

Notice of Public Meeting

The Board of Retirement

of the San Mateo County Employees' Retirement Association will meet on

Tuesday, September 24, 2013, at 1:00 p.m.

PUBLIC SESSION – The Board will meet in Public Session at 1:00 p.m.

1. Call to Order, Roll Call and Miscellaneous Business

- 1.1 Administration of Oath of Office to Reappointed Trustees
- 1.2 Announcement of the Appointment of the Ad Hoc Committee to Review the Medical Advisor

2. Oral Communications

- 2.1 Oral Communications From the Board
- 2.2 Oral Communications From the Public
- 3. Approval of the Minutes

4. Approval of the Consent Agenda *

- 4.1 Disability Retirements
 - a. Caroline Banal
 - b. Carla Lawrence
 - c. Michael Shanks
 - d. Glen Simmons
 - 4.2 Service Retirements
 - 4.3 Continuances

- 4.4 Deferred Retirements
- 4.5 Member Account Refunds
- 4.6 Member Account Rollovers
- 4.7 Trustee Training Request
- 4.8 Trustee Request to Exceed Education Allocation

5. Benefit & Actuarial Services

- 5.1 Consideration of Agenda Items, if any, Removed From the Consent Agenda
- 5.2 Presentation of the June 30, 2013, Actuarial Valuation Report by Milliman, Inc.
- 5.3 Acceptance of the Fiscal Year 2014-2015 Employer and Member Contribution Rates and Recommendations
- 5.4 Annual Review of SamCERA's Actuarial Services Firm, Milliman, Inc.

6. Investment Services

- 6.1 Preliminary Monthly Portfolio Performance Report for the Period Ending August 31, 2013
- 6.2 Approval of New Asset Class Target Portfolio: Follow-up
- 6.3 Report on Opportunistic Credit and TIPS Manager Annual Reviews
- 6.4 Discussion and Approval Regarding Frequency of Trading Cost Analysis Due Diligence
- 6.5 Discussion and Approval Regarding Proposed Changes to Western Asset Investment Guidelines

7. Board & Management Support Services

- 7.1 Presentation of Monthly Financial Report
- 7.2 Report on Status of 2012-13 Financial Audit
- 7.3 Update on Technology Modernization Project Status
- 7.4 Approval of General Plan for Succession Planning for the Chief Executive Officer Position
- 7.5 Approval of SACRS Voting Delegate and Alternates for the SACRS Fall 2013 Business Meeting

[Continued on page 2 – Posted 09/18/2013]

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7.6 Approval to Cancel the November Meeting and Reschedule the October and December Meetings of the Board of Retirement

8. Management Reports

- 8.1 Chief Executive Officer's Report
- 8.2 Assistant Executive Officer's Report
- 8.3 Chief Investment Officer's Report
- 8.4 Chief Legal Counsel's Report

CLOSED SESSION - The Board may meet in closed session prior to adjournment

C1 Consideration of Disability Items, if any, Removed from the Consent Agenda

9. Report on Actions Taken in Closed Session

10. Adjournment in Memory of the Following Deceased Members:

Stewart, Eileen
Lewis, Burner
Pitts, Frances
Cavallero, Miriam
Kenny, Laverne
Judge, Catherine
Anderson, William
Wethington, Jerome
O'Keefe, John

David Bailey, Chief Executive Officer

May 18, 2013 August 9, 2013 August 7,2013 August 19, 013 August 19, 013 August 20, 013 August 22, 013 August 31, 013 August 31, 013 Human Services Agency Ben. of Willie Lewis Sheriff's Office Ben. of Raymond Cavallero Courts Libraries Health Services Hospital Probation

Posted: September 18, 2013

(* All items on the Consent Agenda are approved by one roll call motion unless a request is made by a Board member that an item be withdrawn or transferred to the Regular Agenda. Any item on the Regular Agenda may be transferred to the Consent Agenda. Any 4.1 items removed from the Consent Agenda will be taken up under Closed Session; all other items removed from the Consent Agenda will be taken up under 5.1.)

THE BOARD MEETS AT 100 MARINE PARKWAY, SUITE 160,

WHICH IS LOCATED ON THE SE CORNER OF TWIN DOLPHIN & MARINE PARKWAY IN REDWOOD CITY. Detailed directions are available on the "Contact Us" page of the website <u>www.samcera.org</u> *Free Parking is available in all lots in the vicinity of the building.*

A copy of the Board of Retirement's open session agenda packet is available for review at the SamCERA offices and on our website unless the writings are privileged or otherwise exempt from disclosure under the provisions of the California Public Records Act. Office hours are Monday through Thursday 7 a.m. – 6 p.m.

IN COMPLIANCE WITH THE CALIFORNIA GOVERNMENT CODE AND THE AMERICANS WITH DISABILITIES ACT:

SamCERA's facilities and board and committee meetings are accessible to individuals with disabilities. Contact SamCERA at (650) 599-1234 at least three business days prior to the meeting if (1) you need special assistance or a disability-related modification or accommodation, including auxiliary aids or services, in order to participate in this meeting; or (2) you have a disability and wish to receive the agenda, meeting notice, agenda packet or other writings that may be distributed at the meeting in an alternative format. Notification in advance of the meeting will enable SamCERA to make reasonable arrangements to ensure full accessibility to this meeting and the materials related to it.

