AGENDA

REGULAR BOARD MEETING
MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION (MCERA)

One McInnis Parkway, 1st Floor
Retirement Board Chambers
San Rafael, CA

January 13, 2021 – 9:00 a.m.

This meeting will be held via videoconference pursuant to Executive Order N-25-20, issued by Governor Newsom on March 12, 2020, Executive Order N-29-20, issued by Governor Newsom on March 17, 2020, and Executive Order N-35-20, issued by Governor Newsom on March 21, 2020.

Instructions for watching the meeting and/or providing public comment, as well as the links for access, are available on the Watch & Attend Meetings page of MCERA's website. Please visit https://www.mcera.org/retirementboard/agendas-minutes/watchmeetings for more information.

The Board of Retirement encourages a respectful presentation of public views to the Board. The Board, staff and public are expected to be polite and courteous, and refrain from questioning the character or motives of others. Please help create an atmosphere of respect during Board meetings.

EVENT CALENDAR 9 a.m. Regular Board Meeting

CALL TO ORDER

ROLL CALL

MINUTES

December 9, 2020 Board meeting
December 16, 2020 Investment Committee meeting

A. OPEN TIME FOR PUBLIC EXPRESSION

Note: The public may also address the Board regarding any agenda item when the Board considers the item.

Open time for public expression, from three to five minutes per speaker, on items not on the Board Agenda. While members of the public are welcome to address the Board during this time on matters within the Board's jurisdiction, except as otherwise permitted by the Ralph M. Brown Act (Government Code Sections 54950 et seq.), no deliberation or action may be taken by the Board concerning a non-agenda item. Members of the Board may (1) briefly

respond to statements made or questions posed by persons addressing the Board, (2) ask a question for clarification, or (3) provide a reference to staff for factual information.

B. MATTERS OF GENERAL INTEREST

1. Final Experience Study (**Action**) – Cheiron, Graham Schmidt
   Consider and take possible action to adopt Experience Study and any demographic or economic assumption changes

C. BOARD OF RETIREMENT MATTERS

1. Administrator's Report
   a. Administrator's Update

   b. Staffing Update

   c. Facility Use Report

   d. Future Meetings
      - January 20, 2021 Investment Committee
      - February 10, 2021 Board

2. Trustee Comments
   a. Educational Training: Reports by Trustees and Staff

   b. Other Comments

D. NEW BUSINESS

1. Fiduciary Liability Insurance (**Action**)
   Consider and take possible action on selection of fiduciary liability insurance provider

2. Notification of SACRS Board of Directors Election 2021-2022
   Consider and discuss election process and deadlines

3. Future Meetings
   Consider and discuss agenda items for future meetings.

E. OTHER INFORMATION

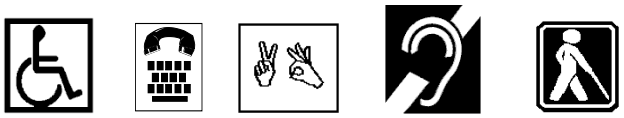
1. Training Calendar (**Action**)

F. CONSENT CALENDAR (Action)

Note on Process: Items designated for information are appropriate for Board action if the Board wishes to take action. Any agenda item from a properly noticed Committee meeting held prior to this Board meeting may be considered by the Board.

Note on Voting: As provided by statute, the Alternate Safety Member votes in the absence of the Elected General or Safety Member, and in the absence of both the Retired and Alternate Retired Members. The Alternate Retired Member votes in the absence of the Elected Retired Member. If both Elected General Members, or the Safety Member and an Elected General

Member, are absent, then the Elected Alternate Retired Member may vote in place of one absent Elected General Member.



Agenda material is provided upon request. Requests may be submitted by email to MCERABoard@marincounty.org, or by phone at (415) 473-6147.

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The agenda is available on the Internet at http://www.mcera.org

MINUTES

REGULAR BOARD MEETING
MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION (MCERA)

One McInnis Parkway, 1st Floor
Retirement Board Chambers
San Rafael, CA

December 9, 2020 – 9:00 a.m.

This meeting was held via teleconference pursuant to Executive Order N-25-20, issued by Governor Newsom on March 12, 2020, Executive Order N-29-20, issued by Governor Newsom on March 17, 2020, and Executive Order N-35-20, issued by Governor Newsom on March 21, 2020. The public was able to listen to and observe the meeting on YouTube.

EVENT CALENDAR 9 a.m. Regular Board Meeting

CALL TO ORDER

Chair Silberstein called the meeting to order at 9:01 a.m.

ROLL CALL

PRESENT: Block, Cooper, Given, Gladstern, Jones (alternate retired), Klein, Murphy, Poirier (alternate safety), Shaw (ex officio alternate), Silberstein, Thomas, Werby

ABSENT: None

MINUTES

It was M/S Block/Gladstern to approve the November 4, 2020 Board Meeting Minutes as submitted. The motion was approved by a vote of 9-0 as follows:

AYES: Block, Cooper, Given, Gladstern, Klein, Murphy, Silberstein, Thomas, Werby
NOES: None
ABSTAIN: None
ABSENT: None

It was M/S Thomas/Murphy to approve the October 27-28, 2020 Strategic Workshop Minutes as submitted. The motion was approved by a vote of 9-0 as follows:

AYES: Block, Cooper, Given, Gladstern, Klein, Murphy, Silberstein, Thomas, Werby
NOES: None
ABSTAIN: None
ABSENT: None

A. OPEN TIME FOR PUBLIC EXPRESSION

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No members of the public provided comment.

B. APPOINTMENT OF BOARD STANDING COMMITTEES (Action)

Appointment of Standing Committees and Standing Committee Chairs

Chair Silberstein announced that Standing Committee Chairs have agreed to continue serving in their current positions for 2021 and Standing Committees will have the same composition as the current year.

Investment Committee – composed of all twelve members of the Retirement Board
Sara Klein, Chair

Finance and Risk Management Committee
Todd Werby, Chair
Steve Block
Roy Given
Sara Klein
Laurie Murphy

Governance Committee
Chris Cooper, Chair
Maya Gladstern
Dorothy Jones
Steve Silberstein
Phillip Thomas

Audit Committee
Maya Gladstern, Chair
Steve Block
Roy Given
Steve Silberstein

It was M/S Gladstern/Werby to approve the Chair's assignments for 2021 Standing Committees and Standing Committee Chairs as presented.

AYES: Block, Cooper, Given, Gladstern, Klein, Murphy, Silberstein, Thomas, Werby
NOES: None
ABSTAIN: None
ABSENT: None

C. MATTERS OF GENERAL INTEREST

1. Preliminary Actuarial Valuation Results June 30, 2020 – Cheiron, Graham Schmidt
   Presentation of preliminary results for the annual actuarial valuation

   Retirement Administrator Jeff Wickman opened the actuarial presentations by stating that there would be two separate presentations at today's meeting. First, Actuary Graham Schmidt will present the preliminary results of the June 30, 2020 Actuarial Valuation. The results would be based on current economic and demographic assumptions. The second presentation would be the demographic results of the June 30, 2020 Actuarial Experience Study. The final June 30, 2020 Experience Study will be presented to the Board in January for potential action Any assumption changes adopted in the Experience Study will be used for the final June 30, 2020 Actuarial Valuation which will be presented to the Board at the February 2021 Board meeting.

   Graham Schmidt, Actuary with Cheiron, explained that first he will present preliminary Actuarial Valuation results as of June 30, 2020 using the current actuarial economic or demographic assumptions. Mr. Schmidt stated preliminary Actuarial Valuation results show that employer contribution rates increased slightly, primarily as a result of the current year investment return falling below the 7% target. The funded ratio based on market value of assets fell slightly from 86.6% to 84.9%. The net impact on employer contribution rates would be an increase of about a 10th of a percent of payroll, except for San Rafael that experienced a higher increase in the contribution rate.

   Mr. Schmidt noted the number of active members increased slightly, and retirees increased 3.3%, so the ratio of retirees to actives increased from 125.2% to 128.7%. PEPRA members now make up over 40% of active member payroll, reducing overall cost by 0.21% of pay. Payroll growth increased by 4.0% and average pay went up by 3.5%, which is close to the assumption for individual members' pay. Payroll growth reduced the overall contribution rate by 0.15% of pay. The City of San Rafael is the exception where payroll decreased by 0.4%, increasing its overall contribution rate by 1.43% of payroll. The Novato Fire Protection District's experience was fairly neutral with demographic changes.

   In summary Mr. Schmidt said the results are fairly neutral in terms of changes to the cost of the Plan.

2. Preliminary Experience Study Results – Cheiron, Graham Schmidt

   Mr. Schmidt presented demographic results of the Actuarial Experience Study as of June 30, 2020. The Actuary explained that the overall cost of the Plan depends on actual

experience. Good assumptions produce level costs, and periodic experience studies provide a self-correcting mechanism for these costs.

Mr. Schmidt stated that demographic assumptions address the questions of whether members reach retirement, when members retire, what is the benefit, how much will salary increase during the members' careers, and how long will the benefit be paid. Other demographic assumptions take into account members who do not retire but instead take a refund of contributions and reciprocal employment, for example. The actual-to-expected ratio, the actual number of members who leave divided by expected decrements, is used to set the overall level of demographic assumptions. The actuary looks for a 90% confidence interval for this ratio at each service level and an R-Squared Ratio, the percentage of variation in the data explained by the assumption, of 100%.

Mr. Schmidt discussed assumptions for retirement rates within Miscellaneous and Safety member groups. Safety rates are split between 3% @ 50 years versus 3% @ 55 years. Rates vary for age groups under 20 years old, from 20 to 29 years, and 30 and years and over.

The actuary's retirement rate recommendations are:

- Maintain current assumptions for pre-PEPRA Miscellaneous, except increase rates at ages 60+ for less than 20 years of service
- Maintain current assumptions for 3% @ 50 Safety members
- Replace current assumptions for 3% @ 55 Safety members with age and service-based CalPERS rates for Public Safety Police members with the same formula
- Replace current assumptions for PEPRA members with age and service-based CalPERS assumptions for PEPRA groups; 2.0% @ 62 Public Agency Miscellaneous – 2.7% @ 57 Public Agency Safety Police

The recommendations reflect that for the Miscellaneous group, retirement rates were higher than current assumptions. MCERA has little PEPRA experience so using the CalPERS assumptions reflects a slightly later retirement date for PEPRA members.

Termination Rates have separate assumptions for Miscellaneous and Safety members. For Miscellaneous members Mr. Schmidt is recommending replacing current age/service/sex based rates with service-only rates. The recommendation is to retain current Safety termination rates, except increase rates modestly for members with less than five years of service. This will mean higher termination rates across the board, Mr. Schmidt said. He discussed types of termination. Termination rates distinguish between those members who leave employment and withdraw their contributions as opposed to members who terminate employment and leave their contributions with MCERA. This group is considered deferred members. Mr. Schmidt recommends modest reductions in refund rates at lower service levels for Miscellaneous and Safety.

Those members who leave employment and go to another reciprocal retirement plan with a different non-MCERA employer also have unique assumptions. Mr. Schmidt recommends

an increase in rates of reciprocity for members leaving contributions on deposit. The Termination and Reciprocity assumptions changes will have a minimal impact on contribution rates, Mr. Schmidt said.

For the rates of disability retirements, Mr. Schmidt recommends retaining current Miscellaneous rates and increasing the percentage of disabilities assumed to be service-connected from 50% to 75%. The recommendation is to replace Safety disability rates with the alternative CalPERS Peace Officers and Fire Fighter rates, multiplied by 120%, and assume all Safety disabilities are service-connected. The net impact of recommendations on disability rates is minimal.

Healthy annuitants have the biggest impact on cost. The Retirement Plans Experience Committee released a new set of mortality improvement tables (MP-2020) that Cheiron is recommending for MCERA. In short, Mr. Schmidt noted that previously projected improvements to mortality have not materialized. The proposed changes in mortality assumptions will reduce overall Plan cost.

No changes are proposed for Salary Merit Increase assumptions or for beneficiary assumptions. The recommendation for Administrative Expenses is a reduction from $5.4 million to $5.0 million for the current fiscal year.

Mr. Schmidt closed his presentation by summarizing the recommended changes in economic assumptions that were reviewed at the Board's October Workshop. Those recommendations were to reduce the nominal return to 6.75% from 7.0% and reduce inflation to 2.5% from 2.75%. The real return remains at 4.25%.

Mr. Schmidt went on to present a sensitivity analysis showing the change in overall contribution rates for each proposed demographic and economic assumption change. The recommended demographic assumptions do not have much of an impact on contribution rates except for the change to the mortality assumption which is projected to reduce contributions. The reduction in the normal cost will be split roughly equally between employers and employees, while the reduction in the UAL rates is applied to the employer rates only. Mr. Schmidt presented the overall change to contribution rates for each valuation group, noting that the impact on the changes was the biggest for the County and Special District group which showed an increase in the overall contribution rate by 1.26% in the first year of the three-year phase-in period.

Trustee Murphy asked if the actuary looked at the economic impact of COVID-19 in terms of delaying retirement. Mr. Schmidt replied he is not seeing changes in retirement rates and it is too early to tell whether long-term retirement rates will be affected by COVID-19. He noted that any significant changes in behavior will be captured in the June 30, 2021 Actuarial Valuation.

Trustee Block asked about reciprocal member benefits being the highest final annual salary and Mr. Schmidt confirmed the assumptions already anticipate this. Chair Silberstein noted that employees will see a slight increase in contribution rates.

Trustee Klein asked if changes in the discount rate are always by quarter points. In response Mr. Schmidt explained that quarter point increments are used in order to be

meaningful. Mr. Wickman agreed, noting using smaller increments implies a level of precision that may not be applicable. Trustee Klein noted the change in contribution rates would be smoother using a smaller increment for the reduction in the discount rate. Mr. Wickman observed adjustments can be made if needed based on experience from year to year. Trustee Werby asked if higher inflation should be expected based on economic stimulus. Mr. Schmidt pointed to market expectations for inflation, noting inflation has not appeared after over a decade of loosening monetary policy.

3. GASB 67/68 Report (**Action**) – Cheiron, Graham Schmidt
   Consider and take possible action to adopt June 30, 2020 GASB 67/68 Report

   Mr. Wickman explained that Governmental Accounting Standards Board (GASB) Statements 67 and 68 (GASB 67/68) Reports provide accounting and financial reporting information that MCERA and its employers use for their annual financial statements. GASB 67 provided the required information for MCERA's financial statements while GASB 68 provides financial data for participating employers. Mr. Schmidt discussed key results from each statement.

   Mr. Schmidt stated the GASB 67/68 report projects MCERA's Total Pension Liability based on last year's valuation rolled forward with service and interest cost offset by benefit payments. As of June 30, 2020 the Net Pension Liability increased from $365.7 million to $457.8 million. Pension Expense, a balancing item of the net impact from one year to the next, rose from $80.7 million to $94.3 million, largely due to the investment loss which is recognized over five years. The Total Pension Liability rose to $3.1 billion from $3.0 billion. The sensitivity of the collective Net Pension Liability to changes in the discount rate was reviewed. The report itemizes changes from year to year in the collective Total Pension Liability and the Net Pension Liability and shows the Net Pension Liability as a percentage of covered payroll. A table lists the allocation of the unfunded actuarial liability among employers.

It was M/S Gladstern/Given to adopt the GASB 67/68 Report as presented. The motion was approved by a vote of 9-0 as follows:

AYES:	Block, Cooper, Given, Gladstern, Klein, Murphy, Silberstein, Thomas, Werby
NOES:	None
ABSTAIN:	None
ABSENT:	None

4. Audited Financial Statements for Fiscal Year Ending June 30, 2020 (**Action**) – Brown Armstrong, Rosalva Flores, CPA, Audit Manager
   Discuss and consider Audit Committee recommendation to adopt the Audited Financial Statements for June 30, 2020

   Rosalva Flores, Partner with Brown Armstrong, reported the annual audit has been completed. Auditors presented draft financial reports to the Audit Committee on December 1, 2020. In accordance with Generally Accepted Accounting Principles (GAAP) Brown Armstrong has issued an unmodified clean opinion of the Financial Statements as of June 30, 2020. Auditors are required to present the Independent

Auditor's Report on Internal Control. Ms. Flores reported there were no noncompliance items nor material weakness or significant deficiencies. The Required Communication to the Board communicates matters regarding the audit. There were no disagreements with management on accounting matters. There was an audit adjustment of $37 million due to a lag in reporting of final private equity values as of June 30, 2020.

In the Agreed Upon Conditions Report, opportunities for improvement are listed. One recommendation was made to review manager Service Organization Control (SOC) reports formally and document any important matters. Management has agreed with this recommendation.

Audit Committee Chair Maya Gladstern reviewed the deliberations of the Audit Committee at its December 1, 2020 meeting. See below in Agenda Item D.2.b. Trustee Block affirmed that the final audited financial statements reflect the amendments contemplated by the Committee.

Audit Committee Chair Gladstern stated that the Audit Committee acted to recommend that the Board adopt the audited June 30, 2020 Financial Statements. The motion was approved by a vote of 9-0 as follows:

AYES:	Block, Cooper, Given, Gladstern, Klein, Murphy, Silberstein, Thomas, Werby
NOES:	None
ABSTAIN:	None
ABSENT:	None

Mr. Wickman expressed his appreciation to Rosalva Flores and the Brown Armstrong audit team, MCERA Accounting Unit Manager La Valda Marshall, and Senior Accountant Lisa Jackson for their cooperation and flexibility in completing the annual financial audit using remote procedures.

D. BOARD OF RETIREMENT MATTERS

1. Administrator's Report
   a. Administrator's Update

Mr. Wickman reported the Marin County Health Officer issued a new Stay-at-Home Order that went into effect yesterday. As a result MCERA's office remains open but staff in the office have been reduced to four or five members daily and will be continued while the new order is in place.

On November 10, 2020 the Administrator participated in a Zoom meeting with members of the Marin County Association of Retired Employees (MCARE). He presented operational updates for the office and discussed the financial position and funding of the Plan. Syd Fowler presented information on health care premiums for 2021.

Marin County is preparing to implement a new Human Resource/Payroll system in December. MCERA staff have worked closely with the County Project Team to review payroll system test results and identify any issues that may come up. Staff will be

scrutinizing the first couple of data files generated by the new system to make sure data is correct.

Mr. Wickman reported that the new shared corridor for suites 100, 150 and 175 at One McInnis Parkway is complete. Also, the courtyard project is approximately 90% complete. One potential tenant has conducted a walk-through of Suite 150/175. Trustee Werby asked about rental rates and Mr. Wickman said based on current market conditions the brokers do not expect we will achieve the exact same rates as the second floor suites.

b. Staffing Update

No updates to staffing to report.

c. Facility Use Report

No facility use in the period.

d. Future Meetings

- December 16, 2020 Investment Committee
- January 13, 2021 Board

2. Standing Committee Reports

a. Finance and Risk Management Committee

1. Administrative Budget Fiscal Year 2020/21 Quarterly Review
Consider and review expenses for quarter ending September 30, 2020

Finance and Risk Management Committee Chair Todd Werby reported the Committee met on November 18, 2020. Expenditures were 21.6% of the budgeted amount for the quarter. Salaries and Benefits expenses were 21.7% of the budgeted amount for the quarter due to vacancies. Services and Supplies were 20.5% of the budgeted amount for the quarter. Expenses for professional services were over the budgeted amount due to paying Brown Armstrong more than 25% of annual financial auditing services. Other budget overages were due to purchasing sneeze guards and laptops for staff telework; also, payment for AT&T cell phone and data services was brought up to date.

2. Non-budgeted Expenses
Consider and review non-budgeted expenses for the quarter

See Finance and Risk Management Committee minutes.

3. Quarterly Checklist
Consider, review and updates on the following:

a. MCERA educational and event-related expenses

Educational and event-related expenses included Mr. Wickman's attendance at the CalAPRS Administrators' Institute and staff training.

b. Continuing Trustee Education Log

The Trustee Continuing Education Log shows all trustees with education hours due in 2020 have achieved the 24 hours.

c. Other expenses per Checklist Guidelines

Credit card charges included purchasing desktop cameras to enable staff to participate visually in meetings.

d. Variances in the MCERA administrative budget in excess of 10%

See discussion above.

e. Vendor services provided to MCERA

No new vendor services in the period.

f. MCERA staffing status

No staffing updates to report.

g. Internal controls, compliance activities and capital calls

For the quarter in the private equity program, MCERA received slightly over $7 million in distributions from Abbott and paid $5.3 million in capital calls. Pathway distributed $5.4 million and was paid $3.2 million in capital calls. An extra $30 million in the Parametric Overly Program margin account was deposited into MCERA's short-term investment account to meet expenses.

h. Audits, examinations, investigations or inquiries from governmental agencies

No discussion.

i. Other items from the Administrator related to risk and finance

No discussion.

4. Cyber Risk Assessment (**Action**)
Consider possible action on Finance and Risk Management recommendation to authorize the Retirement Administrator to enter into an agreement with Linea Secure to assist with the implementation of the recommended changes from the Cybersecurity Risk Assessment Report

Finance and Risk Management Committee Chair Werby reported the Administrator presented to the Committee a $70,000 proposal from Linea Secure to support follow-up work related to its Cybersecurity Risk Assessment Report. Included in this work would be development of incident and breach responses and implementing the remaining action items from the assessment. Efficiency, timeliness, and limitations on staff resources were cited to support the proposal.

Finance and Risk Management Committee Chair Werby stated that the Finance and Risk Management Committee acted to recommend that the Board authorize the Retirement Administrator to enter into an agreement with Linea Secure to assist with the implementation of the recommended changes from the Cybersecurity Risk Assessment Report.

Mr. Wickman noted that Linea Secure has provided the prioritized list the Committee had requested based on the original assessment. Trustee Block asked if that changed the Administrator's analysis of what needs to be done. In response Mr. Wickman said the issue is staff's ability to complete the required work in a timely manner. Due to limits on staff resources it would take longer for staff to implement the findings, leading to more potential risk to MCERA.

The motion was approved by a vote of 9-0 as follows:

AYES:	Block, Cooper, Given, Gladstern, Klein, Murphy, Silberstein, Thomas, Werby
NOES:	None
ABSTAIN:	None
ABSENT:	None

5. Annual Audit of Financial Statements Update
   Update on audit process

   A material increase in final June 30, 2020 private equity valuations caused financial statements to be revised. See also Audit Committee report below.

b. Audit Committee

1. Financial Audit Review – Rosalva Flores, Brown Armstrong
   Review and discuss audit results

   Audit Committee Chair Gladstern reported that Brown Armstrong will issue an unmodified, clean opinion verifying the financial statements as of June 30, 2020 are in accordance with Generally Accepted Accounting Principles. The use of shared files enhanced effective communication during the audit. The auditors focused on significant risk areas of revenue recognition, management override of controls, investments and related earnings, and participant data. Auditors proposed a significant audit adjustment due to the $37 million increase in the value of the private equity portfolio from March 31, 2020 preliminary values. June 30, 2020 private equity and real estate valuations lag other investment valuations. Auditors found real estate returns as compared with the benchmark and peers over the long term to be reasonable. No noncompliance was noted and there were no material weaknesses or significant deficiencies noted.

2. Financial Statements (**Action**) – Rosalva Flores, Brown Armstrong
   Consider possible action on Finance and Risk Management Committee recommendation to adopt proposed June 30, 2020 Financial Statements (see Agenda Item C.4 above)

   Audit Committee Chair Gladstern reported that the reference to foreign currency risk being minimal in the Notes to Financial Statements will be clarified. The Committee determined that settled lawsuits may remain as Contingencies. The Committee took action to recommend adoption of the June 30, 2020 Financial Statements. See Agenda Item C.4 above.

3. Trustee Comments
   a. Educational Training: Reports by Trustees and Staff

   Trustee Thomas reported the SACRS conference was well organized. Mr. Wickman said the first SACRS conference session, 2020 Vision – The Consequences of the Presidential Election, was mostly a discussion about economic impacts. The presenter had interesting insights on whether a W- or K-shaped recovery will unfold and productivity gains as a result of COVID. Concerns are whether office space or main street will ever recover. The session California Recover/COVID-19 pointed to the startling increase in how fast cases are increasing and potential reinfection rates. Trustee Jones indicated some SACRS conference presentations will be available. Mr. Wickman said once all presentations are available he will let the trustees know.

   b. Other Comments

   Trustee Block suggested continuing streaming Board meetings when the COVID-19 situation is over. Mr. Wickman agreed increased public involvement has been positive and plans are to continue with this practice.

Chair Silberstein recessed Open Session and directed deliberations to **Agenda Item E**, **Legal Matter**, in Closed Session at 11:01 a.m. Chair Silberstein recessed Closed Session and reconvened in Open Session at 11:10 a.m.

E. LEGAL MATTER

1. Conference with Legal Counsel – Pending Litigation (Gov. Code sec. 54956.9(d)(4)) (**CLOSED SESSION**), Second District Court of Appeal Case No. B295673, potential support for LACERA request for publication of opinion

Mr. Wickman reported that the Board took the following action on this agenda item:

It was M/S Block/Werby to authorize Counsel to send a letter to the Court of Appeal in support of the Los Angeles County Employees' Retirement Association (LACERA) request to publish the *Marquez v. LACERA* opinion. The motion was approved by a vote of 9-0 as follows:

AYES: Block, Cooper, Given, Gladstern, Klein, Murphy, Silberstein, Thomas, Werby
NOES: None
ABSTAIN: None
ABSENT: None

F. NEW BUSINESS

1. Fiduciary Liability Insurance (**Action**)
   Consider and take possible action on selection of fiduciary liability insurance provider

   The Administrator reported that on December 3, 2020 MCERA received a proposal with a premium increase and an increase to MCERA's retention cost for any case filed related to the *Alameda* decision. The Administrator informed the broker that MCERA will not be impacted by those claims. He is waiting for a response from the broker and has requested an extension by the current provider to January 13, 2021 to properly analyze the proposal.

2. Future Meetings
   Consider and discuss agenda items for future meetings.

   No discussion.

G. OTHER INFORMATION

1. Training Calendar (**Action**)

   Mr. Wickman noted most meetings on the Training Calendar are in virtual format. Trustee Werby asked if cost has been adjusted for the virtual CalAPRS General Assembly and Mr. Wickman will look into this. Trustee Werby asked if all trustees can attend Wharton and Ms. Dunning replied it depends on if it is open to the public. Normally only one or two trustees at a time attend Wharton, the Administrator said.

