at least 70 years of age are eligible to retire, regardless of years of service, for all Tiers.
- Tier IV Safety members are eligible for retirement with 5 years of service and a minimum age of 50.
- Tier IV General members are eligible for retirement with 5 years of service and a minimum age of 52.
- The service retirement benefit is a percentage of monthly final average salary per year of service, depending on age at retirement and Tier.
- For members integrated with Social Security, the benefit is reduced by 1/3 of the percentage multiplied by the first \$350 of the monthly final average salary, per year of service credited after January 1, 1956 (not applicable to Tier 4 Members).
- The actual benefit paid will also be affected by the benefit payment option selected by the member.

The County Board of Supervisors adopted Government Code Section 31676.17 of the 1937 Act for all County General members, Tier I and Tier II, except Merced Cemetery District members and any member who was deferred or in inactive reciprocity status prior to the dates of adoption, on March 15, 2005; Government Code Section 31664.1 for all Safety members, Tier I and Tier II, on July 1, 2005; Government Code Section 31676.17 for Superior Court of California and County members on November 4, 2005; Government Code Section 31676.1 for General members, Tier III, on October 1, 2012; and Government Code Section 31664 for all Safety members, Tier III, on October 1, 2012. The County adopted PEPR Tier IV for all General and Safety members on January 1, 2013.

Merced County Employees' Retirement Association

Notes to Basic Financial Statements (continued)

June 30, 2019 and 2018

The following chart demonstrates the percentage of Final Average Salary a member of each tier would receive per year of service at different ages.

Percentage of Final Average Salary for Each Year of Service (Rounded) Current Employees				
Tier I			Tier II / Tier II-R	
Retirement Age	General	Safety	General	Safety
50	2.00%	3.00%	-	3.00%
55	2.50%	3.00%	2.50%	3.00%
60+	3.00%	3.00%	3.00%	3.00%
Tier III / Tier III-R			Tier IV	
Retirement Age	General	Safety	General	Safety
50	-	2.00%	-	2.00%
55	1.49%	2.62%	1.30%	2.50%
57	1.64%	2.62%	1.50%	2.70%
65	2.43%	2.62%	2.30%	2.70%
67+	2.43%	2.62%	2.50%	2.70%
Percentage of Final Average Salary for Each Year of Service (Rounded) for Merced Cemetery District, Deferred, and Inactive Reciprocal Members Prior to Enhanced Benefit Adoption Dates				
Tier I			Tier II	
Retirement Age	General	Safety	General	Safety
50	1.24%	2.00%	-	2.00%
55	1.67%	2.62%	1.49%	2.62%
60	2.18%	2.62%	1.92%	2.62%
65+	2.61%	2.62%	2.43%	2.62%

(1) Retirement Options

Under the current "Fixed Formula" retirement, a member may elect the "**Unmodified**" allowance, which provides the maximum allowance to the member for life, with a continuance of 60% of the allowance to the spouse or registered domestic partner if the spouse or registered domestic partner is designated as beneficiary. No allowance, however, shall be paid to a surviving spouse or domestic partner unless he or she is married to the member or has been registered as a domestic partner at least one year prior to the date of retirement. In the event of the death of the retiree, spouse or domestic partner, any balance of the retiree's contributions, less retirement allowances received, is payable to an alternate beneficiary.

Option 1 - The member may elect to receive a slightly reduced monthly retirement allowance, payable throughout their life, with the provision that upon death, their accumulated contributions less the actual annuity payments received by the retiree will be paid to a designated beneficiary. Under this option, beneficiaries may be changed after retirement.

Merced County Employees' Retirement Association

Notes to Basic Financial Statements (continued)

June 30, 2019 and 2018

Option 2 - The member receives a considerably reduced monthly retirement allowance, with the provision that 100% of the retiree's benefit will continue to be paid after the member's death to a beneficiary named at the time of retirement. All payments stop at the death of both annuitants.

Option 3 - The member receives a reduced monthly retirement allowance, with the provision that 50% of the retiree's benefit will continue to be paid after the member's death to a beneficiary named at the time of retirement. As in Option 2, all payments stop at the death of both annuitants.

Option 4 - The member receives a reduced monthly retirement allowance for life. The reduction depends on the member's age and the age of the member's beneficiary(ies). This is the only option that allows for multiple beneficiaries. A beneficiary does not have to be a spouse or domestic partner, but must have an insurable interest in the member's life. This option also allows the member to assign the percent of continuance to each beneficiary. This option and any estimates for this option are calculated by MCERA's actuary and the cost is paid by the member.

(2) Cost-of-Living Adjustment

Annual COLAs to retirement allowances may be granted by the Retirement Board in accordance with governing law. The current maximum increase in a retirement allowance is 3% per year. Any increase is based on the change in the Bureau of Labor Statistics' Consumer Price Index (CPI) for All Urban Consumers for the calendar year prior to the April 1 effective date of the COLA. The amount of any actual CPI above the 3% maximum is accumulated. Accumulated COLAs may be used in future years, at the Board's discretion, when the cost-of-living change is less than the maximum 3%. Tiers II, II-R, III, III-R, and IV members are not eligible for any cost-of-living increases in their monthly retirement allowances.

(3) Disability Benefits

Members with five years of service, regardless of age, are eligible for non-service connected disability benefits. Member benefits are 1.5% (1.8% for Safety members) of final average salary for each year of service. If this benefit does not equal 1/3 of final average salary, the benefit is increased by the above percentage of final average salary for the years that would have been credited had the member worked to age 65 (age 55 for Safety members). The total benefit cannot exceed 1/3 of the final average salary.

If the disability is service connected, the member may retire regardless of length of service, and the benefit is 50% of final average salary, unless the member is also eligible for a service retirement, in which case the member receives the greater of the two amounts.

(4) Death Benefit Before Retirement

In addition to the return of the member's contributions plus interest, MCERA provides a basic death benefit payable to the member's beneficiary or estate equal to one month's salary for each completed year of service under the Association, based on the final year's average salary, but not to exceed six months' salary. Depending on length of service, a monthly allowance could be selected by the surviving spouse to be paid for the rest of his or her life as an alternate benefit.

If a member dies while eligible for service retirement or non-service connected disability, the spouse may receive 60% of the allowance that the member would have received for retirement on the day of his or her death in lieu of the basic death benefit. If the member was below the qualifying retirement age at the time of death, the surviving spouse may elect

Merced County Employees' Retirement Association

Notes to Basic Financial Statements (continued)

June 30, 2019 and 2018

to leave the member's accumulated contributions on deposit until such time as the member would have attained the qualifying age had he or she lived, at which time the spouse may exercise the option above. Unmarried minor children of the deceased member may continue to receive this allowance until marriage or attaining age 18 (21 if full-time student in an accredited school), upon the death of the surviving spouse or in place of the spouse if he or she does not survive the death of the member.

If a member dies as a result of service-connected injury or disease arising out of the course of his or her employment, his or her surviving spouse may elect, in lieu of the basic death benefit, to receive a monthly allowance of 1/2 of the member's final compensation.

Unmarried minor children of the member may receive the same monthly allowance prior to their marriage or attaining age 18 (21 if a full-time student in an accredited school) if there is no surviving spouse or upon the death of the spouse.

(5) Death Benefit After Retirement

Once a member dies after retirement, a lump sum amount of \$3,000 (Government Code Section 31789.3 adopted May 2, 2006) is paid to the beneficiary or estate. However, if the member is a reciprocal system member, this benefit is payable only to active members of the County at the time of retirement.

If the retirement was for service-connected disability, 100% of the amount the member was receiving at the time of death is continued to the surviving spouse for life. If the retirement was for other than a service-connected disability, there are several options available to the member.

(6) Terminated Members

A member leaving covered employment after completing five years of credited service becomes eligible for a deferred retirement allowance, provided the member lives to the minimum service retirement age and does not withdraw his or her accumulated contributions. A member must elect deferred status within 180 days after termination. Members leaving employment with less than five years of service are not eligible to receive a retirement benefit. Non-vested members (less than five years of service credit) may leave their contributions on deposit and continue to be credited interest or they can choose to withdraw their contributions at any time. A non-vested member that enters a reciprocal retirement system after terminating employment with a MCERA agency may wish to arrange for reciprocal benefits. Under a reciprocal arrangement, the member funds are kept on deposit with MCERA.

(7) Vesting

Active members of the Association receive a 100% vested interest in the Plan after five years of service, but cannot receive a service retirement benefit until they have been a member of the Association for ten years and obtained age fifty for Tier I General members; Tier I, Tier II, Tier III, and Tier III-R Safety members; and age fifty-five for Tier II, Tier II-R, Tier III, and Tier III-R General members. Members may receive a service retirement benefit after being a member of the Association for 30 years for General members and 20 years for Safety members regardless of age. Tier IV members can receive a service retirement benefit with five years of service credit and attaining age fifty-two for General members and age fifty for Safety members.

Merced County Employees' Retirement Association

Notes to Basic Financial Statements (continued)

June 30, 2019 and 2018

(8) Contribution Rates

The 1937 Act establishes the basic obligations for employer and member contributions to the Association. The actual employer and member contribution rates in effect each year are based on recommendations made by an independent actuary and adopted by the Board of Retirement.

Benefits payable by the Association are financed through member contributions; employer contributions from Merced County, Merced Cemetery District, Merced Superior Courts; and earnings from investments.

a. Member

MCERA members are required to contribute a percentage of their annual covered salary. The rates are set to provide a retirement amount that is equal to a fractional part of the highest year(s) salary, based on membership and tier. Government Code Section 31621.8 sets forth the basis for the determination of the normal rates of contribution for General Tier I, Tier II, and Tier II-R members. Government Code Section 31639.5 sets forth the basis for the normal rates of contribution for Safety Tier I and Tier II members. The law further provides that the contribution rates of members will be based on the age nearest birthday at the time of entrance into the Association. Section 31453 states that no adjustment will be included in the rates of contribution for time prior to the effective date of any revisions. Member basic contribution rates are based on entry age into the Association, except for Tier IV, which are 50% of the normal cost, and range between 2.94% and 19.21% for the fiscal years ended June 30, 2019 and June 30, 2018. For members integrated with Social Security, the contributions are reduced by 1/3 of such contribution payable with respect to the first \$350 of monthly salary.

b. Plan Sponsors

The County of Merced, Merced Superior Court, and participating special districts are required by statute to contribute the amounts necessary to finance the estimated benefits accruing to MCERA members not otherwise funded by employee contributions or investment earnings. Pursuant to provisions of the 1937 Act, the Board recommends annual contribution rates for adoption by the County Board of Supervisors each year based upon the rates recommended by the Association's actuary.

The employers' actuarially determined contribution (ADC) is an actuarially determined amount that is required on a sustained, ongoing basis to systematically fund the normal cost and to amortize the unfunded actuarial accrued liability (UAAL) attributed to past service cost over a period not to exceed thirty years. MCERA's actuarially determined contribution rates for the fiscal years ended June 30, 2019 and 2018 were 50.20% and 50.58%, respectively, of annual payroll.

In order to determine the ADC, the actuary must first adopt assumptions with respect to certain factors such as the following:

Merced County Employees' Retirement Association

Notes to Basic Financial Statements (continued)

June 30, 2019 and 2018

Non-economic assumptions

- The probabilities of members separating from active service on account of:
 1. Non-vested and vested withdrawal
 2. Retirement for service
 3. Mortality
 4. Service and non-service connected disability
- The mortality rates to be experienced among retired persons

Economic assumptions

- Rate of future investment earnings
 1. Inflation rate
 2. Real rate of return
- The relative increases in a member's salary from the date of the valuation to the date of separation from active service
 1. Merit increases
 2. Longevity increases
 3. COLA

Employer contribution rates vary from year to year and depend on the level of benefits established, the rate of return on investments, and the cost of administering benefits. MCERA's Schedules of Employer Contributions for the pension benefit plan is presented on page 54 in the Required Supplementary Information following the notes to the basic financial statements.

Note 2 – SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

A. Reporting Entity

While the Association is governed by the Board of Retirement and is considered an independent entity, it is a component unit of the County in accordance with GASB Statement No. 39, *Determining Whether Certain Organizations Are Component Units – an Amendment of GASB Statement No. 14*.

B. Basis of Accounting

MCERA's financial statements are prepared on an accrual basis of accounting, which recognizes income when earned and expenses when the obligation is incurred. Employer and employee contributions are recognized when due, pursuant to statutory or legal requirements per GASB Statement 67, *Financial Reporting for Pension Plans – An Amendment of GASB Statement No. 25*. Investment income is recognized as revenue when earned. Retirement benefits and refunds are recognized when currently due and payable in accordance with the benefit terms. The net appreciation (depreciation) in fair value of investments consists of realized and unrealized gains and losses on those investments.

C. Investment Expenses

Investment expenses include fees paid for investment consulting services, fund due diligence services, securities custodian services, and rebate and bank fees incurred during the reporting period. Fees paid are charged against the Association's investment earnings pursuant to Section 31596.1 of the 1937 Act.

Merced County Employees' Retirement Association

Notes to Basic Financial Statements (continued)

June 30, 2019 and 2018

D. General Administrative Expense

MCERA's administrative costs for fiscal years ended June 30, 2019 and 2018 are calculated pursuant to Government Code Section 31580.2 (a) which provides that the administrative expenses incurred in any year may not exceed the greater of either (1) twenty-one hundredths of 1 percent (.21%) of the actuarial accrued liability of the Association or (2) two million dollars (\$2,000,000), as adjusted annually by the amount of the annual cost-of-living adjustment computed in accordance with Article 16.5. Government Code Section 31580.2 (b) provides that expenditures for computer software, hardware, and computer technology consulting services in support of the computer products shall not be considered a cost of administration of the Association. The administrative limit per this Government Code Section allowed MCERA \$2.7 million (\$1,259.7 million x .21%) of administrative costs for the fiscal year ended June 30, 2019. For the fiscal years ended June 30, 2019 and 2018, total administrative costs were \$2,271,779 and \$2,177,186, respectively. Included in these figures are computer technology related activities of \$585,552 and \$552,787, respectively. For the fiscal year ended June 30, 2019, MCERA began separating technology related depreciation expenses from other depreciation expenses, resulting in an increase year-over-year. The 2018 technology expense amount shown has been updated above to reflect this change for reporting consistency. The costs of administering the Plan are financed by the earnings of the retirement fund.

E. Required Supplementary Information

Schedules of the changes in net pension liability and employer contributions that provides information about the employer's annual contribution to the Plan as well as the annual investment returns are presented on pages 53 and 54.

F. Administrative Budget and Professional Service Budget

MCERA's budget consists of two components, an administrative budget and a professional services budget authorized by Government Code Section 31596.1. MCERA's budgets are on a fiscal year basis starting July 1 and ending June 30.

G. Capital Assets

Capital assets are carried at cost, net of accumulated depreciation. Capital assets with an initial cost of more than \$5,000 and an estimated useful life in excess of one year are depreciated. Depreciation is calculated using the straight-line method over the estimated useful lives of the depreciable assets. Equipment and furniture are depreciated over eight years. MCERA's pension administration system (intangible asset) is amortized over ten years.

MCERA reported \$1,630,517 and \$1,849,495 in capital assets as of June 30, 2019 and 2018, net of accumulated depreciation of \$1,368,129 and \$1,110,948, respectively. Of these amounts, \$146,513 is land held by the association, which is not subject to depreciation.

Merced County Employees' Retirement Association

Notes to Basic Financial Statements (continued)

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H. Methods Used to Value Investments

Investments are reported at fair value in the accompanying Statements of Fiduciary Net Position. Cash deposited in the Merced County Treasurer's pool is stated at fair value. The value of the Association's pool shares is determined on an amortized cost basis, which is not materially different from fair value.

The fair value of fixed income and equity investments are based upon the closing sale prices reported on recognized securities exchanges on the last business day of the period. For listed securities having no reported sales and for unlisted securities, fair value is based upon the last reported sales price.

GASB Statement No. 72, *Fair Value Measurements*, became effective for financial statements for fiscal years beginning after June 15, 2015. This statement enhances comparability of financial statements among governments by requiring measurement of certain assets and liabilities at fair value using a consistent and more detailed definition of fair value and accepted valuation techniques. This statement also enhances fair value application guidance and related disclosures in order to provide information to financial statement users about the impact of fair value measurements on a government's financial position.

The real estate investment holdings are determined by the partners using industry standard appraisal techniques and assumptions, which are updated annually, to determine the fair value of these holdings. The appraisals incorporate subjective judgments and consider assumptions including capitalization rates, discount rates, cash flows, and other factors that are not observable in the market.

The fair value of alternative investments (private equity, hedge funds, infrastructure, and natural resources) is based on the partners' most recent financial statements for the quarter ended June 30. The majority of MCERA's alternative investments are determined by the partnerships using unobservable inputs, which reflect the partnerships' own estimates about the assumptions that market participants would use in pricing the investments. The assumptions are based on the best information available in the circumstances, which might include the partnership's own data. The remaining of MCERA's alternative investments are determined by the partnerships based on quoted market prices in active markets.

Management, in consultation with the investment advisor, has determined the reasonableness of the procedures used to calculate fair value for real estate and alternative investments.

I. Securities Transactions and Related Investment Income

Securities transactions are accounted for on a trade date basis. Interest income is recognized when earned and dividend income is recognized on the ex-dividend date. Stock dividends or stock splits are recorded as memo items and do not affect the total value of the securities. The Association presents, in the Statements of Changes in Fiduciary Net Position, the net appreciation in fair value of investments, which consists of realized and unrealized gains and losses on those investments.

Merced County Employees' Retirement Association

Notes to Basic Financial Statements (continued)

June 30, 2019 and 2018

J. Management's Estimates

The preparation of basic financial statements in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect certain reported amounts and disclosures. Accordingly, actual results could differ from those estimates.

Note 3 – CASH AND INVESTMENTS

A. Investment Stewardship

The Board has exclusive control over all investments of the Association and is responsible for establishing investment objectives, strategies and policies. Pursuant to the California Constitution and California Government Code Sections 31594 and 31595, the Board is authorized to invest in any investment the Board deems prudent.

(1) Investment Policy

The Board has adopted an Investment Policy, which provides the framework for the management of MCERA's investments. The Investment Policy establishes MCERA's investment objectives and defines the principal duties of the Board, the custodian bank, and the investment managers. The asset allocation plan is an integral part of the Investment Policy and is designed to provide an optimum and diversified mix of asset classes with return expectations to satisfy expected liabilities, while minimizing risk exposure. MCERA currently employs external investment managers to manage its assets subject to the provisions of the Investment Policy. Below is MCERA's adopted asset allocation policy as of June 30, 2019 and 2018.

Target Allocation			
Asset Class	June 30, 2019	Asset Class	June 30, 2018
Domestic Equity	21%	Domestic Equity	27%
Developed Markets Equity	10%	International Equity	16%
Emerging Markets Equity	8%	Emerging Markets Equity	7%
Private Equity	15%	Private Equity	9%
Real Estate	8%	Real Estate	8%
Domestic Fixed Income	18%	Domestic Fixed Income	17%
Opportunistic Credit	5%	Hedge Funds	5%
Hedge Funds	10%	Infrastructure	3%
Real Assets	5%	Natural Resources	3%
		Bank Loans	5%
	100%		100%

Merced County Employees' Retirement Association

Notes to Basic Financial Statements (continued)

June 30, 2019 and 2018

(2) Rate of Return

For the fiscal years ended June 30, 2019 and June 30, 2018, the annual money-weighted rate of return on MCERA's investments was 5.5% and 10.1%, respectively. The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

B. Cash and Short-Term Investments

Cash and cash equivalents consist of short-term investments held by the Merced County Treasurer and MCERA's custodian bank, Northern Trust. Cash and cash equivalents are highly liquid investments with a short maturity. Cash and cash equivalents are recorded at cost, which approximates fair value.

(1) Merced County Treasury

Cash from deposits and the cash needed for daily operational purposes is held in a pooled account with other County funds. The Merced County Treasury Oversight Committee is responsible for regulatory oversight of the pool.

Interest on funds in the Merced County investment pool is computed quarterly based on the average daily balance. A deposit in the pooled account approximates fair value. The fair value of the Association's cash invested with the Merced County Treasurer totaled \$5,357,275 and \$5,842,004 at June 30, 2019 and 2018, respectively. Cash and investments included within the County Treasurer's pool are described in Merced County's Comprehensive Annual Financial Report.

(2) Short-Term Investment Funds and Funds Pooled with Northern Trust

The short-term investment funds that are in the custody of Northern Trust are liquidity funds. The cash is invested in short-term obligations and deposits, including U.S. treasury and agency obligations, corporate bonds, commercial paper, repurchase agreements, certificates of deposit, bankers acceptances, time deposits, and floating rate notes.

All participants in the Northern Trust pool proportionately share earnings and losses. Balances in the pooled accounts approximate fair value. At June 30, 2019 and 2018, short-term investments totaled \$13,709,152 and \$13,210,053, respectively, which is the total of cash invested with Northern Trust and other cash and cash equivalents with Northern Trust.

MCERA's cash and short-term investments stated at fair value as of June 30, 2019 and 2018 are as follows:

Cash and Short-term Investments	Fair Value	
	2019	2018
Cash invested with Merced County Treasury	\$5,357,275	\$5,842,004
Cash invested with Northern Trust	12,994,323	10,944,975
Other cash and cash equivalents with Northern Trust	714,829	2,265,078
Total cash and short-term investments	<u>\$19,066,427</u>	<u>\$19,052,057</u>

C. Fair Value Measurements

Fair Value is defined as the price that would be received to sell an asset or paid to transfer a liability in an orderly

Merced County Employees' Retirement Association

Notes to Basic Financial Statements (continued)

June 30, 2019 and 2018

transaction between market participants at the measurement date. MCERA holds significant amounts of investments that are measured at fair value on a recurring basis. Because investing is a key part of MCERA's activities, GASB Statement No. 72 establishes a hierarchy of inputs to measure fair value. That hierarchy has three levels. Level 1 inputs are quoted process (unadjusted) in active markets for identical assets or liabilities. Level 2 inputs are inputs, other than quoted prices, included within Level 1 that are observable for the asset or liability, either directly or indirectly. Finally, Level 3 inputs are unobservable inputs.

Inputs used to measure fair value might fall in different levels of the fair value hierarchy. Categorization within the hierarchy is based on the lowest level input that is significant to the fair value measurement.

Equity securities are generally valued based on quoted prices from an active market and are therefore categorized in Level 1. In the absence of quoted market prices, such as equity securities that trade infrequently or not at all, valuations are based on the last traded price or a price provided by the investment managers and are generally categorized in Level 3.

Fixed income securities classified in Level 2 are valued using the latest bid prices or evaluated quotes from independent pricing vendors. The third-party vendors use a variety of methods when pricing these securities that incorporate relevant observable market data to arrive at an estimate of what a buyer in the marketplace would pay for a security under current market conditions. Fixed income securities held in mutual funds are based on quoted prices in an active market and are therefore categorized in Level 1. When independent price sources are not available, debt securities are priced based on the last traded price or a valuation provided by the investment manager and are categorized in Level 3. In addition, debt securities held in commingled, limited partnerships, and similar vehicles are categorized in Level 3.

Funds priced using a net asset value (NAV) that is published daily and validated with a sufficient level of observable activity are categorized in Level 1. If observable activity is limited, yet supports that the NAV represents an exit value of the security at the measurement date, the securities are categorized in Level 2. Investments in nongovernmental entities that are measured at NAV as a practical expedient, such as alternative investments and real estate investments, are excluded from the fair value hierarchy if the NAV per share (or its equivalent) was calculated in a manner consistent with the Financial Accounting Standards Board's measurement principles for investment companies. Funds not meeting these criteria are categorized in Level 3.

Investments in real estate, other than collective investment funds which are categorized in Level 3, have been valued based on the NAV per share (or its equivalent), as provided by the general partner. This type includes seven funds structured as limited partnerships. These investments can never be redeemed with the funds. Distributions from each fund will be received as the underlying investments of the funds are liquidated. It is expected that the underlying assets of the funds will be liquidated over the next 10 to 15 years.

MCERA is contracted with Cliffwater, LLC to assist with the Association's hedge fund portfolio that has the appropriate risk and return characteristics. Specifically, MCERA has nine hedge funds with low market risk (low beta), equity market downside protection and diversification with unique investment strategies such as shorting, arbitrage, currencies and commodities. Return characteristics include reasonable expected returns that outperform bonds, reasonable expected returns that will be less than the expected returns on stocks and generate alpha of 4% net of fees. MCERA is dedicated to building a diversified portfolio of the following strategies: market neutral, credit event, equity long short, global macro and multi strategy. The fair values of the investments in these types has been determined using the NAV per share (or its

Merced County Employees' Retirement Association

Notes to Basic Financial Statements (continued)

June 30, 2019 and 2018

equivalent) of the investments, as provided by the general partner. Funds may be subject to redemption restrictions, including lock-up periods and/or gate provisions, which prohibit redemptions for a specific time after capital is initially invested, or subject to limitations on the amount that can be withdrawn on any single redemption date.

Infrastructure includes six funds structured as limited partnerships that invest primarily in global infrastructure investments. The fair values of the investments in these types has been determined using the NAV per share (or its equivalents) of the investment as provided by the general partner.

Natural resources include five funds structured as limited partnerships that invest primarily in debt, equity, partnership interests, direct asset investments, working interests, and royalty interests of public and private mining and metals companies and companies within the energy markets including but limited to, companies engaged in the exploration and production of oil and natural gas, coal, midstream, energy services, refining and marketing, power generation, renewable energy, and other commodity driven sectors. The fair values of the investments in these types has been determined using the NAV per share (or its equivalents) of the investment as provided by the general partner.

The private equity portfolio includes nineteen funds structured as limited partnerships participating in diverse strategies including buyouts, venture capital/growth equity and opportunistic fund which includes such categories as distressed debt (debt instruments of companies which may be publicly traded or privately held that are financially distressed and are either in bankruptcy or likely candidates for bankruptcy), mezzanine, secondary, royalties, etc. The fair values of the investments in these types has been determined using the NAV per share (or its equivalent) of the investment as provided by the general partner. These funds have a finite term. Distributions will be received as the underlying investments are sold, which is expected to occur over a rolling 15-year period.

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Notes to Basic Financial Statements (continued)

June 30, 2019 and 2018

The Plan has the following recurring fair value measurements as of June 30, 2019:

Investments by Fair Value Level	June 30, 2019	Quoted Prices in Active Markets for Identical Assets (Level1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Common Stock				
Domestic	\$36,017,951	\$ -	\$ -	\$36,017,951
Domestic Index Funds	196,606,512	-	-	196,606,512
International	88,893,320	-	-	88,893,320
International Index Funds	86,579,292	-	-	86,579,292
US Government and Agency Obligations				
US Treasury and TIPS	12,028,780	-	12,028,780	-
US Government Agency Obligations	19,127,379	-	19,127,379	-
Domestic Fixed Income				
Asset Backed Securities	4,175,638	-	4,175,638	-
Collateralized Mortgage Obligations	313,148	-	313,148	-
Commercial Mortgage Backed Securities	865,969	-	865,969	-
Corporate and Other Credit	22,507,341	-	22,507,341	-
Mutual Funds	128,201,372	128,201,372	-	-
Limited Partnerships	20,734,815	-	-	20,734,815
Total Investments by Fair Value Level	\$616,051,517	\$128,201,372	\$59,018,255	\$428,831,890
Investments Measured at the Net Asset Value (NAV)				
Real Estate	\$59,849,041			
Alternative Investments				
Hedge Funds	76,663,345			
Infrastructure	21,967,120			
Natural Resources	12,064,903			
Private Equity	42,036,800			
Proxy Fund	16,782,711			
Total Alternative Investments	169,514,879			
Total Investments Measured at NAV	229,363,920			
Total Investments Measured at Fair Value and NAV	\$845,415,437			
Investments Measured at the NAV				
	June 30, 2019	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Real Estate*	\$59,849,041	\$25,450,969	See footnote	See footnote
Alternative Investments				
Hedge Funds**	76,663,345	-	Varies	Varies
Infrastructure	21,967,120	20,364,139	N/A	N/A
Natural Resources	12,064,903	14,529,336	N/A	N/A
Private Equity	42,036,800	24,766,838	N/A	N/A
Proxy Fund	16,782,711	-	Monthly	T-2
Total Investments Measured at the NAV	\$229,363,920	\$85,111,282		

*UBS Trumbull Fund redemption is given by a pro rata share of funds available for disbursement, with a 60-day notice period. All other real estate funds are closed-ended private LP funds.

**The nine hedge funds that were funded as of June 30, 2019, have varying lockup periods and redemption notice requirements.

Merced County Employees' Retirement Association

Notes to Basic Financial Statements (continued)

June 30, 2019 and 2018

The plan has the following recurring fair value measurements as of June 30, 2018:

Investments by Fair Value Level	June 30, 2018	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Common Stock				
Domestic	\$43,334,808	\$ -	\$ -	\$43,334,808
Domestic Index Funds	198,239,163	-	-	198,239,163
International	82,837,521	-	-	82,837,521
International Index Funds	115,367,843	-	-	115,367,843
US Government and Agency Obligations				
US Treasury and TIPS	41,413,621	-	41,413,621	-
US Government Agency Obligations	30,897,676	-	30,897,676	-
Domestic Fixed Income				
Asset Backed Securities	6,621,624	-	6,621,624	-
Collateralized Mortgage Obligations	377,251	-	377,251	-
Commercial Mortgage Backed Securities	1,069,765	-	1,069,765	-
Corporate and Other Credit	51,053,407	-	51,053,407	-
Mutual Funds	36,575,203	36,575,203	-	-
Total Investments by Fair Value Level	\$607,787,882	\$ 36,575,203	\$131,433,344	\$439,779,335
Investments Measured at the Net Asset Value (NAV)				
Real Estate	62,191,187			
Alternative Investments				
Hedge Funds	38,047,855			
Infrastructure	15,453,332			
Natural Resources	8,128,292			
Private Equity	38,851,813			
Proxy Fund	25,594,732			
Total Alternative Investments	126,076,024			
Total Investments Measured at NAV	188,267,211			
Total Investments Measured at Fair Value and NAV	\$796,055,093			
Investments Measured at the NAV	June 30, 2018	Unfunded Commitments	Redemption Frequency	Redemption Notice Period
Real Estate*	\$62,191,187	\$17,165,322	Quarterly	Indefinite
Alternative Investments				
Hedge Funds**	38,047,855	-	Varies	Varies
Infrastructure	15,453,332	16,595,600	N/A	N/A
Natural Resources	8,128,292	20,168,504	N/A	N/A
Private Equity	38,851,813	28,748,307	N/A	N/A
Proxy Fund	25,594,732	-	Monthly	T-2
Total Investments Measured at the NAV	\$188,267,211	\$82,677,733		

*Redemption and liquidity applies to UBS Trumbull Fund. Redemption is given by a pro rata share of funds available for disbursement. Other real estate funds are closed-ended private LP funds.