September 24, 2013

Agenda Item 1.1

TO:

Board of Retirement

FROM: Scott Hood, Assistan Executive Officer

SUBJECT: Administration of the Oath of Office to Reappointed Trustees

In this agenda item, Sgt. Christina Corpus of the San Mateo Sheriff's Office, will administer the Trustee Oath of Office to:

- Fifth Member, Ben Bowler, reappointed by the Board of Supervisors;
- Ninth Member, Michal Settles, reappointed by the Board of Supervisors;

At its meeting on September 10, 2013, the Board of Supervisors approved the reappointment of Ms. Settles and Mr. Bowler. Their terms will expire on June 30, 2016.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION Board of Retirement

September 24, 2013

Agenda Item 1.2

TO:	Board	of R	etireme	ent

FROM: David Bailey, Chief Executive Officer

SUBJECT: Announcement of the Appointment of Ad Hoc Committee to Review the Medical Advisor

Staff Recommendation

That the Board Chair announce her appointment of the ad hoc committee that will conduct a review of the performance of the Board's Medical Advisor.

Background

Government Code § 31530 provides that the County Health Officer shall advise the Board on medical matters and, if requested by the Board, shall attend its meetings. As the Board is aware, Dr. Scott Morrow, the County's Health Officer, has delegated these duties to Dr. Henry Brodkin, a part-time employee of the Health Department.

Dr. Brodkin, as the Medical Advisor to the Board, reviews the medical records of disability applicants and makes recommendations to the Board regarding applicants' medical status, their ability to perform the functions of their jobs, and the causes of their medical condition. His duties are described in a Board document, "The Expectations of the Medical Advisor." Staff recommends the appointed Ad Hoc Committee discuss this document with Dr. Brodkin and report back to the full Board on the outcome.

The Board Chair is authorized by the Regulations of the Board of Retirement to appoint all committees.

September 24, 2013

August 27, 2013 – Board Agenda

PUBLIC SESSION – The Board will meet in Public Session at 1:00 p.m.

1. Call to Order, Roll Call and Miscellaneous Business

1.1 Announcement of the Appointment of Board Committees

2. Oral Communications

- 2.1 Oral Communications From the Board
- 2.2 Oral Communications From the Public

3. Approval of the Minutes

4. Approval of the Consent Agenda

Disability Retirements

- a. Manjula Chandr
- b. Ida daRoza
- c. Daisy Lilles
- d. Dennis Mayer
- e. Carlos Mena
- f. Rose Pichay
- g. Jennifer Slegers

- 4.2 Service Retirements
- 4.3 Continuances
- 4.4 Deferred Retirements
- 4.5 Member Account Refunds
- 4.6 Member Account Rollovers
- 4.7 Trustee Conference Request
- 4.8 Acceptance of Semi-Annual Compliance Certification Statements for period ending June 30, 2013

5. Benefit & Actuarial Services

5.1 Consideration of Agenda Items, if any, Removed From the Consent Agenda

6. Investment Services (The Investment Committee will meet at 10:00 a.m. on August 27, 2013)

- 6.1 Preliminary Monthly Portfolio Performance Report for the Period Ending July, 31, 2013
- 6.2 Quarterly Investment Performance Report for the Period Ending June 30, 2013
- 6.3 Report on Core Bond Manager Annual Reviews
- 6.4 Discussion of Asset-Liability Simulation Results and Approval of New Asset Class Target Portfolio
- 6.5 Annual Review of SamCERA's Security Lending Program
- 6.6 Discussion and Approval to Transfer Portion of Mondrian Assets
- 6.7 Report on Trading Cost Analysis for Equity and Fixed Income Managers

7. Board & Management Support Services

- 7.1 Presentation of Monthly Financial Report
- 7.2 Report on Status of 2012-13 Financial Audit
- 7.3 Report on County's Plan for Supplemental Contributions
- 7.4 Approval of SamCERA Logo Design

8. Management Reports

- 8.1 Chief Executive Officer's Report
- 8.2 Assistant Executive Officer's Report
- 8.3 Chief Investment Officer's Report
- 8.4 Chief Legal Counsel's Report

CLOSED SESSION – The Board may meet in closed session prior to adjournment

C1 Consideration of Disability Items, if any, Removed from the Consent Agenda

Agenda Item 3.0

9. Report on Actions Taken in Closed Session

10. Adjournment in Memory of the Following Deceased Members:

Wightman, Anneliese	July 1, 2013	General Services
Eisenson, Eileen	July 3, 2013	Social Services
Ryner, Frances	July 3, 2013	General Services
Sans, Robert	July 11, 2013	Public Works
Coulter, Wilna	July 11, 2013	Probation
Oro-Bedrosian, Dolores	July 15, 2013	Probation
Knutson, Gordon	July 17, 2013	Ben. of Beatrice Knutson
Murray, Minnie	July 18, 2013	Health Department
Deferville, Rose	July 18, 2013	Public Health
Lord, Virginia	July 20, 2013	Crystal Springs
Roth, Julius	July 24, 2013	Ben. of Barbara Roth
Caughey, Patricia	July 28, 2013	Mental Health
Schofield, Richard	July 30, 2013	Sheriff's Department

August 27, 2013 – Regular Board Meeting Minutes

1308.1 Call to Order, Roll Call and Miscellaneous Business

Call to Order: Ms. Natalie Kwan Lloyd, Chair, called the Regular Meeting of the Board of Retirement to order at 1:02 p.m.

Roll Call:

Present: Sandie Arnott, Lauryn Agnew, Ben Bowler, Albert David, Paul Hackleman, Natalie Kwan Lloyd, Christopher Miller (sitting in for David Spinello), Michal Settles and Eric Tashman.
 Excused: David Spinello
 Alternates: Alma Salas
 Staff: David Bailey, Michael Coultrip, Brenda Carlson, Gladys Smith, Tariq Ali, Mabel Wong, Lili Dames and Kristina Perez.