It was M/S Werby/Thomas to approve the Training Calendar as submitted. The motion was approved by a vote of 9-0 as follows:

AYES: Block, Cooper, Given, Gladstern, Klein, Murphy, Silberstein, Thomas, Werby
NOES: None
ABSTAIN: None
ABSENT: None

H. CONSENT CALENDAR (Action)

Trustee Werby asked about a 30-year overpayment refund of contributions on the Consent Calendar. The Administrator explained that in accordance with the CERL members cease paying employee contributions after 30 years of service. There is sometimes a timing issue for when the person reaches 30 years and when the employer stops the contribution. The situation on the Consent Calendar was a case where the member had continued to contribute past 30 years. Trustee Klein asked about the number of terminations and Mr. Wickman replied he does not see the number of terminations as being unusual. Trustee Gladstern noted that terminations can be due to members not passing probation. In response to Trustee Werby's inquiry, Mr. Wickman explained members may buy back service for previous extra

hire time, for example. Trustee Thomas asked if buybacks include interest and the Administrator said yes, interest is charged at 7% to match the investment assumption that MCERA uses.

It was M/S Werby/Gladstern to approve the Consent Calendar as submitted. The motion was approved by a vote of 9-0 as follows:

AYES:	Block, Cooper, Given, Gladstern, Klein, Murphy, Silberstein, Thomas, Werby
NOES:	None
ABSTAIN:	None
ABSENT:	None

There being no further business, Chair Silberstein adjourned the meeting at 11:24 a.m.

_____	_____
Jeff Wickman, Retirement Administrator	Michelle Hardesty, Assistant Retirement Administrator
On behalf of:	On behalf of:
Steve Silberstein, Board Chair	Laurie Murphy, Secretary

Draft MINUTES

INVESTMENT COMMITTEE MEETING
MARIN COUNTY EMPLOYEES' RETIREMENT ASSOCIATION (MCERA)

One McInnis Parkway, 1st Floor
Retirement Board Chambers
San Rafael, CA

December 16, 2020 – 9:00 a.m.

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CALL TO ORDER

Chair Klein called the meeting to order at 9:01a.m.

ROLL CALL

PRESENT: Block, Cooper, Given, Gladstern, Jones (alternate retired), Klein, Murphy, Silberstein, Thomas, Werby

ABSENT: Poirier (alternate safety), Shaw (ex officio alternate)

A. OPEN TIME FOR PUBLIC EXPRESSION

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No members of the public provided comment. Retirement Administrator Jeff Wickman announced that public comment will be live going forward.

B. MANAGER REPORTS

1. Manager Overview – Jim Callahan, Callan LLC

   Jim Callahan, President of Callan LLC, introduced the review of the AEW Core Property Trust portfolio and the real estate market.

2. AEW – Core Real Estate – Mike Acton, Lily Kao, Candida Hoeberichts – 9:05 a.m.

   Candida Hoeberichts, Director of AEW Investor Relations, introduced Mike Acton, Managing Director and Head of AEW Research, and Lily Kao, Senior Portfolio Manager. Ms. Hoeberichts stated core real estate is AEW's largest strategy and the Core Property Trust (CPT) is the flagship fund. Ms. Hoeberichts introduced several new members of the AEW investment team and reported Sara Cassidy and Lily Kao were promoted to Senior Portfolio Manager.

   Mr. Acton stated the implication of COVID-19 is slowing economic activity, including in the property market for retail and restaurants. The recovery is expected to continue until early 2023 when he expects the real estate market will have recovered. Expectations are for rising interest rates over the coming decade. Property yields remain attractive relative to U.S. Treasury yields, supporting additional capital flowing into the real estate market. This is expected to support a floor in commercial property real estate valuations. Industrial properties and warehouses have remained strong.

   Ms. Kao reported CPT's objective is to assemble a high quality core real estate portfolio with good income yield. The CPT has higher occupancy than the benchmark. Portfolio managers have pivoted the portfolio based on secular trends and diversified holdings by product type and geography. Locations include top tier markets with strong job growth and quality of life; examples are Charlotte, North Carolina, and Texas where investments have been added. Office industrial, retail and multifamily sectors are the focus of CPT. Ms. Kao stated the defensive income profile has outperformed the benchmark over ten years. Ms. Kao said over time core real estate is expected to provide attractive income returns.

   Due to COVID-19 disproportionately affecting selected markets, recent returns are negative. In the second quarter of 2020 the negative impact to income was apparent. Since then rent relief has moderated and multifamily and office have had consistent rent collection. Retail centers dipped in the second quarter and are recovering since then. AEW negotiated lower rent and deferred payments and tenants have begun to pay what is due. AEW is expecting the fund's income to remain stable and have been thoughtful in their approach to valuations. There are no enclosed malls in the Core Property Trust – all malls are open air. Many holdings lease to off-price retailers who are continuing to do well. AEW is seeing underperformance in urban markets affected by the working-from-home theme, and similar themes are affecting multi-family as well. Industrial continues to outperform other sectors and Ms. Kao is seeing increasing rents and demand which is driving cap rates down.

   Trustee Klein asked about the vacancy rate at 500 Folsom in San Francisco. Ms. Kao replied 500 Folsom is a high rise near the Salesforce transit center. Last year the property

experienced strong velocity and lease rates. With COVID-19 rents have declined 15 to 25% for studio apartments. The property is 85% leased and Ms. Kao expects full stabilization by this time next year. Leases are relatively short term, which will favor higher rent in a few years.

Ms. Kao stated AEW and the CPT fund are committed to the ESG Global ESG Benchmark for real assets (GRESB). CPT ranks 84 in this index, which is high relative to peers. Trustee Gladstern asked how climate change affects the strategy. Ms. Kao replied that AEW uses the company Four Twenty Seven to assist with due diligence on sustainability. Mitigation of ESG risks are incorporated into the annual business plan, and electric vehicle charging stations and solar panels are favored.

Trustee Silberstein asked if we are continuing to reinvest dividends and Mr. Wickman said reinvesting dividends was changed in March 2020 to receiving dividends. Responding to Trustee Silberstein's inquiry about adding leverage to the portfolio, Ms. Kao said CPT will continue to be a low leverage fund. Trustee Werby asked if 500 Folsom was written down and Ms. Kao replied affirmatively due to lower rent growth. All assets are appraised once per year by a third party valuation consultant. In summary Ms. Kao said she is seeing cap rates decline and money flowing into multi-family and industrial sectors.

C. NEW BUSINESS

1. Institutional Shareholder Services (ISS) Governance Risk Report – Jack Ferdon, Nathan Worthington
   Presentation of the ISS Quarterly Governance Risk Report

   Mr. Wickman introduced Jack Ferdon, Senior Associate, Client Service & Consultants, and Nathan Worthington, Executive Director, Regional Head of Client Service and Consultants with Institutional Shareholder Services (ISS). The Administrator said Mr. Ferdon and Mr. Worthington's presentation is intended as an introduction into the value of the Governance Committee's review of the quarterly ISS Governance Risk Report.

   Mr. Ferdon reviewed the third quarter of 2020 ISS Governance Risk Report for MCERA's Fund. He explained that the ISS Quality Score is given to each company based on a relative review of corporate governance factors. Mr. Ferdon reported that thirty percent of companies in the Fund fall into the low rating level, some of which is expected for passive investments such as the S&P 500. Commingled fund values in the report do not represent MCERA's position.

   Turning to the Manager Summary, Mr. Ferdon highlighted that Parametric votes most often against management recommendations because the follow the ISS Public Fund policy. The percentage of meetings voted is affected by onerous documentation requirements before a vote can be submitted and therefore is not a concern, he said. Overall MCERA managers voted 80% in favor of management proposals. The report shows voting by proposal types. Mr. Ferdon said it is notable that most of MCERA's votes against executive management recommendations involve executive compensation.

   Trustee Gladstern asked about the differences in the ISS Public Fund Policy from the ISS Benchmark Policy. In response Mr. Ferdon said the Public Fund Policy is more aggressive

with respect to recommending voting against management recommendations in several areas, including executive compensation plans. Mr. Worthington added that the general framework is that ISS analyzes shareholder proposals on a case-by-case basis. The Public Fund Policy uses sustainability guides for environmental issues, human rights abuses, workplace safety, and fair lending policies. Trustee Silberstein observed that the ISS Public Fund Policy was developed from conversations with large institutional investors to hold managers more accountable than standard policies. MCERA's policy is similar to the ISS Public Fund Policy, Trustee Silberstein observed.

2. Proxy Voting Education – Jeff Wickman, Retirement Administrator
Review MCERA's current proxy voting process, discuss potential options to the current approach and discuss the current proxy voting policy.

Mr. Wickman thanked the Sacramento County Employees' Retirement System (SCERS) for providing him with information about their proxy voting processes. This educational session on proxy voting is presented as background for the Governance Committee's recommendation that the Investment Committee consider hiring ISS vote proxies for two of MCERA's domestic equity investments: the S&P 500 fund and the DFA small cap core portfolio.

Mr. Wickman explained that proxy voting allows voting without being at companies' annual meetings. There are California Government Code sections requiring proxy voting which MCERA complies with. Proxy voting rights are considered a Plan asset, meaning they need to be managed according to MCERA's fiduciary duties of care and loyalty.

The first option for proxy voting is internal proxy voting which is generally performed by the largest pension plans. The second option is to delegate proxy voting to investment managers as MCERA does. MCERA has the responsibility of monitoring proxy voting by the managers. The third option is to use a third-party service provider. Considerations are ease of execution and meeting fiduciary and regulatory requirements. Third-party firms establish guidelines, research a large volume of issues, and develop model or custom guidelines. The two largest providers of proxy voting services are ISS and Glass Lewis. ISS has been helping MCERA and providing the Governance Risk Report used by the Governance Committee to assess proxy voting.

MCERA's Proxy Voting and Corporate Governance Policy is modeled after Council of Institutional Investors (CII) policies. Model guidelines provided by ISS include its Public Fund Policy and its Benchmark Policy. Mr. Wickman presented a comparison by ISS of MCERA's proxy voting policy with the ISS Benchmark Policy. There were gaps in several areas; for example, MCERA's policy is silent on proxy contests, mergers & acquisitions, or shareholder proposals, whereas the ISS Benchmark Policy provides details.

Staff recommendations to consider at the next Investment Committee meeting are:

- Engage a third party provider if the Investment Committee wants to vote proxies directly.

- Adopt a model policy offered by the third party provider.

- Update the Proxy Voting and Corporate Governance Policy to align with selected provider policy and include Board and staff monitoring and reporting.

- Schedule ISS to present their proxy voting services.

A summary of staff actions when a third party is voting proxies would include:

- Review proxy voting service providers and make a recommendation to the Board for hiring the provider.

- As necessary, review proxy ballots to ensure votes are cast as expected.

- Take action when policy guidelines are insufficient to make a recommendation on voting on a specific issue.

- Report to the Board quarterly a summary of the results of the proxy voting process.

- Ask the third party to prepare a policy review on proxy voting annually.

Based on his discussions with peer systems, Mr. Wickman expects staff can reasonably manage the proxy voting utilizing an external proxy voting provider. Trustee Gladstern expressed appreciation for this presentation because it answers many questions on proxy voting. Chair Klein agreed that needed steps have been clarified and the Committee will move forward with considering proxy voting at its January meeting. Trustee Silberstein commended the Administrator for an excellent presentation. He noted the Governance Committee has been monitoring proxy voting, particularly by DFA and State Street, for a few years.

Trustee Block asked if takeover and merger and acquisition proxy votes could be left to our managers since we hire managers to value the holdings. He also inquired if another party verifies how ISS is voting. Mr. Wickman stated that typically when proxy voting is taken back from the managers all proxy issues are voted by the system or the hired third party provider. Mr. Worthington said that ISS works with Deloitte & Touche on their proxy voting processes and this is included in ISS's SOC report that is available to MCERA. A custom proxy voting policy could be designed to refine how proxy voting is implemented, he said.

Chair Klein recessed the meeting for a break at 10:43 a.m., reconvening at 10:55 a.m.

3. Public Real Assets Structure Review (**Action**) – Callan LLC – Jim Callahan, Jay Kloepfer
Consider, discuss, and take possible action regarding real asset allocations

Mr. Callahan stated historically MCERA's real assets were invested exclusively in the Woodmont private real estate portfolio. Then the Investment Committee determined to diversify and move ultimately to two core real estate funds managed by AEW and UBS. Part of the prior real estate allocation, 7% of Plan assets, was reallocated to a public diversified real assets portfolio including Treasury Inflation-Protected Securities (TIPS), REITs, commodities, and natural resources. Subsequently, commodities and natural resources were moved from passive to active management. There has been discussion about reconsidering the use of commodities in the portfolio which this topic will address.

Trustee Werby asked why (TIPS) are considered real assets and Mr. Callahan replied because TIPS have a distinct positive correlation to inflation levels.

Jay Kloepfer, Executive Vice President, Director of Capital Research with Callan LLC, stated real assets were built as a complement to the real estate portfolio. Options to consider include eliminating commodity exposure and reallocating funds to the other three real asset managers, keeping a sliver of commodities, or moving to global infrastructure.

Mr. Kloepfer made the point that inflation matters. Relative to history consumer price inflation (CPI) has been benign, averaging 2.2% over 25 years. But Callan believes inflation could be a rising threat two to four years from now based on the extensive economic stimulus. The time to consider an inflation hedge is when the risk is low, he advised. Real assets provide a hedge for inflation and commodities have the highest sensitivity to inflation.

Principles for real asset portfolio design include diversification, short-term inflation sensitivity, and long-term real returns. Mr. Kloepfer said the current real assets portfolio has a balanced, moderate risk posture and has performed as designed. Performance over 5.25 years is in the 35th percentile compared to peers, and active managers have added value. Short-term performance is weaker, especially for commodities. Correlations were reviewed showing REITs, TIPS and commodities have lower correlation to equities than natural resources and positive correlation to the CPI.

Mr. Kloepfer discussed characteristics of alternative structures for real assets. Commodities have underperformed other assets, but their purpose is different. TIPs have low volatility. Real asset correlations and betas with stocks and bonds were presented. Assets are analyzed to look for diversification as well as sensitivity to inflation, Mr. Kloepfer explained. One alternative Callan recommends if commodities are removed from the portfolio is global listed infrastructure, These are liquid stocks generating long-term cash flow that are tied to inflation. The weakness is global infrastructure securities have a higher beta to equities. Three alternative mixes for real assets were presented showing that the best beta exposure to inflation is with the commodities portfolio. Mr. Callahan explained that the tradeoff with the three mixes is greater return but lower correlation to inflation.

The mixes are:

- Mix 1: Reduce commodities by 10% and distribute remaining funds to current real asset managers.
- Mix 2: Remove commodities and replace with global listed public infrastructure.
- Mix 3: Remove commodities and reallocate proceeds to the three remaining real assets.

Trustee Silberstein asked if removing commodities and allocating those funds to the private credit portfolio could be done and Mr. Callahan replied the two are separate discussions. Trustee Gladstern said public infrastructure traditionally has been funded with municipal bonds. She is against privatizing infrastructure because it would fall onto

the residents to make the return we are looking for. Trustee Block said because of potential stagflation commodities should remain in the portfolio as inflation protection. Trustee Silberstein noted that equities provide inflation protection over the long term. Mr. Kloepfer observed that in the event of a supply shock, TIPS and commodities provide inflation protection. Trustee Block agreed there may be a supply shock in commodities in the future due to global demand.

In summary Mr. Callahan said real assets would be useful in certain economic scenarios, noting that the total portfolio is equity and growth oriented. Callan is still comfortable with the current real assets portfolio which would perform better than other assets in certain scenarios.

It was M/S Silberstein/Gladstern to adopt Mix 3 in the Callan presentation for the diversified real assets portfolio to remove commodities and reallocate those funds to remaining public real assets.

Trustee Block observed that removing commodities would not do much to portfolio performance and there would be less diversification. Trustee Silberstein noted commodities have had little return. Trustee Werby views the return as the main consideration. Chair Klein agrees with leaving commodities in the portfolio to provide for diversification and guard against inflation that may result from current economic stimulus.

The motion failed by a vote of 5-4 as follows:

AYES:	Cooper, Gladstern, Silberstein, Werby
NOES:	Block, Given, Klein, Murphy, Thomas
ABSTAIN:	None
ABSENT:	None

4. Investment Manager Personnel and Other Updates
   a. Morgan Stanley – Jim Callahan, Callan LLC

      Anne Heaphy, Senior Vice President with Callan, reported Morgan Stanley announced the retirement of Dirk Hoffmann-Becking at the end of March 2021 for personal reasons. Mr. Hoffmann-Becking is a member of the international equity team covering banking and leisure sectors. Mr. Callahan noted William Lock, as head of the international equity team, is in charge of the Morgan Stanley portfolio and therefore the departure of Mr. Hoffmann-Becking should not be a concern.

   b. Morgan Stanley/Eaton Vance – Jim Callahan, Callan LLC

      Mr. Callahan reported Morgan Stanley is going to acquire Eaton Vance, the parent company of Parametric. MCERA is invested in Parametric's emerging markets strategy and the overlay program. Because Morgan Stanley tends to be a more hands-on parent company than Eaton Vance has been, with respect to Parametric Callan will be monitoring the situation closely. Trustee Given asked if there is anything in the agreement with Parametric to prevent Morgan Stanley from changing anything and Mr. Callahan said not that he is aware of.

c. Colchester – Jim Callahan, Callan LLC

Mr. Callahan reported Janhavi Kumar, Head of Distribution for North America, will be departing Colchester on December 18, 2020. Jeremy Church, Product Specialist, will replace Ms. Kumar. Callan does not believe this is a meaningful event as the investment team is intact.

5. Watch Period Review – Callan LLC – Jim Callahan, Anne Heaphy
   a. Parametric Emerging Markets Equity (**Action**)
   Consider and take possible action regarding Watchlist status

Mr. Callahan said the Parametric Emerging Markets Equity portfolio has been on the Watchlist due to trailing 3-year underperformance since 2015. Underperformance has continued due largely to a different portfolio construction than the MSCI Emerging Markets Index. This benchmark has a significant weight in China which has been one of the strongest emerging markets performers. Mr. Callahan said the recommendation is to retain Parametric on the Watchlist. In addition, it makes sense to replace Parametric with an active manager for the global emerging markets opportunity set. Trustee Gladstern asked if the benchmark is appropriate and Mr. Callahan said yes because it represents the opportunity set.

It was M/S Murphy/Silberstein to retain Parametric on the Watchlist.

Upon Trustee Block's suggestion, the makers of the motions above and below separated into two motions what had been one motion. The motion was approved by a vote of 9-0 as follows:

AYES: Block, Cooper, Given, Gladstern, Klein, Murphy, Silberstein, Thomas, Werby
NOES: None
ABSTAIN: None
ABSENT: None

It was M/S Murphy/Silberstein to direct Callan to conduct a search to evaluate other emerging markets strategies.

Trustee Block said he is against increasing investments in China based on his experience working in the country.

The motion was approved by a vote of 8-1 as follows:

AYES: Cooper, Given, Gladstern, Klein, Murphy, Silberstein, Thomas, Werby
NOES: Block
ABSTAIN: None
ABSENT: None

b. Artisan International Growth Equity (**Action**)
Consider and take possible action regarding Watchlist status

The Artisan International Growth Equity portfolio went on the Watchlist in November 2017 because of performance relative to peers. Currently five-year performance as of September 30, 2020 remains below the median partly due to the strategy being not as aggressive as the other growth strategies. Mr. Callahan's recommendation is to retain the Artisan portfolio on the Watchlist.

c. Morgan Stanley International Equity (**Action**)
Consider and take possible action regarding Watchlist status

The Morgan Stanley International Equity portfolio was placed on the Watchlist in November 2017. Although this portfolio no longer qualifies quantitatively for the Watchlist, based on the personnel change and the acquisition discussed above, Mr. Callahan's recommendation is to retain the Morgan Stanley portfolio on the Watchlist.

d. Colchester Global Fixed Income (**Action**)
Consider and take possible action regarding Watchlist status

The performance of the Colchester Global Fixed Income portfolio is good with respect to the index and peers. Mr. Callahan's recommendation is to remove the Colchester portfolio from the Watchlist.

It was M/S Block/Cooper to retain the Artisan International Growth Equity and Morgan Stanley International Equity portfolios on the Watchlist and to remove the Colchester Global Fixed Income portfolio from the Watchlist. The motion was approved by a vote of 9-0 as follows:

AYES:	Cooper, Given, Gladstern, Klein, Murphy, Silberstein, Thomas, Werby
NOES:	Block
ABSTAIN:	None
ABSENT:	None

D. INVESTMENT CONSULTANT QUARTERLY REPORT

1. Quarterly Report as of September 30, 2020
   a. Summary Report

Mr. Callahan presented the Summary Quarterly Report for the Fund as of September 30, 2020. The investment consultant stated the equity markets continue to rebound off the March 2020 lows in dramatic fashion. Large cap equities continued outperformance to small caps for the quarter and over longer time frames. Also, growth stocks have been meaningfully outperforming value stocks. Non-U.S. developed equity markets trail the U.S. equity markets, and emerging markets are stronger than Non-U.S. developed markets. Mr. Callahan said this year the U.S. dollar has weakened versus major currencies, which helps international investments. Bonds had modest returns for the quarter and a strong 9.56% return for the prior 12 months. Longer duration bonds have also rebounded. In real estate returns are positive but there is a write-down in the index for the quarter and the trailing year.

Mr. Callahan highlighted the fact that the value of six stocks – Facebook, Apple, Amazon, Netflix, Google, and Microsoft (FAANGM) represent 25% of the S&P 500 Index. As of September 30, 2020, the top five FAANGM stocks were up 42% calendar year-to-date, while remaining stocks in the index had negative returns. Trustee Werby inquired about the markets going forward. Mr. Callahan replied COVID-19 is affecting which companies recover from the weak economy. The expectation is lagging stocks will do better once the economy recovers from the virus.

MCERA ranks favorably against peers, returning 4.5% net of fees in the third quarter of 2020 and 7.3% for the trailing year. There is an overweight to private equity which performed well in the third quarter of 2020. The big headwind over the last year is the overweight in small cap equities in the domestic equity portfolio versus the Russell 3000 Index and value tilt in the DFA domestic small cap core portfolio. The Dimensional Fund Advisors (DFA) small cap core portfolio underperformed and is value oriented by design. International equity portfolios include Morgan Stanley which has a value orientation, Artisan with a growth orientation, and the TimesSquare international small cap portfolio. For the quarter internationals returned 6.3% and 5.2% net of fees for the prior 12 months. Mr. Callahan noted that MCERA is being rewarded for active management over time.

For the quarter ending September 30, 2020, the fixed income portfolio was up 2.1% versus 1.4% for the index and all three managers outperformed. For the trailing year fixed income was up 9.6%, with all three managers ranking favorably compared with the peer group. Trustee Block asked about the performance of the Western Asset fixed income portfolio since the guidelines changes earlier this year. Mr. Callahan replied the guidelines change for Western Asset has been very positive.

Mr. Callahan reported that real estate returns were negative for the third quarter and trailing 12 months. UBS continues to struggle relative to the index and the peer group as it continues to write down properties in retail and office sectors. Public real assets returned 7.28% in the third quarter versus 3.72% for the benchmark. The big standout is the KBI natural resources portfolio with its 14% return for the quarter. In the private equity portfolio MCERA has paid in around $350 million of the $400 in commitments and has received $250 million in distributions. Net asset value is $301 million, so the total value of the private equity portfolio is almost $550 million. Returns are in the second quartile of the peer group. In response to Trustee Werby's inquiry, the Administrator said the private debt portfolio consists of $33 million for Fortress, and $33.5 million each for CarVal and Varde.

b. Flash Performance Update

Mr. Callahan updated preliminary Fund performance net-of-fees as of November 30, 2020. The fiscal year-to-date return for the domestic equity portfolio was 19.5%, slightly trailing the Russell 3000. Small cap is performing better since the end of September, he said, meaning the overweight to small cap is helping the Fund return in the fourth quarter. The international equity portfolio has a fiscal year-to-date return of 14.4%, underperforming the benchmark. Developed international managers are

underperforming fiscal year returns so far and are ahead of respective benchmarks for the calendar year. The fixed income portfolio was up 4% for the fiscal year-to-date, with all three managers performing well. Public real assets returned 16.7% for the fiscal year to date, with the KBI natural resources portfolio driving returns. The Invesco commodities portfolio performance is far ahead of its benchmark. Mr. Callahan said public real assets have been a good diversifier for the Fund.

As of November 30, 2020 the Fund is up 6.7% for the calendar year and 11.1% for the fiscal year. In summary, Mr. Callahan said it has been an amazing recovery since March 2020. Trustee Block asking if the divergence in valuations between REITs and private real estate is due to equity beta or underlying asset values. In response, Mr. Callahan said the predominant effect has been equity beta. He noted interest rates are so low that he expects institutional investors to continue searching for yield from REITs.

There being no further business, Chair Klein adjourned the meeting at 1:01 p.m.

_____
Jeff Wickman
Retirement Administrator

On behalf of:
Sara Klein
Investment Committee Chair

_____
Michelle Hardesty
Assistant Retirement Administrator

On behalf of:
Jeff Wickman
Retirement Administrator

CHEIRON Classic Values, Innovative Advice

Marin County Employees' Retirement Association

Actuarial Experience Study for July 1, 2017 through June 30, 2020

Produced by Cheiron

January 2021

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January 7, 2021

Board of Retirement
Marin County Employees' Retirement Association
1 McInnis Parkway, Suite 100
San Rafael, CA 94903-2764

Dear Members of the Board:

The purpose of this report is to provide the results of an Actuarial Experience Study of the Marin County Employees' Retirement Association (MCERA) covering actuarial experience from July 1, 2017 through June 30, 2020. This report is for the use of the MCERA Retirement Board in selecting assumptions to be used in actuarial valuations beginning June 30, 2020.