**The seven hedge funds that were funded as of June 30, 2018, have varying lockup periods and redemption notice requirements.

Merced County Employees' Retirement Association

Notes to Basic Financial Statements (continued)

June 30, 2019 and 2018

D. Commission Recapture Policy

In order to minimize the net cost of trading, MCERA encourages its investment managers, on a "best efforts" basis, to execute 25% to 35% of total trades annually through brokers who have a commission recapture program. MCERA's policies require investment managers to seek the best price and execution on all trades. This means that commission recapture trades should only be executed when such trades meet this standard. If an investment manager can execute the trade through MCERA's commission recapture brokerage firms, while not incurring any incremental commission or market impact costs, then MCERA would like the manager to do so. This program should not interfere with or reduce an investment manager's incentive to reduce trading costs.

E. Real Estate and Alternative Investments

The balance of the unfunded capital to MCERA's real estate and alternative investments as of June 30, 2019 was \$85,111,282 and as of June 30, 2018 was \$82,677,733. Capital invested in private equity partnerships is subject to a relatively high degree of risk as compared to other potential investments, with the assumption that the investor will be rewarded with higher returns for that assumption of risk (i.e., the "risk/return trade-off"). Controlling risk in the private equity portfolio is equally as important as seeking higher returns. MCERA controls risk by diversifying the portfolio based on geographic and economic region, liquidity, vintage year, firm, and time.

Geographic and economic region, referring to the selection of private equity investments, the portfolio does not favor particular economic or geographic regions. Most likely, the focus is globally oriented.

Liquidity risk is managed by minimizing the possibility of forced sales that may arise from exceeding the maximum exposure limits or lowering asset allocation exposure limits. Exposure through a fund of funds minimizes this risk.

Vintage year risk refers to the variability of private equity commitments over time. A secondary investment that is a vehicle in the special situation subclass allows the portfolio to gain prior year vintage exposure, further minimizing vintage risk.

Firm risk is the amount of exposure to a private equity general partner. The maximum commitment to private equity is 5% to 20% of the total fund. There are no limits on commitments to individual partners or funds.

Time Risk refers to the long duration of the investment, which makes it difficult to predict business, economic and managerial developments that may have a significant impact on the value of the investments.

F. Custodial Credit Risk

The custodial credit risk for deposits is the risk that, in the event of the failure of a depository financial institution, a government will not be able to recover deposits or will not be able to recover collateral securities that are in the possession of an outside party. The custodial credit risk for investments is the risk that, in the event of the failure of the counterparty to a transaction, a government will not be able to recover the value of investment or collateral securities

Merced County Employees' Retirement Association

Notes to Basic Financial Statements (continued)

June 30, 2019 and 2018

that are in the possession of an outside party. MCERA does not have a formal policy for custodial credit risk. At June 30, 2019 and 2018, MCERA had no investments that were exposed to custodial credit risk.

G. Credit Risk Concentration

Concentration of credit risk is the risk of loss attributed to the magnitude of a government's investment in a single issuer. As of June 30, 2019 and 2018, the Association had no single issuer that exceeded 5% of total investments or fiduciary net position. Investments issued or explicitly guaranteed by the U.S government and investments in mutual funds, external investment pools, and other pooled investments are excluded. MCERA's investment policy does not allow for an investment in any one issuer that is in excess of 5% of the value of a portfolio and no single industry (based on North American Industry Classification System (NAICS) codes) can represent more than 15% of the fair value of the investment portfolio. These single security and single industry restrictions do not apply to U.S. government issued or guaranteed investments, investments in mutual funds, external investment pools, and other pooled investments.

H. Credit Risk

Credit risk is the risk that an issuer or other counterparty to a debt instrument will not fulfill its obligation as described by nationally recognized statistical rating organizations, rating agencies, as of the date of the financial statements. An investment grade security is defined as a security which has been rated investment grade (BBB or higher) by at least one (but preferably two) of the three nationally recognized rating agencies: Fitch Ratings, Moody's Investor Service, and Standard & Poor's. MCERA's core fixed income portfolio requires that no more than 5% of an investment manager's fixed income portfolio be invested in below investment grade rated securities (BB or B rated bonds). No security rated below single B may be purchased at any time. Securities that have at least a single B, but subsequently fall below single B ratings, shall be sold in an orderly manner. This is the case of MCERA's workout portfolio that is managed by MCERA's core fixed income manager. The fair values of MCERA's workout portfolio for the fiscal years ended June 30, 2019 and 2018 were \$594,354 and \$694,610, respectively. These securities are being liquidated or held for longer time frames by comparing their individual fundamental values against executable market prices.

The table below presents the Moody's credit quality ratings of fixed income securities at June 30, 2019 and 2018:

Quality	Aaa	Aa	A	Baa	B	Caa	Ca	NR*	NA**
Percent of Fixed Income as of June 30, 2019	2.06%	1.20%	4.45%	4.89%	0.01%	0.09%	0.12%	7.27%	79.91%
Percent of Fixed Income as of June 30, 2018	3.18%	2.96%	13.82%	12.89%	0.03%	0.14%	0.17%	14.00%	52.81%

*NR represents those securities that are not rated and includes FNMA and FHLMC mortgage backed securities that are not rated by credit rating agencies, but are perceived to have an implicit guarantee by the U.S. Government.

**NA represents those securities that are not applicable to the rating disclosure requirements.

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Notes to Basic Financial Statements (continued)

June 30, 2019 and 2018

I. Interest Rate Risk

Interest rate risk is the risk that changes in interest rates will adversely affect the fair value of an investment. MCERA's Investment Policy Statement does not have a formal policy that limits investment maturities as a means of managing its exposure to fair value losses arising from increasing interest rates. However, MCERA's bond portfolios are managed duration neutral to their benchmarks, the Barclays U.S. Aggregate Bond Index and the Barclays US Government 1-3 and 1-5 year Indices.

As of June 30, 2019 and 2018 the County's pool has a fair value of \$1,008,741,167 and \$907,952,142, respectively, and a weighted average maturity of 487 and 438 days, respectively.

As of June 30, 2019 and 2018, the weighted average maturity of the short-term investment pooled funds with Northern Trust was 39 and 45 days, respectively.

The following table presents the fair value, weighted percentage of each sector, and the effective duration of MCERA's fixed income investments as of June 30, 2019:

Investment Type	Core Bond Portfolio		
	Fair Value 2019	Weight of Fixed Income 2019	Modified Duration (years) 2019
U.S. Government agency obligations	19,127,379	9.20%	4.32
Commercial mortgage backed securities	865,969	0.42%	1.46
Asset backed securities	4,175,638	2.01%	0.80
U.S. Treasury and TIPS	12,028,780	5.78%	7.82
Corporate and other credit	22,507,340	10.82%	6.77
Collateralized mortgage obligations	313,148	0.15%	0.60
Mutual funds	128,201,373	61.65%	2.79
Limited partnerships	20,734,815	9.97%	4.42
Total Fair Value	207,954,442	100.00%	
Portfolio Effective Duration			5.43

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Notes to Basic Financial Statements (continued)

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The following table presents the fair value, weighted percentage of each sector, and the effective duration of MCERA's fixed income investments as of June 30, 2018:

Investment Type	Fair Value 2018	Core Bond Portfolio	
		Weight of Fixed Income 2018	Modified Duration (years) 2018
U.S. Government agency obligations	\$30,897,676	18.39%	4.91
Commercial mortgage backed securities	1,069,765	0.64%	1.93
Asset backed securities	6,621,624	3.94%	1.03
U.S. Treasury and TIPS	41,413,621	24.65%	7.65
Corporate and other credit	51,053,407	30.39%	6.34
Collateralized mortgage obligations	377,251	0.22%	0.60
Mutual funds	36,575,203	21.77%	1.93
Total Fair Value	\$168,008,547	100.00%	
Portfolio Effective Duration			5.38

J. Foreign Currency

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or a deposit. Assets in international equity portfolios will be primarily composed of foreign ordinary shares and American Depository Receipts (ADR) (including ADR's that are 144A securities). Short-term, high-grade fixed income securities may be purchased as previously stated, similar types of securities denominated in foreign currencies may be purchased, or the fund's custodial sweep account may be employed. International equity portfolios will invest in stocks with market capitalizations consistent with their underlying benchmarks. Emerging market equity portfolios can invest in stock with large, mid, and small market capitalizations. Firms will continually monitor the country, currency, sector, and security selection risks associated with their international and emerging market portfolios. All the risks will be included in the manager's quarterly reports and performance attribution based on these factors. Currency hedging, consistent with the stated derivative policy, is an acceptable investment activity. However, prior to initiating such hedging activities, the firms must adequately demonstrate their capability and expertise in this area to the Board.

The following table represents securities and dividends receivable held in a foreign currency as of June 30, 2019 and 2018:

Currency	Fair Value (U.S. Dollars)	
	2019	2018
Czech koruna	\$ -	\$5,504
Euro	7,733,134	6,524,344
Japanese yen	22,199	30,966
Norwegian krone	13,776	14,411
Swiss franc	11,994	11,777
Total foreign currency	\$7,781,103	\$6,587,002

Merced County Employees' Retirement Association

Notes to Basic Financial Statements (continued)

June 30, 2019 and 2018

K. Derivatives

MCERA's investment policy permits the use of derivative instruments to minimize the exposure of certain investments to adverse fluctuations in financial and currency markets and enhance yields. The Association does not use derivatives for speculative use or to create leverage. Exposure to risk by use of derivative instruments must be consistent with MCERA's overall investment policy as well as an individual manager's specific investment guidelines. Any other derivative investment purpose may be allowed by the explicit authorization of the Board. MCERA does not have any derivative instruments as defined by GASB Statement No. 53 as of June 30, 2019 and 2018.

Note 4 – RESERVES

As required by the 1937 Act and the Board's policy, the following reserves for Net Position Restricted for Pensions have been established to account for the members', employers', and retirees' contributions. MCERA maintains the following reserves at June 30, 2019 and 2018.

A. Active Members' Reserves

These reserves represent the cumulative contributions made by active employees. Additions include member contributions and related earnings. Deductions include refunds of member contributions and, upon retirement, the member contributions plus interest credited to their account are transferred from this reserve to the Retired Members' Reserves.

B. Employer Advance Reserves

These reserves represent the cumulative contributions made by the employers for future retirement payments to current active members. Additions include contributions from the employer and related earnings. Deductions include transfers to the Retired Members' Reserve and lump sum death benefits.

C. Retired Members' Reserves

These reserves are established upon the retirement of an employee. Employee contributions plus interest earnings credited to the employee account are transferred from the Active Members' Reserves to the Retired Members' Reserves. In addition, the present value of the actuarially determined pension benefits is also transferred from the Employer Advance Reserves to the Retired Members' Reserves. From these reserves, the Association pays the retiree pension benefits in an amount computed in accordance with the 1937 Act.

D. Interest Fluctuation Reserve

This reserve is used for interest crediting purposes and for holding any funds allocated by the Retirement Board as a reserve for future interest earnings deficiencies. To the extent that net earnings are available, interest is credited to specified reserves. Interest is credited semi-annually according to MCERA's interest crediting policy.

Merced County Employees' Retirement Association

Notes to Basic Financial Statements (continued)

June 30, 2019 and 2018

E. Market Value Fluctuation Reserve

The Board of Retirement established this "designation" account on June 30, 1997 to track the increase (or decrease) in the fair value of the MCERA assets.

The annual change in fair value of MCERA's assets is as follows:

Accumulated Through 2014	2015	2016	2017	2018	2019	Total
\$89,589,154	\$(1,601,763)	\$(49,573,098)	\$88,157,330	\$46,078,111	\$2,882,579	\$175,532,313

F. Contingency Reserve

This reserve is comprised of surplus/excess earnings that are held as a reserve against deficiencies in investment earnings in other years, losses on investments, and other contingencies. As of June 30, 2012, the Contingency Reserve was not funded and all balances were transferred to the Interest Fluctuation Reserve. The Contingency Reserve will be funded and excluded from the actuarial value of assets only when the Plan's funded ratio is at or above 75%.

A summary of the various reserve accounts, which comprise fiduciary net position restricted for pensions at June 30, 2019 and 2018 is as follows:

Reserve	2019	2018
Active Members'	\$107,794,921	\$105,474,936
Employer Advance	213,114,049	179,321,591
Retired Members'	288,219,524	284,111,465
Interest Fluctuation	81,842,477	85,096,244
Market Value Fluctuation	175,532,313	172,649,734
Total Reserves	\$866,503,284	\$826,653,970

Note 5 – NET PENSION LIABILITY OF PARTICIPATING EMPLOYERS

MCERA engages on an annual basis, an independent actuarial consulting firm, Cheiron, Inc., to conduct its annual actuarial valuation.

A. Actuarial Assumptions

The actuarial assumptions used in the June 30, 2018 valuation were based on the results of an actuarial experience study for the period July 1, 2013 through June 30, 2016. Measurements as of the reporting date are based on the fair value of assets as of June 30, 2019 and the Total Pension Liability as of the valuation date June 30, 2018, using update procedures to roll forward to MCERA's fiscal year end of June 30, 2019. There were no significant events between the valuation date

Merced County Employees' Retirement Association

Notes to Basic Financial Statements (continued)

June 30, 2019 and 2018

and the measurement date, so the roll forward procedures only included the addition of service cost and interest cost offset by actual benefit payments.

The components of the employers' Net Pension Liability were as follows:

	FYE June 30, 2019	FYE June 30, 2018
Total Pension Liability	1,342,438,635	\$1,300,753,933
Plan Fiduciary Net Position	(866,503,284)	(826,653,970)
Net Pension Liability	475,935,351	\$474,099,963
Fiduciary Net Position as a Percentage of the Total Pension Liability	64.55%	63.55%

The Total Pension Liabilities as of June 30, 2019 and June 30, 2018 were determined based on the June 30, 2018 and June 30, 2017 actuarial valuations, rolled forward to June 30, 2019 and June 30, 2018, respectively, using the following actuarial assumptions applied to all periods included in the measurement:

ACTUARIAL VALUATION ASSUMPTIONS	
Valuation Date	June 30, 2018 and June 30, 2017
Investment Rate of Return	7.25%
Projected Salary Increases	2.75%, plus service-based rates
Attributed to Inflation	2.75%
Cost-of-Living Adjustments	For Tier I, 100% of CPI up to 3.0% annually with banking, assumed to be 2.40% annually

Post-retirement mortality rates for June 30, 2019 and June 30, 2018 were based on the CalPERS RP2009 tables, projected with MP-2016 and RP2000 Combined tables projected to the year 2028 with adjustments for mortality improvements based on the Society of Actuaries Scale BB.

Pre-retirement mortality, withdrawal, disability, and service retirement rates vary by age, service, gender, and classification.

B. Long-Term Expected Rate of Return

Long-term capital market expectations are derived through a process that relies on both quantitative and qualitative methodologies. The first step in the process is to build out ten-year forecasts for each asset class identified using proprietary, valuation-based fundamental models that consider those critical factors driving asset class returns. The ten-year expectations serve as the primary foundation for longer-term, twenty-year expectations. Twenty-year return expectations are formed by combining our ten-year expectations for each asset class with the observed historical returns for each asset class to then infer a forecast of the following ten-year returns (i.e., years 11-20). The final step is a review by the Investment Committee to determine if any qualitative adjustments are necessary. Return assumption at the total Plan level is derived according to the underlying asset class weightings, using nominal rates of return.

Best estimates of geometric real rates of return for each major asset class included in the target asset allocation as of June 30, 2019 and June 30, 2018 are summarized in the table below.

Merced County Employees' Retirement Association

Notes to Basic Financial Statements (continued)

June 30, 2019 and 2018

Long-Term Expected Real Rate of Return

	FYE June 30, 2019	FYE June 30, 2018
US Equity		
US Large Cap	5.5%	4.7%
US Small Cap	5.7%	4.5%
International Equity	5.9%	4.4%
Emerging Markets Equity	7.8%	6.7%
Private Equity	7.2%	6.2%
Real Estate	4.4%	4.0%
Domestic Fixed Income	1.3%	0.9%
High Yield Fixed Income	3.9%	2.7%
Hedge Funds	2.8%	2.5%
Infrastructure	3.9%	3.9%
Natural Resources	6.9%	6.1%
Bank Loans	3.5%	2.3%
Cash	0.3%	0.2%

C. Discount Rate

The discount rate used to measure the Total Pension Liability was 7.25% for both June 30, 2019 and 2018. The projection of cash flows used to determine the discount rate assumed that contributions from Plan members will be made at the current contribution rate and that contributions from the employers will be made at contractually required rates, actuarially determined. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of 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.

D. Sensitivity of the Net Pension Liability to Changes in the Discount Rate

The following table presents the net pension liability of MCERA calculated using the discount rate of 7.25% for 2019 and 2018, as well as what the Plan's net pension liability would be if it were calculated using a discount rate that is one percentage point lower, 6.25%, or one percentage point higher, 8.25%, than the current rate.

	1% Decrease (6.25%)	Current Rate (7.25%)	1% Increase (8.25%)
2019 Net Pension Liability	\$640,507,767	\$475,935,351	\$339,170,694
2018 Net Pension Liability	\$634,944,490	\$474,099,963	\$340,559,408

Note 6 – LITIGATION

Prior to the passing of the California Public Employees' Pension Reform Act (PEPRA) in 2013, MCERA members were allowed to include up to 160 hours of additional vacation payout hours when terminating employment ("terminal pay") in their retirement allowance calculations under a Settlement Agreement that MCERA entered into in 2001. PEPRA

Merced County Employees' Retirement Association

Notes to Basic Financial Statements (continued)

June 30, 2019 and 2018

prohibited the inclusion of that terminal pay in the retirement allowance calculations of people it defined as "new members" ("PEPRA members"). Other amendments to the law that governs MCERA enacted at that time, known as Assembly Bill 197 (AB 197), also prohibited the inclusion of that terminal pay in retirement allowance calculations of people who already were members of MCERA ("legacy members"). As a result of AB 197, and developments in litigation over the law, on July 12, 2014, MCERA ceased including that terminal pay in retirement allowance calculations for all tiers. MCERA already had excluded the terminal pay from the retirement allowance calculations of PEPRA members as of January 1, 2013.

In January 2018, a court of appeal ruled that AB 197 could not be applied by MCERA to legacy members. That case, *Alameda County Deputy Sheriff's Assn. et al v. Alameda County Employees' Retirement Assn., et al. (2018) 19 Cal.App.5th 61* ("Alameda"), is now before the California Supreme Court on review. However, MCERA does not expect the Court to rule on the case for another year or two.

As a result of Alameda, on February 8, 2018, the MCERA Board of Retirement adopted Resolution 2018-1 which made vacation payout earnings pensionable for MCERA legacy members (Tiers I, II, and III), capped at the lesser of a member's annual vacation accrual amount, the leave hours actually included in the member's vacation pay-off, or 160 hours. The Board subsequently adopted Resolution 2018-3 to further clarify certain aspects of its earlier Resolution. For Tier I, II, and III members who retired on or after July 12, 2014, the adoption of both Resolutions means that a maximum of 160 hours of vacation leave, a maximum of one year's vacation leave accrual, or the number of vacation hours actually included in the member's vacation pay-off, whichever is less will be added to such retiree's final average compensation, unless an exception applies.

On July 1, 2018, MCERA began using additional vacation payout earnings for Tier I, II, and III members' retirement calculations as provided in the above-referenced Resolutions. For members who retired after July 12, 2014 and through June 30, 2018, retirement benefits were re-calculated by MCERA's actuary to determine any increased values, with consideration of the employee's contributions owed to MCERA as a result of the increased retirement benefit and the actual amount of vacation hours cashed out upon retirement, capped as provided above.

As noted above, the California Supreme Court has accepted review of the Alameda case. Currently, there is no date certain as to when the Supreme Court will hear oral arguments or decide on this court case. MCERA took this action pursuant to the decision of the First District Court of Appeal, because, notwithstanding review by the Supreme Court, Alameda provides persuasive guidance to MCERA. However, MCERA is unable to know with certainty the outcome of the Supreme Court review. Nevertheless, the MCERA Board determined that it was more important that its retirees receive the full payments that Alameda stated were due, rather than have the Board wait for final word on that legal determination from the Supreme Court that may not be provided for over a year.

Note 7—SUBSEQUENT EVENTS

The potential for subsequent events were evaluated from the year-end report date of June 30, 2019 through December 23, 2019 which is the date the financial statements were available to be issued. Management did not identify any subsequent events that would require disclosure.

Merced County Employees' Retirement Association

Required Supplementary Information

Schedules of Changes in Net Pension Liability and Related Ratios For the Years Ended June 30, 2019, 2018, 2017, 2016, 2015, and 2014*

Total Pension Liability	2019	2018	2017	2016	2015	2014
Service cost (MOY)	\$22,794,246	\$22,172,594	\$19,512,609	\$19,384,855	\$19,672,490	\$19,384,434
Interest (includes interest on service cost)	92,452,056	89,402,353	88,982,290	86,323,551	84,203,356	81,090,569
Changes of benefit terms	-	-	-	-	-	-
Differences between expected and actual experience	1,249,075	2,914,187	(8,886,191)	(5,488,413)	(12,380,077)	-
Changes of assumptions	-	15,960,129	36,908,183	-	-	-
Benefit payments, including refunds of member contributions	(74,810,675)	(70,720,210)	(66,904,315)	(65,082,403)	(62,951,924)	(58,042,021)
Net changes in total pension liability	41,684,702	59,729,053	69,612,576	35,137,590	28,543,845	42,432,982
Total pension liability—beginning	1,300,753,933	1,241,024,880	1,171,412,304	1,136,274,714	1,107,730,869	1,065,298,068
Total pension liability—ending	\$1,342,438,635	\$1,300,753,933	\$1,241,024,880	\$1,171,412,304	\$1,136,274,714	\$1,107,731,050

Fiduciary net position

Contributions—members	\$10,695,680	\$10,441,876	\$9,384,621	\$9,042,663	\$8,945,316	\$9,642,819
Contributions—employers	66,586,464	64,757,288	60,349,189	56,617,088	52,005,656	48,032,338
Net investment income (loss)	39,728,950	70,689,084	83,097,416	(388,209)	19,318,849	96,219,056
Benefit payments, including refunds of member contributions	(74,810,675)	(70,720,210)	(66,904,315)	(65,082,403)	(62,951,924)	(58,042,021)
Administrative expense	(2,351,105)	(2,283,396)	(2,173,407)	(2,492,684)	(2,323,446)	(1,547,347)
Net change in fiduciary net position	39,849,314	72,884,642	\$83,753,504	\$(2,303,545)	\$14,994,451	\$94,304,845
Fiduciary net position—beginning	826,653,970	753,769,328	670,015,824	672,319,369	657,324,918	563,020,073
Fiduciary net position—ending	\$866,503,284	\$826,653,970	\$753,769,328	\$670,015,824	\$672,319,369	\$657,324,918
Net pension liability—ending	\$475,935,351	\$474,099,963	\$487,255,552	\$501,396,480	\$463,955,345	\$450,406,132
Fiduciary net position as a percentage of the total pension liability	64.55%	63.55%	60.74%	57.19%	59.17%	59.34%
Covered payroll	\$131,365,778	\$126,705,902	\$119,621,964	\$114,397,644	\$110,111,994	\$110,259,316
Net pension liability as a percentage of covered payroll	362.30%	374.17%	407.33%	438.29%	421.35%	408.50%

*Schedules are intended to show information for 10 years. Additional years will be displayed as they become available. Information for this table was provided by Cheiron, Inc.

Merced County Employees' Retirement Association

Required Supplementary Information (continued)

Schedules of Employer Contributions

The schedules of employer contributions show whether the employer has made contributions that are consistent with an actuarial method of funding the benefits to be provided consistent with the parameters established by GASB Statement No. 67.

Schedules of Employer Contributions

Last 10 Fiscal Years Ended June 30

Dollar Amounts in Thousands

	2019	2018	2017	2016	2015
Actuarially Determined Contribution	\$66,586	\$64,757	\$60,349	\$56,617	\$52,006
Contributions in Relation to the Actuarially Determined Contribution	66,586	64,757	60,349	56,617	52,006
Contribution Deficiency/(Excess)	\$ -	\$ -	\$ -	\$ -	\$ -
Covered Payroll	\$131,366	\$126,706	\$119,622	\$114,398	\$110,112
Contributions as a Percentage of Covered Payroll	50.69%	51.11%	50.45%	49.49%	47.23%
	2014	2013	2012	2011	2010
Actuarially Determined Contribution	\$48,032	\$43,784	\$40,263	\$36,662	\$29,137
Contributions in Relation to the Actuarially Determined Contribution	48,032	43,784	40,263	36,662	29,137
Contribution Deficiency/(Excess)	\$ -	\$ -	\$ -	\$ -	\$ -
Covered Payroll	\$110,259	\$109,401	\$111,567	\$117,296	\$119,166
Contributions as a Percentage of Covered Payroll	43.56%	40.02%	36.09%	31.26%	24.45%

Schedules of Investment Returns

The money-weighted rate of return is equivalent to the internal rate of return (IRR). Money-weighted rate of return incorporates the size and timing of cash flows.

Schedules of Investment Returns

Fiscal Years ended June 30*

	2019	2018	2017	2016	2015	2014	2013
Annual money-weighted rate of return, net of investment expense	5.5%	10.1%	9.5%	-0.3%	1.1%	17.0%	11.8%

*Schedules are intended to show information for 10 years. Additional years will be displayed as they become available.

Merced County Employees' Retirement Association

Notes to Required Supplementary Information

Note 1 – CHANGES OF BENEFIT TERMS

There were no changes in benefit terms for the fiscal year ended June 30, 2019.

Note 2 – CHANGES OF ASSUMPTIONS AND METHODS

Assumptions were adopted by the Board at their November 17, 2016 meeting. Rate of return was updated to 7.25%, price inflation assumption decreased to 2.50%, post retirement COLA decrease to 2.40%, and the mortality to CalPERS 2009 with future improvements applying SOA MP-2016 projection scale on a generational basis.

Note 3 – METHODS AND ASSUMPTIONS USED IN CALCULATIONS OF ACTUARIALLY DETERMINED CONTRIBUTIONS

A. Actuarial Valuation Methods and Assumptions

	2019	2018	2017	2016	2015
Valuation Date	June 30, 2017	June 30, 2016	June 30, 2015	June 30, 2014	June 30, 2013
Effective Date	June 30, 2018	June 30, 2017	June 30, 2016	June 30, 2015	June 30, 2014
Actuarial Cost Method	Entry Age Normal	Entry Age Normal	Entry Age Normal	Entry Age Normal	Entry Age Normal
Asset Valuation Method	Market Value	Market Value	Market Value	Market Value	Market Value
Amortization Years Remaining*	24	24	24	24	16
Discount Rate	7.25%	7.25%	7.75%	7.75%	7.75%
Price Inflation	2.50%	2.50%	3.00%	3.00%	3.75%
Salary Increases**	2.75%	2.75%	3.00%	3.00%	3.75%
Cost-of-Living Adjustments	2.50%	2.50%	2.60%	2.60%	2.70%
Mortality***	See Notes	See Notes	See Notes	See Notes	See Notes
	2014	2013	2012	2011	2010
Valuation Date	June 30, 2012	June 30, 2011	June 30, 2010	June 30, 2009	June 30, 2008
Effective Date	June 30, 2013	June 30, 2012	June 30, 2011	June 30, 2010	June 30, 2009
Actuarial Cost Method	Entry Age Normal	Entry Age Normal	Entry Age Normal	Entry Age Normal	Entry Age Normal
Asset Valuation Method	Actuarial Value	Actuarial Value	Actuarial Value	Actuarial Value	Actuarial Value
Amortization Years Remaining*	17	18	18	18	16
Discount Rate	7.75%	7.75%	8.16%	8.16%	8.00%
Price Inflation	3.75%	3.75%	3.75%	4.50%	4.50%
Salary Increases**	3.75%	3.75%	3.75%	4.50%	4.50%
Cost-of-Living Adjustments	2.70%	2.70%	2.70%	3.00%	3.00%
Mortality***	See Notes	See Notes	See Notes	See Notes	See Notes

* Closed Period as a level percentage of payroll method used for all years shown .

** Includes merit component based on years of service.

*** As of 2016 valuation, CalPERS 2009 with future improvements applying SOA MP-2016 on a generational basis is used. Basis Gender distinct RP-2000 Combined Mortality used for all valuation years shown prior to 2016.

Merced County Employees' Retirement Association

Notes to Required Supplementary Information (continued)

B. Changes to the Assumptions

The actuarial valuation performed by MCERA's actuary for the June 30, 2017 measurement date included MCERA's discount rate of 7.25% and liability loads (approximately 6.92% load for Tier I and approximately 2.31% load for Tiers II and III) to account for the addition of the up to 160 hours of additional vacation earning payout hours to current active members.

Merced County Employees' Retirement Association

Other Supplemental Schedules

Schedules of Administrative Expenses For the Fiscal Years Ended June 30, 2019 and 2018

Personnel Services:	2019	2018
Salaries, wages and benefits	\$1,027,558	\$977,155
Office Expenses:		
Communications	4,091	4,160
Requested maintenance / utilities / cost allocation	197,909	240,888
Office supplies	23,696	12,436
Postage	15,374	14,714
Total Office Expenses	241,070	272,198
Professional Services:		
Audit Fees	46,265	58,338
Attorney fees	206,330	130,683
Disability stenographic fees / investigations	-	1,390
Publications / legal notices / other	2,551	1,550
Disability medical reviews / services	24,551	41,910
Software, technology, and information services	342,775	310,216
Total Professional Services	622,472	544,087
Miscellaneous Expenses:		
Memberships	5,860	5,160
Fiduciary meeting	11,300	11,000
Fiduciary and staff travel / training	27,046	31,887
Insurance	79,292	79,999
Depreciation expense	257,181	255,700
Total Miscellaneous Expenses	380,679	383,746
Total Administrative Expenses	\$2,271,779	\$2,177,186

Merced County Employees' Retirement Association

Other Supplemental Schedules (continued)

Schedules of Investment Expenses For the Fiscal Years Ended June 30, 2019 and 2018

Investment managers' fees

	2019	2018
Domestic equities		
Dimensional Fund Advisors	\$65,473	\$74,381
Mellon Capital Management	286,200	278,608
PanAgora Asset Management	150,819	167,364
Total domestic equities	502,492	520,353
International equities		
Acadian Asset Management	45,273	-
Driehaus Asset Management	31,616	-
Copper Rock International	122,671	240,363
Mellon Capital Management	41,429	46,308
Wells Capital Management	541,581	557,286
Total international equities	782,570	843,957
Alternative investments		
Graham Capital	53,412	17,259
GSO	83,591	-
Invesco Private Capital	-	18,755
KKR	82,717	59,882
SSgA	80,136	98,746
Total alternative investments	299,856	194,642
Real estate		
UBS Global –Trumbull Property Management	361,973	374,215
Total real estate	361,973	374,215
Fixed income		
Barrow Hanley	271,442	308,470
Total fixed income	271,442	308,470
Total investment managers' fees	2,218,333	2,241,637
Other investment expenses		
Custodian	118,768	116,743
Investment counsel	282,837	316,124
Investment consultant	611,000	587,081
Miscellaneous investment expense	23,621	3,794
Total other investment expenses	1,036,226	1,023,742
Total fees and other investment expenses	\$3,254,559	\$3,265,379

Merced County Employees' Retirement Association

Other Supplemental Schedules (continued)

Schedules of Payments to Consultants For the Fiscal Years Ended June 30, 2019 and 2018

Investment professional service fees	2019	2018
Custodial services - Northern Trust, BNY Mellon*	\$118,768	\$116,743
Investment consultant - Meketa Investment Group, Inc., Verus Investments, and Cliffwater, LLC.	611,000	587,081
Investment counsel - Nossaman, LLP	282,837	316,124
Actuarial services - Cheiron, Inc. and Segal Consulting	79,326	106,210
Total investment professional service fees	<u>\$1,091,931</u>	<u>\$1,126,158</u>
Administrative professional service fees		
Audit services - Brown Armstrong Accountancy Corporation	\$46,265	\$58,338
Legal services	206,330	130,683
Disability stenographic fees/investigations	-	1,390
Other specialized services	2,551	1,550
Disability medical reviews/services	24,551	41,910
Software and information systems	342,775	310,216
Total administrative professional service fees	<u>\$622,472</u>	<u>\$544,087</u>

*MCERA continues to receive investment class action services from BNY Mellon.