- 1308.1.1 Announcement of the Appointment of Board Committees: Ms. Kwan Lloyd announced that the Board's committees would retain the same members as the previous year. The Audit Committee includes Natalie Kwan Lloyd, Paul Hackleman, Sandie Arnott, with Eric Tashman serving as the Chair. The Investment Committee includes Ben Bowler, Lauryn Agnew, Michal Settles and with Al David as Chair. The Succession Planning Committee members are Al David, Ben Bowler, Michal Settles, and Paul Hackleman will serve as Chair. After the Board of Supervisors approves the re-appointment of two Board members, other committees may be announced.
- 1308.2.1 **Oral Communications From the Board**: Ms. Settles reported on the interview meeting she had with County Supervisors Pine and Horsley regarding her re-appointment. Ms. Settles summarized some of the topics and comments from that discussion. Mr. Bowler also reported on his re-appointment interview with the Supervisors.
- 1308.2.2 **Oral Communications From the Public:** Ms. Smith introduced JulieAnne Nagal who was recently hired as a Support Specialist at SamCERA.

- 1308.3.0 Approval of the Board Meeting Minutes: Ms. Kwan Lloyd asked if there were any changes or corrections to the minutes, and none were noted.
 Action: Ms. Arnott moved to approve the regular and special meeting minutes from the Board meetings held on July 23, 2013. The motion was seconded by Mr. David and carried unanimously.
- 1308.4.0 Approval of the Consent Agenda: Ms. Kwan Lloyd asked if there were any items to be removed from the Consent Agenda, and no items were removed.
 Action: Mr. Hackleman moved to approve the Consent Agenda, and the motion was seconded by Mr. David and carried unanimously.

1308.4.1

Consent Agenda

- Disability Retirements
 - a. The Board found that **Manjula Chandr** is (1) permanently incapacitated for the performance of her usual and customary duties as a Medical Services Assistant, (2) found that her disability was a result of an injury arising out of and in the course of her employment and (3) granted her application for a service-connected disability retirement.
 - b. The Board found that **Ida daRoza** is (1) permanently incapacitated for the performance of her usual and customary duties as a Librarian, (2) found that her disability was not a result of an injury arising out of and in the course of her employment and (3) granted her application for a non-service-connected disability retirement.
 - c. The Board found that **Daisy Lilles** is (1) permanently incapacitated for the performance of her usual and customary duties as a Medical Office Assistant, (2) found that her disability was a result of an injury arising out of and in the course of her employment, (3) granted her application for a service-connected disability retirement.
 - d. The Board found that **Dennis Mayer** is (1) permanently incapacitated for the performance of his usual and customary duties as a Deputy Sheriff, (2) found that his disability was not a result of an injury arising out of and in the course of his employment, (3) denied his application for a service-connected disability retirement and (4) grant him a non-service-connected disability retirement.
 - e. The Board found that **Carlos Mena** is (1) permanently incapacitated for the performance of his duties as a Psychiatric Nurse, (2) found that his disability was a result of an injury arising out of and in the course of his employment and (3) granted his application for a service-connected disability retirement.
 - f. The Board found that **Rose Pichay** is (1) permanently incapacitated for the performance of her duties as Medical Surgical Staff Nurse, (2) found that her disability was a result of an injury arising out of and in the course of her employment and (3) granted her application for a service-connected disability retirement.
 - g. The Board found that **Jennifer Slegers** is (1) permanently incapacitated for the performance of her duties as a Deputy Sheriff, (2) found that her disability was a result of an injury arising out of and in the course of her employment and (3) granted her application for a service-connected disability retirement.

Service Retirements

The Board ratified the actions as listed below for the following members regarding service retirements:

Member Name	Effective Retirement Date	Department
Bana, Nancy	June 14, 2013	Courts
Chin, Yet	June 19, 2013	Assessor's Office

Service Retirements

Drake, Linda	June 29, 2013
Driver, Tedd	June 24, 2013
Gonzales, Kathleen	June 29, 2013
Guerrero, Estela	June 18, 2013
Lewis, Ouida	June 22, 2013
Makhlouf, Aleanor	June 29, 2013
Ryan, Dennis	June 21, 2013

Mental Health Department Def'd. from ISD Probation Def'd. from Sheriff's Dept. Courts Aging and Adult Services Def'd. from Sheriff's Dept.

1308.4.3 Continuances

The Board ratified the actions as listed below for the following members regarding continuances:

Survivor's Name	Beneficiary of
Breen, Mary	Breen, Robert
Sprague, Yulanda	Sprague, Dewitt

1308.4.4 Deferred Retirements

The Board ratified the actions as listed below for the following members regarding deferred retirements:

Member Name	Retirement Plan Type
Barnett, Sanford	G4 Vested w/incoming reciprocity, Auto Defer
Elmore Reeder, Chantilli L.	G4 Vested
Schukle, Amanda	G4 Vested w/incoming reciprocity, Auto Defer
Hagen, Michael	S4 Vested w/incoming reciprocity, Auto Defer
Cabrera, Leticia	G4 Vested w/incoming reciprocity, Auto Defer
Carlos, Arlene	G4 Vested – Auto Defer
Chandr, Manjula	G4 Vested – Auto Defer
Langi, Ana	G4 Vested – Auto Defer
Nar, Asher	G4 Vested – Auto Defer
Chavez, Himer	G4 Vested – Auto Defer
Johnson, Alonzo	G4 Vested – Auto Defer
Villamor, Sixta	G4 Vested – Auto Defer
Aficial, Teresita	G4 Vested – Auto Defer
Calvert, Elsa	G4 Vested – Auto Defer
Zamora_Cortez,	G4 Vested – Auto Defer
MaryKeyes, Marcia	G4 Vested – Auto Defer
Catambay, Milagros	G4 Vested – Auto Defer
Pagarigan, Rey	G4 Vested – Auto Defer
Ebora, Julie	G4 Vested – Auto Defer
Fernandez, Manolo	G4 Vested – Auto Defer
Delgado, Cilda	G4 Vested – Auto Defer
Jackson, Katherine	G4 Vested – Auto Defer
Guerrero, Isabel	3 Vested – Auto Defer
Zaru, Donna	G4 Vested
Herico, Thannette	G4 Vested
Ayala, Dolores	G4 Vested
Borja, Hugo	G4 Vested
Matthews, Sherry	G4 Vested

Deferred Retirements (con't)

Ramseur, Shari	G4 Vested
Romero, Rowena	G4 Vested
Tom, Christopher	G5 Non Vested - Reciprocity

1308.4.5 Member Account Refunds

The Board ratified the actions as listed below for the following members regarding refunds:

Member Name	Retirement Plan Type
Hazard, Kareem	G7 Non-vested
Avila, Carmen	G4 Non-vested
Babiera, Gloria	G4 Non-vested
Morales, Salvador	G4 Non-vested
Wright, Duperly	G4 Vested
Pulido, Ericka	G4 Vested
Nguyen, Angela	G5 Non-vested

1308.4.6 Member Account Rollovers

The Board ratified the actions as listed below for the following members regarding rollovers:

Member Name	Retirement Plan Type
Davis, Elizabeth	G4 Non-vested
Cerda, Felix	G4 Vested
Librian, Tiffany	G4 Non-vested

1308.5.1 Consideration of Agenda Items, if any, Removed From the Consent Agenda: None

1308.6.0 Investment Services

- 1308.6.1 **Preliminary Monthly Portfolio Performance Report:** Mr. Coultrip presented this item and reported that the fund's net preliminary return for July was +3.3%, while the preliminary trailing twelve month return was +15.3% net. This item was for discussion only and no action was taken.
- 1308.6.2 **Quarterly Investment Performance Report for the Period Ending June 30, 2013:** Mr. Thomas reviewed the quarterly report with the Board, and reviewed the sources of outperformance and underperformance for the 2nd quarter and for the fiscal year ending 6/30/13. This agenda item was informational only and no action was taken.
- 1308.6.3 **Report on Core Bond Manager Annual Reviews:** Ms. Dames reported that staff met with SamCERA's core bond managers on August 8, 2013 and there were no significant concerns identified with either Western Asset or Pyramis Global. She stated that a personnel change was addressed with one manager. This item was informational only and no action was taken.
- 1308.6.4 **Discussion of Asset-Liability Simulation Results and Approval of New Asset Class Target Portfolio:** Mr. Thomas presented the report, and reviewed with the full Board what the Investment Committee had discussed. The Investment Committee recommended that this item be brought back for consideration at the September Board meeting to allow SIS to provide more detailed justification for the proposed changes to the asset allocation target portfolio. The item was continued and no action was taken.

- 1308.6.5 **Annual Review of SamCERA's Security Lending Program:** Ms. Dames reported that the securities lending program had earned \$5.9M since it started, and earned \$620,000 this fiscal year. This item was informational only and no action was taken.
- 1308.6.6 **Discussion and Approval to Transfer Portion of Mondrian Assets:** Mr. David reported that the Investment Committee recommended Board approval to change the vehicle used to gain exposure to emerging markets in our Mondrian account from the Delaware Pooled Trust Emerging Markets Equity Portfolio to the Mondrian Emerging Markets Equity Fund, LP. In an effort to simplify the relationship with the manager and provide savings for SamCERA. It was noted transaction costs would be refunded over a two year period by Mondrian for this transition.

Action: Mr. David moved to approve the transfer of assets as discussed. Ms. Agnew seconded the motion and it carried unanimously.

1308.6.7 **Report on Trading Cost Analysis for Equity and Fixed Income Managers:** Mr. Vinod Pakianathan gave a presentation to the Board highlighting Zeno Consulting's history and reviewed the way transaction costs are calculated. Board members discussed with Mr. Pakianathan scenarios where transaction costs may be higher as a by-product of a manager's strategy, and how that is considered in the analysis. Mr. Pakianathan went over specific results of the analysis prepared for SamCERA. This item was for discussion only and no action was taken.