Cheiron utilizes ProVal, an actuarial valuation software program leased from Winklevoss Technologies (WinTech), to calculate liabilities and projected benefit payments. We have reviewed the underlying workings of this model to the degree feasible and consistent with Actuarial Standard of Practice No. 56 and believe them to be appropriate for the purposes of this experience study report.

This report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices and our understanding of the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board as well as applicable laws and regulations. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys and our firm does not provide any legal services or advice.

This report was prepared for the Retirement Board of MCERA for the purposes described herein. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any other user.

If you have any questions about the report or would like additional information, please let us know.

Sincerely,
Cheiron

Graham A. Schmidt, ASA, EA, FCA, MAAA
Consulting Actuary

William R. Hallmark, ASA, EA, FCA, MAAA
Consulting Actuary

SECTION I – EXECUTIVE SUMMARY

Actuarial assumptions (economic and demographic) are intended to be long term in nature, and should be both individually reasonable and consistent in the aggregate. The purpose of this experience study is to evaluate whether or not the current assumptions adequately reflect the long-term expectations for MCERA, and if not, to recommend adjustments. It is important to note that frequent and significant changes in the actuarial assumptions are not typically recommended, unless there are known fundamental changes in expectations of the economy, or with respect to MCERA's membership or assets that would warrant such frequent or significant changes.

This report does not reflect any changes to long-term assumptions as a result of COVID-19, other than information that is already known as of the measurement date (June 30, 2020), such as current market conditions and actual changes in the covered population. Although COVID-19 is likely to have an impact on both economic and demographic experience, at least over the short term, the long-term effect of the pandemic is uncertain.

SUMMARY OF ECONOMIC ASSUMPTION ANALYSIS

The specific economic assumptions analyzed in this report are price inflation, wage and pensionable payroll inflation, COLA growth, and the discount rate. These assumptions have a significant impact on the contribution rates in the short-term and the risk of negative outcomes in the long-term.

The economic assumptions recommended in this report include a 6.75% long-term rate of return on Plan assets, an annual increase in prices measured by the Consumer Price Index (CPI) of 2.50%, annual wage increases of 3.00%, annual pensionable payroll growth of 2.75%, and a post-retirement COLA average growth rate of 1.9%, 2.4%, or 2.5%, for the 2.0%, 3.0% and 4.0% COLA caps, respectively. We note that other combinations of economic assumptions are also reasonable.

The real return expectation for this set of assumptions (4.25%) is consistent with the 10-year capital market expectations of Callan, the Plan's investment consultant, and more conservative than the long-term expectations (20 years or longer) of a survey of investment consultants published by Horizon Actuarial Services. Other data presented in this report indicate that the inflation and wage growth expectations recommended herein are reasonable.

The nominal return assumption is higher than the expectations provided by Callan, as well as the expectations from the Horizon survey over a 10-year time horizon. If the current asset target is maintained and these projections are realized, the Board can expect a pattern of small actuarial asset losses in the near term. However, these projections also assume lower inflation and if these projections are also realized, the asset losses may be at least partially offset by liability gains on COLAs and wages.

SECTION I – EXECUTIVE SUMMARY

SUMMARY OF DEMOGRAPHIC ASSUMPTION CHANGES

This experience study specifically analyzes and makes the following recommendations for the demographic assumptions.

- **Retirement rates** – Increase rates for pre-PEPRA Miscellaneous members at ages 60 and older with less than 20 years of service; use CalPERS Public Safety Police rates for 3% at 55 Safety members; and replace rates for PEPRA members with CalPERS assumptions for their respective groups.
- **Termination rates** – Replace Miscellaneous member rates with unisex service-only table; slightly increase rates for Safety members with less than five years of service; reduce refund rates at low service levels; and increase rates of reciprocity.
- **Deferral age** – Increase Miscellaneous deferral age to 59 and Safety 3% at 50 deferral age to 53 for those with reciprocity.
- **Disability rates** – Increase percentage of disabilities assumed to be service-connected for Miscellaneous members from 50% to 75%, and change Safety rates to the CalPERS Peace Officers and Fire Fighter (POFF) rates multiplied by 120%.
- **Mortality rates** – Change mortality assumptions from CalPERS 2017 rates to Pub-2010 rates; update the mortality improvement scale to MP-2020.
- **Merit salary increases** – No changes.
- **Other assumptions** – Increase age difference for female retirees to 2 years younger than spouse; reduce current expected administrative expenses to $5.0 million; decrease sick leave adjustment to 1.5% for Marin and San Rafael non-PEPRA members; increase sick leave adjustment from 3.0% to 4.0% for Novato non-PEPRA members; and apply a 1.5% sick leave adjustment for all PEPRA active members at retirement.

The body of this report provides additional detail and support for our conclusions and recommendations.

COST OF ECONOMIC AND DEMOGRAPHIC ASSUMPTION CHANGES

The changes to the economic assumptions have the largest impact. Among the demographic assumptions, the recommended changes to mortality rates have the largest impact on contribution rates. Table I-1 summarizes the estimated cost impact of the recommended changes to economic and demographic assumptions contained in this report in the next year, while Table I-2 summarizes the estimated cost after the Unfunded Actuarial Liability (UAL) rate increases have been recognized over a three-year ramp up period. We have also included the estimated impact of two alternative economic assumption scenarios, as discussed at prior Board meetings.

SECTION I – EXECUTIVE SUMMARY

Table I-1

Estimated Impact on Contribution Rates from Demographic Assumption Changes (based on June 30, 2020 valuation results)

	Change in Contribution Rate (Employee and Employer)								
	Total Normal Cost Rate			UAL Rate			Total Contribution Rate		
Description	County	Novato	San Rafael	County	Novato	San Rafael	County	Novato	San Rafael
Proposed Demographic Assumptions									
Mortality Rates	-0.15%	-0.05%	-0.17%	-0.26%	-0.38%	-0.43%	-0.41%	-0.43%	-0.60%
Retirement Rates	0.15%	-0.21%	0.03%	0.02%	-0.04%	-0.01%	0.17%	-0.25%	0.02%
Disability Rates	0.11%	-0.15%	0.00%	0.01%	0.09%	0.04%	0.12%	-0.06%	0.04%
Termination Rates	-0.13%	0.34%	0.13%	0.00%	-0.03%	-0.01%	-0.13%	0.31%	0.12%
Vested Deferral Age	-0.10%	-0.28%	-0.07%	-0.02%	0.04%	0.00%	-0.12%	-0.24%	-0.07%
Spouse Age Difference	-0.02%	-0.01%	-0.02%	-0.01%	-0.01%	-0.01%	-0.03%	-0.02%	-0.03%
Administrative Expense	-0.07%	-0.11%	-0.10%	-0.04%	-0.09%	-0.16%	-0.11%	-0.20%	-0.26%
Load for Terminal Pay and Sick Leave	0.05%	0.38%	-0.04%	-0.02%	0.17%	-0.08%	0.03%	0.55%	-0.12%
Contribution Rate Increase After Proposed Demographic Assumption Changes	-0.16%	-0.09%	-0.24%	-0.32%	-0.25%	-0.66%	-0.48%	-0.34%	-0.90%

Table I-2

Estimated Impact on Contribution Rates from All Assumption Changes (based on June 30, 2020 valuation results)

	Change in Contribution Rate (Employee and Employer)					
	1st Smoothing Year Total Contribution Rate			3rd Smoothing Year Total Contribution Rate		
Description	County	Novato	San Rafael	County	Novato	San Rafael
Total After Proposed Demographic Assumptions	**-0.48%**	**-0.34%**	**-0.90%**	**-1.12%**	**-0.84%**	**-2.22%**
Proposed Economic Assumptions						
Recommended (6.75% Discount, 2.75% Payroll)	**1.77%**	**1.65%**	**1.46%**	**2.99%**	**2.65%**	**2.54%**
Alternative 1 (6.75% Discount, 3.00% Payroll)	1.62%	1.32%	0.96%	2.84%	2.30%	2.04%
Alternative 2 (6.50% Discount, 2.50% Payroll)	2.98%	1.71%	2.22%	5.16%	2.65%	3.82%
Total (Recommended Economic + Proposed Demographic)	**1.29%**	**1.31%**	**0.56%**	**1.87%**	**1.81%**	**0.32%**

SECTION II – ECONOMIC ASSUMPTIONS
PRICE INFLATION

The economic assumptions used in actuarial valuations are intended to be long term in nature, and should be both individually reasonable and consistent with each other. The specific assumptions analyzed in this report are:

- **Price inflation** – used indirectly as an underlying component of other economic assumptions.
- **Wage inflation** – across the board wage growth used to project benefits.
- **Payroll growth** – overall pensionable payroll growth used in the calculation of the unfunded liability amortization payment as a level percentage of expected payroll.
- **COLA growth** – rate at which inflation-linked post-retirement COLAs are expected to change.
- **Discount rate** – used both to project long-term asset growth and to discount future cash flows in calculating the liabilities and costs of the Plan.

In order to develop recommendations for each of these assumptions, we considered historical data, both nationally and for the Plan, and expectations for the future, as expressed by the Plan's and other external investment consultants and the Board.

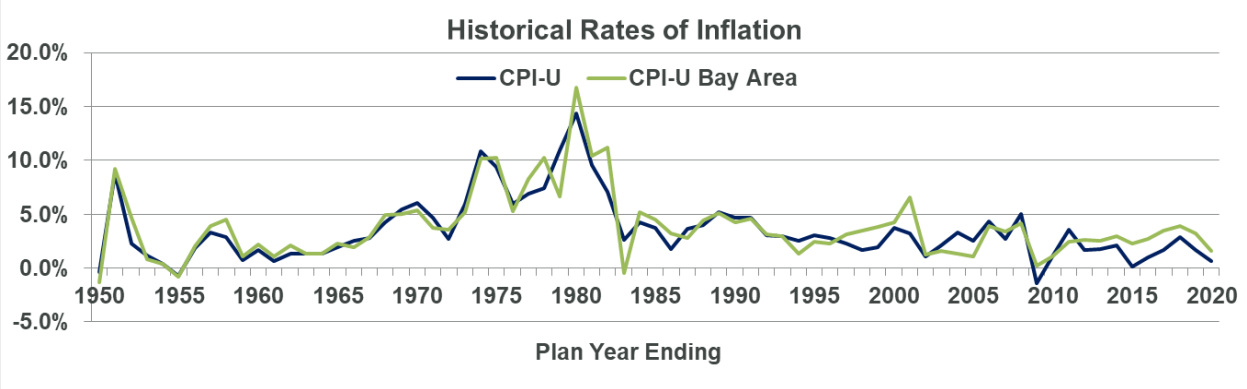
PRICE INFLATION

Long-term price inflation rates are the foundation of other economic assumptions. In a growing economy, wages, and investments are expected to grow at the underlying inflation rate plus some additional real growth rate, whether it reflects productivity in terms of wages or risk premiums in terms of investments.

Historical Data

Chart II-1 below shows inflation (CPI-U) for the U.S. and for the Bay Area by Plan year (ending June 30) since 1950.

Chart II-1



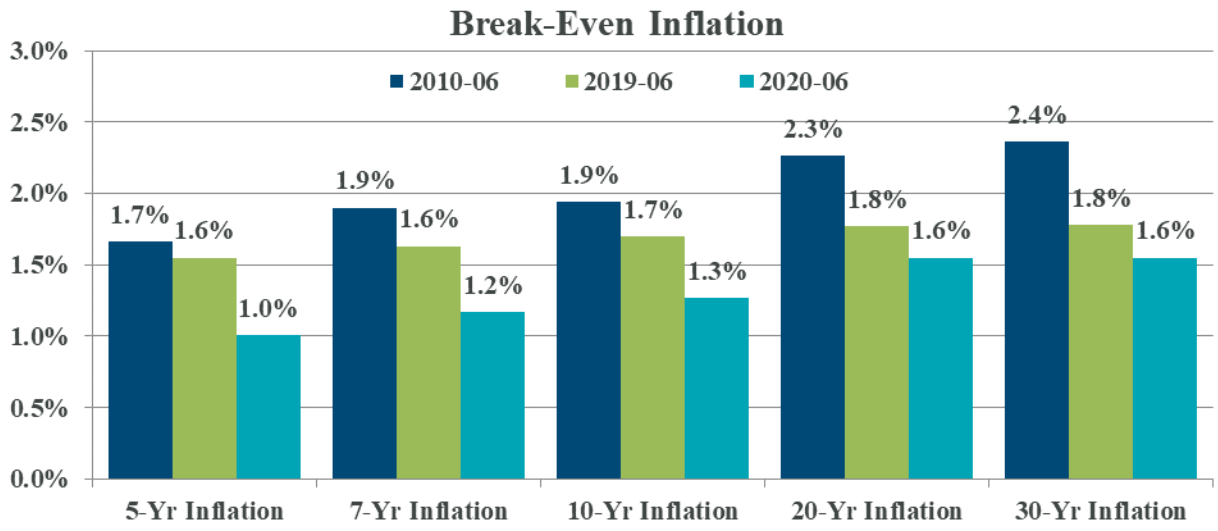
SECTION II – ECONOMIC ASSUMPTIONS
PRICE INFLATION

Over the 70 years ending June 2020, the geometric average inflation rate for the U.S. has been about 3.5%, but this average is heavily influenced by the high inflation rates in the 1970s and early 1980s. Over the last 30 years, the geometric average inflation rate has been 2.3%, and it has only been 1.7% over the last 10 years. The inflation rate for the Bay Area – which affects post-retirement COLAs and active member wage increases, but not necessarily overall investment returns – has generally tracked U.S. inflation reasonably closely, but has been somewhat higher over the past decade.

Future Expectations

A measure of the market consensus of expected future inflation rates is the difference in yields between conventional treasury bonds/notes and Treasury Inflation-Protected Securities (TIPS) at the same maturity. Chart II-2 shows the break-even inflation rate as of June 2020, as well as the periods, one and 10 years earlier. Break-even inflation is the level of inflation needed for an investment in TIPS to "break even" with an investment in conventional treasury bonds/notes of the same maturity.

Chart II-2

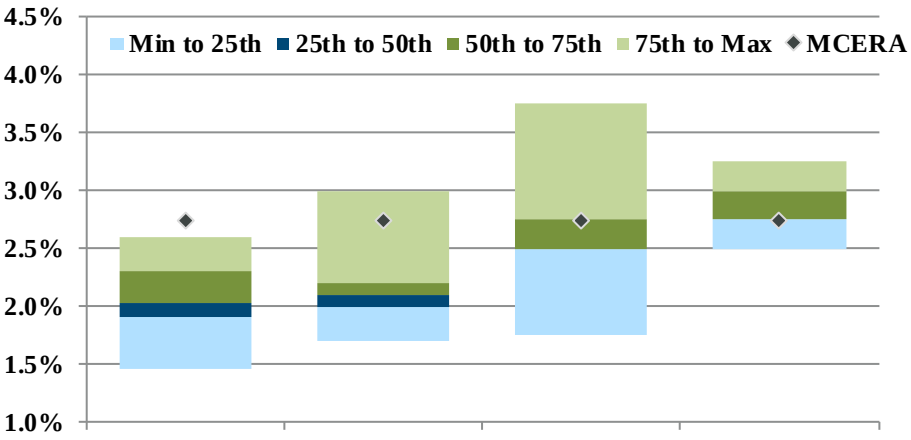


Data Source Federal Reserve, Constant Maturity Yields, Monthly Series

The Federal Reserve Bank of Philadelphia publishes a quarterly survey of professional economic forecasters. Chart II-3 on the next page shows the distribution of the professionals' forecasts for average inflation over the next 10 years, compared to a survey of investment consultants performed by Horizon Actuarial Services, as well as a database of assumptions used by U.S. public pension plans and a Cheiron survey of assumptions used by California public pension plans.

SECTION II – ECONOMIC ASSUMPTIONS
PRICE INFLATION

Chart II-3



	Q3 2020 Economic Forecasters	2020 Horizon Survey	2019 Public Plan Database	2019 Cheiron California Survey
Minimum	1.46%	1.70%	1.75%	2.50%
25th Percentile	1.90%	2.00%	2.50%	2.75%
50th Percentile	2.03%	2.10%	2.50%	2.75%
75th Percentile	2.30%	2.20%	2.75%	3.00%
Maximum	2.60%	3.00%	3.75%	3.25%

Finally, Callan, the Board's investment consultant, uses a 10-year inflation assumption of 2.25%, similar to that of many other investment consultants.

Based on all of these considerations, we believe a reasonable range for long-term price inflation for use in the Plan's actuarial valuations is between 2.25% and 2.75%, and we recommend that the Board reduce the inflation assumption from 2.75% to 2.50%. If, at the time of the next review of economic assumptions, the markets and forecasters continue to indicate lower expectations of future inflation, further reductions in the assumption would be considered.

WAGE INFLATION

Wage inflation can be thought of as the annual across-the-board increase in wages. Individuals often receive salary increases in excess of the wage inflation rate, and we study these increases as a part of the merit salary scale assumption. Wage inflation generally exceeds price inflation by some margin reflecting the history of increased purchasing power. Wage inflation is used in the actuarial valuation as the minimum expected salary increase for an individual.

From 2009 through 2019, wage inflation for Marin local government workers averaged approximately 1.8% compared to annual US price inflation of 1.8% and Bay area inflation of 2.8%, making real wage growth negative compared to local inflation.

While governmental entities remain under financial stress (even more so now under the COVID-19 crisis) and other areas of employee compensation – most notably health care costs and pension contributions – have continued to increase faster than the CPI, it is common to assume some additional level of base payroll increase beyond general inflation, reflecting some level of real wage growth. Potential reasons contributing to the real wage increase may include the presence of strong union representation in the collective bargaining process, competition in hiring among other similar employers, and regional factors – such as the local inflation index exceeding the national average, as has recently proven the case in the Bay Area. Also, while US local government workers did not experience any real wage growth from 2009 to 2019, over the last five years real wage growth has been approximately 1.3%. The Social Security Administration projects real wage growth of 0.6% – 1.8% going forward in their Social Security solvency projections.

If the Board adopts the recommended reduction in the price inflation assumption from 2.75% to 2.50%, we recommend that the Board increase the real wage growth assumption from 0.25% to 0.50%, retaining a 3.00% total wage growth assumption. This change brings the real wage growth assumption into closer alignment with the long-term assumption used by many other plans and the Social Security Administration in their projections, and also accounts for the fact that wages are generally related to local inflation, which recently in the Bay Area has been higher than the national average. However, retaining the current real wage growth assumption of 0.25% would also be reasonable.

PAYROLL GROWTH

The funding policy for MCERA is based on a "level percentage of payroll" methodology. This means that the amortization payments to fund the layers of the unfunded liability are designed to remain constant as a percentage of pensionable compensation (notwithstanding the phasing in and out of new layers).

In order to achieve this objective, an assumption regarding the rate of growth in overall pensionable compensation must be set. The dollar amount of the UAL payments will then be calculated to increase at this assumed rate of payroll growth. If actual payroll growth ends up being higher than the assumption, the UAL payments will decline as a percentage of pay, and if actual payroll growth is lower, the UAL rates will increase.

Traditionally for MCERA and most other public systems using level percentage of payroll methods, the assumed rate of payroll growth has been set equal to the wage growth assumption. This is consistent with an assumption that the pay for newly hired members will increase by the wage growth assumption each year, and that the Plan will have a stable active population – i.e., having a consistent number of active members and a stable distribution at various age and service levels – and that the increases in members' pay will be pensionable.

However, there are several reasons why it may be reasonable to set a payroll/amortization growth rate lower than the wage growth assumption. As a result of the Public Employee Pension Reform Act (PEPRA), some pay amounts for new hires will not be pensionable, both because of the changes in the definition of pensionable compensation and the impact of the PEPRA wage cap. This means that even if overall wages grow by the full wage growth assumption, the amount of wages that are pensionable are likely to grow by a smaller rate. In addition, budgetary stresses – such as those that may result from events such as the current COVID crisis – could cause payroll to increase less than expected. Finally, setting the amortization growth rate below the wage growth assumption increases the likelihood that UAL payments will decline rather than grow as a percentage of pay.

For these reasons, we recommend setting the payroll/amortization growth assumption 0.25% less than the wage growth assumption. If the Board retains the 3.00% wage growth assumption as recommended, this would result in a payroll/amortization growth rate of 2.75%. However, retaining the current practice of setting the payroll/amortization growth rate equal to the wage growth assumption would also be reasonable, though slightly less conservative.

COLA GROWTH

Most members of MCERA are eligible to receive automatic Cost-of-Living Adjustments (COLAs), based on the growth in the Bay Area Consumer Price Index (CPI-U) and reflecting various caps on the annual COLA increase. These caps depend on the Tier of the member, and can be 2%, 3% or 4% annually. Any increase in the CPI above the maximum increase can be banked for future years in which the change in the CPI is below the maximum increase.

It is necessary to determine an assumed rate of COLA growth, reflecting both inflation (i.e., the growth in the CPI), and the interaction of the CPI with the COLA cap and banking mechanism. Simulations of inflation show us that the average growth in the COLA is expected to be below the cap, even if the expected increase in the CPI is equal to or higher than the cap itself. This is because if there is not a significant bank already in existence (such as in the early years of retirement) and there are years in which inflation is below the cap, this shortfall will not be made up in future years.

Using an internally developed model, we have produced statistical simulations of inflation and then modeled how the COLA maxima and the banking process interact with the changes in CPI. For a given long-term estimate of inflation, we used a 30% autocorrelation factor with 1.5% annual inflation volatility. A starting inflation level of 1.6% was used in the simulations, to reflect the most recent level of Bay Area inflation (based on the increase in the CPI-U for the Bay Area from August 2019 through August 2020).

Based on the results of these simulations, Table II-1 shows our recommended COLA growth assumptions for the various COLA cap groups, based on three different price inflation assumptions.

Table II-1

Recommended COLA Assumptions Based on Inflation Assumption Adopted			
Inflation	2.75% (Current)	2.50% (Recommended)	2.25% (Alternative)
2% Cap	1.90%	1.90%	1.90%
3% Cap	2.60%	2.40%	2.20%
4% Cap	2.70%	2.50%	2.25%

We recommend the Board adopt the COLA growth assumptions consistent with the price inflation assumption adopted by the Board.

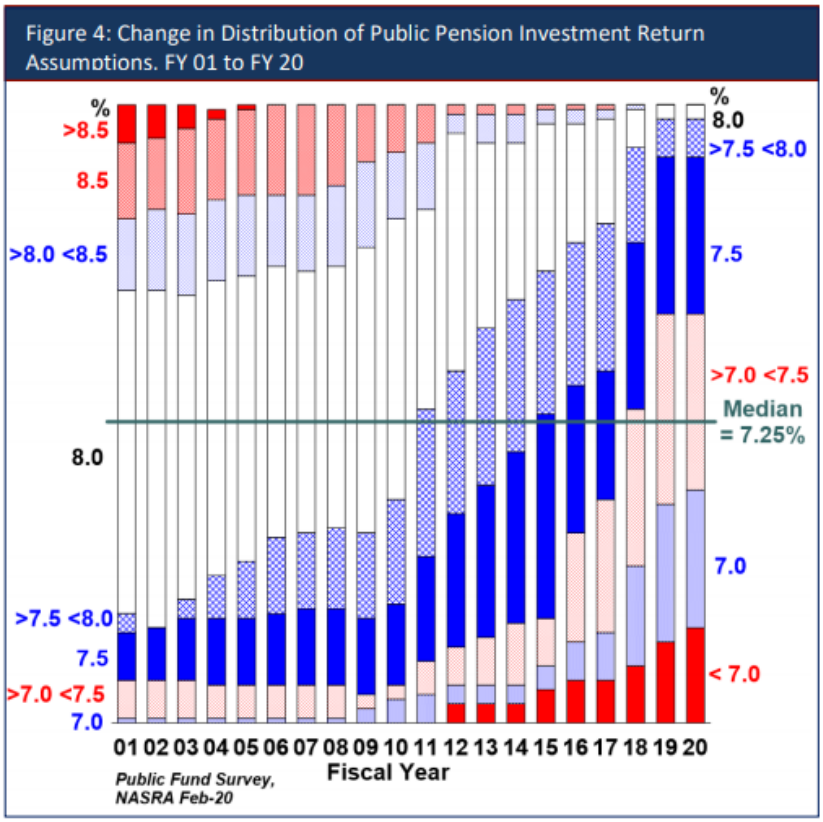
DISCOUNT RATE

The discount rate assumption is generally the most significant of all the assumptions employed in actuarial valuations. The discount rate is based on the long-term expected return on plan investments. In the short term, a higher discount rate results in lower expected contributions. However, over the long term, actual contributions will depend on actual investment returns and not the discount rate (or expected investment returns). If actual investment returns are lower than expected, contribution rates will increase in the future. It is important to set a realistic discount rate so that projections of future contributions for budgeting purposes will not be significantly biased, particularly to be too low.

Other Large Public Retirement Plans

Based on the Public Fund Survey, developed by the National Association of State Retirement Administrators (NASRA) covering most of the largest public retirement systems in the country, there has been a general movement over at least the last decade to reduce the discount rate used in actuarial valuations. Chart II-4 below shows the change in the distribution of assumptions since 2001. The median assumption is now 7.25% and the number of plans using a discount rate of 7.0% or lower has increased significantly.