Merced County Employees' Retirement Association

Other Information

Schedule of Cost Sharing Employer Allocations

For the Fiscal Year Ended June 30, 2019

Employer	2018-2019 Amortization Share of Pensionable Payroll	Employer Proportionate Share Percentage
County of Merced	\$48,604,755	94.9984%
Merced Superior Court	2,540,351	4.9651%
Merced Cemetery District	18,653	0.0365%
Total	\$51,163,759	100.0000%

The accompanying notes are an integral part of this schedule.

Merced County Employees' Retirement Association

Other Information

Schedule of Employer Pension Amounts Allocated by Cost Sharing Plan As of and for the Fiscal Year Ended June 30, 2019

Employer	Deferred Outflows of Resources				Deferred Inflows of Resources				Pension Expense Excluding that Attributable to Employer-Paid Member Contributions					
	Net Pension Liability	Differences Between Expected and Actual Experience and Investment Earnings	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Resources	Differences Between Projected and Actual Investment Earnings	Changes of Assumptions	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Resources	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions That are Share of Pension Expense	Proportionate Share of Pension Expense	Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions That are Share of Pension Expense Excluding Contributions				
County of Merced	\$452,130,968	\$2,274,166	\$4,383,380	\$16,346,479	794,776	\$23,798,801	\$2,110,434	\$ -	\$ -	\$444,956	\$2,555,390	\$85,572,601	\$295,438	\$65,868,039
Merced Superior Court	23,630,666	118,859	229,098	854,350	571,910	1,774,217	110,302	-	-	549,800	660,102	3,427,158	183,595	3,610,753
Regional Waste Management	-	-	-	-	-	-	-	-	-	310,074	310,074	-	(455,951)	(455,951)
Merced Cemetery District	173,717	874	1,684	6,281	-	8,839	811	-	-	61,856	62,667	25,194	(23,082)	2,112
Total	\$475,935,351	\$2,393,899	\$4,614,162	\$17,207,110	\$1,366,686	\$25,561,857	\$2,221,547	\$ -	\$ -	\$1,366,686	\$3,588,233	\$89,024,953	\$ -	\$89,024,953

Note: Information compiled from GASB 67/68 Report Prepared by Cheiron, Inc. dated June 30, 2019.

The accompanying notes are an integral part of this schedule.

Merced County Employees' Retirement Association

Notes to Other Information

A. Basis of Presentation and Basis of Accounting

Employers participating in MCERA are required to report pension information in their financial statements for fiscal periods beginning on or after June 15, 2014, in accordance with GASB Statement No. 68, *Accounting and Financial Reporting for Pensions—an Amendment of GASB Statement No. 27*.

MCERA's actuary prepares the GASB Statement No. 67 and No. 68 Actuarial Valuation based on the June 30, 2019 measurement date for Employer Reporting as of June 30, 2020, in accordance with accounting principles generally accepted in the United States of America as applicable to governmental organizations based on information provided by MCERA. This document provides the required information for financial reporting related to MCERA that employers may use in their financial statements.

B. Use of Estimates in the Preparation of These Schedules

The preparation of these schedules in conformity with accounting principles generally accepted in the United States of America requires management to make estimates and assumptions that affect certain amounts and disclosures. However, actual results could differ from those estimates.

C. Amortization of Deferred Outflows and Deferred Inflows of Resources

The net difference between projected and actual investment earnings on pension plan investments is amortized over 5 years on a straight-line basis. One-fifth was recognized in pension expense/(credit) during the measurement period and the remaining net difference between projected and actual investment earnings on pension plan investments at June 30, 2019 is to be amortized over the remaining amortization periods.

The difference between expected and actual experience, changes in proportion, and the difference between employer contributions and proportionate share of contributions are amortized over the average of the expected remaining service lives of all employees that are provided with pensions through the plan determined as of the beginning of the related measurement period. Employers are required to recognize pension expense based on the balance of the closed period "layers" attributable to each measurement period. The average expected remaining service lives determined as of the beginning of each measurement period are described below:

Average Expected Remaining Service Lives, Year Ended June 30 (In years)					
2019	2018	2017	2016	2015	2014
4	4	4	4	4	4

The Schedule of Cost Sharing Employer Allocations and the Schedule of Employer Pension Amounts Allocated by Cost Sharing Plan do not include contributions to the plan subsequent to the measurement date as defined in GASB Statement No. 68 Paragraphs 54, 55, and 57. Appropriate treatment of such amounts is the responsibility of the employers.

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MEMORANDUM

From: Mika Malone, Paola Nealon
Meketa Investment Group

Date: October 31, 2019

Re: Investment Consultant's Statement for CAFR

This letter reviews the investment performance of the Merced County Employees' Retirement Association (MCERA) for the fiscal year ending June 30, 2019.

MCERA's stated mission is to provide benefits to its members, to manage assets prudently in accordance with plan provisions and to provide competent and efficient services to our members. Meketa Investment Group, MCERA's general consultant, works in concert with Cliffwater, MCERA's alternative investments consultant, to provide guidance to the Board (the Association's fiduciary), and assist the Board with performance evaluation, asset allocation, manager selection, and other industry best practices.

Rates of return are represented using a time-weighted rate of return methodology based upon market values.

2019 FISCAL YEAR IN REVIEW

While the start of 2019 may have been characterized by worries of rising interest rates globally, this theme quickly shifted throughout the year as increasing concerns of slowing global growth - made worse by trade tensions between the US and China - prompted major central banks to consider more accommodative policies. In the US, the Federal Reserve held the federal funds rate steady at its June meeting, while signaling the potential for future interest rate cuts. The European Central Bank (ECB) also held rates steady with a potential for further reductions, and the Bank of Japan showed no signs of pulling back from its unprecedented monetary stimulus. Of all the central banks, the US has the most room to lower rates, while Japan and Europe are already in negative territory. With growth revisions for 2019 and 2020 (IMF forecast of 3.2% and 3.5% respectively) down by 0.1%, key risks to monitor will not only be trade tensions between the US and China, but declining growth in China, political uncertainty in Europe, and risks related to Brexit.

While global equities rebounded significantly from December lows to close out the June 2019 fiscal year, the past twelve months certainly saw heightened

volatility. The VIX reached 36 in December before re-tracing to 25 and further retreating to around 15 by the June 30 fiscal year-end. Nonetheless, for much of the fiscal year, most markets embraced a “risk on” appetite.

US equities, as represented by the Russell 3000 Index, closed out the fiscal year with a 8.98% return. Non-US equity markets did not fare as well. Emerging markets delivered negative returns in the first half of the fiscal year, but reversed course in the second half, finishing the fiscal year with a 1.21% return. Trade tensions and a strong US dollar continued to weigh on results. The MSCI EAFE Index, representing foreign developed markets, followed closely behind returning 1.08%. Overall growth has declined in Europe given the slowdown in Germany, uncertainties related to Brexit, and trade tensions.

The trend of US growth stocks outperforming value stocks persisted throughout the year, with growth holding a 3.26% lead over value, as the Russell 3000 Growth Index closed out the year with a 10.60% return, versus 7.34% for the Russell 3000 Value Index.

Within fixed income, investment grade markets closed out the fiscal year on a strong note. Throughout the first half of fiscal year 2019, concerns over rising interest rates and inflation created headwinds. In the US, the Federal Reserve increased short-term interest rates to a range of 2.25% to 2.50% by December, but this hawkish stance turned dovish in the second half of the fiscal year as central banks abruptly shifted to a more accommodative policy by early January. Investment grade credit and high yield bonds rebounded alongside the equity markets as a result, with the high yield market posting one of the strongest returns in nearly 10 years (7.26% for the quarter ending March 31, 2019). Despite this, the deterioration of US and China trade talks in May prompted a temporary drop in global equity prices and US Treasury yields.

The 3mo-10yr segment of the yield curve inverted for the second time in 2019, causing investors to question whether this might be a sign of worse to come. Historically, the yield curve has been relied on as a barometer of economic strength and as a potential recession indicator. Inversions in the yield curve have historically preceded recessions, with a few exceptions.

Over the fiscal year, the broad US bond market, represented by the Bloomberg Barclays Aggregate Index, returned 7.87%, high yield bonds returned 7.48%, and TIPS returned 4.84%. Emerging market bonds (as represented by the JPM GBI-EM Global Diversified Index) posted an 8.99% return for the fiscal year.

Within other asset classes, natural resource stocks (S&P Global Natural Resources Index) returned -4.02%, commodities (Bloomberg Commodity Index) lost -6.75%, and REITs (MSCI US REIT Index) gained 9.66%. WTI crude oil settled at \$58.42/barrel, down roughly 20.46% from the prior fiscal year-end levels, but well

above the December 31 value of \$45.33. OPEC-led production cuts along with sanctions on Iran and Venezuela drove the higher prices, tempered by the slowing global economy.

2019 OUTLOOK

Looking forward, there are several issues that we will continue to monitor. First is the slowing global growth. After increasing rates over the last several years from record lows, major central banks have shifted to a more accommodative stance. With little room for a reduction in rates outside the US, there is speculation of other policy measures being implemented such as negative rates and/or further quantitative easing. Outside of the US, European economic conditions continue to slow due to political uncertainty and ongoing structural issues. Brexit negotiations also remain a concern. Within emerging markets, and China specifically, growth has slowed. Second, in the US, equity markets remain extended despite the declines in the fourth quarter, and the current economic cycle has been one of the longest on record now going into the eleventh year. Also in the US, trade policy remains a key issue. We also see declining growth in China and the impact of trade tensions with the US.

Given slowing global growth, compounded by trade tensions, major central banks have pivoted to a more dovish tone. The US and ECB are expected to start cutting rates and could return to quantitative easing, while the BOJ maintains its massive monetary support. These policies have been a major boost to the markets and could support global growth. The key questions remain whether or not they are pivoting too early and if this rally in risk assets is short-lived or more sustainable. *Note: following the close of fiscal year 2019, the Federal Reserve did cut rates by 25 basis points.*

The US economy and equity markets have experienced a long period of growth since the Global Financial Crisis due in part to central bank support. Late cycle dynamics of low unemployment and higher inflation are in place, and valuations are stretched for equities, despite the pullback witnessed in December 2018. With the long economic and market expansions, and the many unresolved political and trade issues, we could see heightened volatility in the remainder of 2019. Other key issues in the US will be policy uncertainty related to tariffs, immigration, and strategic alliances.

China has the second largest economy behind the US. After a long period of growth driven by government investment and exports, it continues to manage a repositioning of its economy to one based increasingly on domestic consumption. This rebalancing process has led to a slowing of the economy which has hurt countries that have become reliant on its trade. The recent focus on tariffs

between the US and China is another key issue that could have a disproportionately negative impact on China, as the US is one of their largest export destinations (18% of exports). Another core issue in China remains its high debt levels, particularly in the corporate sector.

Europe continues to have the structural problem of maintaining a single currency and central bank, while fiscal policy rests with each individual country. Consequently, countries that are experiencing financial difficulties are unable to use the traditional tools of lowering interest rates and devaluing their currencies to stimulate growth. This has caused tensions within the Eurozone, as highlighted by the recent elections in Italy and the prior elections in Germany, as well as the on-going issues in Greece. Given the size of Italy's bond market and economy within the euro area, an Italian sovereign debt crisis or its departure from the euro would have significant consequences. Further, Brexit uncertainty continues to affect the Eurozone. In March 2019, Theresa May's withdrawal proposal was rejected by Parliament for a third time, increasing the likelihood of a no-deal Brexit when the current extension expires in October 2019. *Note: following the close of fiscal year 2019, Boris Johnson became UK Prime Minister in July, increasing the likelihood of a no-deal Brexit.*

We will continue to monitor these issues and others.

MCERA FISCAL YEAR 2019 PERFORMANCE

MCERA's portfolio returned 5.2% on a net of fees basis for the fiscal year ended June 30, 2019, which exceeded the policy index by 50 basis points. US equity within the portfolio was the key driver of positive absolute contribution, returning 8.2%. The non-US equity segment recorded a 0.6% return, which trailed the segment benchmark by 60 basis points for the trailing fiscal year. The US fixed income sleeve fared well on an absolute basis, reporting a return of 6.8%. The hedge fund program posted a return of 1.8%, exceeding its sleeve benchmark by 1.2%. Results for the private markets were quite strong, as both private equity and real assets each posted returns above 9%.

Over the trailing three- and five-year periods, the MCERA portfolio returned 8.9% and 5.9% on an average annual basis, underperforming the Policy Index returns of 9.1% and 6.2%, respectively. For the trailing three years, MCERA was in the 48th percentile compared to peers, and over the trailing five years, MCERA was in the 40th percentile compared to peers (on a net of fees basis).

INVESTMENT RESULTS

Periods Ended June 30, 2019	Annualized Returns (%)		
	One Year	Three Years	Five Years
US Equity (net)	8.2	14.4	11.0
80% Russell 1000 / 20% Russell 2000	7.3	13.8	9.8
Rank	46	20	4
International Equity (net)	0.6	9.3	2.0
International Equity Custom Index	1.2	10.1	2.7
Rank	41	43	67
US Fixed Income (net)	6.8	3.2	3.1
US Fixed Custom Index	7.2	3.3	3.2
Rank	63	47	52
Hedge Funds (net)	1.8	7.3	4.0
Hedge Fund Custom Index	1.2	4.4	2.8
Rank	49	15	21
Private Equity (net & lagged)	9.5	12.4	9.9
Thomson Reuters Cambridge PE Index	9.2	16.0	13.1
Rank	50	43	53
Private Real Estate (net & lagged)	5.9	6.8	7.3
Real Estate Index	5.5	6.6	8.8
Rank	62	49	86
Real Assets (net & certain managers lagged)	9.5	7.6	7.7
Real Assets Custom Index	13.5	11.1	8.2
Rank	11	28	21
Total Portfolio (net)	5.2	8.9	5.9
Policy Benchmark	4.7	9.1	6.2
Rank	70	48	40

MLM/PN/mps

Merced County Employees' Retirement Association

Total Fund Returns (Gross of Fees) vs. Universe Period Ending June 30, 2019

	<i>3 mo</i>	<i>Fiscal YTD</i>	<i>3 yrs</i>	<i>5 yrs</i>	<i>7 yrs</i>	<i>10 yrs</i>	<i>Inception Return</i>	<i>Since</i>
Total Fund	3.2%	5.4%	9.2%	6.2%	8.7%	9.5%	8.1%	12/31/94
Fund Benchmark	2.4%	4.7%	9.1%	6.2%	8.6%	9.7%	6.0%	12/31/94
IF Public Defined Benefit	46	63	39	25	25	30	34	12/31/94
IF Public Defined Benefit	3.1%	5.7%	8.8%	5.7%	8.2%	9.1%	7.6%	12/31/94

Outline of Investment Policies

The Board of Retirement (Board) has exclusive control of all investments of the Merced County Employees' Retirement Association (MCERA, or the Association) and is responsible for establishing investment objectives, strategies, and policies.

Pursuant to the California Constitution and the 1937 Act, the Board is authorized to invest in any form or type of investment deemed prudent in the informed judgment of the Board. In making decisions regarding the MCERA investment portfolio, the Board acts in a fiduciary capacity and must discharge its duties in accordance with fiduciary principles. In this regard, investment decisions are to be made in the sole interest and for the exclusive purpose of providing benefits, minimizing employer contributions, and defraying the reasonable expenses of the Association.

The Board of Retirement has adopted an Investment Policy, adopted February 23, 2017 and amended November 8, 2018, which provides the framework for the management of MCERA's investments. The Investment Policy establishes the investment program goals, asset allocation policies, performance objectives, investment management policies and risk controls. The Investment Policy also defines the principal duties of the Board, MCERA's custodian bank, consultant, and MCERA's investment managers. The Board makes revisions to the Investment Policy as necessary.

Pursuant to the Investment Policy, the basic goal of MCERA's investment program is to obtain a fully funded plan status, while assuming a risk posture consistent with the Board's risk tolerance. In pursuing this goal, the Board has adopted a long-term investment horizon in which the chances and duration of investment losses are carefully weighed against the long-term potential for appreciation of assets. The primary investment objective is to exceed the actuarial assumption for return on assets. The risk assumed in the pursuit of this investment objective must be appropriate for the return anticipated and consistent with the total diversification of the fund. The asset allocation plan, adopted by the Board, is an integral part of MCERA's investment program. It is designed to provide an optimum, diversified mix of asset classes with return expectations to satisfy expected liabilities, while minimizing risk exposure.

Summary of Proxy Voting Guidelines and Procedures

Voting of MCERA's proxy voting ballots shall be in accordance with MCERA's proxy voting guidelines as set forth in the Investment Policy. The basic directive of the proxy voting guidelines is that, when voting proxy ballots on behalf of MCERA, investment managers shall vote according to the best interests of the MCERA membership. On a quarterly basis, the investment managers are required to provide a report to MCERA detailing their proxy votes.

Merced County Employees' Retirement Association

Asset Allocation Information

For the Fiscal Year Ended June 30, 2019

Allocation Ranges	Allocation June 30, 2019	Target	Allocation Minimum	Allocation Maximum
Domestic Equity	27.0%	21.0%	15.0%	26.0%
Developed Markets Equity	12.4%	10.0%	5.0%	15.0%
Emerging Markets Equity	7.9%	8.0%	4.0%	12.0%
Private Equity	7.0%	15.0%	5.0%	20.0%
Real Estate	4.7%	8.0%	6.0%	10.0%
Domestic Fixed Income	19.5%	18.0%	13.0%	23.0%
Opportunistic Credit	4.8%	5.0%	3.0%	7.0%
Hedge Fund	8.9%	5.0%	5.0%	15.0%
Real Assets	5.7%	5.0%	3.0%	7.0%
Cash	2.1%	0.0%	0.0%	5.0%
	100.0%	100.0%		

Asset Allocation Information

For the Fiscal Year Ended June 30, 2018

Allocation Ranges	Allocation June 30, 2018	Target	Allocation Minimum	Allocation Maximum
Total Domestic Equity				
Large Cap	24.3%	22.0%	18.0%	26.0%
Small Cap	5.3%	5.0%	4.0%	6.0%
International Equity	17.0%	16.0%	14.0%	18.0%
Emerging Markets	7.4%	7.0%	5.0%	9.0%
Private Equity	4.8%	9.0%	7.0%	11.0%
Real Estate	7.6%	8.0%	6.5%	9.5%
Domestic Fixed Income	20.6%	17.0%	15.0%	19.0%
Bank Loan	0.0%	5.0%	4.0%	6.0%
Hedge Fund	4.7%	5.0%	4.0%	6.0%
Real Assets	6.0%	6.0%	4.5%	7.5%
Cash	2.3%	0.0%	0.0%	0.0%
	100.0%	100.0%		

Merced County Employees' Retirement Association

Investment Summary

For the Fiscal Year Ended June 30, 2019

	Value	Percent of Total
Domestic Equity		
Large Cap	\$105,071,824	12.2%
Large Cap Active	91,534,688	10.6%
Small Cap	36,017,951	4.2%
Total	232,624,463	26.9%
International Equity		
Large Cap	68,361,628	7.9%
Small Cap	20,531,692	2.4%
Emerging Market	86,579,292	10.0%
Total	175,472,612	20.3%
Fixed Income		
Domestic Core	59,018,254	6.8%
Mutual Fund	128,201,373	14.8%
Opportunistic Credit	20,734,815	2.4%
Total	207,954,442	24.1%
Alternative Investments		
Private Equity	76,068,823	8.8%
Hedge Funds	76,663,345	8.9%
Real Asset Proxy	16,782,711	1.9%
Total	169,514,879	19.6%
Real Estate		
Domestic Property Fund	40,756,249	4.7%
Domestic Private Real Estate	12,807,343	1.5%
International Private Real Estate	6,285,449	0.7%
Total	59,849,041	6.9%
Cash and Short-Term Investments	19,066,427	2.2%
Total Investments, Cash and Short-Term Investments	\$864,481,864	100.0%

Merced County Employees' Retirement Association

Schedule of Investment Results (Gross of Fees)

For the Fiscal Year Ended June 30, 2019

	Current	Annualized				
	Year	3Yrs	5Yrs	7Yrs	10Yrs	Inception
Domestic Equity						
Large Cap:						
Mellon Dynamic	12.6	16.2	13.5	--	--	17.6
Mellon Large Cap Index	10.1	14.2	--	--	--	13.9
Small Cap:						
DFA	-4.4	10.9	7.2	--	--	7.2
PanAgora	-5.0	12.5	8.2	--	--	9.8
Total Domestic Equity	8.4	14.6	11.2	14.9	15.1	10.1
<i>Index: 80% R1000/20% R2000</i>	7.3	13.8	9.8	13.5	14.5	9.9
International Equity						
Mellon International	1.5	9.6	--	--	--	8.4
Acadian ACWI ex U.S. Small Cap Equity	*	--	--	--	--	-0.1
Driehaus International Small Cap Growth	*	--	--	--	--	2.3
Wells Capital	3.8	11.7	4.6	5.7	--	4.2
Total International Equity	1.0	9.7	2.5	7.3	7.7	5.4
<i>Index: MSCI ASCI ex US</i>	1.2	10.1	2.7	7.2	6.9	4.3
Fixed Income						
Barrow Hanley	8.1	2.5	3.2	2.9	--	4.4
Vanguard Short-Term Treasury Index Fund	3.9	--	--	--	--	3.2
Vanguard Total Bond Market Index Fund	*	--	--	--	--	3.0
PIMCO Income Fund	*	--	--	--	--	1.5
GoldenTree Multi-Sector Credit	*	--	--	--	--	1.3
Total Fixed Income	7.0	3.4	3.2	3.5	5.0	5.5
<i>Index: US Fixed Custom</i>	7.2	3.3	3.2	2.9	4.1	5.7

Merced County Employees' Retirement Association

Schedule of Investment Results (Gross of Fees) (Continued)

Real Estate	Current	Annualized				
	Year	3Yrs	5Yrs	7Yrs	10Yrs	Inception
UBS Trumbull	5.5	5.0	7.6	8.3	8.5	8.4
Greenfield GAP VII	9.7	12.3	--	--	--	13.8
Patron V	3.0	15.8	--	--	--	13.8
Carlyle Realty VIII	-29.7	--	--	--	--	-35.9
Taconic CRE Dislocation Fund II	*	--	--	--	--	-0.1
Carmel Partners Investment Fund VII	*	--	--	--	--	-20.4
AG Realty Value Fund X, L.P.	*	--	--	--	--	0.0
Total Real Estate**	5.9	6.9	8.0	8.8	9.3	8.6
Index: NCREIF ODCE	5.5	6.6	8.8	9.5	8.9	7.4
Real Assets						
Proxy Fund						
SSgA	2.0	--	--	--	--	4.6
Private Infrastructure:						
KKR Global II	11.2	10.9	--	--	--	10.5
North Haven Infrastructure II	12.7	12.1	--	--	--	7.6
ISQ Global Infrastructure Fund II	-24.5	--	--	--	--	-24.5
KKR Global Infrastructure Investors III	*	--	--	--	--	-15.4
Total Private Infrastructure**	10.6	11.0	--	--	--	7.5
Index: S&P Global Infrastructure Net TR USD	11.0	7.8	3.9	7.9	--	5.0
Private Natural Resources:						
GSO Energy Opportunities	7.7	17.2	--	--	--	16.9
Taurus Mining	19.8	15.1	--	--	--	18.0
Taurus Mining Annex	28.4	--	--	--	--	29.7
EnCap XI	-14.6	--	--	--	--	-31.5
EnCap IV	4.0	--	--	--	--	-3.4
Total Private Natural Resources**	12.9	16.5	--	--	--	17.5
Index: S&P Global Natural Resources Index TR USD	-4.0	11.4	0.7	3.0	3.5	13.8
Total Real Assets	9.6	7.8	8.4	9.0	--	--
Index: Real Asset Custom	13.5	11.1	8.2	--	--	--

Merced County Employees' Retirement Association

Schedule of Investment Results (Gross of Fees) (Continued)

Private Equity	Current Year	Annualized				
		3Yrs	5Yrs	7Yrs	10Yrs	Inception
Adams St	13.8	14.4	12.5	13.4	13.7	10.9
Invesco IV	-19.1	6.2	6.5	6.0	9.4	8.1
Invesco VI	8.1	13.0	21.0	--	--	11.8
Ocean Ave II	16.5	22.7	12.3	--	--	12.3
Pantheon I	4.0	7.2	4.7	6.7	7.4	4.7
Pantheon II	15.9	15.3	12.2	14.2	--	12.5
Pantheon Secondary	19.5	7.5	3.8	3.1	3.9	5.3
Raven Asset Fund II	8.3	0.8	--	--	--	-0.9
Davidson Kempner Long-Term Distressed	16.2	--	--	--	--	13.4
GTCR Fund XII	-27.8	--	--	--	--	-26.0
Carrick Capital Partners III	*	--	--	--	--	-14.3
Cressey & Company Fund VI	*	--	--	--	--	-15.6
TCV X	*	--	--	--	--	0.0
Total Private Equity**	9.5	12.4	9.9	9.1	10.0	8.3
<i>Index: Thomson Reuters Cambridge Private Equity Index</i>	<i>9.2</i>	<i>16.0</i>	<i>13.1</i>	<i>17.8</i>	--	--
Hedge Funds						
Sculptor (OZ) Domestic II	6.4	10.0	6.4	--	--	6.4
Graham Absolute Return	3.6	--	--	--	--	4.4
Wellington-Archipelago	3.6	--	--	--	--	5.3
KLS Diversified	-1.0	--	--	--	--	2.5
Winton	-1.6	--	--	--	--	1.4
Marshall Wace Eureka	1.5	--	--	--	--	4.9
Silver Point Capital	-0.7	--	--	--	--	2.4
Laurion Capital	*	--	--	--	--	9.3
Taconic Opportunity Fund	*	--	--	--	--	3.7
Total Hedge Funds	2.0	7.5	4.1	--	--	4.1
<i>Index: Hedge Fund Custom</i>	<i>1.2</i>	<i>4.4</i>	<i>2.8</i>	--	--	<i>2.8</i>
Total Fund***	5.4	9.2	6.2	8.7	9.5	8.1
Total Fund Custom Index***	4.7	9.1	6.2	8.6	9.7	6.0

*There is no fiscal year data available; the fund doesn't have a year.

**Performance results lag by a up to a quarter due to financial reporting constraints.

***Using time-weighted rate of return based on market rate return and are presented gross of fees.

Merced County Employees' Retirement Association

Top 10 Largest Holdings by Fair Value

June 30, 2019

PAR		Bonds	Fair Value
4,105,000	U S TREASURY BOND	3.000% 02/15/2049 DD 02/15/19	\$4,508,444
3,555,000	U S TREASURY NOTE	2.375% 08/15/2024 DD 08/15/14	3,659,151
2,375,000	U S TREASURY NOTE	2.000% 02/15/2022 DD 02/15/12	2,391,791
1,085,000	U S TREASURY NOTE	2.625% 02/15/2029 DD 02/15/19	1,144,166
657,437	FHLMC POOL #G60581	3.500% 05/01/2046 DD 05/01/16	683,029
633,117	FNMA POOL #AS8796	3.000% 02/01/2047 DD 01/01/17	640,862
616,218	ALLY AUTO RECVBLS TR 2017-4 CL A	1.750% 12/15/2021 DD 08/12/17	614,365
600,000	JOHN DEERE OWNER TR-2018-B	3.080% 11/15/2022 DD 07/25/18	608,088
556,849	FNMA POOL #CA2373	5.000% 09/01/2048 DD 05/01/19	591,555
494,859	FNMA POOL #BE5068	4.000% 07/01/2046 DD 12/01/16	517,889
			\$15,359,340

A complete list of portfolio holdings is available upon request.

Schedules of Investment Management Fees

June 30, 2019 and 2018

Investment Managers' Fees	2019	2018
Equity Managers		
Domestic	\$502,492	\$520,353
International	782,570	843,957
Fixed Income Managers	271,442	308,470
Alternative Investment Managers	299,856	194,642
Real Estate Managers	361,973	374,215
Total Investment Manager Fees	\$2,218,333	\$2,241,637
Other Investment Service Fees		
Investment Consultant Fees	\$611,000	\$587,081
Investment Custodial Fees	118,768	116,743
Investment Counsel Fees	282,837	316,124
Other Investment Service Fees	23,621	3,794
Total Other Investment Service Fees	1,036,226	1,023,742
Total Investment Managers' Fees and Other Investment Service Fees	\$3,254,559	\$3,265,379

Merced County Employees' Retirement Association

List of Investment Service Providers

June 30, 2019

Fixed Income

Barrow, Hanley, Mewhinney & Strauss, Inc.

Vanguard

PIMCO Investment Management

GoldenTree Asset Management LP

Domestic Equity

Mellon Capital Management

Dimensional Fund Advisors

PanAgora Asset Management, Inc.

International Equity

Mellon Capital Management

Wells Capital Management

Acadian Asset Management

Driehaus Capital Management

Real Asset Proxy

SSgA

Private Equity

Adams Street Partners, LLC

Pantheon Ventures, Inc.

Invesco Private Capital

Ocean Avenue Capital Partners

Raven Capital Management

Davidson Kempner Capital Management LP

GTCR LLC

Carrick Capital Management Company

Cressey & Company LP

Technology Crossover Ventures (TCV)

Real Estate

UBS Global Asset Management

Greenfield Partners

Patron Capital

The Carlyle Group

Taconic Capital Advisors LP

Carmel Partners, Inc

Angelo Gordon

Hedge Fund

Och-Ziff Capital Management

Wellington Alternative Investments

Graham Capital Management

KLS Diversified Asset Management

Winton Group, Ltd

Marshall Wace, LLP

Silver Point Capital, L.P.