1308.7.0 Board & Management Support Services

- 1308.7.1 **Presentation of Monthly Financial Report:** Ms. Wong presented the monthly financial report to the Board. This item was informational only and no action was taken.
- 1308.7.2 **Report on Status of 2012-13 Financial Audit:** Ms. Wong reported the Brown Armstrong audit team led by Brooke Baird and Ashley Casey were here in June for interim work and they are back this week reviewing our financials and investment information. She reported improved communication between staff and the firm, as a result of working directly with Mr. Andy Paulden. This item was informational only and no action was taken.
- 1308.7.3 **Report on County's Plan for Supplemental Contributions:** Mr. Bailey discussed the County's plan to provide supplemental contributions to the SamCERA fund, as received preliminary approval by the County Board of Supervisors on August 6. He explained the County's intentions for these funds, and how staff is preparing an MOU to determine the proper treatment of supplemental funds. Mr. Bailey noted the exceptional action taken by the Board of Supervisors, and expressed gratitude to the County staff, Supervisors, County Controller, the lead actuary and SamCERA staff members who facilitated this discussion and worked on the details. This item was for discussion only and no action was taken.
- 1308.7.4 Approval of SamCERA Logo Design: Mr. Bailey presented the logo design with a lighthouse added to the SamCERA name. This will be used on letter-head and other stationary.
 Action: Mr. David moved to approve the new logo. The motion was seconded by Ms. Arnott, and carried unanimously.
- 1308.8.1 **Chief Executive Officer's Report:** Mr. Bailey reported that SamCERA had again received the GASB Award for Excellence in Financial Reporting, for the CAFR and PAFR.
- 1308.8.2 Assistant Executive Officer's Report: None.

- 1308.8.3 **Chief Investment Officer's Report:** Mr. Coultrip reported that the Clifton overlay management went live on July 31, and the rebalancing feature will be implemented after the asset allocation study and determination.
- 1308.8.4 **Chief Legal Counsel's Report:** Ms. Carlson gave an update of legislative actions related to PEPRA and the Public Records Act.
- 1308.9 Report on Actions Taken in Closed Session: None
- 1308.10 Adjournment: With no further business, Ms. Kwan Lloyd adjourned the meeting at 3:42 p.m., in memory of the following deceased members:

Wightman, Anneliese	July 1, 2013	General Services
Eisenson, Eileen	July 3, 2013	Social Services
Ryner, Frances	July 3, 2013	General Services
Sans, Robert	July 11, 2013	Public Works
Coulter, Wilna	July 11, 2013	Probation
Oro-Bedrosian, Dolores	July 15, 2013	Probation
Knutson, Gordon	July 17, 2013	Ben. of Beatrice Knutson
Murray, Minnie	July 18, 2013	Health Department
Deferville, Rose	July 18, 2013	Public Health
Lord, Virginia	July 20, 2013	Crystal Springs
Roth, Julius	July 24, 2013	Ben. of Barbara Roth
Caughey, Patricia	July 28, 2013	Mental Health
Schofield, Richard	July 30, 2013	Sheriff's Department

David Bailey Chief Executive Officer Kristina Perez Retirement Executive Secretary

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION Board of Retirement

September 24, 2013

Agenda Items 4.1-4.6

To: Board of Retirement

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From: Gladys Smith, Retirement Benefits Manager

Subject: Approval of Consent Agenda Items 4.1 – 4.6

4.1 Disability Retirements

- a) The Board find that Caroline Banal is (1) permanently incapacitated for the performance of her usual and customary duties as a Medical Services Assistant II, (2) find that her disability was a result of an injury arising out of and in the course of her employment and (3) grant her application for a service-connected disability retirement.
- b) The Board find that Carla Lawrence is (1) permanently incapacitated for the performance of her usual and customary duties as a Program Counselor II, (2) find that her disability was not a result of an injury/illness arising out of and in the course of her employment and (3) grant her application for a non-service-connected disability retirement.
- c) The Board find that Michael Shanks is (1) permanently incapacitated for the performance of his usual and customary duties as a Correctional Officer, (2) find that his disability was a result of an injury arising out of and in the course of his employment, (3) grant his application for a service-connected disability retirement.
- **d**) The Board find that **Glen Simmons** is (1) permanently incapacitated for the performance of his usual and customary duties as a Supervising Cook, (2) find that his disability was a result of an injury arising out of and in the course of his employment, (3) grant his application for a service-connected disability retirement.

The Board ratifies the actions as listed below for the following members regarding

Member Name	Effective Retirement Date	Department
Alvarado, Dolores	July 13, 2013	Hospital
Alvarez, Juan	July 31, 2013	Courts
Cachuela, Honorata	July 2, 2013	Def'd. fromHospital
Cereno, Romulo	August 1, 2013	Human Services
Contreras, Juan	July 25, 2013	Hospital
Galestian, Deanna	August 1, 2013	Mental Health
Garbez, Elaine	August 1, 2013	Public Works
Guyden, Paula	June 22, 2013	Human Services

4.2 Service Retirements

service retirements.

Howard, Deborah	July 29, 2013	Correctional Health
,		
Kauk, Elizabeth	July 27, 2013	Public Health
Mojas, Michelle	July 31, 2013	Def'd. from Courts
Roberts, Diane	July 7, 2013	Hospital
Ruiz, Raymond	July 6, 2013	Def'd. from Hospital
Schumaker, Nadine	May 31, 2013	QDRO
Smith, William	August 1, 2013	County Counsel
Stephanik, Suzanne	July 9, 2013	Def'd. from Mental Health
Tan, Lourdes	July 15, 2013	Children's Protective Services
Wong, Arthur G.	June 29, 2013	Def'd. from Public Works
Yee, Eric	July 24, 2013	Def'd. from ISD

4.3 Continuances

The Board ratifies the actions as listed below for the following members regarding continuances:

Survivor's Name	Beneficiary of:
Flahavan, Jennifer	Ben. of John Flahavan

4.4 Deferred Retirements

The Board ratifies the actions as listed below for the following members regarding deferred retirements:

Member Name	Retirement Plan Type
Velasquez, Angelina	G4 Vested – Auto Defer
Sarraga, Joy	G4 Vested – Auto Defer
Anaya-Marmolejo, Roberto	G4 Vested – Auto Defer
Alejandrino, Abel	G4 Vested - Reciprocity
Van Meter, Juliana	G4 Vested - Reciprocity
Sheridan, Kyle	G4 Vested - Reciprocity
Ow, Jennifer	G4 Vested - Reciprocity
Mayfield, Zulaika	G4 Vested - Non-Reciprocity

Irwin, Rebecca	G4 Vested – Non-Reciprocity
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4.5 Member Account Refunds

The Board ratifies the actions as listed below for the following members regarding refunds:

Member Name	Retirement Plan Type
Diesh, Fanny	G4 Non-vested
Medios, Lourdes	G4 Vested

4.6 Member Account Rollovers

The Board ratifies the actions as listed below for the following members regarding rollovers:

Member Name	Retirement Plan Type
Crockett, Jack	G4 Vested
Cathay, Richard	G4 Non-vested

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION Board of Retirement

September 24, 2013

Agenda Item 4.7

Ad SS

TO: Board of Retirement

FROM: David Bailey, Chief Executive Officer

SUBJECT: Trustee Request for Conference Approval

Staff Recommendation

Staff recommends approval of attendance at the below-mentioned educational event.

Background

The *SamCERA* Education Policy allows trustees to expend certain levels of system funds for continuing education sponsored by organizations approved in the policy. The policy also states that, "the board may approve participation in additional educational activities..."

Trustee Lauryn Agnew, would like to attend the 2013 California Economic Summit, "Thriving Regions Lead to a Thriving State", sponsored by California Forward and the California Stewardship Network, scheduled for November 7-8, 2013 in Los Angeles.

The cost is within this trustee's annual educational and training budget. Information taken from the conference website its attached.

Taken from www.caeconomy.org/summit#intro

The first-ever California Economic Summit, held May 11, 2012 in Santa Clara, Calif., was an unprecedented gathering of leaders focused on working together to put California's economy on a sustainable path for growth.

Capping the work of fourteen regional forums and five Action Teams, Summit participants concluded the twin pillars of immediate job creation and long-term competitiveness for California are:

- Investing in people, infrastructure and innovation in creative ways to prepare our state and our regions to compete in the 21st century global economy
- Streamlining our complex regulatory processes to reduce cost of doing business while maintaining our environmental standards.

2013 California Economic Summit

Advancing the Triple Bottom Line

The Second Annual California Economic Summit will take place in Los Angeles on November 7-8, 2013.

Continuing the collaboration of <u>California Forward</u> and the <u>California Stewardship Network</u>, the 2013 California Economic Summit will build through five stages that will culminate in policy initiatives to advance the state's triple bottom line: a prosperous economy, a sustainable environment and community equity.

Read the charters for the 2013 Action Teams:

- Infrastructure Action Team
- Workforce Action Team
- <u>Regulations Action Team</u>
- Advancing Manufacturing Action Team
- Working Landscapes Action Team
- <u>Capital Action Team</u>
- Housing Action Team

This grassroots, collaborative process began in January 2013 and leads up to the Second Annual Summit in November.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION Board of Retirement

September 24, 2013

Agenda Item 4.8

TO: Board of Retirement

FROM: David Bailey, Chief Executive Officer

Ad B'S

SUBJECT: Trustee Request to Exceed Educational Allocation

Staff Recommendation

Staff recommends the Board approve the attendance of Natalie Kwan Lloyd, SamCERA Trustee, at the IFEBP Trustees Masters' Program (TMP) and Annual Conference.

Summary

Approval of this recommendation will allow Ms. Kwan Lloyd to attend the IFEBP Trustees Masters' Program and Annual Conference, scheduled for October 18-23, 2013 in Las Vegas.

Board approval of an increase in Ms. Kwan Lloyd's educational allocation is needed to allow her attendance.

Background

Ms. Kwan Lloyd attended "Advanced Investments Management", an IFEBP Wharton class, held in September 2013, which expended a majority of her annual educational allowance for 2013-14.

Although funds remain, Ms. Kwan Lloyd's current educational allocation is not sufficient to cover the cost of IFEBP Trustee Masters' Program and Conference. IFEBP is an approved provider for trustee education and training as per the SamCERA Education Policy.

Regarding the annual allocation for trustee education, the SamCERA Education Policy states that, "Trustees who wish to exceed these allocations may request board approval for their participation in additional educational activities when placed on the agenda of a public meeting of the Board."

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION Board of Retirement

September 24, 2013

Agenda Item 5.2

FROM: David Bailey, Chief Executive Officer

SUBJECT: Presentation of the June 30, 2013, Actuarial Valuation Report by Milliman, Inc.

Staff Recommendation

This is an information-only item. Nick Collier of Milliman, Inc. will present the results of the June 30, 2013, Actuarial Valuation. This item will be followed by item 5.3 in which the Board will be asked to approve the employer and member contribution rates and recommendations made by Milliman in the valuation report.

Summary

The table below shows some of the key results of the 2013 valuation as compared to the 2012 valuation.

	6/30/2013 Valuation	6/30/2012 Valuation
Average Employer Contribution Rate	37.47%	35.49%
Average Member Contribution Rate	10.55%	10.52%
Funded Ratio	73.3%	72.0%
Unfunded Actuarial Accrued Liability	\$954 million	\$962 million

The higher average employer contribution rate is partly due to the recognition of deferred losses from the market crisis of 2008-09. The good news is that this will be the last valuation year in which losses from that time period must be recognized. The actuarial projection is that following this year, SamCERA will have net actuarial gains (rather than losses) to recognize in the valuation and rate setting processes.