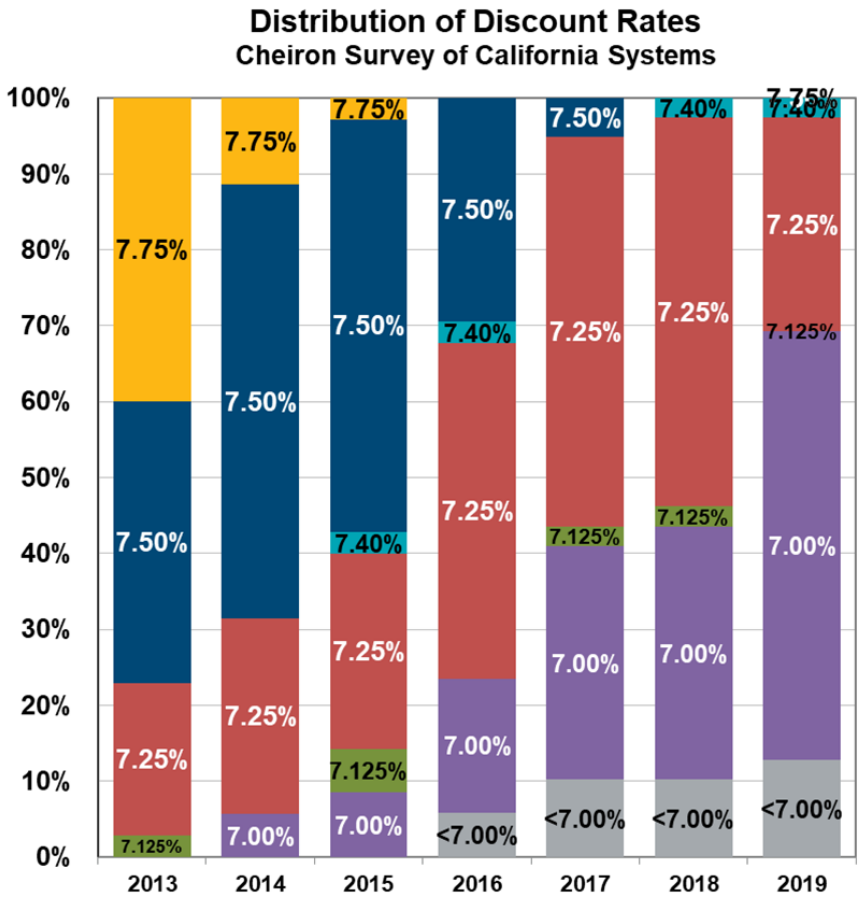
Chart II-4



SECTION II – ECONOMIC ASSUMPTIONS
DISCOUNT RATE

In our survey of California retirement systems, only 30% were still using a discount rate of 7.25% or greater as of 2019. Chart II-5 below shows the change in discount rate assumptions for California systems from 2013 to 2019.

Chart II-5



Target Asset Allocation and Future Expectations

The nominal expected return on assets depends on the allocation of assets to different asset classes (e.g., stocks, bonds, etc.) and the capital market assumptions for each of the asset classes.

Table II-2 on the next page shows the expected nominal geometric return based on the Board's current target asset allocation and the capital market assumptions provided by the Plan's investment consultant (Callan), as well as an average set of capital market assumptions based on a survey of multiple investment consultants published by Horizon Actuarial Services. The table also shows the underlying inflation assumption used by each investment consultant in the development of their capital market assumptions and computes the expected real rate of return

SECTION II – ECONOMIC ASSUMPTIONS
DISCOUNT RATE

(investment return in excess of inflation). These results were produced using an internally developed model, which relies on asset class returns, standard deviations, and correlations provided by Callan and Horizon Actuarial Services, and which reflects an assumption that asset class returns are lognormally distributed.

Table II-2

MCERA Portfolio Return Expectations
(reflects 5bp adjustment for investment expenses)

Consultant	Nominal	Inflation	Real	Standard Deviation
Callan (10-year)	6.48%	2.25%	4.23%	13.22%
Horizon (Survey, 10-year)	6.18%	1.98%	4.20%	12.25%
Horizon (Survey, 20-year)	7.06%	2.17%	4.89%	12.25%
Average	6.57%	2.13%	4.44%	12.57%
Current Assumption	7.00%	2.75%	4.25%	

We note that the returns in Table II-2 above were reduced by 0.05% to reflect investment fees on the MCERA portfolio. The public asset class returns provided by the investment consultants are based on the expected returns of the portfolio benchmark indices, whereas the private asset class expected returns provided are net of fees. The actuarial standards on selecting a return assumption (ASOP 27) state that in general superior or inferior returns (net of fees) should not be assumed for active versus passive management, therefore we do not recommend a significant adjustment to the modeled returns for the fees of active asset managers. However, a slight margin is appropriate to reflect the cost of investing in passively-managed public classes, as well as investment-related expenses other than those of the investment managers, which would include the investment advisor and custodian.

Based on these capital market assumptions, as adjusted for investment expenses as discussed above, we also calculated the potential distribution of nominal returns over 10-year and 20-year periods (as applicable), as shown in Table II-3 on the next page. These results were determined based on the same internally developed model.

SECTION II – ECONOMIC ASSUMPTIONS
DISCOUNT RATE

Table II-3

Expected Distribution of Average Nominal Annual Investment Returns (reflects 5bp adjustment for investment expenses)			
Percentile	**Callan (10-Year)**	**Horizon (10-Year)**	**Horizon (20-Year)**
95th	13.5%	12.7%	11.6%
75th	9.3%	8.8%	8.9%
60th	7.5%	7.2%	7.8%
50th	6.5%	6.2%	7.1%
40th	5.4%	5.2%	6.4%
25th	3.7%	3.6%	5.2%
5th	-0.1%	0.1%	2.7%

Finally, we calculated the likelihood of achieving various nominal and real return thresholds, using the same model as described above, with the results shown in Table II-4 below. We note that for the purposes of this analysis, we used the applicable constant inflation assumption from the assumption set to estimate the real return from the simulated nominal returns. This practice may result in inaccurate estimates to the extent that the real returns by asset class are not independent of inflation.

Table II-4

Likelihood of Achieving Average Returns (reflects 5bp adjustment for investment expenses)						
	Nominal			**Real**		
	6.50%	**6.75%**	**7.00%**	**3.75%**	**4.00%**	**4.25%**
Callan (10-yr)	50%	47%	45%	55%	52%	50%
Horizon (10-yr)	47%	44%	42%	55%	52%	50%
Horizon (20-yr)	58%	55%	51%	66%	63%	59%
Average	52%	49%	46%	59%	56%	53%

As shown in Table II-2, we calculated an average expected geometric real return of 4.44%, which is slightly above the Board's current real return assumption of 4.25%. The average nominal return of 6.57% is lower than the current nominal return assumption of 7.00%, as a result of the lower average inflation assumption (2.13%) underlying the consultant expectations.

We recommend that the Board retain the current real return assumption of 4.25%, and reduce the nominal return assumption from 7.00% to 6.75%, consistent with the recommended reduction in the inflation assumption from 2.75% to 2.50%. We note that other combinations of real returns and inflation assumptions are also reasonable.

SECTION III – DEMOGRAPHIC ASSUMPTIONS
MERIT SALARY INCREASES

Demographic assumptions are used to predict membership behavior, including rates of retirement, termination, disability, and mortality. These assumptions are based primarily on the historical experience of MCERA, with some adjustments where future experience is expected to differ from historical experience and with deference to standard tables where MCERA experience is not fully credible and a standard table is available. For purposes of this study, merit salary increases and administrative expenses are also considered demographic assumptions because the assumptions are based primarily on MCERA's historical experience.

MERIT SALARY INCREASES

Salary increases consist of three components: increases due to cost-of-living maintenance (inflation), increases related to non-inflationary pressures on base pay (such as productivity increases), and increases in individual pay due to merit, promotion, and longevity. Increases due to cost-of-living and non-inflationary base pay factors were addressed in an earlier section of this report.

The merit salary increase assumption is analyzed by employee group and by service. Generally, newer employees are more likely to earn a longevity increase or receive a promotion, so their salary increases tend to be greater than those for longer service employees. A *longitudinal* approach was used to analyze the merit increases for this study.

A longitudinal study reviews the average increase in pay for each level of service. To analyze the merit component, we subtracted the Plan's real wage growth – as measured by the annual increase in average valuation salary during the experience study period – from the total pay increases experienced by each member during the experience study period.

Charts III-1 and III-2 on the following pages illustrate the results of the longitudinal study. It analyzes the pay patterns for Miscellaneous and Safety members, respectively. Our charts will generally show the current assumption (red line) compared to the actual experience (blue line) and the proposed assumption (green line). When no change in assumption is proposed, the current assumption will not appear on the chart. We backed out the wage growth in order to isolate the merit, promotion, and longevity component. We have combined the experience of the past three years with that of the prior three-year period in order to have a more robust dataset to review.

We recommend no changes to the merit assumption for Miscellaneous or Safety.

SECTION III – DEMOGRAPHIC ASSUMPTIONS
MERIT SALARY INCREASES

Chart III-1: Miscellaneous

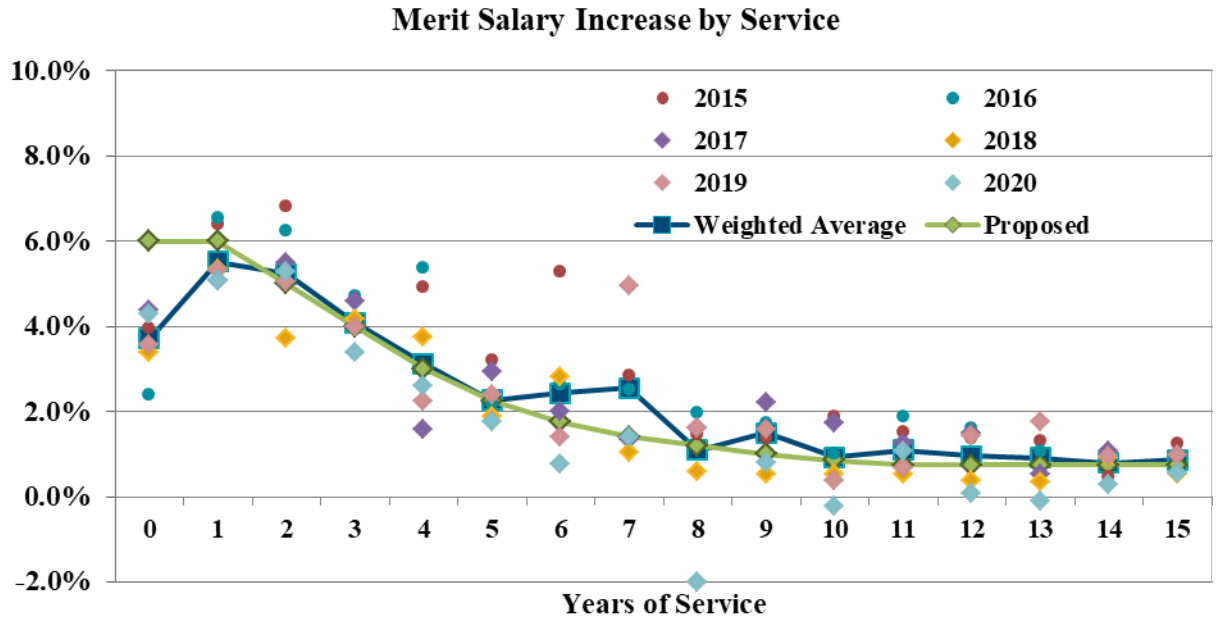
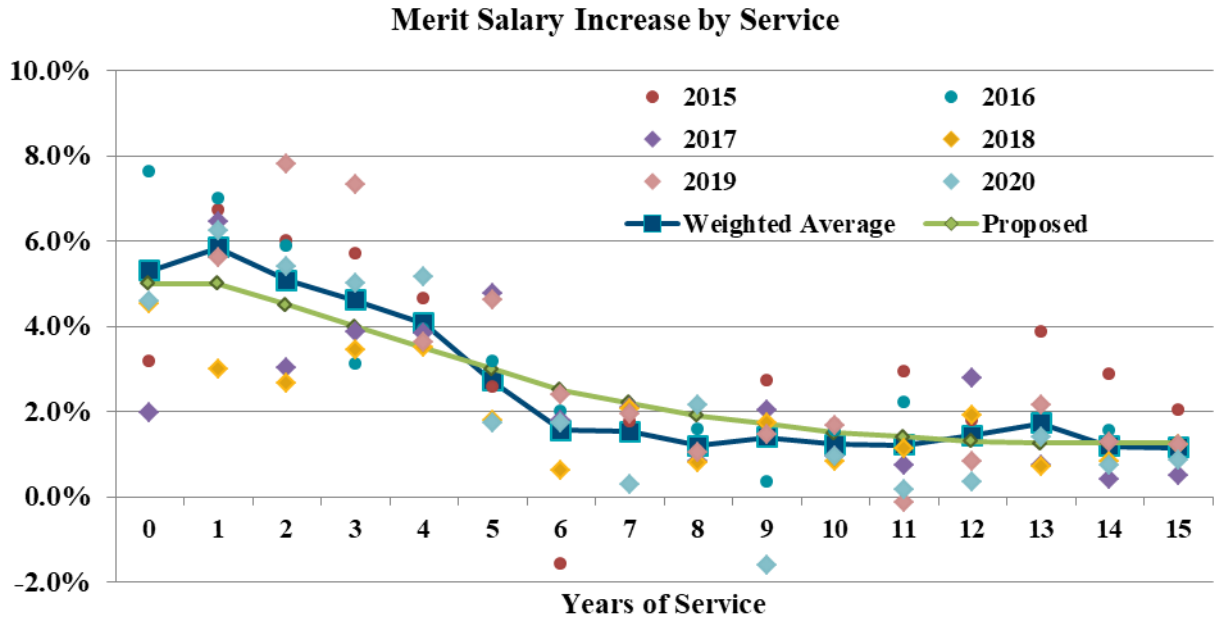


Chart III-2: Safety



SECTION III – DEMOGRAPHIC ASSUMPTIONS

ANALYSIS OF OTHER DEMOGRAPHIC ASSUMPTIONS

For most of the remaining demographic assumptions, we determined the ratio of the actual number of decrements for each membership group compared to the expected number of decrements (A/E ratio or actual-to-expected ratio). If the assumption is perfect, this ratio will be 100%. Otherwise, any recommended assumption change should move from the current A/E ratio towards 100% unless future experience is expected to be different than the experience during the period of study.

In addition, we calculated the 90% confidence interval using a binomial distribution, which represents the range within which the true decrement rate during the experience study period fell with 90% confidence. We generally propose assumption changes when the current assumption is outside the 90% confidence interval of the observed experience. However, adjustments are made to account for differences between future expectations and historical experience, to account for the past experience represented by the current assumption, and to maintain a neutral to slight conservative bias in the selection of the assumption. For disability, mortality, and some retirement rates, we compare MCERA's experience to that of a published table and adjust the tables to bring the proposed assumption closer to an A/E ratio of 100% taking into account the level and credibility of MCERA's experience.

Our internal model uses the limited fluctuation approach to credibility assigning full credibility when there is a 90% probability that MCERA's sample experience rate will be within 5% of the true expected rate. For assumptions where the expected rate is near zero, this approach requires 1082 actual decrements for full credibility. When there is insufficient experience for full credibility, partial credibility is assigned, weighting MCERA's experience by the square root of the ratio of actual decrements in the sample to the number of decrements required for full credibility. The remaining weight is given to the published table. Other methods of determining credibility may produce a different result.

To track how well the assumption fits the pattern of the data, we calculate the percentage of the assumptions that fall within the 90% confidence interval, and we calculate an r-squared statistic for each assumption. R-squared can be thought of as the percentage of the variation in actual data explained by the assumption. Ideally, all of the assumptions would fall within the 90% confidence interval and r-squared would equal 100% although this is never the case. Any proposed assumption change should increase the percentage of assumptions within the confidence interval and should increase the r-squared compared to the current assumption making it closer to 100% unless the pattern of future decrements is expected to be different from the pattern experienced during the period of study.

RETIREMENT RATES

The current retirement rates vary by group, age, and service and are applied to all members who are eligible to retire. We have combined the experience of the past three years with that of the prior three-year period in order to have a more robust dataset to review.

Generally, at any given age, members with more service are more likely to retire than members with fewer years of service. We reviewed the MCERA actual retirement rates based on service groupings since MCERA is not large enough to justify assumptions for each age and service combination.

We recommend maintaining the current assumptions for pre-PEPRA Miscellaneous members, except increasing rates at ages 60 and above and with less than 20 years of service. We also recommend maintaining the current assumptions for those Safety members with the 3% at age 50 benefit formula. We suggest replacing the current assumptions for Safety members with the 3% at age 55 benefit formulas with age and service-based CalPERS rates for Public Safety Police members with the same formula.

We recommend replacing the assumptions for all Miscellaneous PEPRA members and Safety PEPRA members with those of their CalPERS counterparts. MCERA Miscellaneous PEPRA members would be assumed to retire using the CalPERS 2.0% at age 62 Public Agency Miscellaneous rates, while MCERA Safety PEPRA members would be assumed to retire using the CalPERS 2.7% at age 57 Public Agency Safety Police rates. These PEPRA assumptions reflect the expectation that PEPRA members may retire later than those in other tiers due to their lower benefit levels.

SECTION III – DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES

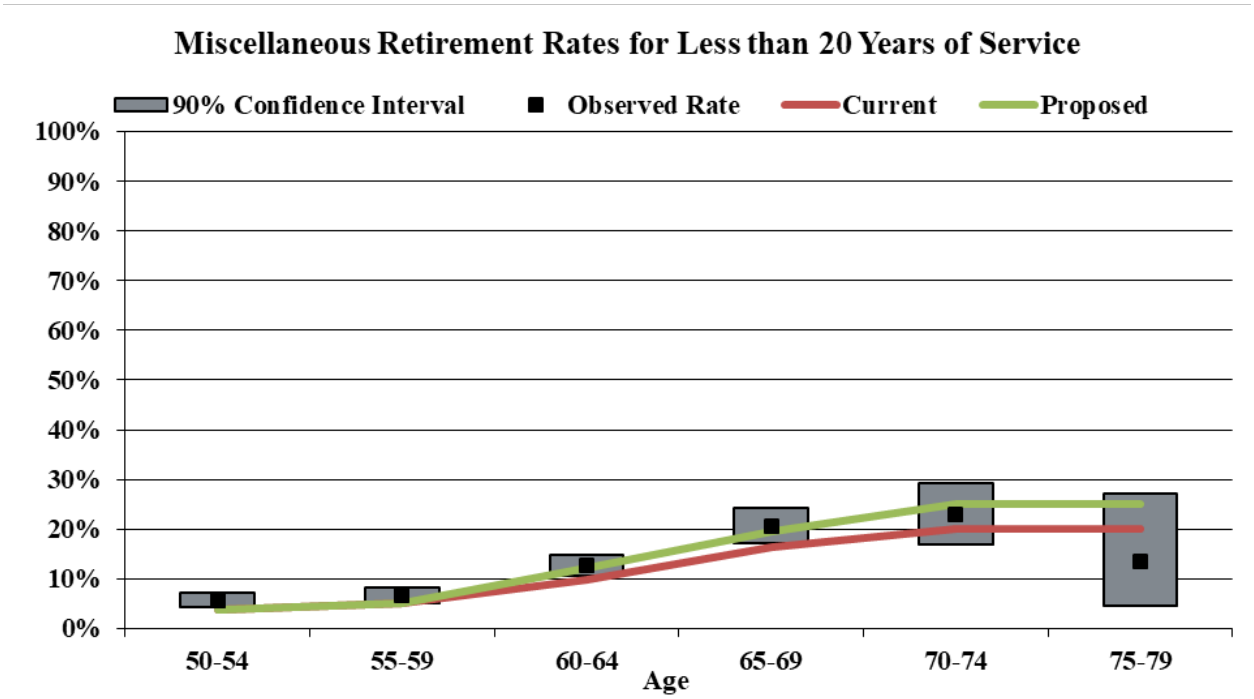
Table III-R1 shows the calculation of actual-to-expected ratios and the r-squared statistic for Miscellaneous members with less than 20 years of service. Chart III-R1 shows the information graphically along with the 90% confidence interval.

The data shows higher actual retirement rates than expected under the current assumption. The proposed assumption increases the aggregate assumed rate of retirement and decreases the aggregate A/E ratio from 129% to 111%. The r-squared statistic increases from 80.9% to 84.3%.

Table III-R1 – Miscellaneous

Miscellaneous Retirement Rates for Less Than 20 Years of Service									
		Retirements			Retirement Rates			A/E Ratios	
Age	Exposures	Actual	Current	Proposed	Actual	Current	Proposed	Current	Proposed
50-54	740	42	28	28	5.7%	3.8%	3.8%	150%	150%
55-59	730	49	37	37	6.7%	5.0%	5.0%	134%	134%
60-64	673	85	67	83	12.6%	9.9%	12.3%	128%	103%
65-69	372	77	61	72	20.7%	16.4%	19.5%	126%	106%
70-74	113	26	23	28	23.0%	20.0%	25.0%	115%	92%
75-79	22	3	4	6	13.6%	20.0%	25.0%	68%	55%
Total	**2,650**	**282**	**219**	**253**	**10.6%**	**8.3%**	**9.6%**	**129%**	**111%**
R-squared			**80.9%**	**84.3%**					

Chart III-R1 – Miscellaneous



SECTION III – DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES

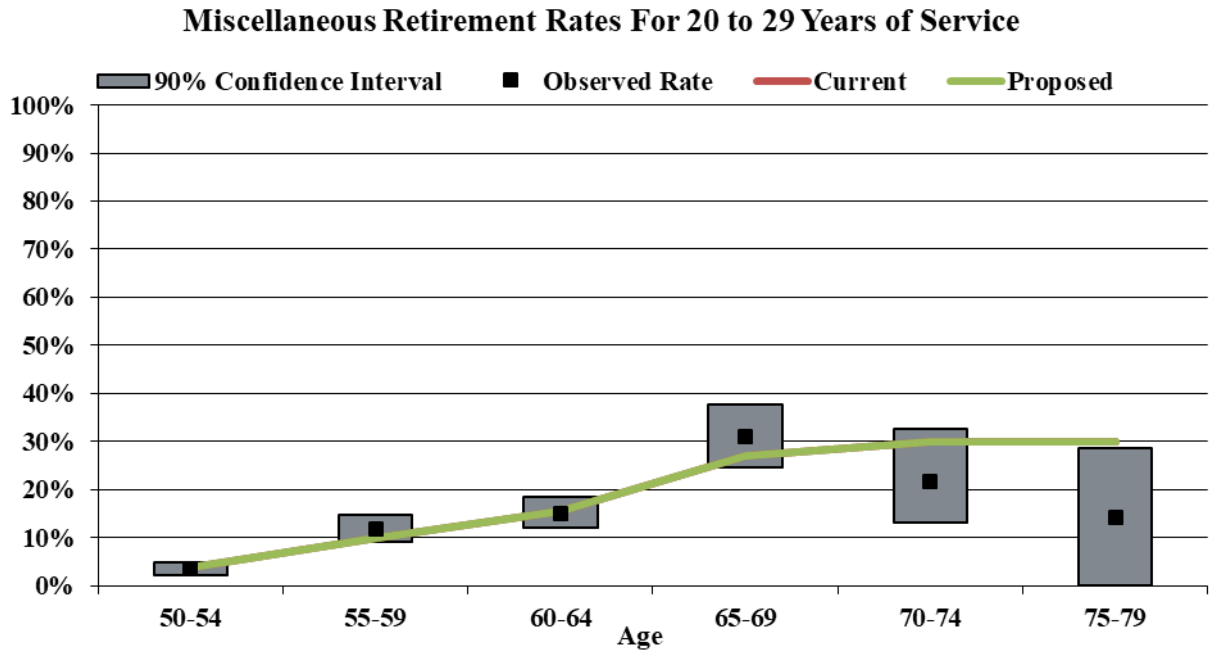
Table III-R2 shows the calculation of actual-to-expected ratios and the r-squared statistic for Miscellaneous members with 20 to 29 years of service. Chart III-R2 shows the information graphically along with the 90% confidence interval.

The data shows actual retirement rates close to those expected under the current assumption. No assumption changes are recommended for these members.

Table III-R2 – Miscellaneous

Miscellaneous Retirement Rates for 20 to 29 Years of Service									
		Retirements			Retirement Rates			A/E Ratios	
Age	Exposures	Actual	Current	Proposed	Actual	Current	Proposed	Current	Proposed
50-54	428	15	17	17	3.5%	3.9%	3.9%	90%	90%
55-59	378	45	38	38	11.9%	10.0%	10.0%	119%	119%
60-64	324	49	51	51	15.1%	15.7%	15.7%	96%	96%
65-69	138	43	37	37	31.2%	27.1%	27.1%	115%	115%
70-74	46	10	14	14	21.7%	30.0%	30.0%	72%	72%
75-79	14	2	4	4	14.3%	30.0%	30.0%	48%	48%
Total	**1,328**	**164**	**161**	**161**	**5.9%**	**5.7%**	**5.7%**	**102%**	**102%**
R-squared			**82.7%**	**82.7%**					

Chart III-R2 – Miscellaneous



SECTION III – DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES

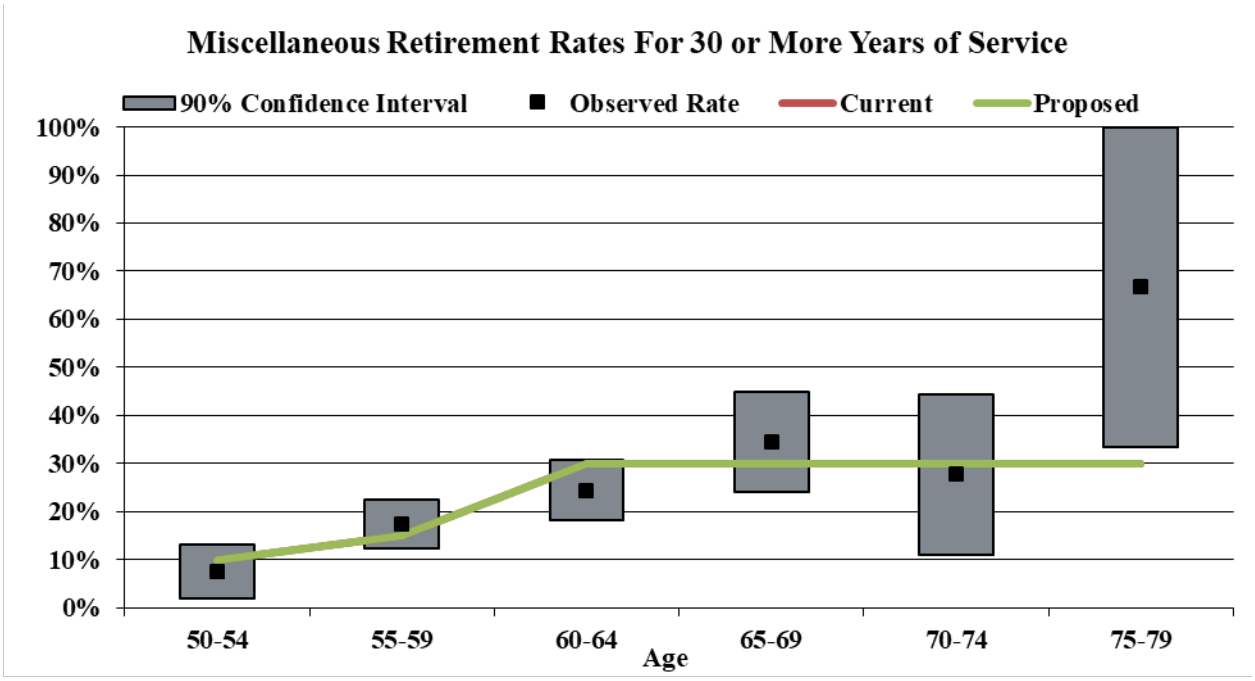
Table III-R3 shows the calculation of actual-to-expected ratios and the r-squared statistic for Miscellaneous members with 30 or more years of service. Chart III-R3 shows the information graphically along with the 90% confidence interval.