Taconic Capital Advisors LP

Laurion Capital Management, LLP

Infrastructure

KKR & Co. L.P.

Morgan Stanley

ISquared Capital

Ardian

BlackRock, Inc

Natural Resources

GSO Energy Select Opportunities Assc, LLC

Taurus Funds Management

EnCap Investments L.P.

Commission Recapture Brokers

ConvergEx Group

Capital Institutional Services, Inc.

Actuarial Section

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Via Electronic Mail

November 11, 2019

Actuarial Certification

This is the Actuary's Certification Letter for the Actuarial Section of the Comprehensive Annual Financial Report (CAFR) for the Merced County Employees' Retirement Association (the Plan) as of June 30, 2019. This letter includes references to two documents produced by Cheiron for the Plan: the Actuarial Valuation Report as of June 30, 2018 (transmitted January 17, 2019) and the GASB 67/68 Report as of June 30, 2019 (transmitted November 8, 2019).

Actuarial Valuation Report as of June 30, 2018

The purpose of the annual Actuarial Valuation Report as of June 30, 2018 is to determine the actuarial funding status of the Plan on that date and to calculate recommended contribution rates for the participating employers and Plan members for the Fiscal Year 2019-2020. The prior review was conducted as of June 30, 2017, and included recommended contribution rates for the Fiscal Year 2018-2019. The rates for Fiscal Year 2018-2019 were updated to reflect the reinstatement of the final average compensation load and the updated administrative expense load.

The funding objective of the Plan is to accumulate sufficient assets over each Member's working life to provide for Plan benefits after termination of employment or retirement. The Board of Retirement is responsible for establishing and maintaining the funding policy of the Plan.

Actuarial funding is based on the Entry Age Normal Cost Method. Under this method, the employer contribution rate provides for current cost (normal cost and expected administrative expenses) plus a level percentage of payroll to amortize the Unfunded Actuarial Liability (UAL). As of the valuation date (June 30, 2018), the amortization period for the June 30, 2013 UAL is 11 years. For the June 30, 2014 valuation, the Board of Retirement adopted a new funding policy for any subsequent unexpected change in the UAL after June 30, 2013. Any new sources of UAL due to actuarial gains and losses or method changes are amortized over a closed 24-year period, with a five-year ramp up period at the beginning of the period, a four-year ramp down at the end of the period, and 15 years of level payments as a percentage of payroll between the ramping periods. Assumption changes will be amortized over a closed 22-year period, with a three-year ramp up period, two-year ramp down period, and 17 years of level payments as a percentage of payroll. The Board also adopted a policy to replace the smoothed actuarial value of assets with the market value of assets for valuation purposes. These new amortization and funding policies in conjunction are a type of policy known as direct rate smoothing.

We prepared the following schedules, which we understand will be included in the Actuarial Section of the CAFR, based on the June 30, 2018 actuarial valuation. All historical information prior to the June 30, 2013 actuarial valuation shown in these schedules is based on information reported by EFI Actuaries, which was acquired by Cheiron in January 2013.

- Statement of Current Actuarial Assumptions and Methods
- Schedule of Active Member Valuation Data
- Schedule of Retirees and Beneficiaries Added to and Removed from Rolls
- Development of 2018 Experience Gain/(Loss) (Analysis of Financial Experience)
- Schedule of Funded Liabilities by Type (formerly the Solvency Test)
- Summary of Plan Provisions

We reviewed the actuarial assumptions shown in the schedules and found them to be reasonably appropriate for use under the Plan. The assumptions used in this report reflect the results of an Experience Study performed by Cheiron covering the period from July 1, 2013 through June 30, 2016, and approved by the Board. The assumptions used in the most recent valuation are intended to produce results that, in the aggregate, reasonably approximate the anticipated future experience of the Plan. The next experience analysis will cover the years through 2019.

We certify that the valuation was performed in accordance with generally accepted actuarial principles and practices. In particular, the assumptions and methods used for funding purposes meet the requirements of the Actuarial Standards of Practice, in particular Standards No. 4, 27, 35, and 44.

GASB 67/68 Report as of June 30, 2019

The purpose of the GASB 67/68 Report as of June 30, 2019, is to provide accounting and financial reporting information under GASB 67 for the Plan and under GASB 68 for the County of Merced and the other participating employers. This report is not appropriate for other purposes, including the measurement of funding requirements for the Plan.

For financial reporting purposes, the Total Pension Liability is based on the June 30, 2018, actuarial valuation updated to the measurement date of June 30, 2019. The beginning of year Total Pension Liability was based on the actuarial valuation as of June 30, 2017, updated to June 30, 2018. The Total Pension Liability measurements as of June 30, 2019 and June 30, 2018 presented in the GASB 67/68 Report were based upon the same data, plan provisions, actuarial methods, and assumptions as were used in the Actuarial Valuation Reports as of June 30, 2018 and June 30, 2017, respectively.

Please refer to our GASB 67 report as of June 30, 2019, for additional information related to the financial reporting of the System. We prepared the following schedules for inclusion in the Financial Section of the CAFR based on the June 30, 2019, GASB 67/68 report:

- Change in Net Pension Liability
- Sensitivity of Net Pension Liability to Changes in Discount Rate
- Schedule of Changes in Net Pension Liability and Related Ratios
- Schedule of Employer Contributions
- Notes to the Schedule of Employer Contributions

We certify that the report was performed in accordance with generally accepted actuarial principles and practices. In particular, the assumptions and methods used for disclosure purposes have been prepared in accordance with our understanding of generally accepted accounting principles as promulgated by the GASB.

Disclaimers

In preparing our reports, we relied on information (some oral and some written) supplied by the Merced County Employees' Retirement Association. This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

Future actuarial measurements may differ significantly from the current measurements due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; and, changes in plan provisions or applicable law.

These reports are for the use of the Plan and their auditor in preparing financial reports in accordance with applicable law and accounting requirements. Any other user of these reports is not an intended user and is considered a third party.

Cheiron's reports were prepared solely for the Plan for the purposes described herein, except that the Plan auditor may rely on these reports solely for the purpose of completing an audit related to the matters herein. They are not intended to benefit any third party, and Cheiron assumes no duty or liability to any such party.

We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein. These reports do not address any contractual or legal issues. We are not attorneys, and our firm does not provide any legal services or advice.

Respectfully Submitted,
Cheiron



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Merced County Employees' Retirement Association

Statement of Current Actuarial Assumptions and Methods

A. Economic Assumptions

The following economic assumptions and non-economic assumptions were recommended by the actuary and adopted by the Board of Retirement as of the most recent actuarial valuation (dated June 30, 2018):

Investment Rate of Return	7.25%, net investment and administrative expenses
Inflation	2.75% per annum
Cost-of-Living Adjustments	For Tier 1, 100% of CPI up to 3% annually with banking, assumed to be 2.40% annually
Asset Valuation Method	Market value of assets
Interest Credited to Active Members' Reserves	Pursuant to MCERA Interest Crediting Policy, adopted September 14, 2017, interest will fall within a range from 0% to the actuarial interest rate
Projected Annual Salary Increases	2.75%, plus service-based rates

B. Non-Economic Assumptions

The date of the last study of the Plan's actual experience was June 30, 2016. The actuary compared the expected number of terminations from active service to the number actually experienced during a 3-year period and based on this comparison and the trends observed; the probabilities of separation were adjusted.

Mortality Tables Used:

1. Service

General Member Males	CalPERS 2009 Healthy Annuitant Mortality Table; projected using MP-2016 from 2009-2037
General Member Females	CalPERS 2009 Healthy Annuitant Mortality Table; projected using MP-2016 from 2009-2037
Safety Members	CalPERS 2009 Industrial Employees Mortality Table; projected using MP-2016 from 2009-2037

2. Disability

General Member Males	CalPERS 2009 Industrial Disability Mortality Table; projected using MP-2016 from 2009-2037
General Member Females	CalPERS 2009 Industrial Disability Mortality Table; projected using MP-2016 from 2009-2037
Safety Members	CalPERS 2009 Industrial Employees Mortality Table; projected using MP-2016 from 2009-2037

3. For Employee Contributions Rate Purposes

General Members	CalPERS 2009 projected using MP-2016 from 2009-2037
Safety Members	CalPERS 2009 projected using MP-2016 from 2009-2037

Merced County Employees' Retirement Association

Statement of Current Actuarial Assumptions and Methods (Continued)

Active Member Mortality	CalPERS 2009 Healthy Annuitant Mortality Table; projected using MP-2016 from 2009-2037
Withdrawal Rates	Based upon the Experience Analysis as of 6/30/2016 (see Appendix B — Statement of Current Actuarial Assumptions.)
Disability Rates	Based upon the Experience Analysis as of 6/30/2016 (see Appendix B — Statement of Current Actuarial Assumptions.)
Service Retirement Rates	Based upon the Experience Analysis as of 6/30/2016 (see Appendix B — Statement of Current Actuarial Assumptions.)
Vested Termination	Rates of vested termination apply to active members who terminate their employment after five years of service and leave their contribution with the plan. Vested terminated General Members are assumed to begin receiving benefits at 59; terminated Safety Members are assumed to begin receiving benefits at age 53. Assumed rates of reciprocity at termination depend on participant type and years of service, and are based on the Experience Analysis as of June 30, 2016.
Family Composition	50% of female General Members, 70% of male General Members, and 90% of Safety Members are assumed to be married at retirement. Male members are assumed to be three years older than their spouses.
Final Average Compensation Load	The final average compensation (FAC) for members projected to receive a service retirement benefit has been increased based on the assumption that members will have elements of pay included in their FAC which are not included in the annual pay provided to the Actuary (Ventura decision pays). The FAC for Tier 1 members has been increased by 6.92% and the FAC for Tier 2 and Tier 3 members by 2.31%.

C. Funding Method

The Entry Age Normal actuarial funding method was used for active employees, whereby the normal cost is computed as the level annual percentage of pay required to fund the retirement benefits between each Member's date of hire and assumed retirement. The Actuarial Liability is the difference between the present value of future benefits and the present value of future normal cost. The Unfunded Actuarial Liability (UAL) is the difference between the Actuarial Liability and the Actuarial Value of Assets.

The UAL is amortized by annual payments. The payments are determined so that they will be a level percentage of pay, assuming payroll increases of 3% per year. The UAL as of June 30, 2013 is being amortized over a closed period of 16 years. Effective with the June 30, 2014 valuation, any new sources of UAL due to actuarial gains and losses or method changes are amortized over a closed 24-year period, with a 5-year ramp up period at the beginning of the period, a 4-year ramp down at the end of the period, and 15 years of level payments as a percentage of payroll. Assumption changes will be amortized over a closed 22-year period, with a 3-year ramp up period, 2-year ramp down period, and 17 years of level payments as a percentage of payroll.

D. Plan Description

A summary of plan provisions is located in Note 1 of the **NOTES TO BASIC FINANCIAL STATEMENTS**.

Merced County Employees' Retirement Association

Probabilities of Separation from Active Service

GENERAL MEMBERS

Service Retirement – Male (by Service)			
Age	10-19 Yrs	20-29 Yrs	30+ Yrs
50	5.00%	10.00%	7.50%
55	10.00%	12.50%	27.00%
60	20.00%	25.00%	37.50%
65	35.00%	50.00%	40.00%
70	100.00%	100.00%	100.00%

Service	Withdrawals	Transfers	Vested Terminations
0-4	90.0%	10.0%	0.0%
5-14	40.0%	10.0%	50.0%
15+	10.0%	10.0%	80.0%

Service Retirement – Female (by Service)			
Age	10-19 Yrs	20-29 Yrs	30+ Yrs
50	2.50%	7.50%	25.00%
55	12.00%	25.00%	35.00%
60	15.00%	30.00%	35.00%
65	40.00%	50.00%	50.00%
70	100.00%	100.00%	100.00%

Age	Service-Connected Disability		Non-Service Connected Disability	
	Female	Male	Female	Male
20	0.0040%	0.0027%	0.0000%	0.0000%
30	0.0115%	0.0133%	0.0067%	0.0533%
40	0.0190%	0.0320%	0.0133%	0.0867%
50	0.0600%	0.0640%	0.0600%	0.1600%
60	0.1575%	0.1120%	0.1533%	0.2800%
65	0.0000%	0.0000%	0.0000%	0.0000%

SAFETY MEMBERS

Service Retirement (by Service)		
Age	10-19 Yrs	20+ Yrs
40-44	0.00%	3.10%
45-49	0.00%	7.60%
50	15.00%	32.90%
51-54	12.80%	32.90%
55-59	25.00%	32.90%
60+	100.00%	100.00%

Age	Active Member Mortality	
	Female	Male
20	0.0201%	0.0273%
30	0.0377%	0.0609%
40	0.0643%	0.0861%
50	0.1132%	0.1558%
60	0.2384%	0.4020%

Service	Withdrawals	Vested Terminations
0-4	90.0%	0.0%
5+	30.0%	45.0%

Age	Service Connected Disability	Non-Service Connected Disability
	(All)	(All)
20	0.0000%	0.0050%
30	0.2380%	0.0100%
40	0.5500%	0.0200%
50	0.9230%	0.0400%
60	3.0120%	0.1000%
65	3.6385%	0.1000%

RATES OF TERMINATION

Years of Service	General Male	General Female	Safety
0	22.5%	12.0%	20.8%
5	8.2%	7.5%	4.6%
10	4.5%	3.6%	4.6%
15	4.5%	3.0%	2.5%

Years of Service	General Male	General Female	Safety
20	4.5%	3.0%	0.0%
25	4.5%	3.0%	0.0%
30	0.0%	0.0%	0.0%

Note: Information compiled from Actuarial Report Prepared by Cheiron, Inc. dated June 30, 2018.

Merced County Employees' Retirement Association

Schedule of Active Member Valuation Data

Valuation Date	Plan Type	Number	Annual Salary	Average Annual Salary	% Increase in Average Annual Salary
6/30/2009	General	1,848	\$99,266,589	\$53,716	12.02%
	Safety	342	\$19,363,697	\$56,619	12.00%
	Total	2,190	\$118,630,286	\$54,169	12.05%
6/30/2010	General	1,708	\$94,915,436	\$55,571	3.45%
	Safety	330	\$19,692,515	\$59,674	5.40%
	Total	2,038	\$114,607,951	\$56,236	3.81%
6/30/2011	General	1,659	\$94,976,978	\$57,250	3.02%
	Safety	321	\$19,768,859	\$61,585	3.20%
	Total	1,980	\$114,745,837	\$57,952	3.05%
6/30/2012	General	1,596	\$90,706,280	\$56,834	-0.73%
	Safety	305	\$19,145,091	\$62,771	1.93%
	Total	1,901	\$109,851,371	\$57,786	-0.29%
6/30/2013	General	1,604	\$91,737,348	\$57,193	0.63%
	Safety	295	\$18,699,145	\$63,387	0.98%
	Total	1,899	\$110,436,493	\$58,155	0.64%
6/30/2014	General	1,624	\$91,704,083	\$56,468	-1.27%
	Safety	300	\$18,620,870	\$62,070	-2.08%
	Total	1,924	\$110,324,953	\$57,341	-1.40%
6/30/2015	General	1,664	\$93,938,857	\$56,454	-0.03%
	Safety	298	\$18,397,233	\$61,736	-0.54%
	Total	1,962	\$112,336,090	\$57,256	-0.15%
6/30/2016	General	1,729	\$97,337,917	\$56,297	-0.28%
	Safety	311	\$19,394,922	\$62,363	1.02%
	Total	2,040	\$116,732,839	\$57,222	-0.06%
6/30/2017	General	1,783	\$102,498,328	\$57,486	2.11%
	Safety	313	\$20,136,323	\$64,333	3.16%
	Total	2,096	\$122,634,651	\$58,509	2.25%
6/30/2018	General	1,827	\$108,067,248	\$59,150	2.89%
	Safety	322	\$22,018,174	\$68,379	6.29%
	Total	2,149	\$130,085,422	\$60,533	3.46%

Note: Information compiled from Actuarial Report prepared by Cheiron, Inc. dated June 30, 2018. The data differs from the membership data in the notes to the financial statements due to timing differences and actuary changes in rounding of data.

Merced County Employees' Retirement Association

Schedule of Retirements and Beneficiaries Added to and Removed from Retiree Payroll For Fiscal Years Ended June 30

Year	Beginning of Year	Added During Year	Allowances Added (\$000)	Removed During Year	Allowances Removed (\$000)	End of Year	Retiree Payroll (\$000)	% Increase in Retiree Payroll	Average Annual Allowances
2009	1,658	105	\$3,403	52	\$813	1,711	\$37,748	9.09%	\$22,062
2010	1,711	171	\$6,098	56	\$981	1,826	\$43,653	15.65%	\$23,907
2011	1,826	103	\$2,627	44	\$781	1,885	\$46,177	5.78%	\$24,465
2012	1,885	175	\$6,485	64	\$960	1,996	\$52,888	14.53%	\$26,497
2013	1,996	103	\$3,029	49	\$856	2,050	\$56,048	5.98%	\$27,340
2014	2,050	116	\$3,950	31	\$591	2,135	\$60,297	7.58%	\$28,242
2015	2,135	100	\$2,509	35	\$720	2,200	\$63,254	4.90%	\$28,752
2016	2,200	68	\$1,716	34	\$946	2,234	\$65,506	3.56%	\$29,322
2017	2,234	85	\$2,283	56	\$1,023	2,263	\$68,476	4.53%	\$30,259
2018	2,263	120	\$3,617	73	\$1,672	2,310	\$72,003	5.15%	\$31,170

Note: The data differs from the membership data in the notes to the basic financial statements due to timing differences and rounding of data.

Schedule of Funded Liabilities by Type For Fiscal Years Ended June 30 (Dollar Amounts in Thousands)

Actuarial Accrued Liabilities (AAL) For								
Valuation Date	1	2	3	Actuarial Liabilities	Valuation Assets	Portion of Accrued Liabilities Covered by Reported Assets		
	Active Member Contributions	Retirees and Beneficiaries	Active Members Employer Portion			1	2	3
	2009	\$65,126	\$448,231			\$296,324	\$809,681	\$483,145
2010	\$64,917	\$532,695	\$333,220	\$930,832	\$509,561	100%	83%	0%
2011	\$65,723	\$558,483	\$309,711	\$933,917	\$523,980	100%	82%	0%
2012	\$66,407	\$632,319	\$276,882	\$975,608	\$528,728	100%	73%	0%
2013	\$73,311	\$694,137	\$297,850	\$1,065,298	\$547,264	100%	68%	0%
2014	\$75,582	\$739,428	\$281,231	\$1,096,241	\$657,325	100%	79%	0%
2015	\$78,078	\$765,738	\$287,365	\$1,131,181	\$672,319	100%	78%	0%
2016	\$81,880	\$804,658	\$314,657	\$1,201,195	\$670,016	100%	73%	0%
2017	\$85,150	\$834,643	\$339,909	\$1,259,702	\$753,769	100%	80%	0%
2018	\$86,585	\$871,095	\$344,239	\$1,301,919	\$826,654	100%	85%	0%

Note: Information compiled from Actuarial Report prepared by Cheiron, Inc. dated June 30, 2018.

Merced County Employees' Retirement Association

Actuarial Analysis of Financial Experience

For Fiscal Years Ended June 30

(Dollar Amounts in Thousands)

Plan Year Ended	Actuarial (Gains)/Losses			Changes in Plan Provisions	Changes in Assumptions/Methods	Total (Gains)/Loss
	Asset Sources	Liability Sources	Total			
2009	\$66,987	\$23,892	\$90,879	N/A	N/A	\$90,879
2010	\$16,151	\$8,100	\$24,251	N/A	\$63,410	\$87,661
2011	\$30,955	\$(13,824)	\$17,131	N/A	\$(12,918)	\$4,213
2012	\$40,054	\$11,401	\$51,455	N/A	\$(16,069)	\$35,386
2013	\$20,749	\$4,199	\$24,948	N/A	\$49,294	\$74,242
2014	\$(22,058)	\$(12,533)	\$(34,591)	N/A	\$(36,803)	\$(71,394)
2015	\$31,459	\$(5,096)	\$26,363	N/A	\$7,636	\$33,999
2016	\$52,420	\$(8,327)	\$44,093	N/A	\$41,488	\$85,581
2017	\$(34,498)	\$2,720	\$(31,778)	N/A	\$18,639	\$(13,139)
2018	\$(15,963)	1,158	\$(14,805)	N/A	\$576	\$(14,229)

Schedule of Funding Progress

For Fiscal Years Ended June 30

(Dollar Amounts in Thousands)

Actuarial Valuation Date	Valuation Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL)	Funded Ratio	Active Member Projected Payroll	Unfunded AAL as a % of Covered Payroll
2009	\$483,145	\$809,681	\$326,536	59.7%	\$114,984	284.0%
2010	\$509,561	\$930,832	\$421,271	54.7%	\$115,384	365.1%
2011	\$523,980	\$933,917	\$409,937	56.1%	\$111,342	368.2%
2012	\$528,728	\$975,608	\$446,880	54.2%	\$106,581	419.3%
2013	\$547,264	\$1,065,298	\$518,034	51.4%	\$115,983	446.6%
2014	\$657,325*	\$1,096,241	\$438,916	60.0%	\$115,939	378.6%
2015	\$672,319*	\$1,131,181	\$458,862	59.4%	\$117,822	389.5%
2016	\$670,016*	\$1,201,195	\$531,179	55.8%	\$123,018	431.8%
2017	\$753,769*	\$1,259,702	\$505,933	59.8%	\$129,624	390.3%
2018	\$826,654*	\$1,301,919	\$475,265	63.5%	\$137,668	345.2%

*Reflects change in asset valuation methodology from valuation value of assets to market value of assets effective for the 2014 actuarial valuation.

Note: Information compiled from Actuarial Report prepared by Cheiron, Inc. dated June 30, 2018.

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Merced County Employees' Retirement Association

The Statistical Section presents information pertaining to MCERA's operations on a multi-year basis. The financial and operating information provides contextual data for MCERA's fiduciary net position, benefits, refunds, and different types of retirement benefits. The data presented in this section was produced and compiled by the Association.

Additions by Source

Fiscal Year Ended	Plan Member Contributions	Employer Contributions	Employer % of Covered Payroll	Net Investment Income and Other Income (Loss)	Total
6/30/2010	\$ 9,864,161	\$29,136,704	24.46%	\$ 48,772,246	\$ 87,773,111
6/30/2011	\$ 9,754,849	\$36,662,121	31.26%	\$ 96,031,519	\$142,448,489
6/30/2012	\$10,416,301	\$40,262,881	36.09%	\$ (7,039,276)	\$ 43,639,906
6/30/2013	\$ 9,927,749	\$43,783,663	40.03%	\$ 61,083,399	\$114,794,811
6/30/2014	\$ 9,642,819	\$48,032,338	43.40%	\$ 96,219,056	\$153,894,213
6/30/2015	\$ 8,945,316	\$52,005,656	47.22%	\$ 19,318,849	\$ 80,269,821
6/30/2016	\$ 9,042,663	\$56,617,088	49.50%	\$ (388,209)	\$ 65,271,542
6/30/2017	\$ 9,384,621	\$60,349,189	50.45%	\$ 83,097,416	\$152,831,226
6/30/2018	\$10,441,876	\$64,757,288	51.11%	\$ 70,689,084	\$145,888,248
6/30/2019	\$10,695,680	\$66,586,464	50.69%	\$ 39,728,950	\$117,011,094

Deductions by Type

Fiscal Year Ended	Benefits	Administrative Expenses	Actuarial Expense	Separation Refunds	401(h) Distribution to County	Total
6/30/10	\$40,929,109	\$1,170,605	\$ 66,549	\$ 673,160	\$ 850,000	\$43,689,423
6/30/11	\$45,022,104	\$1,189,030	\$ 138,200	\$ 766,692	\$ 650,000	\$47,766,026
6/30/12	\$49,839,653	\$1,180,083	\$ 63,312	\$ 1,051,526	\$ 733,590	\$52,868,164
6/30/13	\$54,257,547	\$1,496,338	\$ 71,402	\$ 1,082,050	\$ -	\$56,907,337
6/30/14	\$57,338,930	\$1,434,671	\$ 112,676	\$ 703,091	\$ -	\$59,589,368
6/30/15	\$61,780,089	\$2,197,281	\$ 126,165	\$ 1,171,835	\$ -	\$65,275,370
6/30/16	\$63,928,672	\$2,416,563	\$ 76,121	\$ 1,153,731	\$ -	\$67,575,087
6/30/17	\$66,116,108	\$1,966,898	\$ 206,509	\$ 788,207	\$ -	\$69,077,722
6/30/18	\$69,836,223	\$2,177,186	\$ 106,210	\$ 883,987	\$ -	\$73,003,606
6/30/19	\$74,238,692	\$2,271,779	\$ 79,326	\$ 571,983	\$ -	\$77,161,780

Merced County Employees' Retirement Association

Schedules of Changes in Fiduciary Net Position

(Dollar Amount in Thousands)

Additions	6/30/2019	6/30/2018	6/30/2017	6/30/2016	6/30/2015
Plan members contributions	\$10,696	\$10,442	\$9,385	\$9,043	\$8,945
Employer contributions	66,586	64,757	60,349	56,617	52,005
Net investment income/(loss)	39,729	70,689	83,097	(388)	19,319
Total additions	117,011	145,888	152,831	65,272	80,269
Deductions					
Benefits paid	74,239	69,836	66,116	63,929	61,780
Administrative expenses	2,272	2,177	1,966	2,417	2,197
Actuarial expenses	79	106	207	76	126
Refunds	572	884	788	1,154	1,172
401(h) distribution	-	-	-	-	-
Total deductions	77,162	73,003	69,077	67,576	65,275
Change in fiduciary net position	39,849	72,885	83,754	(2,304)	14,994
Net position restricted for pensions at beginning of the year	826,654	753,769	670,015	672,319	657,325
Net position restricted for pensions at end of the year	\$866,503	\$826,654	\$753,769	\$670,015	\$672,319
Additions	6/30/2014	6/30/2013	6/30/2012	6/30/2011	6/30/2010
Plan members contributions	\$9,643	\$9,928	\$10,416	\$9,754	\$9,864
Employer contributions	48,032	43,784	40,263	36,662	29,137
Net investment income/(loss)	96,219	61,083	(7,039)	96,032	48,772
Total additions	153,894	114,795	43,640	142,448	87,773
Deductions					
Benefits paid	57,339	54,258	49,839	45,022	40,929
Administrative expenses	1,435	1,496	1,180	767	673
Actuarial expenses	112	71	63	138	67
Refunds	703	1,082	1,052	1,189	1,171
401(h) distribution	-	-	734	650	850
Total deductions	59,589	56,907	52,868	47,766	43,690
Change in fiduciary net position	94,305	57,888	(9,228)	94,682	44,083
Net position restricted for pensions at beginning of the year	563,020	505,132	514,360	419,678	375,595
Net position restricted for pensions at end of the year	\$657,325	\$563,020	\$505,132	\$514,360	\$419,678

Merced County Employees' Retirement Association

Schedules of Benefit Expenses by Type

(Total amount in Thousands)

	2019**	2018**	2017**	2016**	2015**	2014*	2013*	2012*	2011*	2010
Service Retirement										
General	\$54,136	\$50,551	\$47,522	\$46,126	\$44,722	\$41,442	\$39,447	\$35,897	\$31,770	\$28,665
Safety	9,336	8,652	8,059	7,761	7,854	7,196	6,679	6,209	5,845	5,404
Total	\$63,472	\$59,203	\$55,581	\$53,887	\$52,576	\$48,638	\$46,126	\$42,106	\$37,615	\$34,069
Disability Retirement										
General	\$2,139	\$2,032	\$2,117	\$1,953	\$1,842	\$2,600	\$2,489	\$2,230	\$2,159	\$2,154
Safety	3,100	2,976	2,759	2,604	2,623	3,005	2,898	2,738	2,522	2,424
Total	\$5,239	\$5,008	\$4,876	\$4,557	\$4,465	\$5,605	\$5,387	\$4,968	\$4,681	\$4,578
Beneficiary/Survivor										
General	\$3,786	\$3,808	\$3,767	\$3,667	\$3,327	\$2,346	\$2,030	\$2,035	\$2,049	\$1,762
Safety	1,608	1,627	1,729	1,650	1,258	610	562	579	521	412
Total	\$5,394	\$5,435	\$5,496	\$5,317	\$4,585	\$2,956	\$2,592	\$2,614	\$2,570	\$2,174
Total Payroll Expense										
General	\$60,061	\$56,391	\$53,406	\$51,746	\$49,891	\$46,387	\$43,966	\$40,162	\$35,978	\$32,581
Safety	14,044	13,255	12,547	12,015	11,735	10,811	10,139	9,526	8,887	8,240
Total	\$74,105	\$69,646	\$65,953	\$63,761	\$61,626	\$57,198	\$54,105	\$49,688	\$44,865	\$40,821
Death Benefits										
General	\$99	\$102	\$111	\$129	\$84	\$96	\$96	\$117	\$81	\$99
Safety	24	18	12	15	18	18	12	9	-	9
Total	\$123	\$120	\$123	\$144	\$102	\$114	\$108	\$126	\$81	\$108
Separation Refund Expense										
General	\$446	\$643	\$674	\$978	\$1,033	\$582	\$985	\$861	\$729	\$599
Safety	126	241	114	176	139	121	97	190	37	74
Total	\$572	\$884	\$788	\$1,154	\$1,172	\$703	\$1,082	\$1,051	\$766	\$673
Active Death Expense										
General	\$11	\$70	\$40	\$24	\$51	\$29	\$44	\$26	\$82	\$ -
Safety	-	-	-	-	-	-	-	-	-	-
Total	\$11	\$70	\$40	\$24	\$51	\$29	\$44	\$26	\$82	\$ -

*In 2011, MCERA changed death refund expense to active death expense to better identify expense for active member death.

**During the 2015 fiscal year, MCERA converted to the CPAS System. Because of differences in handling data, beneficiaries of disability retiree decedents are now grouped with Beneficiary/Survivors.