The slightly higher member contribution rate is mainly due to the addition of negotiated COLA cost sharing payments for some members.

The improvement in the funded ratio is mainly due to contributions in excess of the value of benefits earned.

The decrease in the Unfunded Actuarial Accrued Liability can be attributed to salary increases and CPI increases that were less than expected.

Detailed information is included in the attached full valuation report from Milliman, Inc.

Actuarial Valuation June 30, 2013

By

Nick J. Collier

Associate, Society of Actuaries Enrolled Actuary Member, American Academy of Actuaries

and

Craig J. Glyde

Associate, Society of Actuaries Enrolled Actuary Member, American Academy of Actuaries





1301 Fifth Avenue Suite 3800 Seattle, WA 98101-2605 USA

Tel +1 206 624 7940 Fax +1 206 623 3485

milliman.com

September 18, 2013

Board of Retirement San Mateo County Employees' Retirement Association 100 Marine Parkway, Suite 125 Redwood Shores, CA 94065-5208

Dear Members of the Board:

As requested, we have completed an actuarial valuation for the San Mateo County Employees' Retirement Association (SamCERA). The purpose of the valuation is to recommend the employer and member contribution rates for the fiscal year beginning July 1, 2014.

Actuarial Certification – Per SamCERA Consulting Contract

This actuarial valuation has been completed in accordance with generally accepted actuarial principles and practices, including Actuarial Standards of Practice (ASOPs) Nos. 4, 27 and 35. In particular, it reflects the actuary's responsibility under Section 5.8 of ASOP No. 4 for assessing the implications of overall results, in terms of short- and long-range benefit security and expected cost progression.

To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate. Further, in our best professional judgment, the assumptions and methodologies as adopted by the Board of Retirement, individually and in combination, are reasonably related to the experience of and the expectations for SamCERA, and will not, in and of themselves, expose the retirement system to "unsound financial risk." In this regard, we consider "unsound financial risk" to mean the following:

- A substantial likelihood that future required contribution rates as a percentage of payroll
 will be dramatically higher than the rates shown in this report, given the uncertainties of
 actuarial projections and assuming the full payment of all recommended contributions; or
- A substantial likelihood that SamCERA's assets will be insufficient to pay benefit payments when due, given the uncertainties of actuarial projections and assuming the full payment of all recommended contributions.

In preparing this report, we have complied with all quality assurance procedures detailed on page 14 of our November 28, 2005 proposal titled "Response for Request for Actuarial Services."

Actuarial Certification – Milliman

The major findings of the valuation are contained in this report. This report reflects the benefit provisions and contribution rates in effect as of June 30, 2013. In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by SamCERA's

This work product was prepared solely for SamCERA for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.



Board of Retirement September 18, 2013 Page 2

staff. This information includes, but is not limited to, statutory provisions, employee data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any data of this information is inaccurate or incomplete, our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for SamCERA have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of SamCERA and reasonable expectations) and which, in combination, offer a reasonable estimate of anticipated experience affecting SamCERA. We will next be reviewing the assumptions in 2014 as part of our triennial investigation.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements. The Board of Retirement has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in Appendix A.

Actuarial computations presented in this report are for purposes of determining the recommended funding amounts for SamCERA. Actuarial computations under GASB Statement No. 25 are for purposes of fulfilling financial accounting requirements. The computations prepared for this purpose may differ as disclosed in our report. The calculations in this report have been made on a basis consistent with our understanding of SamCERA's current funding requirements and of GASB Statement No. 25. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Milliman's work is prepared solely for the internal business use of SamCERA. To the extent that Milliman's work is not subject to disclosure under applicable public records laws, Milliman's work may not be provided to third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work product. Milliman's consent to release its work product to any third party may be conditioned on the third party signing a Release, subject to the following exceptions:

- (a) The System may provide a copy of Milliman's work, in its entirety, to the System's professional service advisors who are subject to a duty of confidentiality and who agree to not use Milliman's work for any purpose other than to benefit the System.
- (b) The System may provide a copy of Milliman's work, in its entirety, to other governmental entities, as required by law.

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Board of Retirement September 18, 2013 Page 3

No third party recipient of Milliman's work product should rely upon Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

We would like to express our appreciation to Mr. David Bailey, Chief Executive Officer of SamCERA, and to members of his staff, who gave substantial assistance in supplying the data on which this report is based.

We respectfully submit the following report, and we look forward to discussing it with you.

Sincerely,

Vich Celi

Nick J. Collier, ASA, EA, MAAA Consulting Actuary

NJC/CJG/nlo

Craig J. Glyde, ASA, EA, MAAA Consulting Actuary

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Section 1: Summary of the Findings



Overview

2013 Valuation Results

	June 30, 2013	June 30, 2012
Employer Contribution Rate*	37.47%	35.49%
Funded Ratio	73.3%	72.0%

* Weighted average contribution rate for only the County is 37.70% of pay.

This report presents the results of the June 30, 2013 actuarial valuation. Several key points are summarized as follows:

- Funding: The Funded Ratio increased from 72.0% to 73.3%. This increase was primarily due to contributions in excess of the value of benefits earned.
- **Contribution Rates:** The Employer Normal Cost rate of 11.19% decreased from 11.52% reported in the prior year. This rate was influenced by the increased number of members in plans 5, 6, and 7 which are less expensive than plans 1, 2, and 4 and a decrease in the average entry age of the active population. Rates will vary slightly from year to year as the average entry age of the membership changes and as a greater proportion of members enter the less expensive plans.