The data shows actual retirement rates close to those expected under the current assumption. No assumption changes are recommended for these members.

Table III-R3 – Miscellaneous

Miscellaneous Retirement Rates For 30 or More Years of Service									
		Retirements			Retirement Rates			A/E Ratios	
Age	Exposures	Actual	Current	Proposed	Actual	Current	Proposed	Current	Proposed
50-54	53	4	5	5	7.5%	10.0%	10.0%	75%	75%
55-59	138	24	21	21	17.4%	15.0%	15.0%	116%	116%
60-64	127	31	38	38	24.4%	30.0%	30.0%	81%	81%
65-69	58	20	17	17	34.5%	30.0%	30.0%	115%	115%
70-74	18	5	5	5	27.8%	30.0%	30.0%	93%	93%
75-79	3	2	1	1	66.7%	30.0%	30.0%	222%	222%
Total	**397**	**86**	**88**	**88**	**3.1%**	**3.1%**	**3.1%**	**98%**	**98%**
R-squared			**79.0%**	**79.0%**					

Chart III-R3 – Miscellaneous



See Appendices A and B for a full listing of the proposed and prior retirement rates for Miscellaneous members. The ultimate retirement age remains at 80.

SECTION III – DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES

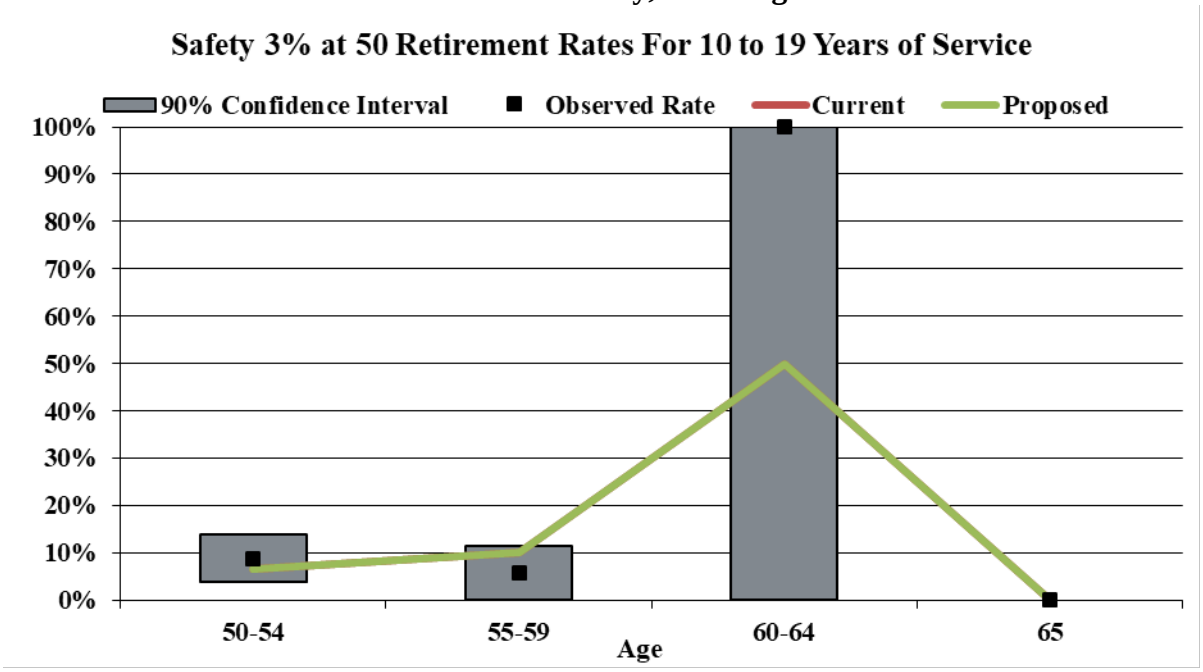
Table III-R4 shows the calculation of actual-to-expected ratios and the r-squared statistic for Safety members with the 3% at age 50 benefit formula and 10 to 19 years of service. Chart III-R4 shows the information graphically along with the 90% confidence interval.

The limited data shows actual retirement rates higher than those expected under the current assumption, but the current assumptions remain within the confidence intervals. No assumption changes are recommended for these members.

Table III-R4 – Safety, 3% at age 50

Safety 3% at 50 Retirement Rates For 10 to 19 Years of Service									
		Retirements			Retirement Rates			A/E Ratios	
Age	Exposures	Actual	Current	Proposed	Actual	Current	Proposed	Current	Proposed
50-54	80	7	5	5	8.8%	6.6%	6.6%	133%	133%
55-59	35	2	4	4	5.7%	10.0%	10.0%	57%	57%
60-64	3	3	2	2	100.0%	50.0%	50.0%	200%	200%
65	0	0	0	0	0.0%	0.0%	0.0%	0%	0%
Total	**118**	**12**	**10**	**10**	**10.2%**	**8.7%**	**8.7%**	**117%**	**117%**
R-squared			**80.6%**	**80.6%**					

Chart III-R4 – Safety, 3% at age 50



SECTION III – DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES

Table III-R5 shows the calculation of actual-to-expected ratios and the r-squared statistic for Safety members with the 3% at age 50 benefit formula and 20 to 29 years of service. Chart III-R5 shows the information graphically along with the 90% confidence interval.

The data shows lower actual retirement rates than expected under the current assumption, but the current assumptions remain within the confidence intervals. No assumption changes are recommended for these members.

Table III-R5 – Safety, 3% at age 50

Safety 3% at 50 Retirement Rates For 20 to 29 Years of Service									
		Retirements			Retirement Rates			A/E Ratios	
Age	Exposures	Actual	Current	Proposed	Actual	Current	Proposed	Current	Proposed
40-44	35	1	1	1	2.9%	3.0%	3.0%	95%	95%
45-49	197	7	11	11	3.6%	5.8%	5.8%	61%	61%
50-54	134	11	15	15	8.2%	11.3%	11.3%	72%	72%
55-59	46	14	14	14	30.4%	31.0%	31.0%	98%	98%
60-64	8	3	4	4	37.5%	50.0%	50.0%	75%	75%
65	0	0	0	0	0.0%	0.0%	0.0%	0%	0%
Total	**420**	**36**	**46**	**46**	**8.6%**	**10.9%**	**10.9%**	**78%**	**78%**
R-squared			**85.6%**	**85.6%**					

Chart III-R5 – Safety, 3% at age 50

SECTION III – DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES

Table III-R6 shows the calculation of actual-to-expected ratios and the r-squared statistic for Safety members with the 3% at age 50 benefit formula and 30 or more years of service. Chart III-R6 shows the information graphically along with the 90% confidence interval.

The data shows actual retirement rates that are higher than expected in aggregate under the current assumption, but the current assumptions remain within the confidence intervals. Given the limited experience, we propose no change in assumptions.

Table III-R6 – Safety, 3% at age 50

Safety 3% at 50 Retirement Rates For 30 or More Years of Service									
		Retirements			Retirement Rates			A/E Ratios	
Age	Exposures	Actual	Current	Proposed	Actual	Current	Proposed	Current	Proposed
40-44	0	0	0	0	0.0%	0.0%	0.0%	0%	0%
45-49	0	0	0	0	0.0%	0.0%	0.0%	0%	0%
50-54	13	5	3	3	38.5%	20.0%	20.0%	192%	192%
55-59	13	8	7	7	61.5%	50.0%	50.0%	123%	123%
60-64	1	1	1	1	100.0%	50.0%	50.0%	200%	200%
65	0	0	0	0	0.0%	0.0%	0.0%	0%	0%
Total	**27**	**14**	**10**	**10**	**51.9%**	**35.6%**	**35.6%**	**146%**	**146%**
R-squared			**67.1%**	**67.1%**					

Chart III-R6 – Safety, 3% at age 50

SECTION III – DEMOGRAPHIC ASSUMPTIONS
RETIREMENT RATES

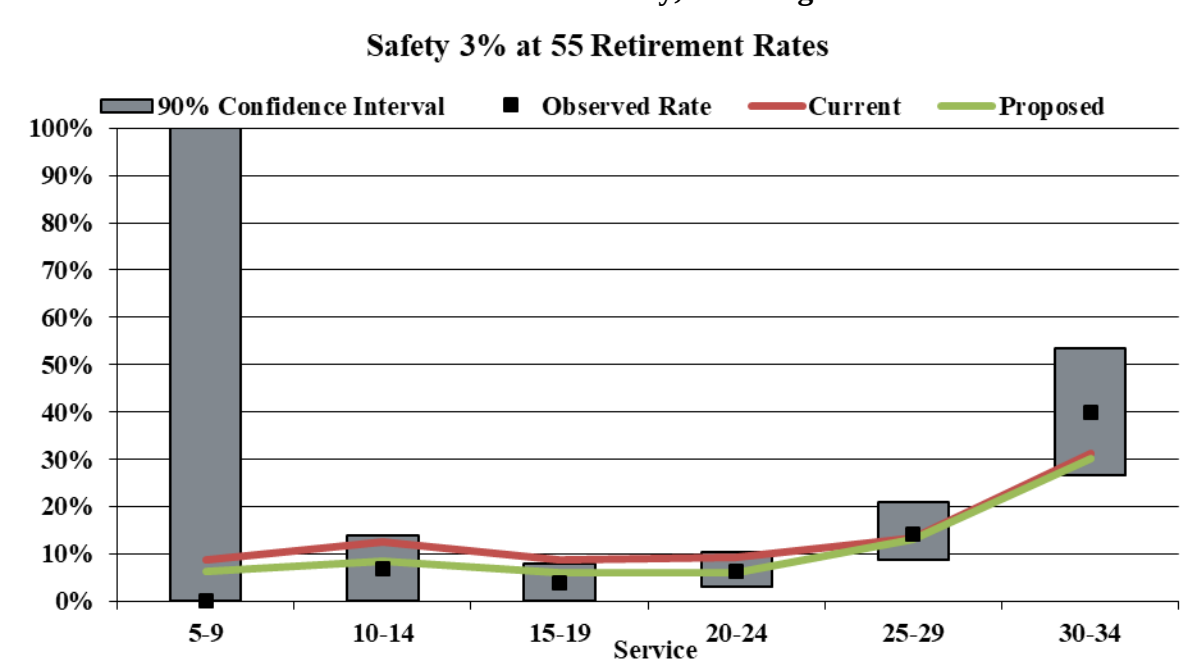
Table III-R7 shows the calculation of actual-to-expected ratios and the r-squared statistic for Safety members with the 3% at age 55 benefit formula and 5 to 34 years of service. Chart III-R7 shows the information graphically along with the 90% confidence interval. We note that in this case we have shown the comparison based on service rather than age, as the comparison based on age shows less distinguishable results between the current and proposed assumptions.

The data shows lower actual retirement rates than expected under the current assumption. We are proposing a change to base the rates on the 3% at 55 age and service-based CalPERS rates for Public Safety Police members. The proposed assumption decreases the aggregate assumed rate of retirement and increases the aggregate A/E ratio from 89% to 107%. The r-squared statistic increases from 79.3% to 85.1%.

Table III-R7 – Safety, 3% at age 55

Safety 3% at 55 Retirement Rates									
		Retirements			Retirement Rates			A/E Ratios	
Service	Exposures	Actual	Current	Proposed	Actual	Current	Proposed	Current	Proposed
5-9	4	0	0	0	0.0%	8.8%	6.2%	0%	0%
10-14	29	2	4	2	6.9%	12.6%	8.6%	55%	81%
15-19	51	2	5	3	3.9%	8.8%	6.1%	44%	64%
20-24	126	8	12	8	6.3%	9.2%	6.1%	69%	104%
25-29	91	13	12	12	14.3%	13.5%	13.0%	106%	110%
30-34	30	12	9	9	40.0%	31.3%	30.2%	128%	132%
Total	**331**	**37**	**42**	**34**	**11.2%**	**12.6%**	**10.4%**	**89%**	**107%**
R-squared			**79.3%**	**85.1%**					

Chart III-R7 – Safety, 3% at age 55



TERMINATION RATES

Termination rates reflect the frequency at which active members leave employment for reasons other than retirement, death, or disability. Currently, the termination rates are based on age and service for both Safety and Miscellaneous members. Termination rates for Miscellaneous members also vary by sex. The termination rates do not apply once members are eligible for a service retirement benefit.

To make the best use of the available member data, we study all terminations together – vested terminations, terminating members who withdraw their contributions, and members who transfer to a reciprocal pension plan – to determine an overall termination rate. We then analyze the percentages of terminating members who withdraw their contributions, transfer, or are eligible for a vested benefit. Additionally, we have combined the experience of the past three years with that of the prior three-year period in order to have a more robust dataset to review.

Based on this data, we recommend replacing the current age, service and sex-based termination rates for Miscellaneous members with service-only rates. We also recommend a small increase to Safety termination rates for members with less than five years of service.

SECTION III – DEMOGRAPHIC ASSUMPTIONS
TERMINATION RATES

Table III-T1 shows the calculation of actual-to-expected ratios and the r-squared statistic for Miscellaneous members and Table III-T2 shows the same for Safety members. Charts III-T1 and III-T2 show the information graphically along with the 90% confidence intervals.

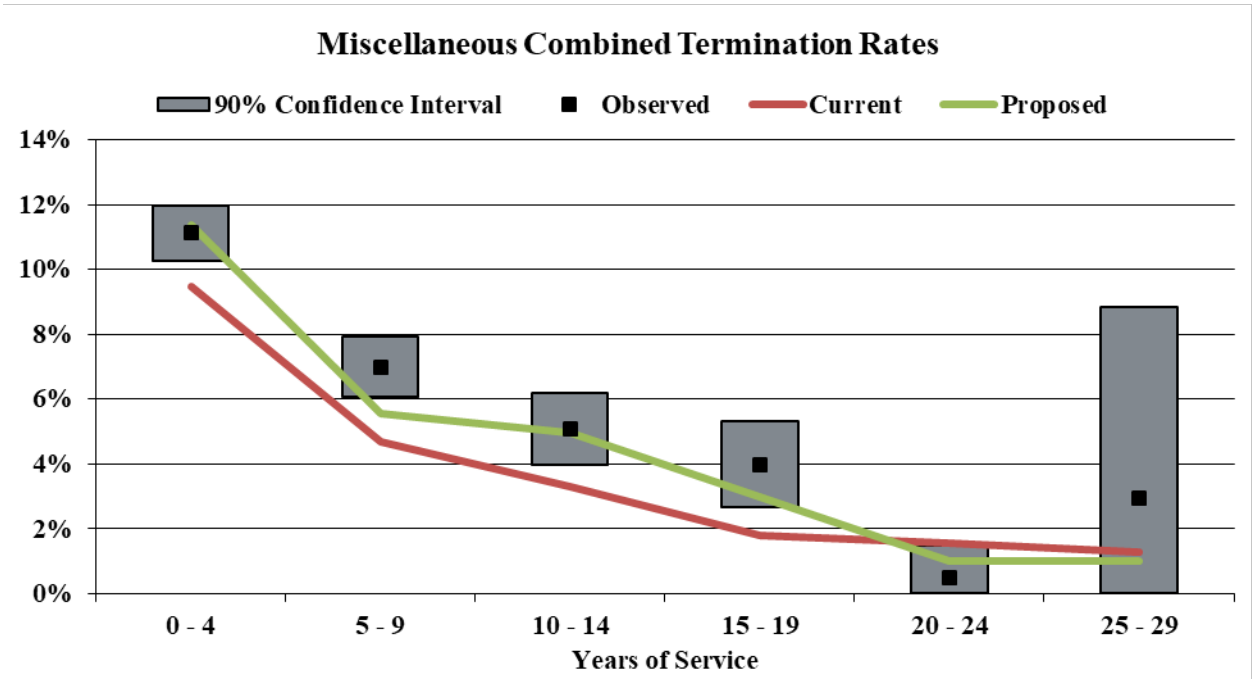
The data shows that in most cases the actual termination rates are slightly higher in aggregate, similar to results in the last study. We also reviewed the Miscellaneous experience by age and sex, but found that the differences in behavior associated with these factors were not as important as service, as evidenced by the fact that our proposed service-only tables provided a better match on all measures (A/E, confidence interval, r-squared statistic).

See Appendices A and B for a sample listing of the proposed and prior rates.

Table III-T1 – Miscellaneous

Miscellaneous Combined Termination Rates									
		Terminations			Termination Rates			A/E Ratios	
Service	Exposures	Actual	Current	Proposed	Actual	Current	Proposed	Current	Proposed
0 - 4	3,813	424	362	433	11.12%	9.49%	11.36%	117%	98%
5 - 9	1,980	138	93	110	6.97%	4.69%	5.56%	149%	125%
10 - 14	1,102	56	36	55	5.08%	3.30%	4.97%	154%	102%
15 - 19	602	24	11	18	3.99%	1.81%	3.00%	221%	133%
20 - 24	202	1	3	2	0.50%	1.54%	1.00%	32%	50%
25 - 29	34	1	0	0	2.94%	1.29%	1.00%	228%	294%
Total	**7,733**	**644**	**506**	**618**	**8.33%**	**6.54%**	**8.00%**	**127%**	**104%**
R-squared			**94.2%**	**98.2%**					

Chart III-T1 – Miscellaneous Combined

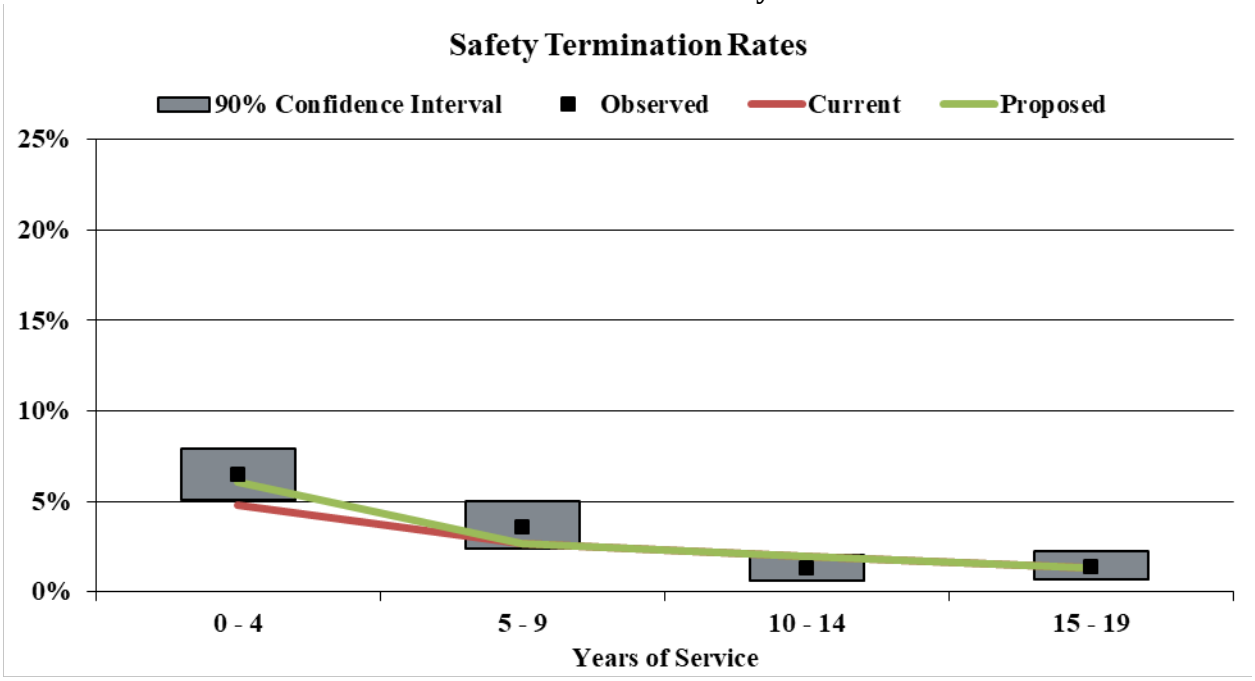


SECTION III – DEMOGRAPHIC ASSUMPTIONS
TERMINATION RATES

Table III-T2 – Safety

Safety Termination Rates									
		Terminations			Termination Rates			A/E Ratios	
Service	Exposures	Actual	Current	Proposed	Actual	Current	Proposed	Current	Proposed
0 - 4	863	56	42	52	6.49%	4.83%	6.07%	134%	107%
5 - 9	582	21	15	15	3.61%	2.66%	2.66%	136%	136%
10 - 14	678	9	13	13	1.33%	1.94%	1.94%	68%	68%
15 - 19	572	8	7	7	1.40%	1.30%	1.30%	108%	108%
Total	**2,695**	**94**	**78**	**88**	**3.49%**	**2.88%**	**3.28%**	**121%**	**106%**
R-squared			**90.3%**	**89.8%**					

Chart III-T2 – Safety



SECTION III – DEMOGRAPHIC ASSUMPTIONS
TERMINATION RATES

TYPES OF TERMINATION

When a vested member terminates employment, the member has the option of receiving a refund of contributions with interest or a deferred annuity. If an employee terminates employment and works for a reciprocal employer (also referred to as a transfer), the employee's retirement benefit is based on the employee's service with MCERA and Final Compensation based on employment with the reciprocal employer.

Tables III-T3 and III-T4 show the results of our analysis of terminations for Safety and Miscellaneous members, as well as our recommendations regarding rates of withdrawal, vested termination, and transfer.

We note that the actual rates of vested terminations and transfers are based on the information reported to Cheiron as part of the actuarial valuation data in the year after the member has terminated. However, many members do not report that they have established reciprocity with another system until they actually submit a retirement application. Therefore, if we relied only on the rates shown below to develop a reciprocity assumption, we would likely underestimate the ultimate number of transfers.

Accordingly, we also reviewed the number of members who went from a deferred status to service retirement during the study period, and determined which of those members had established reciprocity with another system prior to retirement. We found that over 40% of the Miscellaneous members had worked for a reciprocal employer, and over 80% of Safety members had done so. Therefore, our recommended rates of transfer shown in Tables III-T3 and III-T4 are higher than would have been indicated just by the actual rates reported at the time of termination.

Table III-T3 – Safety

Types of Termination for Safety Members			
Service and Type	Actual	Expected	Recommended
0-9 Years of Service			
Withdrawal	13.70%	25.00%	20.00%
Transfer	17.26%	45.00%	68.00%
Vested Termination	69.04%	30.00%	12.00%
10+ Years of Service			
Withdrawal	15.00%	15.00%	15.00%
Transfer	0.00%	51.00%	72.25%
Vested Termination	85.00%	34.00%	12.75%

SECTION III – DEMOGRAPHIC ASSUMPTIONS
TERMINATION RATES

Table III-T4 – Miscellaneous

Types of Termination for Miscellaneous Members			
Service and Type	Actual	Expected	Recommended
0 Years of Service			
Withdrawal	32.22%	50.00%	40.00%
Transfer	2.05%	15.00%	24.00%
Vested Termination	65.72%	35.00%	36.00%
1 Year of Service			
Withdrawal	32.61%	40.00%	35.00%
Transfer	3.74%	18.00%	26.00%
Vested Termination	63.65%	42.00%	39.00%
2 Years of Service			
Withdrawal	22.55%	20.00%	20.00%
Transfer	5.00%	24.00%	32.00%
Vested Termination	72.45%	56.00%	48.00%
3 Years of Service			
Withdrawal	13.73%	20.00%	20.00%
Transfer	10.78%	24.00%	32.00%
Vested Termination	75.49%	56.00%	48.00%
4 Years of Service			
Withdrawal	19.05%	20.00%	20.00%
Transfer	5.06%	24.00%	32.00%
Vested Termination	75.89%	56.00%	48.00%
5+ Years of Service			
Withdrawal	9.09%	10.00%	10.00%
Transfer	6.49%	27.00%	36.00%
Vested Termination	84.42%	63.00%	54.00%

RECIPROCAL PAY INCREASE

If a member terminates employment and works for a reciprocal employer, the member's retirement benefit is ultimately computed using the highest Final Compensation based on employment with the reciprocal employer. We recommend that the assumption used to project pay during employment with the reciprocal employer be based on the wage growth assumption, increased by the ultimate merit pay increase assumption described earlier in this report. Therefore, the recommended total pay growth assumption for members in reciprocal status is 3.75% (3.00% + 0.75%) for Miscellaneous members and 4.25% (3.00% + 1.25%) for Safety members.

DISABILITY RATES

This section analyzes the incidence of disability by the age of the employee. We have combined the experience of the past three years with that of the prior three-year period in order to have a more robust dataset to review. The amount of disability experience is still fairly limited; only 46 disabilities have occurred during the last six years for Safety and Miscellaneous members combined.

Table III-D1 shows the calculation of actual-to-expected ratios and the r-squared statistic for all disabilities for Miscellaneous members, and Chart III-D1 shows the information graphically.

The data shows that actual disability rates are lower than expected for Miscellaneous members in aggregate. However, due to the limited amount of experience we recommend retaining the current rates, which are based on the 2017 CalPERS Public Agency Miscellaneous Ordinary Disability rates.

In the last six years, 73% of disabilities were service-related for Miscellaneous members. We recommend assuming that 75% of future disabilities are service-related for Miscellaneous members.