Merced County Employees' Retirement Association

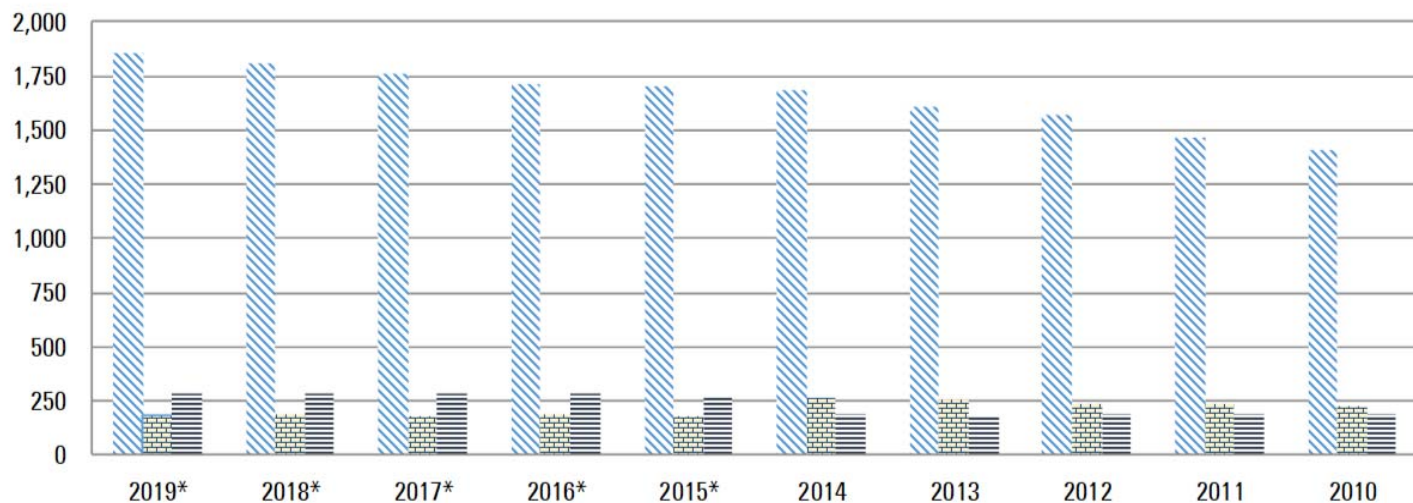
Schedule of Retired Members by Type of Benefit

(Summary of Monthly Allowances Being Paid - As of June 30, 2019)

Type of Benefit	General Members		Safety Members		Total	
	Number	Average Monthly Allowance	Number	Average Monthly Allowance	Number	Average Monthly Allowance
Service Retirement	1,662	\$2,818	197	\$3,938	1,859	\$2,937
Disability	95	\$1,853	93	\$2,917	188	\$2,380
Beneficiary/Survivor	230	\$1,424	54	\$2,464	284	\$1,622
Total Retired Members	1,987	\$2,610	344	\$3,430	2,331	\$2,731

This schedule excludes separation refunds and death refunds.

Ten Year Structure of Retiree Membership History



▨ Service Retirements
 ▨ Disability Retirements
 ▨ Beneficiaries and Survivors

	2019*	2018*	2017*	2016*	2015*	2014	2013	2012	2011	2010
Service Retirements	1,859	1,806	1,757	1,713	1,706	1,685	1,613	1,570	1,463	1,411
Disability Retirements	188	185	183	184	180	260	257	236	233	230
Beneficiaries and Survivors	284	283	285	286	276	187	176	192	187	185
Total	2,331	2,274	2,225	2,183	2,162	2,132	2,046	1,998	1,883	1,826

*During the 2014-2015 fiscal year, MCERA migrated to a new pension administration system. Beneficiaries of disability retirees are no longer classified as disability retirements. This has resulted in a re-proportioning of these numbers.

Merced County Employees' Retirement Association

Summary of Retired Membership

For Fiscal Years Ended June 30

(Basic Annual and Total Annual Allowance Dollars in Thousands)

	2019*	2018*	2017*	2016*	2015*	2014	2013	2012	2011	2010
General										
Number	1,987	1,937	1,895	1,860	1,848	1,810	1,730	1,693	1,590	1,545
Basic annual allowance	\$46,562	\$43,874	\$41,930	\$41,265	\$40,316	\$37,646	\$35,885	\$32,933	\$29,232	\$26,331
Average basic monthly allowance	\$1,953	\$1,888	\$1,844	\$1,849	\$1,818	\$1,733	\$1,729	\$1,621	\$1,532	\$1,420
Total annual allowance**	\$60,061	\$56,391	\$53,406	\$51,746	\$49,891	\$46,387	\$43,966	\$40,161	\$35,978	\$32,561
Average total monthly allowance	\$2,519	\$2,426	\$2,349	\$2,318	\$2,250	\$2,136	\$2,118	\$1,976	\$1,886	\$1,756
Safety										
Number	344	337	330	323	314	322	316	305	293	281
Basic annual allowance	\$10,302	\$9,783	\$9,347	\$9,086	\$8,996	\$8,279	\$7,791	\$7,379	\$6,863	\$6,401
Average basic monthly allowance	\$2,496	\$2,419	\$2,360	\$2,344	\$2,387	\$2,143	\$2,054	\$2,016	\$1,952	\$1,898
Total annual allowance**	\$14,044	\$13,255	\$12,547	\$12,015	\$11,735	\$10,811	\$10,139	\$9,527	\$8,887	\$8,240
Average total monthly allowance	\$3,402	\$3,278	\$3,168	\$3,100	\$3,114	\$2,798	\$2,674	\$2,603	\$2,528	\$2,444
Total										
Number	2,331	2,274	2,225	2,183	2,162	2,132	2,046	1,998	1,883	1,826
Basic annual allowance	\$56,864	\$53,657	\$51,277	\$50,351	\$49,312	\$45,925	\$43,676	\$40,312	\$36,095	\$32,732
Average basic monthly allowance	\$2,033	\$1,966	\$1,920	\$1,922	\$1,901	\$1,795	\$1,779	\$1,681	\$1,597	\$1,494
Total annual allowance**	\$74,105	\$69,646	\$65,953	\$63,761	\$61,626	\$57,198	\$54,105	\$49,688	\$44,865	\$40,801
Average total monthly allowance	\$2,649	\$2,552	\$2,470	\$2,434	\$2,375	\$2,236	\$2,204	\$2,072	\$1,986	\$1,862

*As of 2015, divorcees will be excluded from Membership data as they are technically not members and only represent a party to a single split benefit.

**Total Annual Allowance includes COLA, and partial monthly payment/one-time catch up payment. Excludes death refunds, lump sum death benefits and separation refunds.

Merced County Employees' Retirement Association

Retired Members by Type of Retirement

As of June 30, 2019

Amount of Monthly Benefit	Number of Members	Type of Retirement*							Option Selected**					
		1	2	3	4	5	6	7	U	1	2	3	4	SD
1-250	84	21	33	19	0	9	2	0	51	6	18	9	0	0
251-500	135	38	65	21	3	3	2	3	100	5	24	3	0	3
501-750	182	58	83	26	5	4	0	6	141	7	26	3	0	5
751-1,000	184	56	86	24	5	0	7	6	143	11	21	4	0	5
1,001-1,250	172	58	73	30	5	2	3	1	137	5	22	3	0	5
1,251-1,500	171	55	78	13	1	6	17	1	140	1	21	7	1	1
1,501-1,750	131	49	52	12	0	9	7	2	115	3	9	4	0	0
1,751-2,000	129	53	41	10	2	13	4	6	106	0	15	5	1	2
Over 2,000	1,143	529	431	53	6	96	4	24	986	33	88	22	8	6
	2,331	917	942	208	27	142	46	49	1,919	71	244	60	10	27

*Type of Retirement:

- 1-Normal retirement for age and service
- 2-Early retirement
- 3-Beneficiary payment, normal or early retirement
- 4-Beneficiary payment, death in service
- 5-Duty disability retirement
- 6-Non-duty disability retirement
- 7-Beneficiary payment, disability retirement

**Option Selected:

Unmodified Plan-Beneficiary receives 60% continuance

The following options reduce the retired member's monthly Benefit:

- Option 1-Beneficiary receives lump sum or member's reduced allowance
- Option 2-Beneficiary receives 100% of member's reduced allowance
- Option 3-Beneficiary receives 50% of member's reduced allowance
- Option 4-Multiple beneficiaries receive a designated percentage of a reduced allowance

The monthly benefit for the following option varies dependent upon multiple factors:

- Option SD-Pre-retirement death in service

Merced County Employees' Retirement Association

Retired Members Average Benefit Payments

Last Ten Fiscal Years

Retirement Effective Dates	Years of Credited Service						
	0-5	5-10	10-15	15-20	20-25	25-30	30+
Period 7/1/2018 to 6/30/2019							
Average monthly benefit	\$473	\$1,026	\$1,930	\$3,352	\$4,144	\$6,511	\$6,540
Average final average salary	\$7,581	\$6,545	\$5,392	\$6,982	\$6,792	\$8,710	\$7,142
Number of retired members	12	9	18	22	14	12	12
Period 7/1/2017 to 6/30/2018							
Average monthly benefit	\$309	\$1,421	\$1,432	\$2,240	\$4,202	\$4,691	\$4,969
Average final average salary	\$6,936	\$5,742	\$4,324	\$4,786	\$6,713	\$5,943	\$5,639
Number of retired members	6	19	16	21	17	11	11
Period 7/1/2016 to 6/30/2017							
Average monthly benefit	\$574	\$1,044	\$1,852	\$1,657	\$3,490	\$4,866	\$7,294
Average final average salary	\$9,068	\$6,544	\$5,327	\$4,073	\$5,618	\$6,112	\$8,780
Number of retired members	11	15	19	18	13	6	3
Period 7/1/2015 to 6/30/2016							
Average monthly benefit	\$212	\$1,273	\$2,067	\$3,227	\$2,997	\$3,724	\$4,669
Average final average salary	\$7,449	\$5,585	\$6,322	\$6,299	\$4,703	\$4,750	\$4,875
Number of retired members	8	15	19	11	4	4	2
Period 7/1/2014 to 6/30/2015							
Average monthly benefit	\$448	\$1,083	\$1,650	\$2,434	\$2,981	\$3,438	\$8,150
Average final average salary	\$7,700	\$5,994	\$5,007	\$5,401	\$5,303	\$4,903	\$8,849
Number of retired members	10	11	28	17	14	5	3
Period 7/1/2013 to 6/30/2014							
Average monthly benefit	\$426	\$1,121	\$1,634	\$2,714	\$4,018	\$5,013	\$5,992
Average final average salary	\$8,946	\$4,750	\$4,587	\$5,441	\$6,527	\$6,566	\$7,088
Number of retired members	7	17	22	16	15	13	13
Period 7/1/2012 to 6/30/2013							
Average monthly benefit	\$467	\$1,240	\$1,750	\$2,183	\$3,895	\$4,201	\$6,431
Average final average salary	\$8,663	\$6,466	\$5,215	\$4,591	\$7,293	\$5,695	\$7,463
Number of retired members	4	11	24	15	9	8	6
Period 7/1/2011 to 6/30/2012							
Average monthly benefit	\$612	\$899	\$1,359	\$2,476	\$3,958	\$4,683	\$6,166
Average final average salary	\$9,507	\$4,097	\$3,953	\$5,148	\$6,270	\$6,257	\$7,060
Number of retired members	5	9	26	27	36	15	24
Period 7/1/2010 to 6/30/2011							
Average monthly benefit	\$805	\$926	\$1,120	\$2,171	\$3,693	\$4,289	\$8,010
Average final average salary	\$8,545	\$5,111	\$4,042	\$4,657	\$5,715	\$5,687	\$8,180
Number of retired members	8	21	23	8	18	5	5
Period 7/1/2009 to 6/30/2010							
Average monthly benefit	\$359	\$1,247	\$1,354	\$2,831	\$4,149	\$4,563	\$5,294
Average final average salary	\$7,068	\$6,819	\$4,167	\$5,713	\$6,780	\$6,148	\$6,112
Number of retired members	7	14	25	24	31	15	22

Merced County Employees' Retirement Association
Participating Employers and Active Members
Last Ten Fiscal Years

County of Merced	2019	2018	2017	2016	2015	2014	2013	2012	2011	2010
General members	1,736	1,690	1,665	1,596	1,542	1,490	1,478	1,453	1,521	1,575
Safety members	318	320	320	311	300	298	294	306	322	331
Total County of Merced	2,054	2,010	1,985	1,907	1,842	1,788	1,772	1,759	1,843	1,906
Percentage of membership	93.96%	93.88%	93.68%	93.39%	93.65%	93.56%	93.21%	92.53%	92.85%	93.07%
Participating employers										
Merced Cemetery District	-	1	1	1	1	1	1	2	2	2
Percentage of membership	-	0.05%	0.05%	0.05%	0.05%	0.05%	0.05%	0.11%	0.10%	0.09%
Transit Joint Powers Authority	-	-	-	-	-	-	-	1	3	3
Percentage of membership	-	-	-	-	-	-	-	0.05%	0.15%	0.14%
Merced Superior Court	132	130	133	129	118	112	115	126	137	137
Percentage of membership	6.04%	6.07%	6.28%	6.32%	6.00%	5.86%	6.05%	6.63%	6.90%	6.33%
Regional Waste Mgt Authority	-	-	-	5	6	10	13	13	-	-
Percentage of membership	-	-	-	0.24%	0.31%	0.52%	0.68%	0.68%	-	-
Total Active Membership										
General	1,868	1,821	1,799	1,731	1,667	1,613	1,607	1,595	1,663	1,717
Safety	318	320	320	311	300	298	294	306	322	331
Total	2,186	2,141	2,119	2,042	1,967	1,911	1,901	1,901	1,985	2,048

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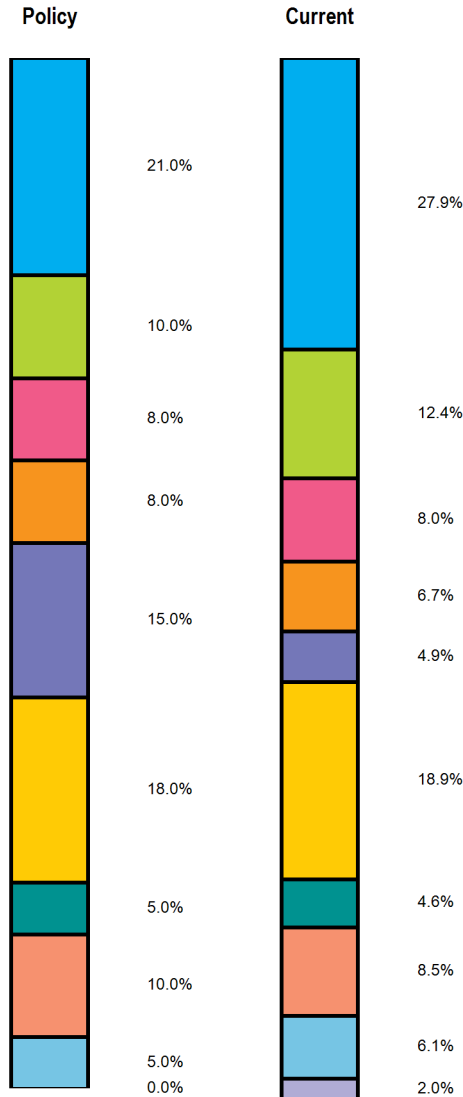


Merced County Employees' Retirement Association
3199 M Street
Merced, CA 95326
209.726.2724
www.co.merced.ca.us/2145/retirement

Merced County Employees' Retirement Association

As of November 30, 2019

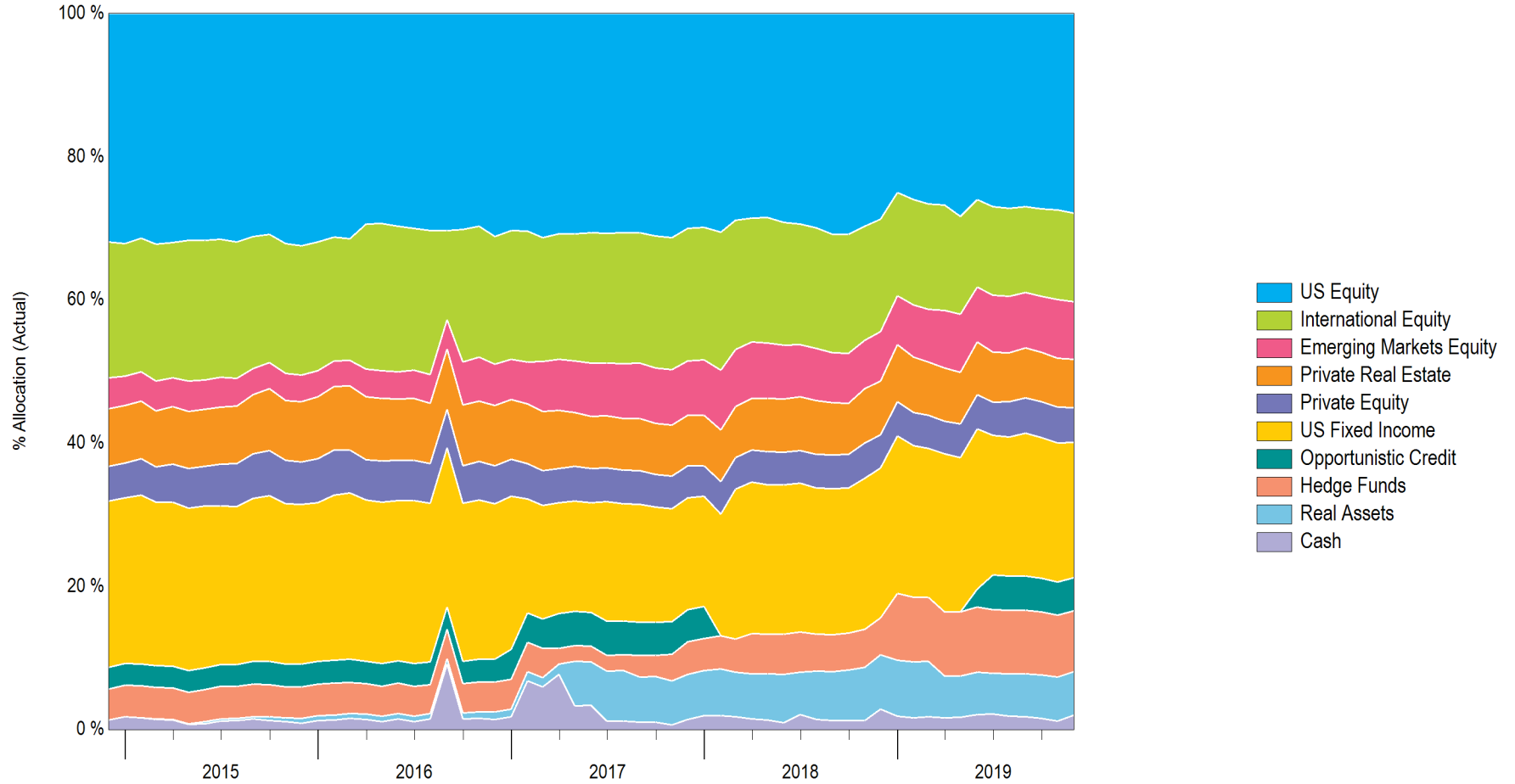
Performance Review



Allocation vs. Targets and Policy							
	Current Balance	Current Allocation	Policy	Difference	Policy Range	Within IPS Range?	
US Equity	\$250,629,492	27.9%	21.0%	6.9%	15.0% - 26.0%	No	
International Equity	\$111,482,229	12.4%	10.0%	2.4%	5.0% - 15.0%	Yes	
Emerging Markets Equity	\$71,880,657	8.0%	8.0%	0.0%	4.0% - 12.0%	Yes	
Private Real Estate	\$60,510,085	6.7%	8.0%	-1.3%	6.0% - 10.0%	Yes	
Private Equity	\$43,741,349	4.9%	15.0%	-10.1%	5.0% - 20.0%	No	
US Fixed Income	\$170,052,901	18.9%	18.0%	0.9%	13.0% - 23.0%	Yes	
Opportunistic Credit	\$41,376,822	4.6%	5.0%	-0.4%	3.0% - 7.0%	Yes	
Hedge Funds	\$76,524,274	8.5%	10.0%	-1.5%	5.0% - 15.0%	Yes	
Real Assets	\$54,450,529	6.1%	5.0%	1.1%	3.0% - 7.0%	Yes	
Cash	\$18,209,818	2.0%	0.0%	2.0%	0.0% - 5.0%	Yes	
Total	\$898,858,154	100.0%	100.0%				

Cash range displayed for illustrative purposes only.

Asset Allocation History
5 Years Ending November 30, 2019



Asset Class Performance Summary												
	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund (Net)*	898,858,154	100.0	1.3	2.9	3.6	14.9	10.6	9.1	6.5	8.2	8.0	Dec-94
Total Fund (Gross)*			1.3	3.0	3.7	15.1	10.9	9.3	6.8	8.5	8.1	
<i>Policy Index</i>			1.0	2.4	2.4	13.3	9.5	8.9	6.6	8.7	6.0	Dec-94
Total Fund w/o Alternatives (Net)	645,422,100	71.8	1.7	3.9	4.8	19.0	13.3	10.1	6.7	--	--	Dec-94
Total Fund w/o Alternatives (Gross)			1.8	4.0	4.9	19.3	13.5	10.3	7.0	--	--	
<i>Policy Index w/o AI</i>			1.6	3.8	3.9	17.2	12.0	9.6	6.5	--	--	Dec-94
US Equity (Net)	250,629,492	27.9	3.7	6.0	7.6	29.0	16.3	14.7	11.4	13.7	10.2	Dec-94
US Equity (Gross)			3.8	6.1	7.7	29.3	16.6	15.0	11.6	13.9	10.3	
<i>80% R1000 / 20% R2000</i>			3.8	6.2	6.8	26.6	14.4	13.5	10.3	13.2	10.0	Dec-94
International Equity (Net)	183,362,886	20.4	1.1	5.4	4.3	19.5	14.0	10.1	4.2	5.7	5.3	Dec-98
International Equity (Gross)			1.1	5.5	4.5	20.0	14.5	10.5	4.7	6.2	5.5	
<i>International Equity Custom</i>			0.6	4.5	2.0	15.1	10.3	9.7	4.3	5.2	4.3	Dec-98
Developed International Equity (Net)	111,482,229	12.4	1.5	5.2	4.1	19.0	12.9	9.7	4.1	5.9	3.5	Jan-08
Developed International Equity (Gross)			1.5	5.3	4.1	19.1	13.0	9.9	4.4	6.4	3.9	
<i>MSCI EAFE</i>			1.1	4.8	3.6	18.2	12.4	9.6	4.3	5.3	2.6	Jan-08
Emerging Markets Equity (Net)	71,880,657	8.0	0.4	5.7	4.8	20.9	16.9	11.0	5.2	--	3.9	Apr-12
Emerging Markets Equity (Gross)			0.4	5.9	5.1	21.9	17.9	12.0	6.2	--	4.9	
<i>MSCI Emerging Markets</i>			-0.1	4.1	-0.3	10.2	7.3	9.0	3.1	3.3	2.7	Apr-12
US Fixed Income (Net)	170,052,901	18.9	0.0	0.3	2.1	7.5	9.1	4.0	3.3	4.1	5.3	Dec-94
US Fixed Income (Gross)			0.0	0.3	2.2	7.6	9.3	4.2	3.5	4.4	5.5	
<i>US Fixed Custom</i>			-0.1	0.2	2.2	7.7	9.5	4.2	3.4	3.8	5.7	Dec-94

Data prior to March 2018 provided by prior consultant

Total Fund I As of November 30, 2019

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Opportunistic Credit (Net)	41,376,822	4.6	0.5	0.8	0.9	--	--	--	--	--	2.6	May-19
Opportunistic Credit (Gross)			0.5	0.8	0.9	--	--	--	--	--	2.6	
<i>50% Barclays US Aggregate / 25% Barclays US High Yield / 25% Credit Suisse Leveraged Loans</i>			<i>0.2</i>	<i>0.3</i>	<i>2.0</i>	--	--	--	--	--	<i>3.8</i>	<i>May-19</i>
Private Real Estate (Net)	60,510,085	6.7	0.0	0.0	-0.8	1.6	1.6	6.1	6.8	--	--	Mar-99
Private Real Estate (Gross)			0.0	0.0	-0.8	1.6	1.6	6.1	7.5	9.1	8.4	
<i>NCREIF ODCE (net)</i>			<i>0.0</i>	<i>0.0</i>	<i>1.1</i>	<i>3.1</i>	<i>4.6</i>	<i>6.3</i>	<i>8.4</i>	<i>9.8</i>	<i>7.3</i>	<i>Mar-99</i>
Private Equity (Net)	43,741,349	4.9	0.0	0.0	3.2	7.2	7.2	12.1	9.8	10.8	8.1	Jun-05
Private Equity (Gross)			0.0	0.0	3.2	7.2	7.2	12.1	9.8	11.0	8.2	
<i>Thomson Reuters Cambridge Private Equity Index</i>			<i>0.0</i>	<i>0.0</i>	<i>0.0</i>	<i>10.2</i>	<i>9.9</i>	<i>15.1</i>	<i>12.5</i>	--	--	<i>Jun-05</i>
Hedge Fund (Net)	76,524,274	8.5	0.7	0.8	-0.4	5.7	3.7	5.8	3.5	--	3.6	Jun-14
Hedge Fund (Gross)			0.8	1.0	-0.2	6.1	4.1	6.1	3.7	--	3.7	
<i>Hedge Fund Custom</i>			<i>0.7</i>	<i>1.2</i>	<i>0.2</i>	<i>6.4</i>	<i>4.7</i>	<i>3.6</i>	<i>2.7</i>	--	<i>2.7</i>	<i>Jun-14</i>
Real Assets (Net)	54,450,529	6.1	-0.2	0.1	1.4	10.8	9.7	7.7	7.8	--	--	Mar-99
Real Assets (Gross)			-0.2	0.1	1.5	10.9	9.9	7.8	8.4	--	--	
<i>Real Asset Custom</i>			<i>0.4</i>	<i>2.1</i>	<i>-0.7</i>	<i>16.2</i>	<i>15.2</i>	<i>10.1</i>	<i>8.4</i>	--	--	<i>Mar-99</i>
Private Infrastructure (Net)	23,081,390	2.6	0.0	0.0	2.8	10.0	10.0	12.4	--	--	7.6	Dec-14
Private Infrastructure (Gross)			0.0	0.0	2.8	10.0	10.0	12.4	--	--	7.6	
<i>S&P Global Infrastructure Net TR USD</i>			<i>-0.9</i>	<i>0.6</i>	<i>1.0</i>	<i>20.6</i>	<i>16.8</i>	<i>9.8</i>	<i>4.6</i>	<i>6.7</i>	<i>4.8</i>	<i>Dec-14</i>
Private Natural Resources (Net)	14,667,840	1.6	0.0	0.0	2.0	8.1	8.1	11.4	--	--	16.2	Sep-15
Private Natural Resources (Gross)			0.0	0.0	2.0	8.1	8.1	11.4	--	--	16.2	
<i>S&P Global Natural Resources Index TR USD</i>			<i>1.6</i>	<i>3.4</i>	<i>-2.9</i>	<i>10.6</i>	<i>5.0</i>	<i>6.9</i>	<i>3.0</i>	<i>1.1</i>	<i>11.6</i>	<i>Sep-15</i>
Cash (Net)	18,209,818	2.0	0.1	0.2	0.7	1.3	1.5	--	--	--	--	
Cash (Gross)			0.1	0.2	0.7	1.3	1.5	--	--	--	--	

*One or more accounts have been excluded from the composite for the purposes of performance calculations and market value.

Real Assets includes State Street Real Asset NL Fund

Trailing Net Performance													
	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund(Net)*	898,858,154	100.0	--	1.3	2.9	3.6	14.9	10.6	9.1	6.5	8.2	8.0	Dec-94
<i>Policy Index</i>				<i>1.0</i>	<i>2.4</i>	<i>2.4</i>	<i>13.3</i>	<i>9.5</i>	<i>8.9</i>	<i>6.6</i>	<i>8.7</i>	<i>6.0</i>	<i>Dec-94</i>
Total Fund w/o Alternatives(Net)	645,422,100	71.8	71.8	1.7	3.9	4.8	19.0	13.3	10.1	6.7	--	--	Dec-94
<i>Policy Index w/o AI</i>				<i>1.6</i>	<i>3.8</i>	<i>3.9</i>	<i>17.2</i>	<i>12.0</i>	<i>9.6</i>	<i>6.5</i>	<i>--</i>	<i>--</i>	<i>Dec-94</i>
US Equity(Net)	250,629,492	27.9	38.8	3.7	6.0	7.6	29.0	16.3	14.7	11.4	13.7	10.2	Dec-94
<i>80% R1000 / 20% R2000</i>				<i>3.8</i>	<i>6.2</i>	<i>6.8</i>	<i>26.6</i>	<i>14.4</i>	<i>13.5</i>	<i>10.3</i>	<i>13.2</i>	<i>10.0</i>	<i>Dec-94</i>
Mellon Large Cap(Net)	112,946,691	12.6	45.1	3.8	6.0	7.5	27.7	16.1	14.7	--	--	14.4	Mar-16
<i>Russell 1000</i>				<i>3.8</i>	<i>6.0</i>	<i>7.5</i>	<i>27.7</i>	<i>16.1</i>	<i>14.7</i>	<i>10.8</i>	<i>13.5</i>	<i>14.4</i>	<i>Mar-16</i>
Mellon Dynamic US Equity(Net)	100,040,027	11.1	39.9	3.8	6.1	9.2	33.8	20.6	18.4	13.2	--	17.7	Dec-12
<i>S&P 500</i>				<i>3.6</i>	<i>5.9</i>	<i>7.7</i>	<i>27.6</i>	<i>16.1</i>	<i>14.9</i>	<i>11.0</i>	<i>13.4</i>	<i>14.4</i>	<i>Dec-12</i>
PanAgora(Net)	19,122,978	2.1	7.6	3.9	6.8	5.2	23.2	8.4	8.6	8.2	--	9.2	Sep-13
<i>Russell 2000</i>				<i>4.1</i>	<i>6.9</i>	<i>4.3</i>	<i>22.0</i>	<i>7.5</i>	<i>8.6</i>	<i>8.2</i>	<i>12.4</i>	<i>8.4</i>	<i>Sep-13</i>
DFA Small Cap(Net)	18,519,796	2.1	7.4	2.9	4.9	3.3	18.2	4.2	6.3	7.7	--	7.0	Jun-14
<i>Russell 2000</i>				<i>4.1</i>	<i>6.9</i>	<i>4.3</i>	<i>22.0</i>	<i>7.5</i>	<i>8.6</i>	<i>8.2</i>	<i>12.4</i>	<i>7.3</i>	<i>Jun-14</i>
International Equity(Net)	183,362,886	20.4	28.4	1.1	5.4	4.3	19.5	14.0	10.1	4.2	5.7	5.3	Dec-98
<i>International Equity Custom</i>				<i>0.6</i>	<i>4.5</i>	<i>2.0</i>	<i>15.1</i>	<i>10.3</i>	<i>9.7</i>	<i>4.3</i>	<i>5.2</i>	<i>4.3</i>	<i>Dec-98</i>
Developed International Equity(Net)	111,482,229	12.4	60.8	1.5	5.2	4.1	19.0	12.9	9.7	4.1	5.9	3.5	Jan-08
<i>MSCI EAFE</i>				<i>1.1</i>	<i>4.8</i>	<i>3.6</i>	<i>18.2</i>	<i>12.4</i>	<i>9.6</i>	<i>4.3</i>	<i>5.3</i>	<i>2.6</i>	<i>Jan-08</i>
Mellon International(Net)	89,759,587	10.0	80.5	1.1	4.8	3.7	18.6	12.9	10.1	--	--	8.4	Mar-16
<i>MSCI EAFE</i>				<i>1.1</i>	<i>4.8</i>	<i>3.6</i>	<i>18.2</i>	<i>12.4</i>	<i>9.6</i>	<i>4.3</i>	<i>5.3</i>	<i>8.0</i>	<i>Mar-16</i>
Driehaus International Small Cap Growth(Net)	11,172,037	1.2	10.0	2.8	7.2	7.6	--	--	--	--	--	10.1	May-19
<i>MSCI ACWI ex US Small Cap Growth NR USD</i>				<i>1.9</i>	<i>6.1</i>	<i>4.6</i>	<i>18.9</i>	<i>11.9</i>	<i>9.6</i>	<i>6.4</i>	<i>7.1</i>	<i>3.7</i>	<i>May-19</i>

Developed International Equity and Emerging Markets Equity composites were only reported as one composite prior to March 2018.
Historical returns for the US Equity Composite prior to January 2012 and for the International Equity Composite prior to December 2010 are gross only.

Total Fund I As of November 30, 2019

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Acadian ACWI ex U.S. Small Cap Equity(Net)	10,550,604	1.2	9.5	3.3	7.3	4.0	--	--	--	--	--	3.8	May-19
<i>MSCI ACWI ex US Small Cap</i>				1.7	5.8	4.5	16.7	10.3	8.7	5.8	6.7	3.5	May-19
Emerging Markets Equity(Net)	71,880,657	8.0	39.2	0.4	5.7	4.8	20.9	16.9	11.0	5.2	--	3.9	Apr-12
<i>MSCI Emerging Markets</i>				-0.1	4.1	-0.3	10.2	7.3	9.0	3.1	3.3	2.7	Apr-12
Wells Capital(Net)	71,880,657	8.0	100.0	0.4	5.7	4.8	20.9	16.9	11.0	5.2	--	3.7	Mar-12
<i>MSCI Emerging Markets</i>				-0.1	4.1	-0.3	10.2	7.3	9.0	3.1	3.3	2.5	Mar-12
US Fixed Income(Net)	170,052,901	18.9	26.3	0.0	0.3	2.1	7.5	9.1	4.0	3.3	4.1	5.3	Dec-94
<i>US Fixed Custom</i>				-0.1	0.2	2.2	7.7	9.5	4.2	3.4	3.8	5.7	Dec-94
Barrow Hanley(Net)	61,064,978	6.8	35.9	0.0	0.3	2.7	9.1	11.0	4.1	3.2	--	3.7	Mar-10
<i>BBgBarc US Aggregate TR</i>				-0.1	0.3	2.5	8.8	10.8	4.1	3.1	3.6	3.7	Mar-10
Vanguard Total Bond Market Index Fund(Net)	60,301,576	6.7	35.5	-0.1	0.2	2.6	--	--	--	--	--	5.7	May-19
<i>BBgBarc US Aggregate TR</i>				-0.1	0.3	2.5	8.8	10.8	4.1	3.1	3.6	5.7	May-19
Vanguard Short-Term Treasury Index Fund(Net)	48,686,346	5.4	28.6	-0.1	0.3	0.9	3.3	4.1	--	--	--	3.0	Feb-18
<i>BBgBarc US Govt 1-3 Yr TR</i>				0.0	0.3	0.9	3.4	4.2	1.8	1.3	1.2	3.0	Feb-18
Opportunistic Credit(Net)	41,376,822	4.6	6.4	0.5	0.8	0.9	--	--	--	--	--	2.6	May-19
<i>50% Barclays US Aggregate / 25% Barclays US High Yield / 25% Credit Suisse Leveraged Loans</i>				0.2	0.3	2.0	--	--	--	--	--	3.8	May-19
GoldenTree Multi-Sector Credit(Net)	20,901,510	2.3	50.5	0.5	0.5	0.8	--	--	--	--	--	2.1	Jun-19
<i>50% BBgBarc US High Yield TR/50% Credit Suisse Leveraged Loans</i>				0.4	0.3	1.5	9.2	6.8	5.3	4.7	6.5	2.7	Jun-19
PIMCO Income Fund(Net)	20,475,312	2.3	49.5	0.5	1.2	1.1	--	--	--	--	--	2.6	Apr-19
<i>BBgBarc US Aggregate TR</i>				-0.1	0.3	2.5	8.8	10.8	4.1	3.1	3.6	5.7	Apr-19

Historical returns for the US Fixed Income Composite prior to December 2010 and for Barrow Hanley prior to June 2010 are gross only.

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Private Real Estate(Net)	60,510,085	6.7	6.7	0.0	0.0	-0.8	1.6	1.6	6.1	6.8	--	--	Mar-99
<i>NCREIF ODCE (net)</i>				0.0	0.0	1.1	3.1	4.6	6.3	8.4	9.8	7.3	Mar-99
UBS Trumbull Property(Net)	40,300,431	4.5	66.6	0.0	0.0	-3.9	-1.8	-1.8	3.0	5.6	7.7	6.9	Mar-99
Greenfield Gap VII(Net)	8,839,742	1.0	14.6	0.0	0.0	9.7	14.4	14.4	14.0	--	--	13.5	Dec-14
Patron Capital V(Net)	7,258,825	0.8	12.0	0.0	0.0	5.6	7.8	7.8	21.1	--	--	13.8	Jan-16
Taconic CRE Dislocation Fund II(Net)	2,473,122	0.3	4.1	0.0	0.0	3.3	3.2	3.2	--	--	--	3.0	Nov-18
Carlyle Realty VIII(Net)	846,639	0.1	1.4	0.0	0.0	2.8	-5.1	-5.1	--	--	--	-28.4	Dec-17
AG Realty Value Fund X, L.P.(Net)	648,985	0.1	1.1	0.0	0.0	-16.9	--	--	--	--	--	-16.9	Jun-19
Carmel Partners Investment Fund VII(Net)	142,341	0.0	0.2	0.0	0.0	-19.5	--	--	--	--	--	-35.9	Apr-19
Private Equity(Net)	43,741,349	4.9	4.9	0.0	0.0	3.2	7.2	7.2	12.1	9.8	10.8	8.1	Jun-05
<i>Thomson Reuters Cambridge Private Equity Index</i>				0.0	0.0	0.0	10.2	9.9	15.1	12.5	--	--	Jun-05
Ocean Avenue II(Net)	9,986,598	1.1	22.8	0.0	0.0	5.4	16.5	16.5	25.2	16.5	--	12.4	Jun-14
Adams Street(Net)	7,394,714	0.8	16.9	0.0	0.0	-0.1	4.5	4.5	11.5	11.3	13.0	7.0	Sep-05

Patron Capital market value is preliminary, pending reconciliation with the private markets consultant Cliffwater.

Private Real Estate results prior to 1/1/2019 were included in the Real Assets composite. All results for the Private Real Estate composite that include the period prior to 1/1/2019 will reflect only the latest lineup of managers that Meketa received information for, therefore it may not reflect the entire Private Real Estate composite at that given time.

All private markets performance and market values reflect a 6/30/2019 capital account balance unless otherwise noted.

Adams Street includes Adams Street 2005, Adams Street 2007, and Adams Street 2011.

Historical returns for Invesco IV prior to April 2012 are gross only.

Total Fund I As of November 30, 2019

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Invesco VI(Net)	6,749,639	0.8	15.4	0.0	0.0	6.6	9.5	9.5	13.8	14.2	--	12.2	Jun-13
Pantheon II(Net)	3,986,220	0.4	9.1	0.0	0.0	4.7	10.3	10.3	15.3	12.6	--	12.0	Dec-11
Davidson Kempner Long-Term Distressed Opportunities Fund IV(Net)	3,633,980	0.4	8.3	0.0	0.0	0.3	4.1	4.1	--	--	--	10.1	Apr-18
Raven Asset Fund II(Net)	3,392,863	0.4	7.8	0.0	0.0	1.6	5.8	5.8	0.3	-0.6	--	-0.6	Aug-14
TCV X(Net)	1,597,666	0.2	3.7	0.0	0.0	-6.6	--	--	--	--	--	-6.6	Apr-19
Carrick Capital Partners III(Net)	1,304,132	0.1	3.0	0.0	0.0	20.1	8.1	8.1	--	--	--	2.2	Aug-18
GTCR Fund XII(Net)	1,269,003	0.1	2.9	0.0	0.0	9.0	-21.4	-21.4	--	--	--	-14.8	Jun-18
Cressey & Company Fund VI(Net)	1,050,879	0.1	2.4	0.0	0.0	2.8	-13.2	--	--	--	--	-13.2	Jan-19
Genstar Capital Partners IX(Net)	1,015,501	0.1	2.3	0.0	0.0	--	--	--	--	--	--	0.0	Jul-19
Pantheon I(Net)	870,662	0.1	2.0	0.0	0.0	-0.9	-2.0	-2.0	5.7	4.2	7.7	3.4	Dec-05
Pantheon Secondary(Net)	861,201	0.1	2.0	0.0	0.0	-1.9	-0.9	-0.9	6.6	3.8	4.1	3.8	Jun-07
Accel-KKR Growth Capital Partners III(Net)	628,291	0.1	1.4	0.0	0.0	0.0	--	--	--	--	--	0.0	Jul-19
Invesco IV(Net)	0	0.0	0.0										
Hedge Fund(Net)	76,524,274	8.5	8.5	0.7	0.8	-0.4	5.7	3.7	5.8	3.5	--	3.6	Jun-14
<i>Hedge Fund Custom</i>				<i>0.7</i>	<i>1.2</i>	<i>0.2</i>	<i>6.4</i>	<i>4.7</i>	<i>3.6</i>	<i>2.7</i>	<i>--</i>	<i>2.7</i>	<i>Jun-14</i>
Wellington-Archipelago(Net)	12,187,996	1.4	15.9	2.7	3.2	1.8	12.5	8.9	--	--	--	4.9	Aug-17
Silver Point Capital(Net)	12,079,789	1.3	15.8	1.8	0.4	-2.5	1.6	-0.5	--	--	--	0.5	Nov-17

Pantheon market values are preliminary, pending reconciliations with the private markets consultant, Cliffwater.
 Pantheon I includes Pantheon US Fund VI and Pantheon Europe Fund IV.
 Pantheon II includes Pantheon US Fund IX, Pantheon Asia Fund VI, and Pantheon Europe Fund VII.
 Pantheon Secondary includes Pantheon GLO SEC III B.

Total Fund I As of November 30, 2019

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Sculptor (OZ) Domestic II(Net)	10,668,130	1.2	13.9	2.2	3.7	0.8	14.5	12.1	8.5	5.8	--	6.0	Jun-14
Taconic Opportunity Fund(Net)	10,393,975	1.2	13.6	0.1	0.5	0.6	4.3	--	--	--	--	4.3	Dec-18
KLS Diversified(Net)	8,947,157	1.0	11.7	-1.2	-1.9	-3.0	-1.5	-3.9	--	--	--	0.1	Oct-17
Graham Absolute Return(Net)	7,503,556	0.8	9.8	-0.5	0.7	-0.9	6.8	3.8	--	--	--	2.9	Aug-17
Winton(Net)	6,148,600	0.7	8.0	-0.8	-2.0	1.0	1.0	-0.4	--	--	--	1.4	Oct-17
Laurion Capital(Net)	5,268,266	0.6	6.9	-2.2	-0.8	-2.7	3.1	3.3	--	--	--	4.7	Aug-18
Marshall Wace Eureka(Net)	3,326,805	0.4	4.3	1.4	1.8	2.5	8.5	7.9	--	--	--	4.2	Nov-17
Real Assets(Net)	54,450,529	6.1	6.1	-0.2	0.1	1.4	10.8	9.7	7.7	7.8	--	--	Mar-99
<i>Real Asset Custom</i>				0.4	2.1	-0.7	16.2	15.2	10.1	8.4	--	--	Mar-99
SSgA(Net)	16,701,299	1.9	30.7	-0.7	0.2	-0.6	9.7	5.5	--	--	--	3.5	Apr-17
<i>Real Asset NL Custom Blended Index</i>				-0.7	0.3	-0.4	10.2	6.1	--	--	--	3.8	Apr-17
Private Infrastructure(Net)	23,081,390	2.6	42.4	0.0	0.0	2.8	10.0	10.0	12.4	--	--	7.6	Dec-14
<i>S&P Global Infrastructure Net TR USD</i>				-0.9	0.6	1.0	20.6	16.8	9.8	4.6	6.7	4.8	Dec-14
KKR Global II(Net)	11,139,018	1.2	48.3	0.0	0.0	2.7	7.9	7.9	12.1	--	--	10.2	Dec-14
North Haven Infrastructure II(Net)	8,490,335	0.9	36.8	0.0	0.0	3.3	11.4	11.4	13.4	--	--	7.7	May-15
ISQ Global Infrastructure Fund II(Net)	1,777,697	0.2	7.7	0.0	0.0	1.9	12.9	12.9	--	--	--	-16.9	Jul-18
KKR Global Infrastructure Investors III(Net)	1,372,958	0.2	5.9	0.0	0.0	-2.9	-17.8	-17.8	--	--	--	-17.8	Jan-19
Global Energy & Power Infrastructure Fund III(Net)	184,993	0.0	0.8	0.0	0.0	0.0	--	--	--	--	--	0.0	Jun-19

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Ardian Infrastructure Fund V(Net)	116,389	0.0	0.5	0.0	--	--	--	--	--	--	--	0.0	Oct-19
Private Natural Resources(Net)	14,667,840	1.6	26.9	0.0	0.0	2.0	8.1	8.1	11.4	--	--	16.2	Sep-15
<i>S&P Global Natural Resources Index TR USD</i>				1.6	3.4	-2.9	10.6	5.0	6.9	3.0	1.1	11.6	Sep-15
GSO Energy Opportunities(Net)	4,408,643	0.5	30.1	0.0	0.0	1.0	3.5	3.5	9.3	--	--	15.3	Nov-15
Taurus Mining(Net)	3,731,324	0.4	25.4	0.0	0.0	2.9	12.3	12.3	12.2	--	--	16.9	Sep-15
Taurus Mining Annex(Net)	3,342,148	0.4	22.8	0.0	0.0	4.7	16.7	16.7	--	--	--	26.9	Jan-17
EnCap IV(Net)	967,712	0.1	6.6	0.0	0.0	0.1	15.2	15.2	--	--	--	-2.6	Feb-18
EnCap XI(Net)	922,475	0.1	6.3	0.0	0.0	-2.8	-7.9	-7.9	--	--	--	-27.6	Jul-17
Tailwater Energy Fund IV, LP(Net)	846,614	0.1	5.8	0.0	0.0	--	--	--	--	--	--	0.0	Oct-19
BlackRock Global Energy and Power Infrastructure Fund III LP(Net)	448,923	0.0	3.1	0.0	0.0	--	--	--	--	--	--	--	Jul-19
Cash(Net)	18,209,818	2.0	2.0	0.1	0.2	0.7	1.3	1.5	--	--	--	--	--
Treasury Cash(Net)	10,103,371	1.1	55.5										
Cash(Net)	8,106,447	0.9	44.5	0.2	0.3	0.9	1.9	2.1	1.4	1.1	--	--	Sep-03

*One or more accounts have been excluded from the composite for the purposes of performance calculations and market value.

Benchmark History
As of November 30, 2019

Total Fund		
7/1/2019	Present	21% US Equity Custom / 18% International Equity Custom / 18% US Fixed Custom / 10% Hedge Fund Custom / 15% Thomson Reuters Cambridge Private Equity Index / 5% Real Asset Custom / 8% NCREIF ODCE (net) / 5% 50% Barclays US Aggregate / 25% Barclays US High Yield / 25% Credit Suisse Leveraged Loans
1/1/2019	6/30/2019	21% US Equity Custom / 18% International Equity Custom / 23% US Fixed Custom / 10% Hedge Fund Custom / 15% Thomson Reuters Cambridge Private Equity Index / 5% Real Asset Custom / 8% NCREIF ODCE (net)
1/1/2017	12/31/2018	27% US Equity Custom / 23% International Equity Custom / 22% US Fixed Custom / 5% Hedge Fund Custom / 9% Thomson Reuters Cambridge Private Equity Index / 14% Real Asset Custom
US Equity		
12/31/1994	Present	80% Russell 1000 / 20% Russell 2000
International Equity		
1/1/2019	Present	56% MSCI EAFE Gross / 44% MSCI Emerging Markets Gross
1/1/2017	12/31/2018	69.56% MSCI EAFE Gross / 30.44% MSCI Emerging Markets Gross
US Fixed Income		
3/1/2018	Present	77.27% BBgBarc US Aggregate TR / 22.73% BBgBarc US Govt 1-5 Yr TR
1/1/2017	2/28/2018	77.27% BBgBarc US Aggregate TR / 22.73% Credit Suisse Leveraged Loans
8/1/2014	12/31/2016	71.93% BBgBarc US Aggregate TR / 17.54% ICE BofAML US High Yield TR / 10.53% Credit Suisse Leveraged Loans
Hedge Fund		
7/1/2017	Present	100% HFRI Fund of Funds Composite Index
1/1/2015	6/30/2017	50% HFRI Fund of Funds Composite Index / 50% HFRI RV: Multi-Strategy Index
Real Assets		
1/1/2019	Present	50% S&P Global Natural Resources Index TR USD / 50% S&P Global Infrastructure TR USD
6/1/2013	12/31/2018	57.14% NCREIF ODCE (net) / 21.43% S&P Global Natural Resources Index TR USD / 21.43% S&P Global Infrastructure TR USD

Benchmark History As of November 30, 2019

SSgA

4/30/2017	Present	25% Bloomberg Roll Select Commodities Index TR USD / 25% S&P Global LargeMidCap Commodity and Resources NR USD / 10% S&P Global Infrastructure TR USD / 15% DJ US Select REIT TR USD / 25% BBgBarc US TIPS TR
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Annual Investment Expense Analysis				
As Of November 30, 2019				
Name	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
Total Fund w/o Alternatives		\$645,422,100		
US Equity		\$250,629,492		
Mellon Dynamic US Equity	0.30% of Assets	\$100,040,027	\$300,120	0.30%
Mellon Large Cap	0.04% of First 100.0 Mil, 0.02% Thereafter	\$112,946,691	\$42,589	0.04%
DFA Small Cap	0.35% of Assets	\$18,519,796	\$64,819	0.35%
PanAgora	0.80% of Assets	\$19,122,978	\$152,984	0.80%
International Equity		\$183,362,886		
Developed International Equity		\$111,482,229		
Mellon International	0.04% of Assets	\$89,759,587	\$35,904	0.04%
Acadian ACWI ex U.S. Small Cap Equity	0.99% of Assets	\$10,550,604	\$104,451	0.99%
Driehaus International Small Cap Growth	0.90% of Assets	\$11,172,037	\$100,548	0.90%
Emerging Markets Equity		\$71,880,657		
Wells Capital	0.90% of First 100.0 Mil, 0.85% Thereafter	\$71,880,657	\$646,926	0.90%
US Fixed Income		\$170,052,901		
Barrow Hanley	0.30% of First 50.0 Mil, 0.20% of Next 100.0 Mil, 0.15% Thereafter	\$61,064,978	\$172,130	0.28%
Vanguard Short-Term Treasury Index Fund	0.05% of Assets	\$48,686,346	\$24,343	0.05%
Vanguard Total Bond Market Index Fund	0.04% of Assets	\$60,301,576	\$21,106	0.04%
Opportunistic Credit		\$41,376,822		
PIMCO Income Fund	0.50% of Assets	\$20,475,312	\$102,377	0.50%
GoldenTree Multi-Sector Credit	0.75% of Assets	\$20,901,510	\$156,761	0.75%
Private Real Estate		\$60,510,085		
Greenfield Gap VII		\$8,839,742		
Patron Capital V		\$7,258,825		

Total Fund I As of November 30, 2019

Name	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
UBS Trumbull Property		\$40,300,431		
Carlyle Realty VIII		\$846,639		
Taconic CRE Dislocation Fund II		\$2,473,122		
Carmel Partners Investment Fund VII		\$142,341		
AG Realty Value Fund X, L.P.		\$648,985		
Invesco IV		\$0		
Invesco VI		\$6,749,639		
Ocean Avenue II		\$9,986,598		
Pantheon I		\$870,662		
Pantheon II		\$3,986,220		
Pantheon Secondary		\$861,201		
Raven Asset Fund II		\$3,392,863		
Davidson Kempner Long-Term Distressed Opportunities Fund IV		\$3,633,980		
GTCR Fund XII		\$1,269,003		
Carrick Capital Partners III		\$1,304,132		
Cressey & Company Fund VI		\$1,050,879		
TCV X		\$1,597,666		
Accel-KKR Growth Capital Partners III		\$628,291		
Genstar Capital Partners IX		\$1,015,501		
Hedge Fund		\$76,524,274		
Sculptor (OZ) Domestic II	Performance-based 1.50 and 20.00	\$10,668,130	\$207,668	1.95%
Graham Absolute Return	Performance-based 1.75 and 20.00	\$7,503,556	\$131,312	1.75%
Wellington-Archipelago	Performance-based 1.00 and 20.00	\$12,187,996	\$189,884	1.56%
KLS Diversified	Performance-based 2.00 and 20.00	\$8,947,157	\$178,943	2.00%
Winton	Performance-based 0.90 and 20.00	\$6,148,600	\$55,337	0.90%
Marshall Wace Eureka	Performance-based 2.00 and 20.00	\$3,326,805	\$76,851	2.31%
Silver Point Capital	Performance-based 2.00 and 20.00	\$12,079,789	\$285,861	2.37%
Laurion Capital		\$5,268,266		
Taconic Opportunity Fund		\$10,393,975		

Name	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
Real Assets		\$54,450,529		
SSgA	0.30% of First 50.0 Mil, 0.27% of Next 50.0 Mil, 0.25% Thereafter	\$16,701,299	\$50,104	0.30%
Private Infrastructure		\$23,081,390		
KKR Global II		\$11,139,018		
North Haven Infrastructure II		\$8,490,335		
ISQ Global Infrastructure Fund II		\$1,777,697		
KKR Global Infrastructure Investors III		\$1,372,958		
Ardian Infrastructure Fund V		\$116,389		
Global Energy & Power Infrastructure Fund III		\$184,993		
Private Natural Resources		\$14,667,840		
EnCap XI		\$922,475		
EnCap IV		\$967,712		
GSO Energy Opportunities		\$4,408,643		
Taurus Mining		\$3,731,324		
Taurus Mining Annex		\$3,342,148		
BlackRock Global Energy and Power Infrastructure Fund III LP		\$448,923		
Tailwater Energy Fund IV, LP		\$846,614		
Cash		\$18,209,818		
Cash		\$8,106,447		
Treasury Cash		\$10,103,371		

WE HAVE PREPARED THIS REPORT (THIS "REPORT") FOR THE SOLE BENEFIT OF THE INTENDED RECIPIENT (THE "RECIPIENT").

SIGNIFICANT EVENTS MAY OCCUR (OR HAVE OCCURRED) AFTER THE DATE OF THIS REPORT AND THAT IT IS NOT OUR FUNCTION OR RESPONSIBILITY TO UPDATE THIS REPORT. ANY OPINIONS OR RECOMMENDATIONS PRESENTED HEREIN REPRESENT OUR GOOD FAITH VIEWS AS OF THE DATE OF THIS REPORT AND ARE SUBJECT TO CHANGE AT ANY TIME. ALL INVESTMENTS INVOLVE RISK. THERE CAN BE NO GUARANTEE THAT THE STRATEGIES, TACTICS, AND METHODS DISCUSSED HERE WILL BE SUCCESSFUL.

INFORMATION USED TO PREPARE THIS REPORT WAS OBTAINED FROM INVESTMENT MANAGERS, CUSTODIANS, AND OTHER EXTERNAL SOURCES. WHILE WE HAVE EXERCISED REASONABLE CARE IN PREPARING THIS REPORT, WE CANNOT GUARANTEE THE ACCURACY OF ALL SOURCE INFORMATION CONTAINED HEREIN.

CERTAIN INFORMATION CONTAINED IN THIS REPORT MAY CONSTITUTE "FORWARD - LOOKING STATEMENTS," WHICH CAN BE IDENTIFIED BY THE USE OF TERMINOLOGY SUCH AS "MAY," "WILL," "SHOULD," "EXPECT," "AIM," "ANTICIPATE," "TARGET," "PROJECT," "ESTIMATE," "INTEND," "CONTINUE" OR "BELIEVE," OR THE NEGATIVES THEREOF OR OTHER VARIATIONS THEREON OR COMPARABLE TERMINOLOGY. ANY FORWARD-LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION ARE BASED UPON CURRENT ASSUMPTIONS. CHANGES TO ANY ASSUMPTIONS MAY HAVE A MATERIAL IMPACT ON FORWARD - LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS. ACTUAL RESULTS MAY THEREFORE BE MATERIALLY DIFFERENT FROM ANY FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION.

PERFORMANCE DATA CONTAINED HEREIN REPRESENT PAST PERFORMANCE. PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.

Merced County Employees' Retirement Association

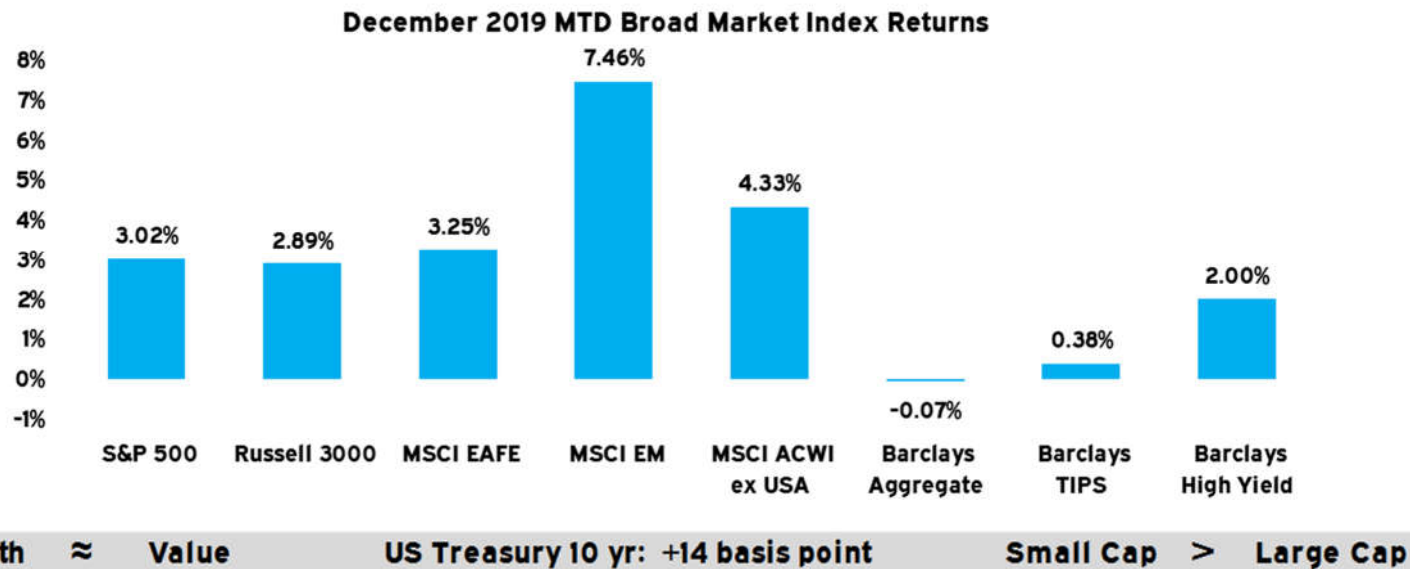
As of December 31, 2019

Preliminary Performance Review

1. Performance Highlights As of December 31, 2019
2. Preliminary Performance Review As of December 31, 2019
3. IFR Checklist
4. Disclaimer, Glossary and Notes

Performance Highlights
As of December 31, 2019

Market Review and Preliminary Performance Summary for December 2019

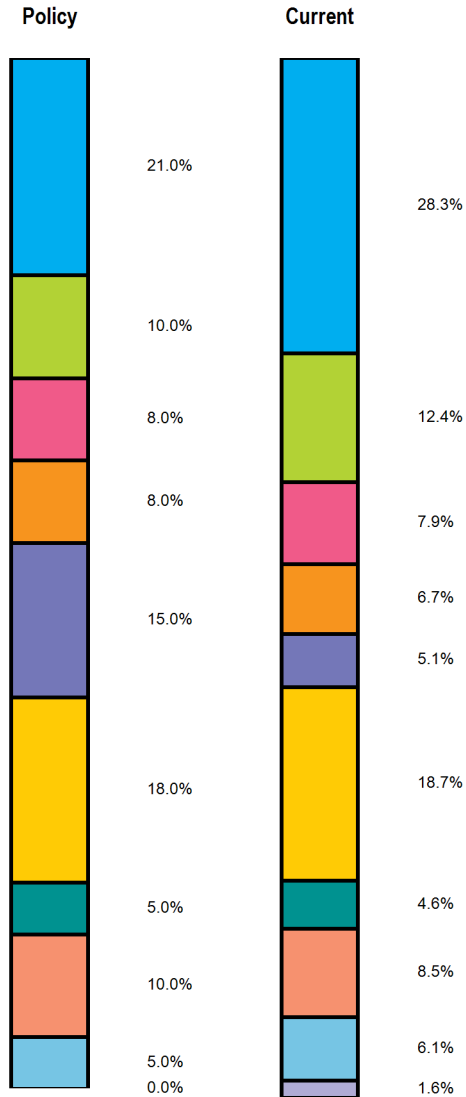


- Global equity markets were up, generally in the 2-4% range during the month, with EM equity standing out with particularly strong gains.
- Yield curve steepened through a combination of short term rates falling and long term rates increasing.
- Implied equity market volatility (as measured by VIX index) remained relatively low during the month.

As of December 31, 2019, preliminary total assets for the MCERA Portfolio stood at \$910.3 million.

- MCERA reported an overall monthly return of +2.0%, with a year-to-date return of +17.2%.
- Within the MCERA Portfolio, EM equity posted the strongest returns for the month and quarter (+6.7% & +12.8%, respectively).
- All other assets classes were either positive or flat.