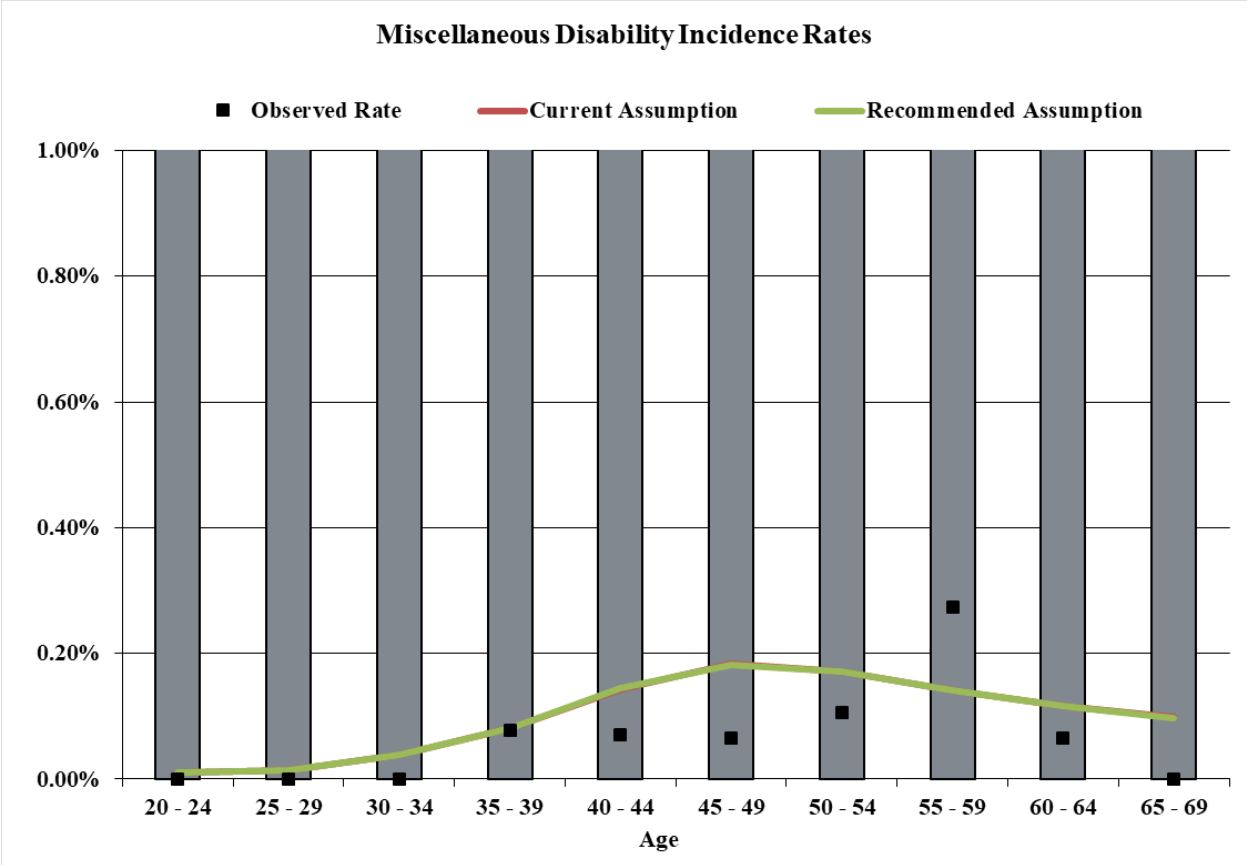
See Appendices A and B for a sample listing of the proposed and prior rates.

SECTION III – DEMOGRAPHIC ASSUMPTIONS
DISABILITY RATES

Table III-D1 – Miscellaneous

Miscellaneous Disability Incidence Rates						
Age Band	Exposures	Disabilities			Actual to Expected Ratios	
		Actual	Current	Recommended	Current	Recommended
20 - 24	92	0	0.0	0.0	0%	0%
25 - 29	636	0	0.1	0.1	0%	0%
30 - 34	1,090	0	0.4	0.4	0%	0%
35 - 39	1,290	1	1.0	1.0	96%	96%
40 - 44	1,431	1	2.1	2.1	49%	49%
45 - 49	1,531	1	2.8	2.8	36%	36%
50 - 54	1,890	2	3.3	3.3	62%	62%
55 - 59	1,829	5	2.6	2.6	194%	193%
60 - 64	1,514	1	1.8	1.8	56%	57%
65 - 69	729	0	0.7	0.7	0%	0%
70 +	60	0	0.1	0.1	0%	0%
Total	**12,092**	**11.0**	**14.8**	**14.8**	**74%**	**74%**
R-squared		**0**	**0.1911**	**0.1911**		

Chart III-D1 – Miscellaneous



SECTION III – DEMOGRAPHIC ASSUMPTIONS
DISABILITY RATES

Table III-D2 below shows the calculation of actual-to-expected ratios and the r-squared statistic for all disabilities for Safety members, and Chart III-D2 shows the information graphically.

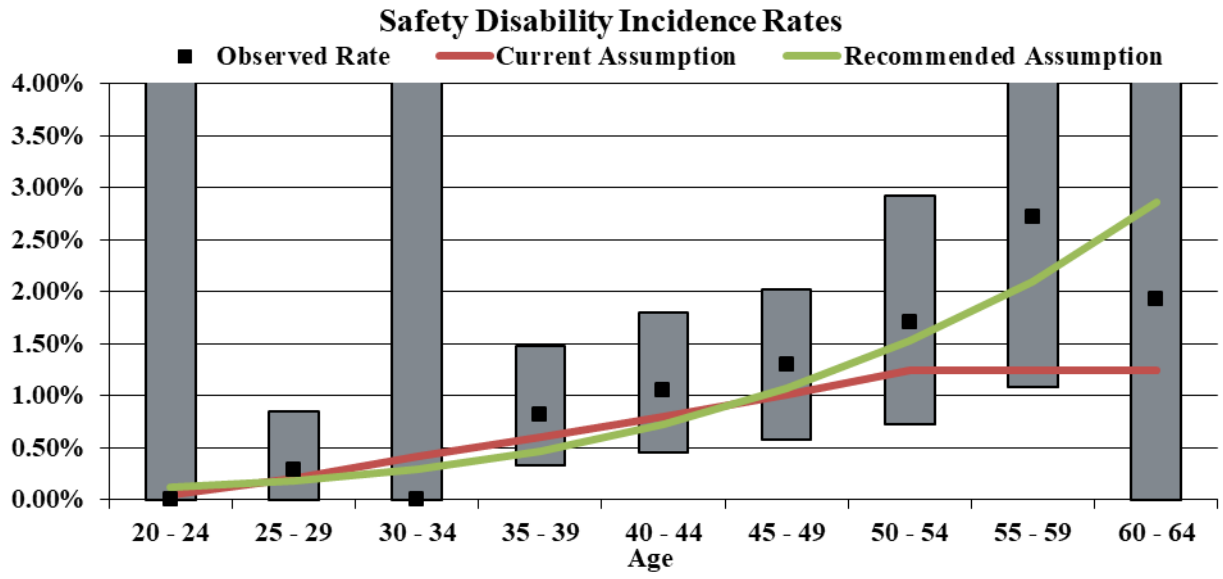
The data shows that actual disability rates are higher than the expected disability rates in aggregate. We recommend changing assumptions from the 2017 CalPERS Public Agency Police Unisex Industrial and Ordinary Disability rates to the CalPERS Peace Officers and Fire Fighter (POFF) rates, multiplied by 120%. We also recommend assuming all Safety disabilities are service-connected, as there has been only one non-service Safety disability in the last six years.

See Appendix A or B for a sample listing of the rates.

Table III-D2 – Safety

Safety Disability Incidence Rates						
Age Band	Exposures	Disabilities			Actual to Expected Ratios	
		Actual	Current	Recommended	Current	Recommended
20 - 34	994	1	3.10	2.40	32%	42%
35 - 39	610	5	3.70	2.80	135%	179%
40 - 44	667	7	5.40	4.90	130%	143%
45 - 49	693	9	7.00	7.60	129%	118%
50 - 54	410	7	5.10	6.30	137%	111%
55 - 59	184	5	2.30	3.80	217%	132%
60 +	52	1	0.70	1.50	143%	67%
Total	**3,610**	**35**	**27.30**	**29.30**	**128%**	**119%**
R-squared			**44.8%**	**49.0%**		

Chart III-D2 – Safety



SECTION III – DEMOGRAPHIC ASSUMPTIONS
MORTALITY RATES

Post-retirement mortality assumptions are typically developed separately by sex for both healthy annuitants and disabled annuitants. Pre-retirement mortality assumptions are developed separately for males and females. Unlike most of the other demographic assumptions that rely exclusively on the experience of the plan, for mortality, standard mortality tables and projection scales serve as the primary basis for the assumption.

The steps in our analysis are as follows:

1. Select an appropriate standard mortality improvement projection scale to apply to the base mortality table.
2. Select a standard mortality table that is, based on experience, most closely matching the anticipated experience of MCERA.
3. Compare actual MCERA experience to what would have been predicted by the selected standard table adjusted by the mortality improvement projection scale for the period of the experience study.
4. Adjust the standard table either fully or partially depending on the level of credibility for MCERA experience. This adjusted table is called the base table.

In general we propose assumption changes when the actual-to-expected (A/E) ratio for the current assumption is significantly different than 100%. However, for those groups that do not have sufficient experience, we may recommend replacement tables based on the experience of the groups that have more credible data. For example, there is very little mortality experience among active members, so we have recommended that MCERA use standard tables for those members, without adjustment to reflect MCERA's experience. We note that the pre-retirement mortality assumptions have very little impact on the liability estimates, because of the very low rates of decrement.

SECTION III – DEMOGRAPHIC ASSUMPTIONS
MORTALITY RATES

In the prior study MCERA elected to use the following mortality tables.

Active members

- CalPERS 2017 Pre-Retirement Non-Industrial Death rates (plus Duty-Related Death rates for Safety members), with the 15-year static projection used by CalPERS replaced by generational improvements from a base year of 2014 using Scale MP-2017. 0% of all Miscellaneous and 95% of all Safety pre-retirement deaths are assumed to be service-connected.

Healthy retirees and beneficiaries

- CalPERS 2017 Post-Retirement Healthy Mortality rates, adjusted by 90% for Males (Miscellaneous and Safety), with the 15-year static projection used by CalPERS replaced by generational improvements from a base year of 2014 using Scale MP-2017.

Disabled members

- CalPERS 2017 Disability Mortality rates (Non-Industrial rates for Miscellaneous members and Industrial Disability rates for Safety members), adjusted by 90% for Males (Miscellaneous and Safety) and 90% for Miscellaneous Females, with the 15-year static projection used by CalPERS replaced by generational improvements from a base year of 2014 using Scale MP-2017.

Since the prior study, the Society of Actuaries' Retirement Plans Experience Committee (RPEC) has continued to release annual updates of the mortality improvement scales, with the newest version – Scale MP-2020 - reflecting three additional years of data (2016-2018) than was used in the development of Scale MP-2017. As a result, it reflects lower expected improvement rates in the near term than Scale MP-2017, based on the lower levels of mortality improvement observed during the three most recent years in the data. It also reflects modifications to the long term (or ultimate) levels of expected improvement at various ages.

MP-2020, similar to MP-2017, represents the Society of Actuaries' most advanced actuarial methodology in incorporating mortality improvement trends with actual recent mortality rates, by using rates that vary not only by age but also by calendar year – known as a two-dimensional approach to projecting mortality improvements. Scale MP-2020 was designed with the intent of being applied to mortality on a generational basis. The effect of this is to build in an automatic expectation of future improvements in mortality. RPEC suggests that using generational mortality is a preferable approach, as it allows for an explicit declaration of the amount of future mortality improvement included in the assumptions.

RPEC has also recently released a new set of base mortality rate tables – the Pub-2010 Mortality Tables, which are based on a recent study of US defined benefit public plan mortality experience. The experience covered 35 public systems with 78 plans from calendar years 2008-2013, including approximately 46 million exposures and 580 thousand deaths.

SECTION III – DEMOGRAPHIC ASSUMPTIONS
MORTALITY RATES

MCERA's experience over the past six years matches fairly well with the new Pub-2010 rates, after applying the improvement projections from the base year of the tables (2010) using the new MP-2020 mortality improvement projections through the mid-point of the six-year period (2016).

Even with the use of six years of data, the MCERA experience is only partially credible, based on standard statistical theory. We therefore recommend partially adjusting the Pub-2010 base tables to fit MCERA's experience to develop a new base table. If appropriate, the rates for each age in the standard table have been adjusted by a factor, where the factor is determined by multiplying the actual-to-expected ratio for the group (such as for the Safety male disabled retirees) by a credibility factor which will bring the A/E results closer – but not all the way – to 100%.

Rather than weighting the experience based on the number of members living and dying, we have weighted the experience based on benefit size (and by compensation for active members). This approach has been recommended by RPEC, since members with larger benefits are expected to live longer, and a benefit-weighted approach helps avoid underestimating the liabilities.

Based on this information, we are recommending the following base mortality table assumptions:

Active members

- Public General Employee Mortality Table (PubG-2010 Employee), with no adjustments.
- Public Safety Above Median Income Employee Mortality Table (PubS-2010(A)), with no adjustments.

Healthy retirees

- Public General Retiree Mortality Table (PubG-2010), with no adjustments.
- Public Safety Above Median Income Retiree Mortality Table (PubS-2010(A)), with no adjustments.

Disabled members

- Public General Disabled Annuitant Mortality Table (PubG-2010), with no adjustments.
- Public Safety Above Median Disabled Annuitant Mortality Table (PubS-2010(A)), adjusted by 95% for Safety male members and no adjustment for Safety female members.

Beneficiaries

- Public Contingent Survivor Mortality Table (PubG-2010), with no adjustment for male beneficiaries and adjusted by 105% for female beneficiaries.

Tables III-M1 through III-M4 on the following pages show the calculation of actual-to-expected death ratios for Healthy Annuitant Miscellaneous male, Healthy Annuitant Miscellaneous female, Healthy Annuitant Safety male, and Healthy Annuitant Safety female members,

SECTION III – DEMOGRAPHIC ASSUMPTIONS
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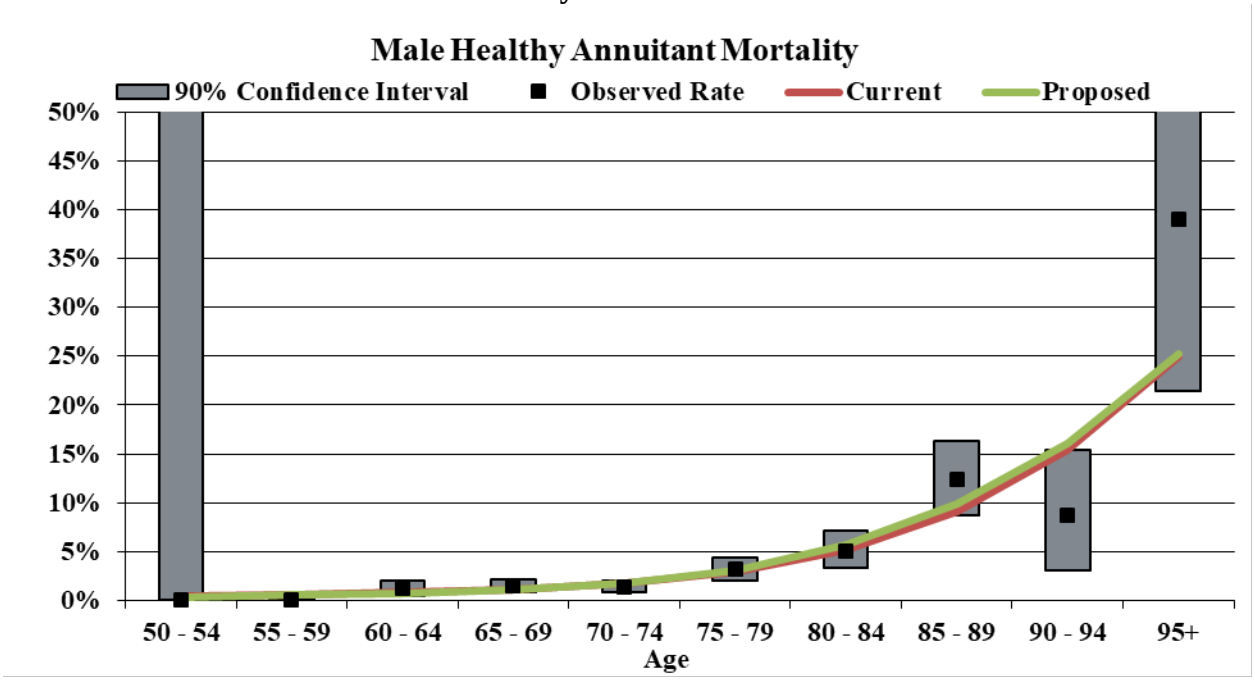
respectively. Charts III-M1 through III-M4 show the information graphically along with the 90% confidence intervals.

Table III-M1 – Healthy Annuitant Miscellaneous Male

Healthy Annuitant Mortality - Base Table for Miscellaneous Males								
Age Band	Exposures	Actual Deaths	Weighted Exposures	Weighted Deaths			A/E Ratios	
				Actual	Current	Proposed	Current	Proposed
50 - 54	39	0	67,586	0	293	244	0%	0%
55 - 59	250	1	582,595	399	3,226	3,094	12%	13%
60 - 64	615	8	2,392,043	27,695	19,216	17,880	144%	155%
65 - 69	882	11	3,696,863	53,609	38,744	39,779	138%	135%
70 - 74	901	16	3,579,204	49,520	60,345	63,758	82%	78%
75 - 79	586	18	2,648,012	84,516	76,389	81,113	111%	104%
80 - 84	367	24	1,254,815	63,396	64,603	71,031	98%	89%
85 - 89	208	24	764,637	95,010	69,298	75,581	137%	126%
90 - 94	65	7	161,795	14,029	24,890	25,922	56%	54%
95 +	14	6	32,952	12,877	8,231	8,303	156%	155%
Total	**3,927**	**115**	**15,180,504**	**401,052**	**365,235**	**386,705**	**110%**	**104%**

Chart III-M1 – Healthy Annuitant Miscellaneous Male



SECTION III – DEMOGRAPHIC ASSUMPTIONS
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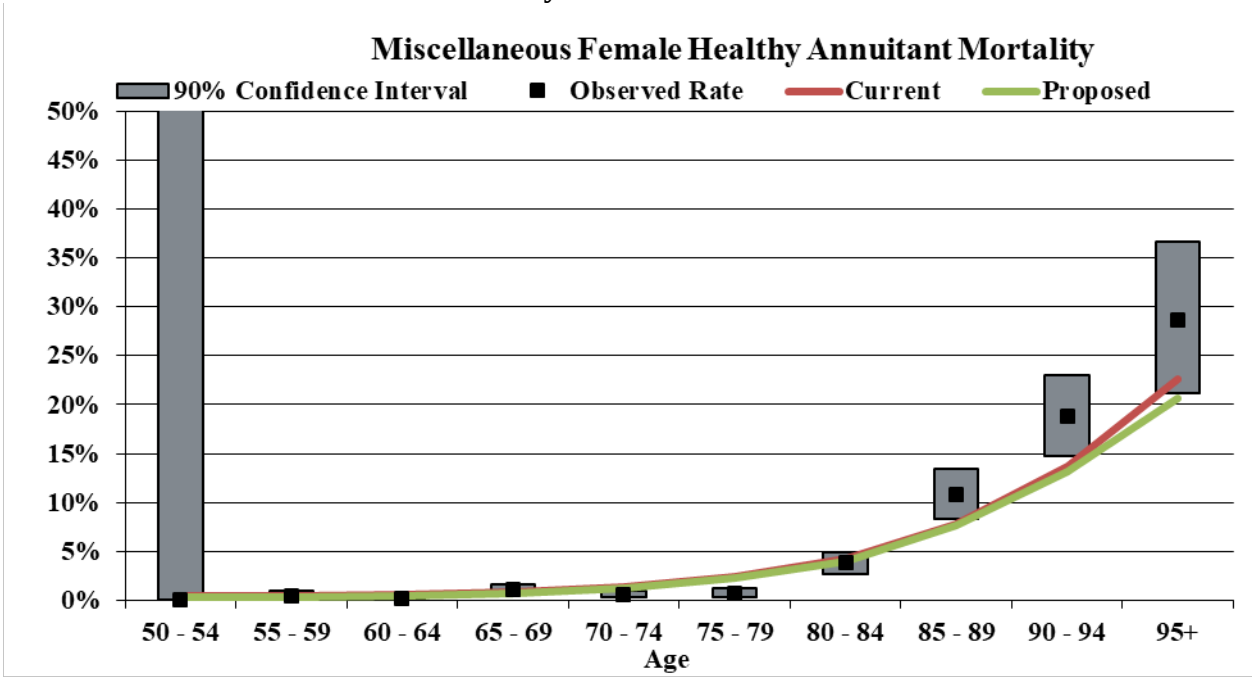
Table III-M2 – Healthy Annuitant Miscellaneous Female

Healthy Annuitant Mortality - Base Table for Miscellaneous Females								
Age Band	Exposures	Actual Deaths	Weighted Exposures	Weighted Deaths			A/E Ratios	
				Actual	Current	Proposed	Current	Proposed
50 - 54	99	0	182,104	0	795	479	0%	0%
55 - 59	428	2	1,053,855	4,652	5,094	3,595	91%	129%
60 - 64	810	3	2,263,803	4,579	13,464	10,399	34%	44%
65 - 69	1,473	12	4,214,894	46,711	34,753	30,835	134%	151%
70 - 74	1,457	10	4,317,038	25,787	55,649	53,333	46%	48%
75 - 79	1,023	11	2,768,397	19,594	66,144	61,420	30%	32%
80 - 84	706	23	1,704,701	64,923	72,336	68,583	90%	95%
85 - 89	408	42	816,988	88,104	63,343	62,070	139%	142%
90 - 94	252	45	441,446	83,047	60,349	58,286	138%	142%
95 +	90	27	157,571	45,202	35,535	32,623	127%	139%
Total	**6,746**	**175**	**17,920,799**	**382,598**	**407,462**	**381,624**	**94%**	**100%**

Chart III-M2 – Healthy Annuitant Miscellaneous Female



SECTION III – DEMOGRAPHIC ASSUMPTIONS
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Table III-M3 – Healthy Annuitant Safety Male

Healthy Annuitant Mortality - Base Table for Safety Males								
Age Band	Exposures	Actual Deaths	Weighted Exposures	Weighted Deaths			A/E Ratios	
				Actual	Current	Proposed	Current	Proposed
50 - 54	172	1	817,294	307	3,499	1,663	9%	18%
55 - 59	420	1	2,814,033	10,363	15,102	9,511	69%	109%
60 - 64	518	1	4,029,070	8,479	31,518	22,472	27%	38%
65 - 69	442	3	3,504,678	19,322	36,450	32,120	53%	60%
70 - 74	354	9	2,539,029	30,801	42,178	39,897	73%	77%
75 - 79	224	6	1,569,470	33,629	45,776	44,205	73%	76%
80 - 84	119	7	596,536	36,088	30,163	30,030	120%	120%
85 - 89	38	9	177,634	47,306	15,792	15,529	300%	305%
90 - 94	4	0	19,748	0	3,117	3,011	0%	0%
95 +	4	0	18,881	0	4,657	4,624	0%	0%
Total	**2,295**	**37**	**16,086,373**	**186,295**	**228,253**	**203,062**	**82%**	**92%**

Chart III-M3 – Healthy Annuitant Safety Male

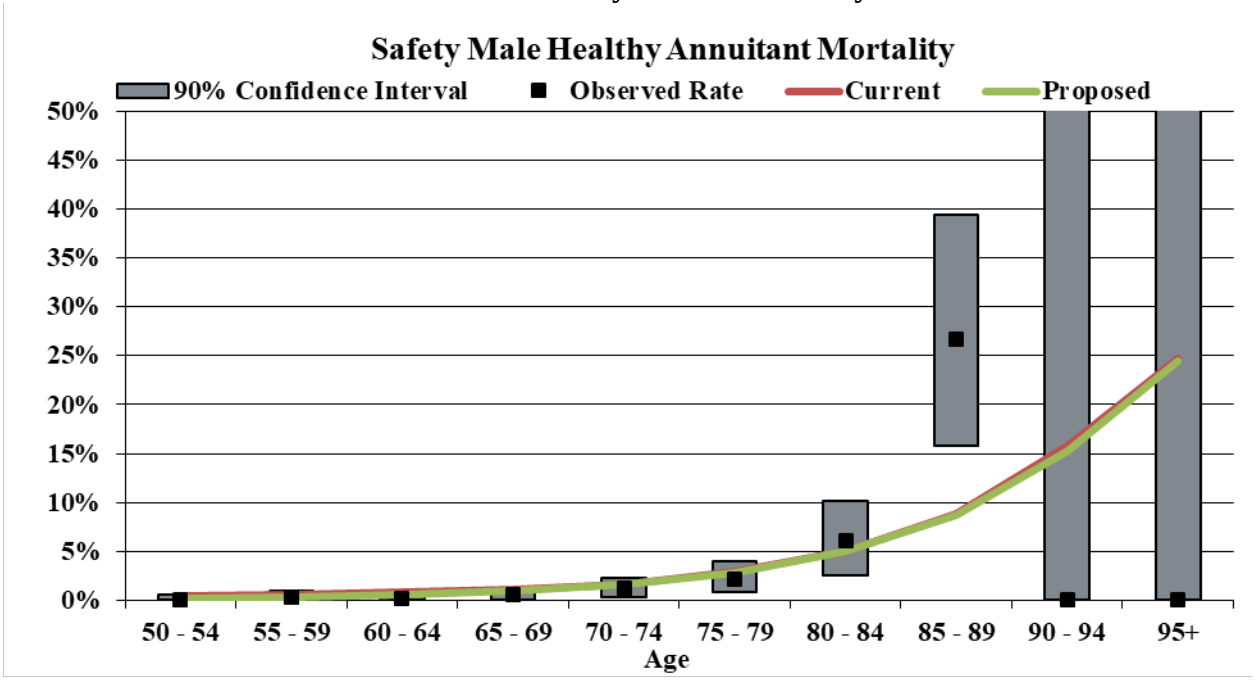

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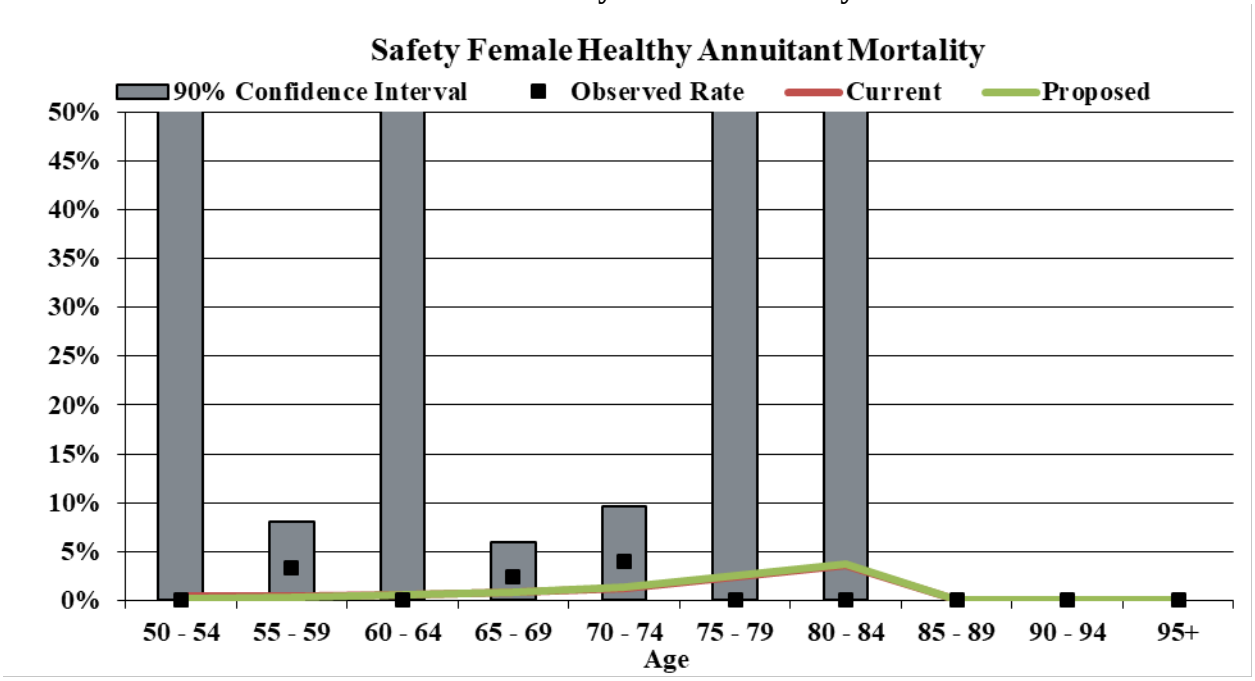
Table III-M4 – Healthy Annuitant Safety Female