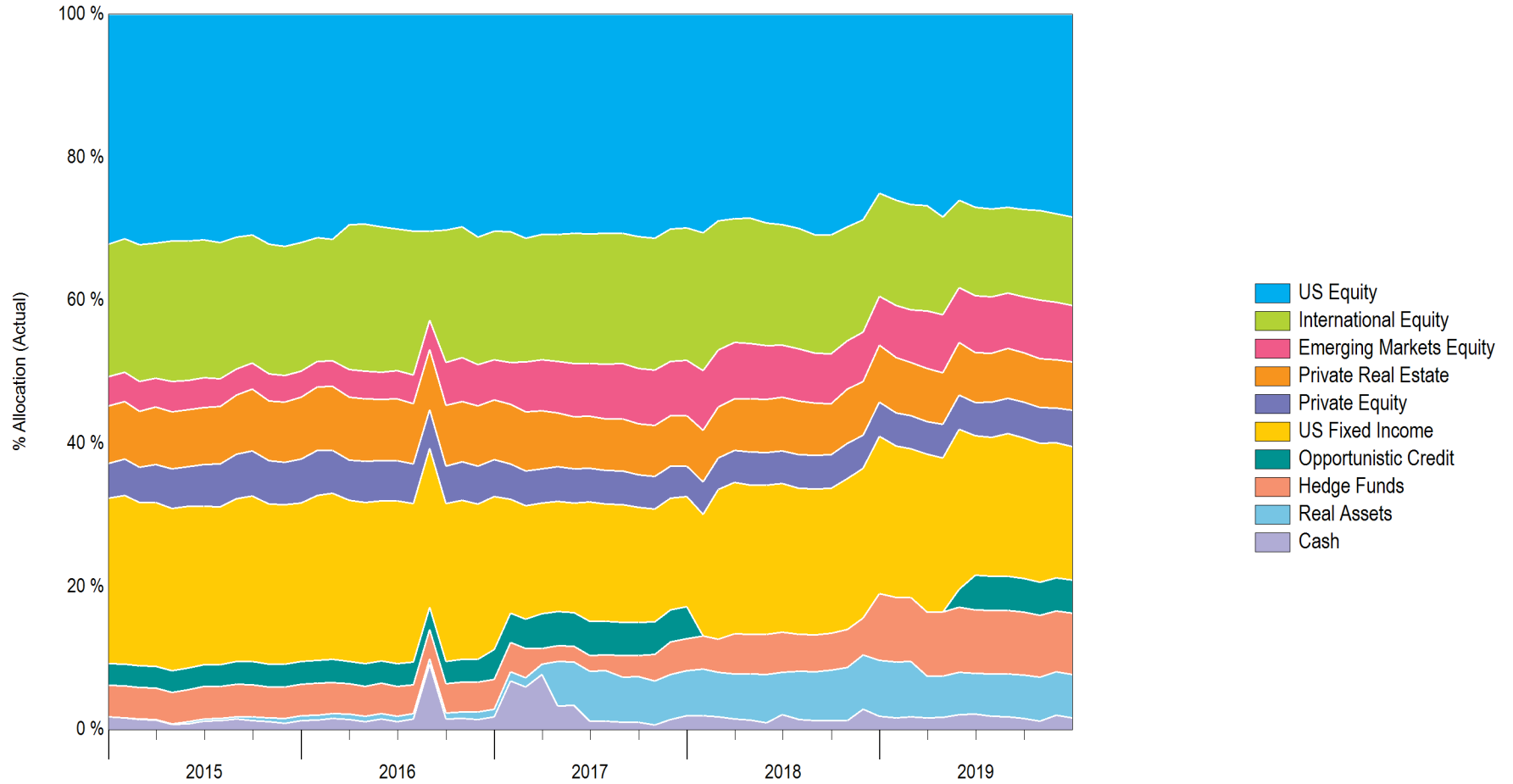
Preliminary Performance Review As of December 31, 2019



Cash range displayed for illustrative purposes only

Allocation vs. Targets and Policy							
	Current Balance	Current Allocation	Policy	Difference	Policy Range	Within IPS Range?	
US Equity	\$257,917,114	28.3%	21.0%	7.3%	15.0% - 26.0%	No	
International Equity	\$112,735,966	12.4%	10.0%	2.4%	5.0% - 15.0%	Yes	
Emerging Markets Equity	\$72,026,006	7.9%	8.0%	-0.1%	4.0% - 12.0%	Yes	
Private Real Estate	\$60,982,533	6.7%	8.0%	-1.3%	6.0% - 10.0%	Yes	
Private Equity	\$46,772,054	5.1%	15.0%	-9.9%	5.0% - 20.0%	Yes	
US Fixed Income	\$169,785,805	18.7%	18.0%	0.7%	13.0% - 23.0%	Yes	
Opportunistic Credit	\$41,895,227	4.6%	5.0%	-0.4%	3.0% - 7.0%	Yes	
Hedge Funds	\$77,792,596	8.5%	10.0%	-1.5%	5.0% - 15.0%	Yes	
Real Assets	\$55,637,063	6.1%	5.0%	1.1%	3.0% - 7.0%	Yes	
Cash	\$14,717,960	1.6%	0.0%	1.6%	0.0% - 5.0%	Yes	
Total	\$910,262,324	100.0%	100.0%				

Asset Allocation History
5 Years Ending December 31, 2019



Asset Class Performance Summary												
	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund (Net)*	910,262,324	100.0	2.0	5.0	5.6	17.2	17.2	9.3	7.0	8.2	8.0	Dec-94
Total Fund (Gross)*			2.0	5.0	5.8	17.5	17.5	9.5	7.3	8.5	8.2	
<i>Policy Index</i>			2.0	4.4	4.4	15.6	15.6	9.0	7.2	8.5	6.1	Dec-94
Total Fund w/o Alternatives (Net)	654,360,118	71.9	2.6	6.6	7.5	22.1	22.1	10.4	7.4	--	--	Dec-94
Total Fund w/o Alternatives (Gross)			2.6	6.7	7.6	22.4	22.4	10.7	7.7	--	--	
<i>Policy Index w/o AI</i>			2.7	6.6	6.8	20.4	20.4	10.0	7.3	--	--	Dec-94
US Equity (Net)	257,917,114	28.3	2.9	9.1	10.7	32.7	32.7	14.9	11.9	13.7	10.3	Dec-94
US Equity (Gross)			2.9	9.1	10.9	33.0	33.0	15.2	12.1	13.9	10.4	
<i>80% R1000 / 20% R2000</i>			2.9	9.2	9.9	30.3	30.3	13.8	10.9	13.2	10.1	Dec-94
International Equity (Net)	184,761,972	20.3	4.9	10.6	9.4	25.4	25.4	11.1	5.9	6.0	5.5	Dec-98
International Equity (Gross)			4.9	10.7	9.6	25.8	25.8	11.6	6.4	6.6	5.8	
<i>International Equity Custom</i>			5.1	9.9	7.2	21.0	21.0	10.6	6.1	5.6	4.6	Dec-98
Developed International Equity (Net)	112,735,966	12.4	3.5	9.0	7.7	23.2	23.2	9.9	5.3	6.2	3.7	Jan-08
Developed International Equity (Gross)			3.5	9.0	7.8	23.4	23.4	10.1	5.7	6.6	4.2	
<i>MSCI EAFE</i>			3.2	8.2	7.0	22.0	22.0	9.6	5.7	5.5	2.9	Jan-08
Emerging Markets Equity (Net)	72,026,006	7.9	6.7	12.8	11.8	29.0	29.0	14.1	7.9	--	4.8	Apr-12
Emerging Markets Equity (Gross)			6.7	13.0	12.2	30.1	30.1	15.1	8.9	--	5.7	
<i>MSCI Emerging Markets</i>			7.5	11.8	7.1	18.4	18.4	11.6	5.6	3.7	3.6	Apr-12
US Fixed Income (Net)	169,785,805	18.7	0.0	0.2	2.1	7.5	7.5	3.8	3.4	4.2	5.3	Dec-94
US Fixed Income (Gross)			0.0	0.3	2.2	7.6	7.6	4.0	3.6	4.6	5.5	
<i>US Fixed Custom</i>			0.0	0.2	2.1	7.7	7.7	4.0	3.5	3.9	5.6	Dec-94

Data prior to March 2018 provided by prior consultant.

	Market Value (\$)	% of Portfolio	1 Mo (%)	QTD (%)	Fiscal YTD (%)	YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Opportunistic Credit (Net)	41,895,227	4.6	1.6	2.5	2.6	--	--	--	--	--	4.3	May-19
Opportunistic Credit (Gross)			1.6	2.5	2.6	--	--	--	--	--	4.3	
<i>50% Barclays US Aggregate / 25% Barclays US High Yield / 25% Credit Suisse Leveraged Loans</i>			0.9	1.2	2.9	--	--	--	--	--	4.7	May-19
Private Real Estate (Net)	60,982,533	6.7	0.0	0.0	-0.8	1.6	1.6	5.7	6.5	--	--	Mar-99
Private Real Estate (Gross)			0.0	0.0	-0.8	1.6	1.6	5.7	7.1	9.4	8.3	
<i>NCREIF ODCE (net)</i>			0.0	0.0	1.1	3.1	3.1	5.7	7.7	10.3	7.3	Mar-99
Private Equity (Net)	46,772,054	5.1	0.0	0.0	3.2	7.2	7.2	12.1	9.8	10.3	8.0	Jun-05
Private Equity (Gross)			0.0	0.0	3.2	7.2	7.2	12.1	9.8	10.6	8.2	
<i>Thomson Reuters Cambridge Private Equity Index</i>			0.0	0.0	0.0	10.2	10.2	14.9	12.9	--	--	Jun-05
Hedge Fund (Net)	77,792,596	8.5	1.6	2.4	1.2	7.4	7.4	6.0	3.6	--	3.9	Jun-14
Hedge Fund (Gross)			1.7	2.7	1.5	7.9	7.9	6.3	3.8	--	4.0	
<i>Hedge Fund Custom</i>			1.3	2.5	1.5	7.8	7.8	3.7	2.9	--	2.9	Jun-14
Real Assets (Net)	55,637,063	6.1	1.0	1.1	2.5	11.9	11.9	7.8	7.7	--	--	Mar-99
Real Assets (Gross)			1.0	1.1	2.5	12.0	12.0	7.8	8.3	--	--	
<i>Real Asset Custom</i>			5.2	7.3	4.4	22.2	22.2	11.1	9.2	--	--	Mar-99
Private Infrastructure (Net)	23,273,432	2.6	0.0	0.0	2.8	10.0	10.0	12.9	7.5	--	7.5	Dec-14
Private Infrastructure (Gross)			0.0	0.0	2.8	10.0	10.0	12.9	7.5	--	7.5	
<i>S&P Global Infrastructure Net TR USD</i>			4.2	4.9	5.3	25.8	25.8	10.3	5.6	6.8	5.6	Dec-14
Private Natural Resources (Net)	15,098,792	1.7	0.0	0.0	2.0	8.1	8.1	9.9	--	--	15.9	Sep-15
Private Natural Resources (Gross)			0.0	0.0	2.0	8.1	8.1	9.9	--	--	15.9	
<i>S&P Global Natural Resources Index TR USD</i>			6.0	9.5	2.9	17.2	17.2	7.9	4.8	1.6	12.9	Sep-15
Cash (Net)	14,717,960	1.6	0.1	0.4	0.8	1.4	1.4	--	--	--	--	
Cash (Gross)			0.1	0.4	0.8	1.4	1.4	--	--	--	--	

*One or more accounts have been excluded from the composite for the purposes of performance calculations and market value.

Real Assets includes State Street Real Asset NL Fund.

Total Fund I As of December 31, 2019

Trailing Net Performance												
	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Fund(Net)*	910,262,324	100.0	--	2.0	5.0	5.6	17.2	9.3	7.0	8.2	8.0	Dec-94
<i>Policy Index</i>				2.0	4.4	4.4	15.6	9.0	7.2	8.5	6.1	Dec-94
Total Fund w/o Alternatives(Net)	654,360,118	71.9	71.9	2.6	6.6	7.5	22.1	10.4	7.4	--	--	Dec-94
<i>Policy Index w/o AI</i>				2.7	6.6	6.8	20.4	10.0	7.3	--	--	Dec-94
US Equity(Net)	257,917,114	28.3	39.4	2.9	9.1	10.7	32.7	14.9	11.9	13.7	10.3	Dec-94
<i>80% R1000 / 20% R2000</i>				2.9	9.2	9.9	30.3	13.8	10.9	13.2	10.1	Dec-94
Mellon Large Cap(Net)	116,210,494	12.8	45.1	2.9	9.0	10.6	31.4	15.0	--	--	15.0	Mar-16
<i>Russell 1000</i>				2.9	9.0	10.6	31.4	15.0	11.5	13.5	15.0	Mar-16
Mellon Dynamic US Equity(Net)	103,016,896	11.3	39.9	2.9	9.2	12.4	37.8	18.6	13.9	--	17.9	Dec-12
<i>S&P 500</i>				3.0	9.1	10.9	31.5	15.3	11.7	13.6	14.7	Dec-12
PanAgora(Net)	19,606,675	2.2	7.6	2.5	9.4	7.8	26.2	8.3	7.9	--	9.5	Sep-13
<i>Russell 2000</i>				2.9	9.9	7.3	25.5	8.6	8.2	11.8	8.8	Sep-13
DFA Small Cap(Net)	19,083,048	2.1	7.4	3.0	8.1	6.4	21.7	6.2	7.7	--	7.5	Jun-14
<i>Russell 2000</i>				2.9	9.9	7.3	25.5	8.6	8.2	11.8	7.8	Jun-14
International Equity(Net)	184,761,972	20.3	28.2	4.9	10.6	9.4	25.4	11.1	5.9	6.0	5.5	Dec-98
<i>International Equity Custom</i>				5.1	9.9	7.2	21.0	10.6	6.1	5.6	4.6	Dec-98
Developed International Equity(Net)	112,735,966	12.4	61.0	3.5	9.0	7.7	23.2	9.9	5.3	6.2	3.7	Jan-08
<i>MSCI EAFE</i>				3.2	8.2	7.0	22.0	9.6	5.7	5.5	2.9	Jan-08
First Eagle International Value Fund(Net)	45,000,000	4.9	39.9									
GQG International Equity(Net)	45,000,000	4.9	39.9									

First Eagle & GQG market values are estimated based on initial funding amounts. Funding transactions done on 12/31/2019 for First Eagle, GQG is an estimate.

Performance starts after first full month of investment.

Historical returns for the US Equity Composite prior to January 2012 and for the International Equity Composite prior to December 2010 are gross only.

Developed International Equity and Emerging Markets Equity composites were only reported as one composite prior to March 2018.

Total Fund I As of December 31, 2019

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Driehaus International Small Cap Growth(Net)	11,647,208	1.3	10.3	4.3	11.8	12.1	--	--	--	--	14.8	May-19
<i>MSCI ACWI ex US Small Cap Growth NR USD</i>				4.8	11.2	9.7	24.6	10.8	7.6	7.3	8.7	May-19
Acadian ACWI ex U.S. Small Cap Equity(Net)	11,088,758	1.2	9.8	5.0	12.6	9.2	--	--	--	--	9.0	May-19
<i>MSCI ACWI ex US Small Cap</i>				4.9	11.0	9.7	22.4	9.6	7.0	6.9	8.6	May-19
Emerging Markets Equity(Net)	72,026,006	7.9	39.0	6.7	12.8	11.8	29.0	14.1	7.9	--	4.8	Apr-12
<i>MSCI Emerging Markets</i>				7.5	11.8	7.1	18.4	11.6	5.6	3.7	3.6	Apr-12
Artisan Developing World TR(Net)	50,426,006	5.5	70.0									
RWC(Net)	21,600,000	2.4	30.0									
Wells Capital(Net)	0	0.0	0.0	7.1	13.3	12.2	29.5	14.2	8.0	--	4.6	Mar-12
<i>MSCI Emerging Markets</i>				7.5	11.8	7.1	18.4	11.6	5.6	3.7	3.4	Mar-12
US Fixed Income(Net)	169,785,805	18.7	25.9	0.0	0.2	2.1	7.5	3.8	3.4	4.2	5.3	Dec-94
<i>US Fixed Custom</i>				0.0	0.2	2.1	7.7	4.0	3.5	3.9	5.6	Dec-94
Barrow Hanley(Net)	60,905,967	6.7	35.9	0.0	0.3	2.7	9.0	4.1	3.1	--	3.7	Mar-10
<i>BBgBarc US Aggregate TR</i>				-0.1	0.2	2.5	8.7	4.0	3.0	3.7	3.7	Mar-10
Vanguard Total Bond Market Index Fund(Net)	60,089,182	6.6	35.4	-0.1	0.0	2.5	--	--	--	--	5.6	May-19
<i>BBgBarc US Aggregate TR</i>				-0.1	0.2	2.5	8.7	4.0	3.0	3.7	5.6	May-19
Vanguard Short-Term Treasury Index Fund(Net)	48,790,657	5.4	28.7	0.2	0.4	1.1	3.5	--	--	--	2.9	Feb-18
<i>BBgBarc US Govt 1-3 Yr TR</i>				0.2	0.5	1.1	3.6	1.9	1.4	1.2	3.0	Feb-18
Opportunistic Credit(Net)	41,895,227	4.6	6.4	1.6	2.5	2.6	--	--	--	--	4.3	May-19
<i>50% Barclays US Aggregate / 25% Barclays US High Yield / 25% Credit Suisse Leveraged Loans</i>				0.9	1.2	2.9	--	--	--	--	4.7	May-19

Performance starts after first full month of investment.

Historical returns for the US Fixed Income Composite prior to December 2010 and for Barrow Hanley prior to June 2010 are gross only.

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
GoldenTree Multi-Sector Credit(Net)	21,300,729	2.3	50.8	1.9	2.4	2.7	--	--	--	--	4.1	Jun-19
50% BBgBarc US High Yield TR/50% Credit Suisse Leveraged Loans				1.8	2.1	3.3	11.2	5.4	5.3	6.4	4.6	Jun-19
PIMCO Income Fund(Net)	20,594,498	2.3	49.2	1.3	2.5	2.4	--	--	--	--	4.0	Apr-19
BBgBarc US Aggregate TR				-0.1	0.2	2.5	8.7	4.0	3.0	3.7	5.6	Apr-19
Private Real Estate(Net)	60,982,533	6.7	6.7	0.0	0.0	-0.8	1.6	5.7	6.5	--	--	Mar-99
NCREIF ODCE (net)				0.0	0.0	1.1	3.1	5.7	7.7	10.3	7.3	Mar-99
UBS Trumbull Property(Net)	40,300,431	4.4	66.1	0.0	0.0	-3.9	-1.8	2.5	5.0	8.1	6.9	Mar-99
Greenfield Gap VII(Net)	8,737,767	1.0	14.3	0.0	0.0	9.7	14.4	14.0	13.2	--	13.2	Dec-14
Patron Capital V(Net)	7,258,825	0.8	11.9	0.0	0.0	5.6	7.8	23.0	--	--	13.5	Jan-16
Taconic CRE Dislocation Fund II(Net)	2,723,122	0.3	4.5	0.0	0.0	3.3	3.2	--	--	--	2.7	Nov-18
AG Realty Value Fund X, L.P.(Net)	973,408	0.1	1.6	0.0	0.0	-16.9	--	--	--	--	-16.9	Jun-19
Carlyle Realty VIII(Net)	846,639	0.1	1.4	0.0	0.0	2.8	-5.1	--	--	--	-27.4	Dec-17
Carmel Partners Investment Fund VII(Net)	142,341	0.0	0.2	0.0	0.0	-19.5	--	--	--	--	-35.9	Apr-19
Private Equity(Net)	46,772,054	5.1	5.1	0.0	0.0	3.2	7.2	12.1	9.8	10.3	8.0	Jun-05
Thomson Reuters Cambridge Private Equity Index				0.0	0.0	0.0	10.2	14.9	12.9	--	--	Jun-05

GoldenTree Multi-Sector Credit market value based off manager estimate.

Patron Capital market value is preliminary, pending reconciliation with the private markets consultant Cliffwater.

For Invesco IV, cash flow adjusting from the latest valuation (6/30/2019) would provide a negative market value. Showing zero instead. Historical returns for Invesco IV prior to April 2012 are gross only.

Private Real Estate results prior to 1/1/2019 were included in the Real Assets composite. All results for the Private Real Estate composite that include the period prior to 1/1/2019 will reflect only the latest lineup of managers that Meketa received information for, therefore it may not reflect the entire Private Real Estate composite at that given time.

All private markets performance and market values reflect a 6/30/2019 capital account balance unless otherwise noted.

Adams Street includes Adams Street 2005, Adams Street 2007, and Adams Street 2011.

Total Fund I As of December 31, 2019

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Ocean Avenue II(Net)	9,986,598	1.1	21.4	0.0	0.0	5.4	16.5	25.2	16.5	--	12.2	Jun-14
Adams Street(Net)	7,204,608	0.8	15.4	0.0	0.0	-0.1	4.5	11.5	11.3	12.5	7.0	Sep-05
Invesco VI(Net)	6,557,110	0.7	14.0	0.0	0.0	6.6	9.5	13.8	14.2	--	12.0	Jun-13
Pantheon II(Net)	3,986,220	0.4	8.5	0.0	0.0	4.7	10.3	15.3	12.6	--	11.9	Dec-11
Davidson Kempner Long-Term Distressed Opportunities Fund IV(Net)	3,633,980	0.4	7.8	0.0	0.0	0.3	4.1	--	--	--	9.6	Apr-18
Raven Asset Fund II(Net)	3,392,863	0.4	7.3	0.0	0.0	1.6	5.8	0.3	-0.6	--	-0.5	Aug-14
Cortec Group Fund VII(Net)	2,890,529	0.3	6.2	0.0	--	--	--	--	--	--	0.0	Dec-19
TCV X(Net)	1,597,666	0.2	3.4	0.0	0.0	-6.6	--	--	--	--	-6.6	Apr-19
Genstar Capital Partners IX(Net)	1,575,284	0.2	3.4	0.0	0.0	--	--	--	--	--	0.0	Jul-19
Carrick Capital Partners III(Net)	1,317,161	0.1	2.8	0.0	0.0	20.1	8.1	--	--	--	2.1	Aug-18
GTCR Fund XII(Net)	1,269,003	0.1	2.7	0.0	0.0	9.0	-21.4	--	--	--	-14.1	Jun-18
Cressey & Company Fund VI(Net)	1,050,879	0.1	2.2	0.0	0.0	2.8	-13.2	--	--	--	-13.2	Jan-19
Pantheon I(Net)	870,662	0.1	1.9	0.0	0.0	-0.9	-2.0	5.7	4.2	7.3	3.4	Dec-05
Pantheon Secondary(Net)	811,201	0.1	1.7	0.0	0.0	-1.9	-0.9	6.6	3.8	3.7	3.8	Jun-07
Accel-KKR Growth Capital Partners III(Net)	628,291	0.1	1.3	0.0	0.0	0.0	--	--	--	--	0.0	Jul-19
Invesco IV(Net)	0	0.0	0.0									

Pantheon market values are preliminary, pending reconciliations with the private markets consultant, Cliffwater.

Pantheon I includes Pantheon US Fund VI and Pantheon Europe Fund IV.

Pantheon II includes Pantheon US Fund IX, Pantheon Asia Fund VI, and Pantheon Europe Fund VII.

Pantheon Secondary includes Pantheon GLO SEC III B.

For Invesco IV, cash flow adjusting from the latest valuation (6/30/2019) would provide a negative market value. Showing zero instead. Historical returns for Invesco IV prior to April 2012 are gross only.

Total Fund I As of December 31, 2019

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Hedge Fund(Net)	77,792,596	8.5	8.5	1.6	2.4	1.2	7.4	6.0	3.6	--	3.9	Jun-14
<i>Hedge Fund Custom</i>				1.3	2.5	1.5	7.8	3.7	2.9	--	2.9	Jun-14
Wellington-Archipelago(Net)	12,470,062	1.4	16.0	2.2	5.5	4.0	15.0	--	--	--	5.7	Aug-17
Silver Point Capital(Net)	12,333,154	1.4	15.9	2.1	2.5	-0.4	3.7	--	--	--	1.5	Nov-17
Sculptor (OZ) Domestic II(Net)	10,895,361	1.2	14.0	2.0	5.8	2.8	16.8	8.9	6.1	--	6.3	Jun-14
Taconic Opportunity Fund(Net)	10,428,275	1.1	13.4	0.3	0.8	0.9	4.7	--	--	--	4.7	Dec-18
KLS Diversified(Net)	9,088,522	1.0	11.7	1.6	-0.4	-1.4	0.1	--	--	--	0.8	Oct-17
Graham Absolute Return(Net)	7,611,040	0.8	9.8	1.3	2.0	0.3	8.2	--	--	--	3.3	Aug-17
Winton(Net)	6,233,755	0.7	8.0	1.3	-0.7	2.3	2.3	--	--	--	2.0	Oct-17
Laurion Capital(Net)	5,337,280	0.6	6.9	1.3	0.5	-1.4	4.4	--	--	--	5.4	Aug-18
Marshall Wace Eureka(Net)	3,395,147	0.4	4.4	1.8	3.7	4.4	10.5	--	--	--	5.0	Nov-17
Real Assets(Net)	55,637,063	6.1	6.1	1.0	1.1	2.5	11.9	7.8	7.7	--	--	Mar-99
<i>Real Asset Custom</i>				5.2	7.3	4.4	22.2	11.1	9.2	--	--	Mar-99
SSgA(Net)	17,264,839	1.9	31.0	3.3	3.5	2.7	13.3	--	--	--	4.6	Apr-17
<i>Real Asset NL Custom Blended Index</i>				3.4	3.7	3.0	13.9	--	--	--	5.0	Apr-17
Private Infrastructure(Net)	23,273,432	2.6	41.8	0.0	0.0	2.8	10.0	12.9	7.5	--	7.5	Dec-14
<i>S&P Global Infrastructure Net TR USD</i>				4.2	4.9	5.3	25.8	10.3	5.6	6.8	5.6	Dec-14
KKR Global II(Net)	11,139,018	1.2	47.9	0.0	0.0	2.7	7.9	13.0	10.0	--	10.0	Dec-14
North Haven Infrastructure II(Net)	8,490,335	0.9	36.5	0.0	0.0	3.3	11.4	13.4	--	--	7.5	May-15
ISQ Global Infrastructure Fund II(Net)	2,138,550	0.2	9.2	0.0	0.0	1.9	12.9	--	--	--	-16.1	Jul-18

	Market Value (\$)	% of Portfolio	% of Sector	1 Mo (%)	QTD (%)	Fiscal YTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
KKR Global Infrastructure Investors III(Net)	1,372,958	0.2	5.9	0.0	0.0	-2.9	-17.8	--	--	--	-17.8	Jan-19
Ardian Infrastructure Fund V(Net)	116,389	0.0	0.5	0.0	--	--	--	--	--	--	0.0	Oct-19
Global Energy & Power Infrastructure Fund III(Net)	16,182	0.0	0.1	0.0	0.0	0.0	--	--	--	--	0.0	Jun-19
Private Natural Resources(Net)	15,098,792	1.7	27.1	0.0	0.0	2.0	8.1	9.9	--	--	15.9	Sep-15
<i>S&P Global Natural Resources Index TR USD</i>				6.0	9.5	2.9	17.2	7.9	4.8	1.6	12.9	Sep-15
Taurus Mining(Net)	3,874,738	0.4	25.7	0.0	0.0	2.9	12.3	9.6	--	--	16.5	Sep-15
GSO Energy Opportunities(Net)	3,664,418	0.4	24.3	0.0	0.0	1.0	3.5	9.3	--	--	15.0	Nov-15
Taurus Mining Annex(Net)	3,539,375	0.4	23.4	0.0	0.0	4.7	16.7	25.2	--	--	26.1	Jan-17
EnCap XI(Net)	1,326,717	0.1	8.8	0.0	0.0	-2.8	-7.9	--	--	--	-26.8	Jul-17
EnCap IV(Net)	1,048,312	0.1	6.9	0.0	0.0	0.1	15.2	--	--	--	-2.5	Feb-18
Tailwater Energy Fund IV, LP(Net)	846,614	0.1	5.6	0.0	0.0	--	--	--	--	--	0.0	Oct-19
BlackRock Global Energy and Power Infrastructure Fund III LP(Net)	798,618	0.1	5.3	0.0	0.0	--	--	--	--	--	--	Jul-19
Cash(Net)	14,717,960	1.6	1.6	0.1	0.4	0.8	1.4	--	--	--	--	
Cash(Net)	10,825,261	1.2	73.6	0.2	0.5	1.1	2.0	1.4	1.1	--	--	Sep-03
Treasury Cash(Net)	3,892,698	0.4	26.4									

*One or more accounts have been excluded from the composite for the purposes of performance calculations and market value.