Healthy Annuitant Mortality - Base Table for Safety Females								
Age Band	Exposures	Actual Deaths	Weighted Exposures	Weighted Deaths			A/E Ratios	
				Actual	Current	Proposed	Current	Proposed
50 - 54	22	0	99,905	0	426	185	0%	0%
55 - 59	50	1	141,937	4,742	684	470	693%	1009%
60 - 64	69	0	203,578	0	1,191	1,045	0%	0%
65 - 69	68	3	294,493	7,130	2,352	2,440	303%	292%
70 - 74	31	2	124,054	4,964	1,564	1,742	317%	285%
75 - 79	18	0	85,411	0	2,017	2,124	0%	0%
80 - 84	3	0	11,123	0	402	415	0%	0%
85 - 89	0	0	0	0	0	0	0%	0%
90 - 94	0	0	0	0	0	0	0%	0%
95 +	0	0	0	0	0	0	0%	0%
Total	**261**	**6**	**960,501**	**16,836**	**8,636**	**8,421**	**195%**	**200%**

Chart III-M4 – Healthy Annuitant Safety Female



SECTION III – DEMOGRAPHIC ASSUMPTIONS
MORTALITY RATES

Table III-M5 shows a summary of the weighted and unweighted exposures, deaths, and the calculation of actual-to-expected death ratios for all groups.

Table III-M5 – Mortality Summary

MCERA Mortality Analysis by Group								
		Actual	Weighted	Weighted Deaths			A/E Ratios	
Group	Exposures	Deaths	Exposures	Actual	Current	Proposed	Current	Proposed
Active Members								
Miscellaneous Male	4,831	9	4,948,488,322	8,517,392	10,953,608	12,137,114	78%	70%
Miscellaneous Female	7,442	8	6,312,454,403	12,316,449	9,483,118	9,769,075	130%	126%
Safety Male	3,047	2	4,438,313,928	4,495,615	5,820,991	4,066,892	77%	111%
Safety Female	585	0	589,489,184	0	547,911	428,106	0%	0%
Healthy Annuitant								
Miscellaneous Male	3,927	115	15,180,504	401,052	365,235	386,705	110%	104%
Miscellaneous Female	6,746	175	17,920,799	382,598	407,462	381,624	94%	100%
Safety Male	2,295	37	16,086,373	186,295	228,253	203,062	82%	92%
Safety Female	261	6	960,501	16,836	8,636	8,421	195%	200%
Disabled Annuitant								
Miscellaneous Male	324	8	1,029,757	32,540	36,942	40,733	88%	80%
Miscellaneous Female	481	15	1,191,397	27,988	31,765	37,992	88%	74%
Safety Male	1,103	17	6,082,869	63,820	97,042	97,470	66%	65%
Safety Female	169	2	650,088	5,405	4,670	4,927	116%	110%
Beneficiaries								
Male	377	28	648,344	26,545	21,625	25,517	123%	104%
Female	2,204	119	5,375,408	259,942	181,514	189,151	143%	137%

SECTION III – DEMOGRAPHIC ASSUMPTIONS
MORTALITY RATES

Mortality Assumptions for Employee Contribution Rates

For purposes of determining employee contribution rates for non-PEPRA members, the use of generational mortality improvements is impractical from an administrative perspective, because of the entry-age based structure of these rates. Therefore, we recommend using the base mortality tables described above (various Pub-2010 tables with adjustments), projected using Scale MP-2020 from 2010 to 2044 for Miscellaneous members and to 2047 for Safety members. These static projections are intended to approximate generational mortality improvements.

The projection periods are based upon the duration of active liabilities for the respective impacted groups, and the period during which the associated employee contribution rates will be in use. The employee contribution rates are also blended using a male/female weighting of 40%/60% for Miscellaneous members and 85%/15% for Safety members.

We anticipate that these mortality assumptions will be used to determine the employee contribution rates in effect for the period of July 1, 2021 through June 30, 2024. We also anticipate that the mortality assumptions for this purpose will be updated again after the next experience study covering the period from July 1, 2020 through June 30, 2023.

FAMILY COMPOSITION

Members who are married at the time of retirement are entitled to an unreduced 60% joint and survivor annuity.

An analysis of all members who retired within the last six years showed that 79% of males are married and 52% of females are married. However, among male members the rates of marriage were higher for the Safety members (86%) than the Miscellaneous members (75%), which is consistent with the current marriage assumptions (85% for Safety males, 75% for Miscellaneous males). The rates of marriage for the Miscellaneous and Safety females were both close to the current assumption (55%), though there was very little Safety female experience. We recommend keeping the current marital assumptions for future retirees.

An analysis of all retired Miscellaneous members showed that on average male members are 2.5 years older than their spouses and female members are 2.2 years younger than their spouses. Similarly, an analysis of all retired Safety members showed that on average male members are 2.5 years older than their spouses and female members are 2.8 years younger than their spouses. We recommend maintaining the current assumption that male members are three years older than their spouses and increasing the assumption for female members from one year younger to two years younger than their spouses.

TERMINAL SERVICE AND COMPENSATION LOADS

A load is currently applied to the projected benefits for (non-PEPRA) active members, to account for anticipated conversions of sick leave, end-of-career service purchases, or other terminal earnings to retirement service credit or final compensation.

An analysis of unexpected additional service and earnings for all members with a vested right to a benefit who retired in the last three years without reciprocity is shown in Table III-O1 on the next page.

SECTION III – DEMOGRAPHIC ASSUMPTIONS
OTHER DEMOGRAPHIC ASSUMPTIONS

Table III-O1 – Terminal Service and Compensation Loads

Pay and Service Increases at Retirement 2018-2020 Retirements	Count	Expected Monthly Benefit at Retirement	Actual Monthly Benefit at Retirement	Observed Increase	Current Assumption	Proposed Assumption
Non-PEPRA						
Marin						
County	282	$ 1,178,593	$ 1,196,440	1.51%	2.00%	1.50%
Courts	11	33,549	33,934	1.15%	2.00%	1.50%
Special Districts	13	58,974	59,013	0.07%	2.00%	1.50%
Total	306	1,271,116	1,289,387	1.44%		
Novato	12	108,638	112,922	3.94%	3.00%	4.00%
San Rafael	56	266,600	271,458	1.82%	2.50%	1.50%
PEPRA					0.00%	1.50%

The increases for Marin (including the County, Courts and Special Districts) and San Rafael members are due primarily to additional service granted at retirement as a result of unused sick leave. We propose a reduction in the terminal service load from 2.00% for the County and 2.50% for San Rafael to 1.50% for both groups.

For Novato Fire, members are also eligible to cash out vacation pay earned and payable in their final service period, and may therefore have an additional increase in pensionable compensation not necessarily reflected in their most recent valuation data. Based on a review of their retirement calculations, we propose a combined 4.00% load for terminal service and compensation increases for their non-PEPRA members.

As part of the most recent actuarial audit, it was noted that PEPRA members may also be eligible for terminal service credits due to sick leave, though not compensation increases such as those applicable to non-PEPRA Novato members. We confirmed this with MCERA Staff, and therefore propose to apply a 1.50% increase to service amounts for PEPRA members at retirement. While data regarding PEPRA retirements is currently limited, we believe it is reasonable to use the same assumption regarding sick leave accruals and usage as the other groups, until and unless emerging experience indicates otherwise.

DEFERRED RETIREMENT AGE

An analysis of all terminated members with a vested right to a benefit who retired in the last six years is shown in Table III-O2 on the following page. We reviewed the information separately for those members who retired with reciprocity, since they will generally have a greater incentive

SECTION III – DEMOGRAPHIC ASSUMPTIONS
OTHER DEMOGRAPHIC ASSUMPTIONS

to defer their retirement. This is especially true for members considering whether to retire once they have reached their maximum retirement benefit age. For example, a 3% at 50 Safety member without reciprocity should have no incentive to defer commencement past age 50 (since their benefit will not increase by doing so), whereas a member with reciprocity may continue to receive pay increases.

The analysis shows that on average Miscellaneous members retire at age 60.2, which is higher than the current assumption of age 58. Safety 3% at age 50 members retire at age 54.0, and Safety 3% at age 55 members retire at age 54.3.

We recommend changing the assumption for Miscellaneous members from 58 to 59, for both those with and without reciprocity. We recommend increasing the assumption for the Safety 3% at 50 members with reciprocity from 50 to 53, and leaving the assumption for members without reciprocity at age 50. We recommend no change for Safety 3% at 55 or Safety PEPRA members, leaving the assumed commencement age at 55 for those with and without reciprocity.

Table III-O2 – Deferred Retirement Age

Deferred Retirement Age 2014-2020 Retirements	Count	Average Retirement Age	Current Assumption	Proposed Assumption
Miscellaneous				
No Reciprocity	72	61.0	58	59
With Reciprocity	61	59.2	58	59
Safety				
3% at Age 50				
No Reciprocity	3	54.4	50	50
With Reciprocity	25	53.9	50	53
3% at Age 55				
No Reciprocity	2	56.2	55	55
With Reciprocity	14	54.0	55	55

ADMINISTRATIVE EXPENSES

The returns discussed in the economic assumption section are expected to be net of investment expenses; administrative expenses are not addressed. Effective with the June 30, 2013 actuarial valuation, MCERA began to include an additional cost item for expected annual administrative expenses in the actuarial cost calculation. For the valuation as of June 30, 2020, we recommend lowering the current administrative expense assumption from $5.373 million to $5.0 million for the Plan year 2020-2021, with future expenses expected to increase at the wage growth assumption.

Table III-O3 – Analysis of Administrative Expenses

	Pension		
FYE	Administrative Expenses	Adjustment to FYE 2021*	Adjusted Expenses
2020	4,607,760	1.0300	4,745,993
2019	5,056,350	1.0467	5,292,231
2018	4,203,705	1.0803	4,541,265
2017	4,404,191	1.1225	4,943,772
2016	4,379,760	1.1616	5,087,525
2015	4,654,623	1.1926	5,551,283
	Adjusted Average (FYE 2018-2020)		4,859,830
	Adjusted Average (FYE 2015-2017)		5,194,193
	Adjusted Average (FYE 2015-2020)		5,027,012
		Current Assumption	5,373,235
		Proposed Assumption (FYE 2021)	5,000,000

* Adjusted to FYE 2020 using increase in Bay Area CPI, plus wage growth at 3% for FYE 2021

APPENDIX A – SUMMARY OF PROPOSED ASSUMPTIONS

The recommended assumptions will be presented to the Board at their January 13, 2021 meeting. The assumptions are based on an experience study covering the period from July 1, 2017 through June 30, 2020.

1. **Rate of Return**

   Assets are assumed to earn 6.75% net of investment and administrative expenses.

2. **Administrative Expenses**

   Administrative expenses are assumed to be $5.000 million for the next year, to be split between employees and employers based on their share of the overall contributions. Administrative expenses are assumed to increase by 3.0% per year.

3. **Cost of Living**

   The cost of living as measured by the Consumer Price Index (CPI) will increase at the rate of 2.50% per year.

4. **Post Retirement COLA**

   Post retirement COLAs are assumed at the rate of 2.5% for members with a 4% COLA cap, 2.4% for members with a 3% COLA cap, and 1.9% for members with a 2% COLA cap.

5. **Internal Revenue Code Section 415 Limit**

   The Internal Revenue Code Section 415 maximum benefit limitations are not reflected in the valuation for funding purposes. Any limitation is reflected in a member's benefit at the time of retirement.

6. **Internal Revenue Code Section 401(a)(17)**

   The Internal Revenue Code Section 401(a)(17) maximum compensation limitation is reflected in the valuation to project compensation and benefits. The limit is expected to increase by 2.50% in future years.

7. **PEPRA Compensation Limit**

   The PEPRA Pensionable Compensation Limit (GC 7522.10) is reflected in the valuation to project compensation and benefits for PEPRA members. The limit is expected to increase by 2.50% in future years.

8. **Interest on Member Contributions**

   The annual credited interest rate on member contributions is assumed to be 6.75%.

APPENDIX A – SUMMARY OF PROPOSED ASSUMPTIONS

9. Sick Leave Service Credit Upon Retirement

Active members' benefits are adjusted by a percentage, in accordance with the table below, for anticipated conversions of sick leave or other terminal earnings to retirement service credit or final compensation.

	Rate
Non-PEPRA	
Marin County	1.50%
Marin Courts	1.50%
Marin Special Districts	1.50%
Novato Fire Protection District	4.00%
City of San Rafael	1.50%
PEPRA	1.50%

10. Family Composition

Percentage married for all active members who retire, become disabled, or die during active service is shown in the table below. Male members are assumed to be three years older than their spouses and female members are assumed to be two years younger than their spouses.

Percentage Married	
Class and Gender	Percentage
Miscellaneous Males	75%
Miscellaneous Females	55%
Safety Males	85%
Safety Females	55%

APPENDIX A – SUMMARY OF PROPOSED ASSUMPTIONS

11. Increases in Pay

Wage inflation component: 3.00%

Additional longevity and promotion component:

Service	Miscellaneous	Safety
0	6.00%	5.00%
1	6.00%	5.00%
2	5.00%	4.50%
3	4.00%	4.00%
4	3.00%	3.50%
5	2.25%	3.00%
6	1.75%	2.50%
7	1.40%	2.20%
8	1.20%	1.90%
9	1.00%	1.70%
10	0.85%	1.50%
11	0.75%	1.40%
12	0.75%	1.30%
13+	0.75%	1.25%

12. Rates of Termination (All Types)

Sample rates of termination are shown in the following tables. Note that termination rates do not apply once a member is eligible for retirement.

Service	Miscellaneous	Service	Miscellaneous
0	14.00%	11	4.75%
1	13.00%	12	4.50%
2	12.00%	13	4.25%
3	9.50%	14	4.00%
4	8.25%	15	3.50%
5	7.50%	16	3.25%
6	6.75%	17	3.00%
7	6.25%	18	2.75%
8	5.75%	19	2.50%
9	5.25%	20+	0.00%
10	5.00%		

APPENDIX A – SUMMARY OF PROPOSED ASSUMPTIONS

Service	Safety
0	9.00%
1	7.00%
2	5.00%
3	5.00%
4	5.00%

Age	Safety 5-19 Years of Service
20	2.06%
25	2.24%
30	3.53%
35	3.41%
40	1.14%
45	1.70%
50	0.27%
55	0.09%
60	0.00%

APPENDIX A – SUMMARY OF PROPOSED ASSUMPTIONS

13. Withdrawal, Reciprocal Transfers, and Vested Termination

The following rates apply to active members who terminate their employment. Members who withdraw their member contributions forfeit entitlement to future Plan benefits.

	Miscellaneous			Safety		
Service	Withdrawal	Reciprocal	Vested Term	Withdrawal	Reciprocal	Vested Term
0	40.00%	24.00%	36.00%	20.00%	68.00%	12.00%
1	35.00%	26.00%	39.00%	20.00%	68.00%	12.00%
2	20.00%	32.00%	48.00%	20.00%	68.00%	12.00%
3	20.00%	32.00%	48.00%	20.00%	68.00%	12.00%
4	20.00%	32.00%	48.00%	20.00%	68.00%	12.00%
5	10.00%	36.00%	54.00%	20.00%	68.00%	12.00%
6	10.00%	36.00%	54.00%	20.00%	68.00%	12.00%
7	10.00%	36.00%	54.00%	20.00%	68.00%	12.00%
8	10.00%	36.00%	54.00%	20.00%	68.00%	12.00%
9	10.00%	36.00%	54.00%	20.00%	68.00%	12.00%
10+	10.00%	36.00%	54.00%	15.00%	72.25%	12.75%

14. Rates of Disability

The rates of disability for Miscellaneous members are based on the 2017 CalPERS Public Agency Miscellaneous Ordinary Disability rates for males and females without adjustment.

The rates of disability for Safety members are based on adjusted 2020 CalPERS Peace Officers and Fire Fighter (POFF) Industrial and Ordinary Disability rates (multiplied by 120%).

75% of all Miscellaneous and 100% of all Safety disabilities are assumed to be service-connected. Sample *service-connected* disability rates of active participants are shown below.

	Miscellaneous		Safety
Age	Male	Female	
20	0.0128%	0.0075%	0.0828%
25	0.0128%	0.0075%	0.1404%
30	0.0143%	0.0180%	0.2364%
35	0.0293%	0.0533%	0.3828%
40	0.0765%	0.1013%	0.6048%
45	0.1133%	0.1410%	0.9192%
50	0.1185%	0.1493%	1.3500%
55	0.1185%	0.1119%	1.9020%
60	0.1148%	0.0788%	2.5848%
65	0.0960%	0.0660%	3.4164%

APPENDIX A – SUMMARY OF PROPOSED ASSUMPTIONS

Sample *non service-connected* disability rates of active participants are shown below.

	Miscellaneous		Safety
Age	Male	Female	
20	0.0042%	0.0025%	0.0000%
25	0.0042%	0.0025%	0.0000%
30	0.0047%	0.0060%	0.0000%
35	0.0097%	0.0178%	0.0000%
40	0.0255%	0.0338%	0.0000%
45	0.0377%	0.0470%	0.0000%
50	0.0395%	0.0498%	0.0000%
55	0.0395%	0.0373%	0.0000%
60	0.0382%	0.0263%	0.0000%
65	0.0320%	0.0220%	0.0000%

15. Rates of Mortality for Active Lives

Mortality rates for Miscellaneous active members are based on the sex distinct Public General 2010 Employee Mortality Table, with generational mortality improvements projected from 2010 using Projection Scale MP-2020, with no adjustments.

Mortality rates for Safety active members are based on the sex distinct Public Safety 2010 Above-Median Income Employee Mortality Table, with generational mortality improvements projected from 2010 using Projection Scale MP-2020, with no adjustments. 10% of Safety member active deaths are assumed to occur in the line of duty.

16. Rates of Mortality for Retired Healthy Lives

Mortality rates for Miscellaneous retired members are based on the sex distinct Public General 2010 Healthy Retiree Mortality Table, with generational mortality improvements projected from 2010 using Projection Scale MP-2020, with no adjustments.

Mortality rates for Safety retired members are based on the sex distinct Public Safety 2010 Above-Median Income Healthy Retiree Mortality Table, with generational mortality improvements projected from 2010 using Projection Scale MP-2020, with no adjustments.

17. Rates of Mortality for Retired Disabled Lives

Rates of mortality among Miscellaneous disabled members are based on the sex distinct Public General 2010 Disabled Retiree Mortality Table, with generational mortality improvements projected from 2010 using Projection Scale MP-2020, with no adjustments.

APPENDIX A – SUMMARY OF PROPOSED ASSUMPTIONS

Rates of mortality among Safety disabled members are based on the sex distinct Public Safety 2010 Disabled Retiree Mortality Table, with generational mortality improvements projected from 2010 using Projection Scale MP-2020, adjusted by 95% for males with no adjustment for females.

18. Rates of Mortality for Beneficiaries

Rates of mortality among members' beneficiaries once their benefits commence are given by sex distinct Public 2010 Contingent Survivor Mortality Table, using General 2010 Healthy Retiree Mortality Table before age 45, with generational mortality improvements projected from 2010 using Projection Scale MP-2020, adjusted by 105% for females and no adjustments to males. Prior to the death of the member, the mortality of the beneficiaries is assumed to use the same sex distinct assumptions as the retired healthy members.

19. Mortality Improvement

Mortality is assumed to improve in future years in accordance with the MP-2020 generational improvement tables.

20. Rates of Retirement

Rates of retirement are based on age according to the following tables below.

Non-PEPRA Miscellaneous Rates

Age	<20 Years of Service	20-29 Years of Service	30+ Years of Service
50-52	3.00%	3.00%	3.00%
53	5.00%	5.00%	10.00%
54	5.00%	5.00%	15.00%
55-59	5.00%	10.00%	15.00%
60	10.00%	10.00%	30.00%
61	10.00%	10.00%	30.00%
62	12.00%	20.00%	30.00%
63	14.00%	20.00%	30.00%
64	16.00%	20.00%	30.00%
65	18.00%	20.00%	30.00%
66-69	20.00%	30.00%	30.00%
70-79	25.00%	30.00%	30.00%
80	100.00%	100.00%	100.00%

APPENDIX A – SUMMARY OF PROPOSED ASSUMPTIONS

PEPRA Miscellaneous Rates

2017 CalPERS 2.0% @ 62 Public Agency Miscellaneous Sample Rates			
Age	15 Years of Service	20 Years of Service	25 Years of Service
52	1.20%	1.50%	1.90%
55	2.80%	3.60%	6.10%
60	7.10%	9.10%	11.10%
61	7.90%	10.00%	12.10%
62	10.40%	13.40%	16.40%
63	13.40%	16.30%	19.20%
64	12.90%	15.80%	18.70%
65	17.30%	20.60%	23.90%
66	21.20%	25.20%	29.20%
67	21.20%	25.20%	29.20%
68-74	19.30%	22.90%	26.50%
75+	100.00%	100.00%	100.00%

Non-PEPRA Safety Rates

Age	3% @ 50 <20 Years of Service	3% @ 50 20-29 Years of Service	3% @ 50 30+ Years of Service
40-44	0.00%	3.00%	3.00%
45-48	0.00%	3.00%	3.00%
49	0.00%	15.00%	15.00%
50	5.00%	15.00%	50.00%
51-52	5.00%	10.00%	20.00%
53-54	10.00%	10.00%	20.00%
55	10.00%	25.00%	50.00%
56	10.00%	30.00%	50.00%
57	10.00%	35.00%	50.00%
58	10.00%	40.00%	50.00%
59	10.00%	45.00%	50.00%
60-64	50.00%	50.00%	50.00%
65	100.00%	100.00%	100.00%

APPENDIX A – SUMMARY OF PROPOSED ASSUMPTIONS

2017 CalPERS 3.0% @ 55 Public Agency Safety Police Sample Rates			
Age	15 Years of Service	20 Years of Service	25 Years of Service
50	3.50%	3.50%	7.00%
51	2.80%	2.90%	6.50%
52	3.20%	3.90%	6.60%
53	2.80%	4.30%	7.50%
54	3.80%	7.40%	11.80%
55	7.00%	12.00%	17.50%
56	6.00%	11.00%	16.50%
57	6.00%	11.00%	16.50%
58	8.00%	10.00%	18.50%
59	9.50%	13.00%	18.50%
60	15.00%	15.00%	18.50%
61	12.00%	12.00%	16.00%
62	15.00%	15.00%	20.00%
63	15.00%	15.00%	20.00%
64	15.00%	15.00%	17.50%
65	100.00%	100.00%	100.00%

APPENDIX A – SUMMARY OF PROPOSED ASSUMPTIONS

PEPRA Safety Rates

2017 CalPERS 2.7% @ 57 Public Agency Safety Police Sample Rates			
Age	15 Years of Service	20 Years of Service	25 Years of Service
50	5.00%	5.00%	5.00%
51	4.00%	4.00%	5.75%
52	3.80%	3.80%	5.80%
53	3.80%	3.80%	7.74%
54	3.80%	4.37%	9.31%
55	6.84%	9.12%	13.40%
56	6.27%	8.36%	12.28%
57	6.00%	8.00%	11.75%
58	8.00%	8.80%	13.75%
59	8.00%	9.20%	14.00%
60	15.00%	15.00%	15.00%
61	14.40%	14.40%	14.40%
62	15.00%	15.00%	15.00%
63	15.00%	15.00%	15.00%
64	15.00%	15.00%	15.00%
65	100.00%	100.00%	100.00%

APPENDIX B – SUMMARY OF PRIOR ASSUMPTIONS

The assumptions and methods used in the June 30, 2019 actuarial valuation reflect the results of an Experience Study performed by Cheiron covering the period from July 1, 2014 through June 30, 2017 and adopted by the Board.