Benchmark History As of December 31, 2019

Total Fund		
7/1/2019	Present	21% US Equity Custom / 18% International Equity Custom / 18% US Fixed Custom / 10% Hedge Fund Custom / 15% Thomson Reuters Cambridge Private Equity Index / 5% Real Asset Custom / 8% NCREIF ODCE (net) / 5% 50% Barclays US Aggregate / 25% Barclays US High Yield / 25% Credit Suisse Leveraged Loans
1/1/2019	6/30/2019	21% US Equity Custom / 18% International Equity Custom / 23% US Fixed Custom / 10% Hedge Fund Custom / 15% Thomson Reuters Cambridge Private Equity Index / 5% Real Asset Custom / 8% NCREIF ODCE (net)
1/1/2017	12/31/2018	27% US Equity Custom / 23% International Equity Custom / 22% US Fixed Custom / 5% Hedge Fund Custom / 9% Thomson Reuters Cambridge Private Equity Index / 14% Real Asset Custom
US Equity		
12/31/1994	Present	80% Russell 1000 / 20% Russell 2000
International Equity		
1/1/2019	Present	56% MSCI EAFE Gross / 44% MSCI Emerging Markets Gross
1/1/2017	12/31/2018	69.56% MSCI EAFE Gross / 30.44% MSCI Emerging Markets Gross
US Fixed Income		
3/1/2018	Present	77.27% BBgBarc US Aggregate TR / 22.73% BBgBarc US Govt 1-5 Yr TR
1/1/2017	2/28/2018	77.27% BBgBarc US Aggregate TR / 22.73% Credit Suisse Leveraged Loans
8/1/2014	12/31/2016	71.93% BBgBarc US Aggregate TR / 17.54% ICE BofAML US High Yield TR / 10.53% Credit Suisse Leveraged Loans
Hedge Fund		
7/1/2017	Present	100% HFRI Fund of Funds Composite Index
1/1/2015	6/30/2017	50% HFRI Fund of Funds Composite Index / 50% HFRI RV: Multi-Strategy Index
Real Assets		
1/1/2019	Present	50% S&P Global Natural Resources Index TR USD / 50% S&P Global Infrastructure TR USD
6/1/2013	12/31/2018	57.14% NCREIF ODCE (net) / 21.43% S&P Global Natural Resources Index TR USD / 21.43% S&P Global Infrastructure TR USD

Benchmark History As of December 31, 2019

SSgA

4/30/2017

Present

25% Bloomberg Roll Select Commodities Index TR USD / 25% S&P Global LargeMidCap Commodity and Resources NR USD / 10% S&P Global Infrastructure TR USD / 15% DJ US Select REIT TR USD / 25% BBgBarc US TIPS TR

Annual Investment Expense Analysis				
As Of December 31, 2019				
Name	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
Total Fund w/o Alternatives		\$654,360,118		
US Equity		\$257,917,114		
Mellon Dynamic US Equity	0.30% of Assets	\$103,016,896	\$309,051	0.30%
Mellon Large Cap	0.04% of First 100.0 Mil, 0.02% Thereafter	\$116,210,494	\$43,242	0.04%
DFA Small Cap	0.35% of Assets	\$19,083,048	\$66,791	0.35%
PanAgora	0.80% of Assets	\$19,606,675	\$156,853	0.80%
International Equity		\$184,761,972		
Developed International Equity		\$112,735,966		
Acadian ACWI ex U.S. Small Cap Equity	0.99% of Assets	\$11,088,758	\$109,779	0.99%
Driehaus International Small Cap Growth	0.90% of Assets	\$11,647,208	\$104,825	0.90%
GQG International Equity		\$45,000,000		
First Eagle International Value Fund		\$45,000,000		
Emerging Markets Equity		\$72,026,006		
Wells Capital	0.90% of First 100.0 Mil, 0.85% Thereafter	\$0	\$0	0.84%
Artisan Developing World TR	1.05% of Assets	\$50,426,006	\$529,473	1.05%
RWC	0.87% of Assets	\$21,600,000	\$187,920	0.87%
US Fixed Income		\$169,785,805		
Barrow Hanley	0.30% of First 50.0 Mil, 0.20% of Next 100.0 Mil, 0.15% Thereafter	\$60,905,967	\$171,812	0.28%
Vanguard Short-Term Treasury Index Fund	0.05% of Assets	\$48,790,657	\$24,395	0.05%
Vanguard Total Bond Market Index Fund	0.04% of Assets	\$60,089,182	\$21,031	0.04%
Opportunistic Credit		\$41,895,227		

Total Fund I As of December 31, 2019

Name	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
PIMCO Income Fund	0.50% of Assets	\$20,594,498	\$102,972	0.50%
GoldenTree Multi-Sector Credit	0.75% of Assets	\$21,300,729	\$159,755	0.75%
Private Real Estate		\$60,982,533		
Greenfield Gap VII		\$8,737,767		
Patron Capital V		\$7,258,825		
UBS Trumbull Property		\$40,300,431		
Carlyle Realty VIII		\$846,639		
Taconic CRE Dislocation Fund II		\$2,723,122		
Carmel Partners Investment Fund VII		\$142,341		
AG Realty Value Fund X, L.P.		\$973,408		
Invesco IV		\$0		
Invesco VI		\$6,557,110		
Ocean Avenue II		\$9,986,598		
Pantheon I		\$870,662		
Pantheon II		\$3,986,220		
Pantheon Secondary		\$811,201		
Raven Asset Fund II		\$3,392,863		
Davidson Kempner Long-Term Distressed Opportunities Fund IV		\$3,633,980		
GTCR Fund XII		\$1,269,003		
Carrick Capital Partners III		\$1,317,161		
Cressey & Company Fund VI		\$1,050,879		
TCV X		\$1,597,666		
Accel-KKR Growth Capital Partners III		\$628,291		
Genstar Capital Partners IX		\$1,575,284		
Cortec Group Fund VII		\$2,890,529		
Hedge Fund		\$77,792,596		
Sculptor (OZ) Domestic II	Performance-based 1.50 and 20.00	\$10,895,361	\$207,090	1.90%
Graham Absolute Return	Performance-based 1.75 and 20.00	\$7,611,040	\$154,998	2.04%
Wellington-Archipelago	Performance-based 1.00 and 20.00	\$12,470,062	\$182,419	1.46%
KLS Diversified	Performance-based 2.00 and 20.00	\$9,088,522	\$210,490	2.32%

Name	Fee Schedule	Market Value	Estimated Fee Value	Estimated Fee
Winton	Performance-based 0.90 and 20.00	\$6,233,755	\$73,371	1.18%
Marshall Wace Eureka	Performance-based 2.00 and 20.00	\$3,395,147	\$81,852	2.41%
Silver Point Capital	Performance-based 2.00 and 20.00	\$12,333,154	\$298,399	2.42%
Laurion Capital		\$5,337,280		
Taconic Opportunity Fund		\$10,428,275		
Real Assets		\$55,637,063		
SSgA	0.30% of First 50.0 Mil, 0.27% of Next 50.0 Mil, 0.25% Thereafter	\$17,264,839	\$51,795	0.30%
Private Infrastructure		\$23,273,432		
KKR Global II		\$11,139,018		
North Haven Infrastructure II		\$8,490,335		
ISQ Global Infrastructure Fund II		\$2,138,550		
KKR Global Infrastructure Investors III		\$1,372,958		
Ardian Infrastructure Fund V		\$116,389		
Global Energy & Power Infrastructure Fund III		\$16,182		
Private Natural Resources		\$15,098,792		
EnCap XI		\$1,326,717		
EnCap IV		\$1,048,312		
GSO Energy Opportunities		\$3,664,418		
Taurus Mining		\$3,874,738		
Taurus Mining Annex		\$3,539,375		
BlackRock Global Energy and Power Infrastructure Fund III LP		\$798,618		
Tailwater Energy Fund IV, LP		\$846,614		
Cash		\$14,717,960		
Cash		\$10,825,261		
Treasury Cash		\$3,892,698		

IFR Checklist

	1Q19	2Q19	3Q19	4Q19	1Q20	2Q20	3Q20 and after
Fund Governance							
Investment Policy Statement							
Review and update policy							
Investment Manager Guidelines							
No action necessary at this time							
Governance Structure							
Consider reducing IC meetings to quarterly or every other month							
Crisis Response Plan							
Establish a crisis response plan							
Asset Allocation & Portfolio Construction							
Asset Allocation							
Portfolio Construction							
Manager Structure & Manager Evaluation							
Review of all Underlying Benchmarks							
Domestic Equity							
International Equity							
Fixed Income							
Private Markets & Hedge Funds							
Active and Passive Investment Management							
Operations							
Custody Services							
Review Periodically							
Transition Management							
Retain a panel of transition managers							
Securities Lending							
No action necessary at this time							
Expenses							
Review management fees of investment managers							
Cash Sweep							
Utilize Govt MMF							
Commission Recapture							
No action necessary at this time							
Legal & Actuarial							
No action necessary at this time							
Proxy Voting							
No action necessary at this time							

Asset Allocation & Portfolio Construction
 Fund Governance
 Operations
 Completed
 NA

- The Crisis Response Plan was added to the Board's bylaws and a Crisis Committee was formed.
- Discussion about the frequency of meetings will be addressed in January 2020, pending clarification.
- A review of underlying benchmarks will be presented in the January 2020 meeting.

Disclaimer, Glossary, and Notes

WE HAVE PREPARED THIS REPORT (THIS "REPORT") FOR THE SOLE BENEFIT OF THE INTENDED RECIPIENT (THE "RECIPIENT").

SIGNIFICANT EVENTS MAY OCCUR (OR HAVE OCCURRED) AFTER THE DATE OF THIS REPORT AND THAT IT IS NOT OUR FUNCTION OR RESPONSIBILITY TO UPDATE THIS REPORT. ANY OPINIONS OR RECOMMENDATIONS PRESENTED HEREIN REPRESENT OUR GOOD FAITH VIEWS AS OF THE DATE OF THIS REPORT AND ARE SUBJECT TO CHANGE AT ANY TIME. ALL INVESTMENTS INVOLVE RISK. THERE CAN BE NO GUARANTEE THAT THE STRATEGIES, TACTICS, AND METHODS DISCUSSED HERE WILL BE SUCCESSFUL.

INFORMATION USED TO PREPARE THIS REPORT WAS OBTAINED FROM INVESTMENT MANAGERS, CUSTODIANS, AND OTHER EXTERNAL SOURCES. WHILE WE HAVE EXERCISED REASONABLE CARE IN PREPARING THIS REPORT, WE CANNOT GUARANTEE THE ACCURACY OF ALL SOURCE INFORMATION CONTAINED HEREIN.

CERTAIN INFORMATION CONTAINED IN THIS REPORT MAY CONSTITUTE "FORWARD - LOOKING STATEMENTS," WHICH CAN BE IDENTIFIED BY THE USE OF TERMINOLOGY SUCH AS "MAY," "WILL," "SHOULD," "EXPECT," "AIM," "ANTICIPATE," "TARGET," "PROJECT," "ESTIMATE," "INTEND," "CONTINUE" OR "BELIEVE," OR THE NEGATIVES THEREOF OR OTHER VARIATIONS THEREON OR COMPARABLE TERMINOLOGY. ANY FORWARD-LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION ARE BASED UPON CURRENT ASSUMPTIONS. CHANGES TO ANY ASSUMPTIONS MAY HAVE A MATERIAL IMPACT ON FORWARD - LOOKING STATEMENTS, FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS. ACTUAL RESULTS MAY THEREFORE BE MATERIALLY DIFFERENT FROM ANY FORECASTS, PROJECTIONS, VALUATIONS, OR RESULTS IN THIS PRESENTATION.

PERFORMANCE DATA CONTAINED HEREIN REPRESENT PAST PERFORMANCE. PAST PERFORMANCE IS NO GUARANTEE OF FUTURE RESULTS.

Credit Risk: Refers to the risk that the issuer of a fixed income security may default (i.e., the issuer will be unable to make timely principal and/or interest payments on the security.)

Duration: Measure of the sensitivity of the price of a bond to a change in its yield to maturity. Duration summarizes, in a single number, the characteristics that cause bond prices to change in response to a change in interest rates. For example, the price of a bond with a duration of three years will rise by approximately 3% for each 1% decrease in its yield to maturity. Conversely, the price will decrease 3% for each 1% increase in the bond's yield. Price changes for two different bonds can be compared using duration. A bond with a duration of six years will exhibit twice the percentage price change of a bond with a three-year duration. The actual calculation of a bond's duration is somewhat complicated, but the idea behind the calculation is straightforward. The first step is to measure the time interval until receipt for each cash flow (coupon and principal payments) from a bond. The second step is to compute a weighted average of these time intervals. Each time interval is measured by the present value of that cash flow. This weighted average is the duration of the bond measured in years.

Information Ratio: This statistic is a measure of the consistency of a portfolio's performance relative to a benchmark. It is calculated by subtracting the benchmark return from the portfolio return (excess return), and dividing the resulting excess return by the standard deviation (volatility) of this excess return. A positive information ratio indicates outperformance versus the benchmark, and the higher the information ratio, the more consistent the outperformance.

Jensen's Alpha: A measure of the average return of a portfolio or investment in excess of what is predicted by its beta or "market" risk. $\text{Portfolio Return} - [\text{Risk Free Rate} + \text{Beta} * (\text{market return} - \text{Risk Free Rate})]$.

Market Capitalization: For a firm, market capitalization is the total market value of outstanding common stock. For a portfolio, market capitalization is the sum of the capitalization of each company weighted by the ratio of holdings in that company to total portfolio holdings; thus it is a weighted-average capitalization. Meketa Investment Group considers the largest 65% of the broad domestic equity market as large capitalization, the next 25% of the market as medium capitalization, and the smallest 10% of stocks as small capitalization.

Market Weighted: Stocks in many indices are weighted based on the total market capitalization of the issue. Thus, the individual returns of higher market-capitalization issues will more heavily influence an index's return than the returns of the smaller market-capitalization issues in the index.

Maturity: The date on which a loan, bond, mortgage, or other debt/security becomes due and is to be paid off.

Prepayment Risk: The risk that prepayments will increase (homeowners will prepay all or part of their mortgage) when mortgage interest rates decline; hence, investors' monies will be returned to them in a lower interest rate environment. Also, the risk that prepayments will slow down when mortgage interest rates rise; hence, investors will not have as much money as previously anticipated in a higher interest rate environment. A prepayment is any payment in excess of the scheduled mortgage payment.

Price-Book Value (P/B) Ratio: The current market price of a stock divided by its book value per share. Meketa Investment Group calculates P/B as the current price divided by Compustat's quarterly common equity. Common equity includes common stock, capital surplus, retained earnings, and treasury stock adjusted for both common and nonredeemable preferred stock. Similar to high P/E stocks, stocks with high P/B's tend to be riskier investments.

Price-Earnings (P/E) Ratio: A stock's market price divided by its current or estimated future earnings. Lower P/E ratios often characterize stocks in low growth or mature industries, stocks in groups that have fallen out of favor, or stocks of established blue chip companies with long records of stable earnings and regular dividends. Sometimes a company that has good fundamentals may be viewed unfavorably by the market if it is an industry that is temporarily out of favor. Or a business may have experienced financial problems causing investors to be skeptical about its future. Either of these situations would result in lower relative P/E ratios. Some stocks exhibit above-average sales and earnings growth or expectations for above average growth. Consequently, investors are willing to pay more for these companies' earnings, which results in elevated P/E ratios. In other words, investors will pay more for shares of companies whose profits, in their opinion, are expected to increase faster than average. Because future events are in no way assured, high P/E stocks tend to be riskier and more volatile investments. Meketa Investment Group calculates P/E as the current price divided by the I/B/E/S consensus of twelve-month forecast earnings per share.

Quality Rating: The rank assigned a security by such rating services as Fitch, Moody's, and Standard & Poor's. The rating may be determined by such factors as (1) the likelihood of fulfillment of dividend, income, and principal payment of obligations; (2) the nature and provisions of the issue; and (3) the security's relative position in the event of liquidation of the company. Bonds assigned the top four grades (AAA, AA, A, BBB) are considered investment grade because they are eligible bank investments as determined by the controller of the currency.

Sharpe Ratio: A commonly used measure of risk-adjusted return. It is calculated by subtracting the risk free return (usually three-month Treasury bill) from the portfolio return and dividing the resulting excess return by the portfolio's total risk level (standard deviation). The result is a measure of return per unit of total risk taken. The higher the Sharpe ratio, the better the fund's historical risk adjusted performance.

STIF Account: Short-term investment fund at a custodian bank that invests in cash-equivalent instruments. It is generally used to safely invest the excess cash held by portfolio managers.

Standard Deviation: A measure of the total risk of an asset or a portfolio. Standard deviation measures the dispersion of a set of numbers around a central point (e.g., the average return). If the standard deviation is small, the distribution is concentrated within a narrow range of values. For a normal distribution, about two thirds of the observations will fall within one standard deviation of the mean, and 95% of the observations will fall within two standard deviations of the mean.

Style: The description of the type of approach and strategy utilized by an investment manager to manage funds. For example, the style for equities is determined by portfolio characteristics such as price-to-book value, price-to-earnings ratio, and dividend yield. Equity styles include growth, value, and core.

Tracking Error: A divergence between the price behavior of a position or a portfolio and the price behavior of a benchmark, as defined by the difference in standard deviation.

Yield to Maturity: The yield, or return, provided by a bond to its maturity date; determined by a mathematical process, usually requiring the use of a “basis book.” For example, a 5% bond pays \$5 a year interest on each \$100 par value. To figure its current yield, divide \$5 by \$95—the market price of the bond—and you get 5.26%. Assume that the same bond is due to mature in five years. On the maturity date, the issuer is pledged to pay \$100 for the bond that can be bought now for \$95. In other words, the bond is selling at a discount of 5% below par value. To figure yield to maturity, a simple and approximate method is to divide 5% by the five years to maturity, which equals 1% pro rata yearly. Add that 1% to the 5.26% current yield, and the yield to maturity is roughly 6.26%.

$$\frac{5\% \text{ (discount)}}{5 \text{ (yrs. to maturity)}} = 1\% \text{ pro rata, plus } 5.26\% \text{ (current yield)} = 6.26\% \text{ (yield to maturity)}$$

Yield to Worst: The lowest potential yield that can be received on a bond without the issuer actually defaulting. The yield to worst is calculated by making worst-case scenario assumptions on the issue by calculating the returns that would be received if provisions, including prepayment, call, or sinking fund, are used by the issuer.

NCREIF Property Index (NPI): Measures unleveraged investment performance of a very large pool of individual commercial real estate properties acquired in the private market by tax-exempt institutional investors for investment purposes only. The NPI index is capitalization-weighted for a quarterly time series composite total rate of return.

NCREIF Fund Index - Open End Diversified Core Equity (NFI-ODCE): Measures the investment performance of 28 open-end commingled funds pursuing a core investment strategy that reflects funds' leverage and cash positions. The NFI-ODCE index is equal-weighted and is reported gross and net of fees for a quarterly time series composite total rate of return.

Sources: Investment Terminology, International Foundation of Employee Benefit Plans, 1999.
The Handbook of Fixed Income Securities, Fabozzi, Frank J., 1991

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Throughout this report, numbers may not sum due to rounding.

Returns for periods greater than one year are annualized throughout this report.

Values shown are in millions of dollars, unless noted otherwise.

Merced County Employees' Retirement Association

January 2020

Rebalancing

Rebalancing Discussion

- The recent run by equity markets have caused the MCERA portfolio to fall outside of its target range for US equity as of December 31, 2019. Therefore, we are recommending two modest rebalancing trades that should better position the MCERA portfolio from a risk/reward perspective, while simultaneously realizing some of the gains from the US equity sleeve. See details below:
- Recommended Trade 1:
 - Sell \$16M from Mellon Large Cap, \$2M from DFA, and \$2M from PanAgora.
 - Purchase \$10M each into Vanguard Total Bond Market and Barrow Hanley.
- Recommended Trade 2:
 - Sell \$24M from Vanguard ST Treasury.
 - Purchase \$24M into Vanguard Total Bond Market.
- The result of these transactions would reduce the total US equity exposure, which has been overweight relative to its policy target and has been outside of the policy range. The transactions would also realign the US equity composite from a market cap perspective. On the fixed income side, the short duration position would be reduced in favor of a larger core fixed income exposure. The role of high quality short duration (risk mitigator and diversifier) will begin to diminish as the private markets and hedge fund allocations steadily increase.
- Please review the table on the following page for more detailed information.

Proposed Rebalancing:

	MCERA current (\$)	Allocations (%)	Recommended Trade 1 (\$)	Recommended Trade 2 (\$)	MCERA tomorrow (\$)	Allocations (%)	Policy Targets (%)
US Equity	257,917,114	28.3			237,917,114	26.1	21.0
Mellon Large Cap	116,210,494	12.8	(16,000,000)		100,210,494	11.0	-
Mellon Dynamic US Eq	103,016,896	11.3			103,016,896	11.3	-
PanAgora Small cap	19,606,675	2.2	(2,000,000)		17,606,675	1.9	-
DFA Small Cap	19,083,048	2.1	(2,000,000)		17,083,048	1.9	-
Dev International Equity	112,735,966	12.4			112,735,966	12.4	10.0
Emerging Markets Equity	72,026,006	7.9			72,026,006	7.9	8.0
US Fixed Income	169,785,805	18.7			189,785,805	20.8	18.0
Barrow Hanley	60,905,967	6.7	10,000,000		70,905,967	7.8	-
Vanguard TBM	60,089,182	6.6	10,000,000	24,000,000	94,089,182	10.3	-
Vanguard ST Treasury	48,790,657	5.4		(24,000,000)	24,790,657	2.7	-
Opportunistic Credit	41,895,227	4.6			41,895,227	4.6	5.0
Hedge Funds	77,792,596	8.5			77,792,596	8.5	10.0
Private Equity	46,772,054	5.1			46,772,054	5.1	15.0
Private Real Estate	60,982,533	6.7			60,982,533	6.7	8.0
Real Assets	55,637,063	6.1			55,637,063	6.1	5.0
Cash	14,717,960	1.6			14,717,960	1.6	0.0
Total	910,262,324	100.0			910,262,324	100.0	100.0

Merced County Employees' Retirement Association

January 2020

Benchmarking

Introduction

- Benchmarks help facilitate the planning, implementation, and review of an investment mandate.
- According to the CFA Institute¹, a benchmark should meet certain criteria:
 - Invest-ability
 - Compatibility
 - Clarity
 - Pre-specification
- Given all of the recent changes for MCERA, Meketa felt it would be prudent to review and confirm that the current benchmarks were appropriate and effective in measuring performance at both the segment and total portfolio levels.
- This review seeks to address improvements in Meketa's performance reporting as well as recommended changes to MCERA's stated benchmarks within the IPS, as deemed necessary.
- Benchmarks at the manager level are not addressed in this paper, but are reviewed periodically as part of the manager strategy review.
- The total portfolio benchmark would reflect a composite of the recommended benchmarks with percentages based on the long term policy targets.

¹ CFA Institute Investment Foundations®, Third Edition - Chapter 19 – Performance Evaluation by Andrew Clare, PhD.

Current Benchmarks & Proposed Changes:

MCERA Portfolio Segments	Policy Target (%)	Current Benchmarks		
		Used for Meketa's Performance Reporting	Proposed and or Retained Benchmark (per IPS)	Proposed Secondary Benchmarks
US Equity	21	80/20 Russell 1000/Russell 2000	Russell 3000	N/A
Developed International Equity	10	MSCI EAFE Gross	80/20 MSCI EAFE Net/MSCI ACWI ex US Small Cap Net	N/A
Emerging Markets Equity	8	MSCI Emerging Markets Gross	MSCI Emerging Markets Net	N/A
Private Equity	15	Thomson Reuters Cambridge PE	Cambridge Global PE & VC 1Q Lagged	Russell 3000 + 3% 1Q Lagged
Real Estate	8	NCREIF ODCE	NCREIF ODCE 1Q Lagged	CPI + 5%
US Fixed Income	18	77.3/22.7 Barc Agg/Barc US Gvt 1-5 Yr	Barc Agg	N/A
Opportunistic Credit	5	50/25/25 Barc Agg/Barc HY/CS Lev Loans	50/25/25 Barc Agg/Barc HY/CS Lev Loans	N/A
Hedge Funds	10	HFRI Fund of Funds Composite Index	HFRI Fund of Funds Composite Index	N/A
Real Assets	5	50/50 S&P GI Natural Resouces/S&P GI Infrastructure	50/50 Cambridge Global Infrastructure/Cambridge Energy Upstream & Royalties and Private Energy 1Q Lagged	CPI + 5%

- Ultimately, Meketa's performance reporting benchmarks will be consistent with those used/ approved for MCERA's IPS..

US Equity

- The current benchmark is a blend of the Russell 1000 (US Large Cap Index) and the Russell 2000 (US Small Cap Index), with a 80/20 split, respectively.
- Meketa feels that using the Russell 3000 (combines the Russell 1000 and Russell 2000 based on natural market caps) may be a more appropriate benchmark as the weight difference between large cap and small cap is not fixed, but left to float.
- Pros:
 - Popular, widely-used index, many passive strategies based on this index with transparent construction rules.
 - Represents approximately 98% of the U.S. public equity.
 - No issues with data availability for analysis, data goes back to the 80s.
- Cons:
 - "Reconstitution", rebalanced only once a year.
 - High correlation to S&P 500, even though it has exposure to small and mid-cap

Developed International Equity

- The current benchmark is the MSCI EAFE Gross Dividend Index.
- Meketa feels that using a 80/20 composite blend of the MSCI EAFE Net Dividend Index and the MSCI ACWI ex US Small Cap Net Dividend Index, respectively, may be a more appropriate benchmark. This blend would include small cap exposure and be more in line with the opportunity set of the managers in this segment (First Eagle, GQG, Acadian, & Driehaus).
- A "Net" Dividend Index is calculated by MSCI using the companies' country of incorporation to determine the relevant dividend withholding tax rates.
- Pros:
 - Popular, widely-used indexes, many passive strategies based on the EAFE with transparent construction rules.
 - Represents vast majority of the free float-adjusted market cap of the global equity opportunity set outside of the US.
- Cons:
 - There will be some overlap with EM equity.
 - No Canada exposure in EAFE.

Emerging Markets Equity

- The current benchmark is the MSCI EM Gross Dividend Index.
- Meketa feels that using the MSCI EM Net Dividend Index may be a more appropriate benchmark.
- A “Net” Dividend Index is calculated by MSCI using the companies’ country of incorporation to determine the relevant dividend withholding tax rates.
- Pros:
 - Popular, widely-used index, many passive strategies based on this index with transparent construction rules.
 - Represents approximately 85% of the free float-adjusted market cap in each country, with 1,404 constituents.
- Cons:
 - Heavy exposure to China, South Korea, and Taiwan in the construction of the market cap weighted Index itself (gross or net).

Private Equity

- The current benchmark is the Thomson Reuters Cambridge Private Equity.
- Meketa supports Cliffwater's use of the Cambridge Global PE & VC 1Q Lagged Benchmark as a primary benchmark as well as the use of the Russell 3000 + 3% 1Q Lagged as a secondary benchmark for longer-term evaluation.
- Pros:
 - Consistent with Cliffwater¹.
 - Broad universe of peers that constitutes the benchmark.
 - Appropriate for portfolios that are diversified across various vintages, strategies, and geographies.
 - Widely recognized and used.
- Cons:
 - Selection (self-reporting) bias in Cambridge Associates Data.
 - Will be 1 quarter lagged due to when data becomes available.

¹ Benchmark composition would be similar, but Meketa would be reporting time-weighted returns while Cliffwater reports on an IRR basis.

Real Estate

- The current benchmark is the NCRIEF ODCE.
- Meketa supports Cliffwater's use of the NCREIF ODCE as the current benchmark, with a 1 quarter lag as well as the use of the CPI + 5% as a secondary benchmark for longer-term evaluation.
- Pros:
 - Consistent with Cliffwater.
 - Like other traditional benchmarks, is a cap-weighted index of 38 open-end commingled funds pursuing a core investment strategy.
 - Widely recognized and used.
- Cons:
 - Valuations are lagged and based on appraised values.
 - Data is derived from a small sample that typically consists of large core properties.

US Fixed Income

- The current benchmark is a 77/23 blend of the Bloomberg Barclays US Aggregate Index and the Bloomberg Barclays US Government 1-5 Year.
- Meketa recommends using only the Bloomberg Barclays US Aggregate Index, thereby removing the short term component.
- One of the roles of the Vanguard ST Treasury Fund position has been to house assets for future capital calls for the private markets. From a long term perspective, we see this position eventually being phased out.
- Pros:
 - Popular, widely-used index, with transparent construction rules.
 - High quality.
 - Low correlation with equity markets.
- Cons:
 - Differences in opinions in terms of composition of a “Core” fixed income portfolio.
 - Current MCERA US Fixed Income segment will have significantly lower duration relative to the Barclays US Aggregate Index which will lead to tracking error.

Opportunistic Credit

- The current benchmark is a 50/25/25 blend of the Bloomberg Barclays US Aggregate Index, Bloomberg Barclays High Yield, and the Credit Suisse Leveraged Loan Index, respectively.
- The Bloomberg Barclays suite of indexes are market cap-weighted indexes, representing various bond asset classes. Credit Suisse Leveraged Loan index tracks the investable market of leveraged loans. We recommend retaining the current benchmark.
- Pros:
 - Popular, widely-used indexes, with transparent construction rules.
- Cons:
 - Specifically as it relates to benchmarking the underlying managers, benchmark “misfit” will exist as PIMCO’s exposure will vary quite significantly from its Bloomberg Barclays US Aggregate stated (referenced) index.

Hedge Funds

- The current benchmark is the HFRI Fund of Funds Composite Index.
- The HFRI Fund of Funds Composite Index comprises multiple managers and strategies. We recommend retaining this benchmark.
- Pros:
 - Consistent with Cliffwater.
 - Popular, widely-used index, suitable for a hedge fund program.
 - Includes the largest possible set of data.
 - Data goes back to 1990.
- Cons:
 - Data revisions for up to 4 months after month end.
 - Does not accurately reflect the composition of client portfolio at any given time.
 - Peer portfolio, rather than an investable portfolio.

Real Assets

- The current benchmark is the 50/50 blend of the S&P Global Natural Resources Index and the S&P Global Infrastructure Index.
- Meketa supports Cliffwater's use of the 50/50 Cambridge Global Infrastructure/Cambridge Energy Upstream & Royalties and Private Energy 1Q Lagged as a primary benchmark as well as the use of the CPI + 5% 1Q Lagged as a secondary benchmark for longer-term evaluation.
- The current benchmark is comprised of publicly-traded companies in the natural resources, commodities, and infrastructure business areas. While this is likely the best proxy for publicly-traded securities, the recommended benchmark should be more correlated to private market real assets investments.
- Pros:
 - Consistent with Cliffwater¹.
 - Broad universe of peers that constitutes the benchmark.
 - Appropriate for portfolios that are diversified across various vintages, strategies, and geographies.
 - Widely recognized and used.
- Cons:
 - Selection (self-reporting) bias in Cambridge Associates Data.
 - Will be 1 quarter lagged due to when data becomes available.

¹ Benchmark composition would be similar, but Meketa would be reporting time-weighted returns while Cliffwater reports on an IRR basis.

Officially Moving to 1 Quarter Lag for Private Markets (Private Equity, Real Estate, & Real Assets)

- Currently, MCERA reflects a 1-month lag for reporting private market investments but in reality, much of the reported date is reflective of a 1-quarter lag or more.
- Cambridge benchmarks are reported on a one-quarter lag from the end of the performance quarter due to the reporting timeframe of private investment fund managers.
- When evaluating benchmarks used for private market, we observe a variety of approaches across plans. That is to say, there is no “one” solution. However, for those that use the fund universe approach, Cambridge is one of the most widely used and most complete private market peer universes.
- Many of Meketa clients currently use a 1-quarter lag. If approved, switching from a 1-month lag to 1-quarter lag will require a performance holiday or adjustment of 1 quarter, meaning that there will be a quarter where private markets returns will be zero.
- As such, we recommend that MCERA employ a 1-quarter lag for all private markets.

**Merced County Employees' Retirement Association (MCERA)
RETIREMENT BOARD AGENDA ITEM**

DATE: January 23, 2020
TO: MCERA Board of Retirement
FROM: Kristie Santos, Plan Administrator
SUBJECT: CPAS Contract for 2020

ITEM NUMBER: 8

ITEM TYPE: Action

STAFF RECOMMENDATION:

Approve the CPAS contract for 2020.

DISCUSSION:

The Merced County Employees' Retirement Association (MCERA) contract with CPAS expired on 12/31/2019. CPAS is the vendor that provides the pension management system for MCERA. As stated in a previous meeting, staff are currently working with CPAS on a new contract which will allow MCERA to pay the vendor annually instead of monthly. The contract amounts for 2020 are as follows:

- Maintenance Extended Warranty fee of \$23,496 billed annually in advance.
- Software Support Services of \$162,000 billed annually in advance (calculated at \$225 per hour for 720 hours for the contract term).
- Any additional support hours more than the 720 hours will be billed at \$255 per hour. These hours would be invoiced annually.
- Currently there is a process in place to monitor the use of MCERA hours per month.
- Any new functionality in the CPAS system will be billed at \$225 per hour (Operations Support).

Staff is recommending the Board approve the 2020 contract.

MCERA's contract with CPAS in the previous period was for two years (January 1, 2017- December 31, 2019) and MCERA paid a Maintenance Extended Warranty fee of \$23,028 each year (billed monthly at \$1,919) and Software Support Services of \$151,200 (billed monthly at \$12,600).