1. **Rate of Return**

   Assets are assumed to earn 7.00% net of investment, but not administrative expenses.

2. **Administrative Expenses**

   Administrative expenses are assumed to be $5.217 million for the next year, to be split between employees and employers based on their share of the overall contributions. Administrative expenses are assumed to increase by 3.0% per year.

3. **Cost of Living**

   The cost of living as measured by the Consumer Price Index (CPI) will increase at the rate of 2.75% per year.

4. **Post Retirement COLA**

   Post retirement COLAs are assumed at the rate of 2.7% for members with a 4% COLA cap, 2.6% for members with a 3% COLA cap, and 1.9% for members with a 2% COLA cap.

5. **Internal Revenue Code Section 415 Limit**

   The Internal Revenue Code Section 415 maximum benefit limitations are not reflected in the valuation for funding purposes. Any limitation is reflected in a member's benefit at the time of retirement.

6. **Internal Revenue Code Section 401(a)(17)**

   The Internal Revenue Code Section 401(a)(17) maximum compensation limitation is reflected in the valuation to project compensation and benefits. The limit is expected to increase by 2.75% in future years.

7. **PEPRA Compensation Limit**

   The PEPRA Pensionable Compensation Limit (GC 7522.10) is reflected in the valuation to project compensation and benefits for PEPRA members. The limit is expected to increase by 2.75% in future years.

8. **Interest on Member Contributions**

   The annual credited interest rate on member contributions is assumed to be 7.00%.

APPENDIX B – SUMMARY OF PRIOR ASSUMPTIONS

9. Sick Leave Service Credit Upon Retirement

Active members' benefits are adjusted by a percentage, in accordance with the table below, for anticipated conversions of sick leave or other terminal earnings to retirement service credit or final compensation.

	Rate
Marin County	2.00%
Marin Courts	2.00%
Marin Special Districts	2.00%
Novato Fire Protection District	3.00%
City of San Rafael	2.50%

10. Family Composition

Percentage married for all active members who retire, become disabled, or die during active service is shown in the table below. Male members are assumed to be three years older than their spouses and female members are assumed to be one year younger than their spouses.

Percentage Married	
Class and Gender	Percentage
Miscellaneous Males	75%
Miscellaneous Females	55%
Safety Males	85%
Safety Females	55%

APPENDIX B – SUMMARY OF PRIOR ASSUMPTIONS

11. Increases in Pay

Wage inflation component: 3.00%

Additional longevity and promotion component:

Service	Miscellaneous	Safety
0	6.00%	5.00%
1	6.00%	5.00%
2	5.00%	4.50%
3	4.00%	4.00%
4	3.00%	3.50%
5	2.25%	3.00%
6	1.75%	2.50%
7	1.40%	2.20%
8	1.20%	1.90%
9	1.00%	1.70%
10	0.85%	1.50%
11	0.75%	1.40%
12	0.75%	1.30%
13+	0.75%	1.25%

APPENDIX B – SUMMARY OF PRIOR ASSUMPTIONS

12. Rates of Termination (All Types)

Sample rates of termination are shown in the following tables below. Note that termination rates do not apply once a member is eligible for retirement.

	Miscellaneous		
Service	Male	Female	Safety
0	15.00%	15.00%	8.00%
1	9.00%	10.00%	5.00%
2	7.00%	8.00%	4.00%
3	7.00%	8.00%	4.00%
4	7.00%	8.00%	4.00%

	Miscellaneous						Safety
	Male			Females			
Age	5-9 Years of Service	10-14 Years of Service	15-29 Years of Service	5-9 Years of Service	10-14 Years of Service	15-29 Years of Service	5-19 Years of Service
20	7.00%	5.30%	3.00%	7.80%	5.30%	3.00%	2.06%
25	7.00%	5.30%	3.00%	7.80%	5.30%	3.00%	2.24%
30	7.00%	5.30%	3.00%	7.80%	5.30%	3.00%	3.53%
35	6.80%	4.50%	2.50%	7.80%	4.50%	2.50%	3.41%
40	4.80%	3.20%	2.00%	5.80%	3.20%	2.00%	1.14%
45	3.80%	2.50%	1.70%	4.80%	2.50%	1.70%	1.70%
50	2.10%	0.00%	0.00%	3.10%	0.00%	0.00%	0.27%
55	1.20%	0.00%	0.00%	2.20%	0.00%	0.00%	0.09%
60	1.20%	0.00%	0.00%	2.20%	0.00%	0.00%	0.00%

APPENDIX B – SUMMARY OF PRIOR ASSUMPTIONS

13. Withdrawal, Reciprocal Transfers and Vested Termination

Rates of withdrawal apply to active Members who terminate their employment. Members who withdraw their member contributions forfeit entitlement to future Plan benefits.

	Miscellaneous			Safety		
Service	Withdrawal	Reciprocal	Vested Term	Withdrawal	Reciprocal	Vested Term
0	50.00%	15.00%	35.00%	25.00%	45.00%	30.00%
1	40.00%	18.00%	42.00%	25.00%	45.00%	30.00%
2	20.00%	24.00%	56.00%	25.00%	45.00%	30.00%
3	20.00%	24.00%	56.00%	25.00%	45.00%	30.00%
4	20.00%	24.00%	56.00%	25.00%	45.00%	30.00%
5	10.00%	27.00%	63.00%	25.00%	45.00%	30.00%
6	10.00%	27.00%	63.00%	25.00%	45.00%	30.00%
7	10.00%	27.00%	63.00%	25.00%	45.00%	30.00%
8	10.00%	27.00%	63.00%	25.00%	45.00%	30.00%
9	10.00%	27.00%	63.00%	25.00%	45.00%	30.00%
10+	10.00%	27.00%	63.00%	15.00%	51.00%	34.00%

14. Reciprocal Transfers and Vested Termination Deferral Age

Miscellaneous members who terminate employment and do not withdraw their member contributions are assumed to retire at age 58. Safety members who terminate employment and do not withdraw their member contributions are assumed to retire at age 50 if their benefits are calculated under CERL section 31664.1 and age 55 otherwise.

15. Projected Pay for Reciprocal Transfers

Members who terminate and transfer to a reciprocal employer are expected to have their wages increase from their date of termination to their assumed retirement age by 3.00% wage inflation and either 0.75% for Miscellaneous members or 1.25% for Safety members.

Members who have terminated and transferred to a reciprocal employer or have transferred within MCERA are assumed to have the same salary increases, and are exposed to the same rates of mortality and retirement as if they were active. No other decrements are assumed.

APPENDIX B – SUMMARY OF PRIOR ASSUMPTIONS

16. Rates of Disability

The rates of disability for Miscellaneous members are based on the 2017 CalPERS Public Agency Miscellaneous Ordinary Disability rates for males and females without adjustment.

The rates of disability for Safety members are based on adjusted 2017 CalPERS Public Agency Police Unisex Industrial and Ordinary Disability rates (multiplied by 0.6, and with a maximum rate of 1.25%).

50% of all Miscellaneous and 95% of all Safety disabilities are assumed to be service-connected. Sample *service-connected* disability rates of active participants are shown below.

	Miscellaneous		
Age	Male	Female	Safety
20	0.0085%	0.0050%	0.0057%
25	0.0085%	0.0050%	0.0998%
30	0.0095%	0.0120%	0.3186%
35	0.0195%	0.0355%	0.5022%
40	0.0510%	0.0675%	0.6857%
45	0.0755%	0.0940%	0.8750%
50	0.0790%	0.0995%	1.1875%
55	0.0790%	0.0745%	1.1875%
60	0.0765%	0.0525%	1.1875%
65	0.0640%	0.0440%	1.1875%

Sample *non service-connected* disability rates of active participants are shown below.

	Miscellaneous		
Age	Male	Female	Safety
20	0.0085%	0.0050%	0.0003%
25	0.0085%	0.0050%	0.0053%
30	0.0095%	0.0120%	0.0168%
35	0.0195%	0.0355%	0.0264%
40	0.0510%	0.0675%	0.0361%
45	0.0755%	0.0940%	0.0461%
50	0.0790%	0.0995%	0.0625%
55	0.0790%	0.0745%	0.0625%
60	0.0765%	0.0525%	0.0625%
65	0.0640%	0.0440%	0.0625%

APPENDIX B – SUMMARY OF PRIOR ASSUMPTIONS

17. Rates of Mortality for Active Lives

Rates of mortality for active members are specified by CalPERS 2017 Pre-Retirement Non-Industrial Death rates (plus Duty-Related Death rates for Safety members), with the 15-year static projection used by CalPERS replaced by generational improvements from a base year of 2014 using Scale MP-2017. 0% of all Miscellaneous and 95% of all Safety pre-retirement deaths are assumed to be service-connected.

18. Rates of Mortality for Retired Healthy Lives

Rates of mortality for retired members and their beneficiaries are given by CalPERS 2017 Post-Retirement Healthy Mortality rates, adjusted by 90% for Males (Miscellaneous and Safety), with the 15-year static projection used by CalPERS replaced by generational improvements from a base year of 2014 using Scale MP-2017.*[1]

19. Rates of Mortality for Retired Disabled Lives

Rates of mortality among disabled members are given by CalPERS 2017 Disability Mortality rates (Non-Industrial rates for Miscellaneous members and Industrial Disability rates for Safety members), adjusted by 90% for Males (Miscellaneous and Safety) and 90% for Miscellaneous Females, with the 15-year static projection used by CalPERS replaced by generational improvements from a base year of 2014 using Scale MP-2017.*

20. Mortality Improvement

Mortality is assumed to improve in future years in accordance with the MP-2017 generational improvement tables.

* Rates of mortality for annuitants younger than age 50 are from the CalPERS 2014 Experience Study

APPENDIX B – SUMMARY OF PRIOR ASSUMPTIONS

21. Rates of Retirement

Rates of retirement are based on age according to the following tables below.

PEPRA: For New Members we assume that the current retirement rates will apply, but that no Non-Safety members will retire before age 52.

Miscellaneous Rates

Age	<20 Years of Service	20-29 Years of Service	30+ Years of Service
50-52	3.00%	3.00%	3.00%
53	5.00%	5.00%	10.00%
54	5.00%	5.00%	15.00%
55-59	5.00%	10.00%	15.00%
60	5.00%	10.00%	30.00%
61	10.00%	10.00%	30.00%
62-63	10.00%	20.00%	30.00%
64-65	15.00%	20.00%	30.00%
66-67	15.00%	30.00%	30.00%
68-79	20.00%	30.00%	30.00%
80	100.00%	100.00%	100.00%

Safety Rates

Age	3% @ 50 <20 Years of Service	3% @ 50 20-29 Years of Service	3% @ 50 30+ Years of Service	3% @ 55 <20 Years of Service	3% @ 55 20-29 Years of Service	3% @ 55 30+ Years of Service
40-44	0.00%	3.00%	3.00%	0.00%	1.00%	1.00%
45-48	0.00%	3.00%	3.00%	0.00%	5.00%	5.00%
49	0.00%	15.00%	3.00%	0.00%	5.00%	5.00%
50	5.00%	15.00%	50.00%	5.00%	10.00%	30.00%
51-52	5.00%	10.00%	20.00%	5.00%	10.00%	30.00%
53-54	10.00%	10.00%	20.00%	5.00%	10.00%	30.00%
55	10.00%	25.00%	50.00%	20.00%	30.00%	30.00%
56	10.00%	30.00%	50.00%	10.00%	30.00%	30.00%
57	10.00%	35.00%	50.00%	10.00%	20.00%	30.00%
58	10.00%	40.00%	50.00%	10.00%	20.00%	30.00%
59	10.00%	45.00%	50.00%	10.00%	20.00%	30.00%
60-64	50.00%	50.00%	50.00%	20.00%	20.00%	50.00%
65	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

CHEIRON

Classic Values, Innovative Advice

C.1 Administrator’s Report

This is a discussion with no backup.

CALAPRS
EDUCATION · COMMUNICATION · NETWORKING
California Association of Public Retirement Systems

Advanced Course in Retirement Plan Administration

Wednesday, December 2 – Friday, December 4, 2020

Online via Zoom

AGENDA

Wednesday, December 2	
1:00 – 1:05 PM	**Welcome & Introductions** *Robert Palmer, Course Coordinator*
1:05 – 2:15 PM	***Introduction to the CAFR and PAFR (Popular Annual Financial Report)*** *Harsh Jadhav, Chief of Internal Audit, Alameda County Employees' Retirement Association*
2:15 – 2:30 PM	Break
2:30 – 5:00 PM	***Actuarial 101 (Part 1) Pension Funding and Actuarial Valuations*** *Paul Angelo, Senior VP & Actuary, Segal Consulting*

Thursday, December 3	
8:00 – 9:00 AM	**The Future of Technology** *Richard Rogers, Client Services Coordinator, Cornerstone Solutions*
9:00 – 10:00 AM	**Social Security**
10:00 – 10:15 AM	Break
10:15 – 11:15 AM	**Understanding the Responsibilities of Participating in a DC Plan** *Carl Nelson, Executive Director and Chief Investment Officer, San Luis Obispo County Pension Trust*
11:15 AM – 12:15 PM	**Institutional Investments** *Rodney June, Chief Investment Officer, Los Angeles City Employees' Retirement System*

Friday, December 4	
8:00 – 9:00 AM	**Legislative Update** *Barry Lew, Legislative Affairs Officer, Los Angeles County Employees' Retirement Association*
9:00 – 9:15 AM	Break
9:15 – 12:00 PM	***Actuarial 101 (Part 2) Pension Funding and Actuarial Valuations*** *Paul Angelo, Senior VP & Actuary, Segal Consulting*
12:00 PM	Adjourn

C.2.b Other Comments

This is a discussion with no backup.

Mcera

Phone 415 473-6147
Fax (benefits) 415 473-3612
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MCERA.org

January 6, 2021

To: Members of the Board of Retirement
Marin County Employees' Retirement Association (MCERA)

From: Jeff Wickman
Retirement Administrator

Subject: Fiduciary Liability and Cyber Insurance
Recommendations for Purchase of Insurance Policies

Background

MCERA currently purchases its fiduciary liability insurance coverage, as well as limited cybersecurity coverage, from Euclid/Hudson Insurance Company ("Hudson"). The Hudson policy term ended on December 11, 2020 but was extended through January 13, 2020 to allow time for the staff to analyze the renewal proposal from Hudson.

Hudson's Proposal for Renewed Fiduciary Liability Insurance Coverage

Premium: $82,001 + $300 Waiver of Recourse Premium ($25/trustee) = $82,301 annually. This is a $11,064 increase over the current policy.

Deductible/Retention: Loss for Claims of Natural Person Insured (e.g., Trustee) that cannot be paid out of plan assets: $0. Loss for all other Claims: $50,000 each Claim. This is a $25,000 (100%) increase from prior year. Hudson indicated the reason for the increase in retention is due to many claims from other 1937 Act retirement plans in California following the recent Alameda Supreme Court decision.

Scope of Coverage: The scope of coverage will be same as the existing policy. For the 2020-2021 policy, Hudson has agreed to increase the reimbursement rates for legal services to the following not to exceed amounts: for partners $550.00 per hour; for counsel $400.00; for senior associates (defined as five years of experience) $350.00; for associates $300.00 per hour; and for paralegals $100.00 per hour. For Class Action Claims, the reimbursement rates for partners shall not exceed $600 per hour, and $450 for counsel.

Cyber Insurance Coverage: The policy will continue to provide $100,000 in coverage under two distinct areas: content restoration and crisis notification. In August 2020, MCERA renewed its separate and more robust cyber insurance policy with Lloyd's of London that was marketed though the National Council on Public Employee Retirement Systems.

Explanation of Changes

MCERA broker, MacCorkle Insurance Services, indicated that the reasons behind the increase in the premium were due to increased claims related to the Alameda decision. MCERA was able to successfully negotiate a single retention cost for all claims. Initially, the proposal included a retention of $50,000 for all non-Alameda related claims and $100,000 for Alameda related claims. Because MCERA's implementation of the PEPRA legislation was validated by the Alameda decision, staff and counsel were able to argue that it would not be subject to such claims.

Recommendation

The policy proposal has been reviewed by the Board Counsel Ashley Dunning and by Counsel at Nossaman who specialize in insurance-related issues, Jim Vorhis. Based on the review and input staff recommends that MCERA continue to obtain fiduciary insurance coverage from Hudson Insurance Company subject to revised agreed upon retention terms as noted.

October 1, 2020

To: SACRS Trustees & SACRS Administrators/CEO's
From: Dan McAllister, SACRS Immediate Past President, Nominating Committee Chair
SACRS Nominating Committee
Re: SACRS Board of Director Elections 2021-2022 - Elections Notice

SACRS BOD 2021-2022 election process will begin January 2021. Please provide this election notice to your Board of Trustees and Voting Delegates.

DEADLINE	DESCRIPTION
March 1, 2021	Any regular member may submit nominations for the election of a Director to the Nominating Committee, provided the Nominating Committee receives those nominations no later than noon on March 1 of each calendar year regardless of whether March 1 is a Business Day. Each candidate may run for only one office. Write-in candidates for the final ballot, and nominations from the floor on the day of the election, shall not be accepted.
March 25, 2021	The Nominating Committee will report a final ballot to each regular member County Retirement System prior to March 25
May 15, 2021	Nomination Committee to conduct elections during the SACRS Business Meeting at the Spring Conference
May 15, 2021	Board of Directors take office for 1 year

Per SACRS Bylaws, Article VIII, Section 1. Board of Director and Section 2. Elections of Directors:

Section 1. Board of Directors. The Board shall consist of the officers of SACRS as described in Article VI, Section 1, the immediate Past President, and two (2) regular members

> ***A. Immediate Past President.*** *The immediate Past President, while he or she is a regular member of SACRS, shall also be a member of the Board. In the event the immediate Past President is unable to serve on the Board, the most recent Past President who qualifies shall serve as a member of the Board.*
> ***B. Two (2) Regular Members****. Two (2) regular members shall also be members of the Board with full voting rights.*

Section 2. Elections of Directors*. Any regular member may submit nominations for the election of a Director to the Nominating Committee, provided the Nominating Committee receives those nominations no later than noon on March 1 of each calendar year regardless of whether March 1 is a Business Day. Each candidate may run for only one office. Write-in candidates for the final ballot, and nominations from the floor on the day of the election, shall not be accepted.*

The Nominating Committee will report its suggested slate, along with a list of the names of all members who had been nominated, to each regular member County Retirement System prior to March 25.
The Administrator of each regular member County Retirement System shall be responsible for communicating the Nominating Committee's suggested slate to each trustee and placing the election of SACRS Directors on his or her board agenda. The Administrator shall acknowledge the completion of these responsibilities with the Nominating Committee.

Director elections shall take place during the first regular meeting of each calendar year. The election shall be conducted by an open roll call vote, and shall conform to Article V, Sections 6 and 7 of these Bylaws.

Newly elected Directors shall assume their duties at the conclusion of the meeting at which they are elected, with the exception of the office of Treasurer. The incumbent Treasurer shall co-serve with the newly elected Treasurer through the completion of the current fiscal year.

The elections will be held at the SACRS Spring Conference May 11-14, 2021 at the Hyatt Regency Long Beach, Long Beach, CA. Elections will be held during the Annual Business meeting on Friday, May 14, 2021.

If you have any questions, please contact Dan McAllister, Dan.McAllister@sdcounty.ca.gov

Thank you for your prompt attention to this timely matter.

Sincerely,

Dan McAllister

Dan McAllister, San Diego CERA Trustee & San Diego County Treasurer Tax Collector
SACRS Nominating Committee Chair

CC: SACRS Board of Directors
SACRS Nominating Committee Members
Sulema H. Peterson, SACRS Executive Director

SACRS Nomination Submission Form
SACRS Board of Directors Elections 2021-2022

All interested candidates must complete this form and submit along with a letter of intent. **Both the form and the letter of intent must be submitted no later than March 1, 2021.** Please submit to the Nominating Committee Chair at Dan.McAllister@sdcounty.ca.gov AND to SACRS at sulema@sacrs.org. If you have any questions, please feel free to contact Sulema Peterson at SACRS at (916) 701-5158.

Name of Candidate	Name:
Candidate Contact Information (Please include – Phone Number, Email Address and Mailing Address)	Mailing Address: Email Address: Phone:
Name of Retirement System Candidate Currently Serves On	System Name:
List Your Current Position on Retirement Board (Chair, Alternate, Retiree, General Elected, Etc)	o Chair o Alternate o General Elected o Retiree o Other _____
Applying for SACRS Board of Directors Position (select only one)	o President o Vice President o Treasurer o Secretary o Regular Member
Brief Bio	

D.3 Future Meetings

This is a discussion with no backup.

E.1

MCERA
CONFERENCE AND TRAINING CALENDAR
January 2021

Block	Cooper	Given	Gladstern	Jones	Klein	Murphy	Poirier	Shaw	Silberstein	Thomas	Werby	Wickman	Hardesty	Dunning	DATE	APPROVED	SPONSOR	PROGRAM	LOCATION
												✪			2/12/21	*	CalAPRS	Administrators' Round Table	Virtual
													✪		2/12/21	*	CalAPRS	Benefits Round Table	Virtual
														✪	2/19/21	*	CalAPRS	Attorneys' Round Table	Virtual
															2/22-26/21	**	Wharton	Investment Strategies & Portfolio Management	Virtual
												✪			3/8-9/21	*	CalAPRS	General Assembly	Virtual
															3/8-10/21	*	CII	Spring Conference	Washington, DC
															3/16/21	*	CalAPRS	Investments Round Table	Virtual
															3/19/21	*	CalAPRS	Accountants' Round Table	Virtual
															4/13/21	*	CalAPRS	Communications Round Table	Virtual
															4/13-15/21	*	Callan	Introduction to Investments	Virtual
															4/16/21	*	CalAPRS	Information Technology Round Table	Virtual
															4/23/21	*	CalAPRS	Overview Course in Retirement Plan Administration	Virtual
															5/28/21	*	CalAPRS	Attorneys' Round Table	Virtual
															5/28/21	*	CalAPRS	Trustees' Round Table	Virtual
															6/14-18/21	**	Wharton	Investment Strategies & Portfolio Management	Virtual
															6/21-23/21	*	Callan	National Conference	San Francisco, CA

Block	Cooper	Given	Gladstern	Jones	Klein	Murphy	Poirier	Shaw	Silberstein	Thomas	Werby	Wickman	Hardesty	Dunning	DATE	APPROVED	SPONSOR	PROGRAM	LOCATION
															6/22/21	*	CalAPRS	Administrative Assistants' Round Table	Virtual
													✪		6/25/21	*	CalAPRS	Benefits Round Table	Virtual
												✪			6/25/21	*	CalAPRS	Administrators' Round Table	Virtual
															7/14-16/21	*	Callan	Introduction to Investments	San Francisco, CA
															8/23-9/1/21	*	CalAPRS	Management Academy	Virtual
															9/14/21	*	CalAPRS	Accountants' Round Table	Virtual
													✪		9/17/21	*	CalAPRS	Benefits Round Table	Virtual
														✪	9/17/21	*	CalAPRS	Attorneys' Round Table	Virtual
												✪			9/22-24/21	*	CalAPRS	Administrators' Institute	Virtual
															9/22-24/21	*	CII	Fall Conference	Chicago, IL
															9/28-10/1/21	*	CalAPRS	Principles of Pension Governance for Trustees	Malibu, CA
															10/8/21	*	CalAPRS	Disability Retirement Administration	Virtual
															10/22/21	*	CalAPRS	Information Technology Round Table	Virtual
															10/26/21	*	CalAPRS	Administrative Assistants' Round Table	Virtual
															10/29/21	*	CalAPRS	Trustees' Round Table	Virtual
															11/3-5/21	*	CalAPRS	Intermediate Course in Retirement Plan Administration	Virtual
															11/9-12/21	*	SACRS	Fall Conference	Hollywood, CA
															12/1-3/21	*	CalAPRS	Advanced Course in Retirement Plan Administration	Virtual

E.1

*Pre-approved events: CalAPRS; Callan; CII; Nossaman LLP; NASRA; SACRS – ** Board-approved events – New event or attendee

CALLAN	Callan College http://www.callan.com/education/college	NASRA	National Association of State Retirement Administrators
	Callan investment Institute http://www.callan.com/education/cii/conferences.asp	SACRS	State Association of County Retirement Systems http://www.sacrs.org

CONSENT CALENDAR
MCERA BOARD MEETING, WEDNESDAY, January 13, 2021

December 2020

RETURN OF CONTRIBUTIONS			
Jessica Farley	Full Refund - Termination	$	12,561.35
Rita Hattrup	Full Refund - Termination	$	1,183.99
Kathryn Harrison Solana	Full Refund - Termination	$	39,567.94
Daphne O. Jones	Full Refund - Termination	$	8,934.94
Paul Marra	Full Refund - Termination	$	4,646.81
Edgar Mendez	Full Refund - Termination	$	11,052.27
Guadalupe Muniz	Full Refund - Termination	$	14,949.45
Laura Sciacca	Full Refund - Termination	$	44,557.57

BUYBACKS		
David Chellson	$	1,089.26
Kasey Anne Clarke Rio	$	3,636.47
Adam Craig	$	6,969.56
Lori Frugoli	$	19,389.53
Diana Giorgi	$	4,976.42
Ramona Indrebo	$	9,014.56
Gretchen Van Voorhis	$	718.50

NEW RETIREES	
Pamela Ahuncain	County of Marin - DRO
Michael Gadoua	County of Marin - Department of Finance
Robert LaCroix	Novato Fire
Rebecca Ng	County of Marin - Community Development
Beth Tabakin	County of Marin - Health & Human Services
Rudolph Yamanoha	County of Marin - DRO

DECEASED RETIREES	
Susan Brown	County of Marin - Human Resources
George Howenstein	County of Marin - Sheriff/Coroner
Priscilla McGee	County of Marin - Probation
Joel Mitchell	County of Marin - Probation
Nancy Siegler	County of Marin - Sheriff/Coroner
Peter Turner	County of Marin - Health & Human Services