The employer's required contribution rate to finance the Unfunded Actuarial Accrued Liability (UAAL) over 15 years increased from 23.97% to 26.28%. This increase is largely driven by the recognition of asset losses from prior years under the smoothing method. Additionally, a decrease in payroll resulted in an increase in the contribution as a percentage of pay. The overall result is an increase in the required total contribution rate from the prior valuation of 1.98% (from 35.49% to 37.47% of payroll).

Investment Returns: SamCERA's investment return on the market value of assets for the prior year of 13.6% (as calculated by SamCERA) was greater than the actuarial assumed rate of 7.50% (effective for the prior year). Combined with the recognition of net investment losses from prior years, the net result was a return on the actuarial value of assets of 3.7%, which is lower than the expected return. This actuarial loss on valuation assets caused an increase in the required employer contribution rate.

Note that currently a \$109 million net asset gain is being deferred. This is because the asset-smoothing method has not yet recognized a portion of the net asset gains from the current and prior four years. These deferred gains will be reflected in future valuations.



Overview (continued)	New Benefits: New benefit provisions and member contributions rates have been negotiated recently for certain employees.
	All Plan 1, 2, and 4 members of the Union of American Physicians and Dentists (UAPD) and Probation and Detention Association (PDA) now contribute 25% of the expected cost of post-retirement cost-of-living-adjustments (COLAs). This is in addition to their basic member contributions and non-COLA cost sharing.
	Effective January 1, 2013, all new members enter Plan 7. Plan 7 is legislated under the Public Employees' Pension Reform Act of 2013 (PEPRA) and is expected to provide smaller individual pension benefits and lower employer pension costs.
	See Appendix B for a more complete description of the provisions of these new Plans.
	• New Member Rates: For Plan 7 Safety and Probation members, the total Normal Cost rate changed by more than 1% from the original study. Note that the size of these groups is very small which has resulted in some variability in these rates compared to our original study calculations. Under PEPRA, member rates for these two groups should be changed such that they are one-half of the new Normal Cost rate, rounded to the nearest 1/4%. There is no change to the General Plan 7 member rate. See Exhibit 1b for details.
	New member rates are also shown for UAPD reflecting the COLA share. Finally, we have shown the member contribution rates for Probation managers without the 20% pick-up that applies to non-manager Probation members. A complete list of all member rates is shown in Appendix D.
Comparison with Prior Year	Note that for comparison purposes, the prior year employer contribution rates shown in this report are those calculated in the June 30, 2012 actuarial valuation.
Summary of Recommendations	The following exhibits summarize our recommendations to the Board.



Exhibit 1a Summary of Recommendations

Recommendation #1: Adopt new employer contribution rates for fiscal year beginning July 1, 2014				
	Fiscal Year	Fiscal Year Beginning		
	July 1, 2014	July 1, 2013	(Decrease)	
Gross Normal Cost	21.74%	22.04%	(0.30)%	
Member Contributions	(10.55)%	(10.52)%	(0.03)%	
Employer Normal Cost	11.19%	11.52%	(0.33)%	
UAAL Amortization	26.28%	23.97%	2.31%	
Total Employer Rate	37.47%	35.49%	1.98%	

Notes:

1) Detailed contribution rates by plan are shown in Section 6.

2) As of the 2013 actuarial valuation, the member contribution rates for current members of the Union of American Physicians and Dentists and Probation and Detention Association reflect 25% of the cost of COLA, in addition to previously effective member rates and cost sharing.



Exhibit 1b Summary of Recommendations (continued)

Recommendation #2:	Adopt nev member <u>o</u>		ntribution rates	for fiscal year	beginning July ?	1, 2014 for the	following
		Recommended Rates				Current	
	Entry Age	Basic	COLA Cost Sharing	Cost Sharing	Total as a % of Pay	Total as a % of Pay	Ratio (New/Curr)
General Members							
Plan 1:							
UAPD ⁽¹⁾	25	6.19%	1.29%	3.00%	10.48%	9.19%	114.1%
-	35	7.42%	1.55%	3.00%	11.97%	10.42%	114.9%
	45	8.91%	1.86%	3.00%	13.77%	11.91%	115.6%
Plan 2:							
UAPD ⁽¹⁾	25	6.19%	1.02%	3.00%	10.21%	9.19%	111.0%
-	35	7.42%	1.22%	3.00%	11.64%	10.42%	111.7%
	45	8.91%	1.46%	3.00%	13.37%	11.91%	112.3%
Plan 4:							
	25	5.94%	0.66%	3.00%	9.60%	8.94%	107.4%
	35	7.12%	0.80%	3.00%	10.92%	10.12%	107.9%
	45	8.51%	0.95%	3.00%	12.46%	11.51%	108.3%
Plan 7: ⁽⁴⁾							
All members		5.18%	2.57%	0.00%	7.75%	7.75%	100.0%
Probation Members							
Plans 1 & 2:							
Managers (2)(3)	25	8.41%	N/A	3.50%	11.91%	10.23%	116.4%
-	35	10.09%	N/A	3.50%	13.59%	11.58%	117.4%
	45	11.89%	N/A	3.50%	15.39%	13.01%	118.3%
Plan 4:							
Managers ⁽²⁾⁽³⁾	25	8.07%	N/A	3.50%	11.57%	9.96%	116.2%
	35	9.68%	N/A	3.50%	13.18%	11.25%	117.2%
	45	11.20%	N/A	3.50%	14.70%	12.46%	118.0%
Plan 7: ⁽⁴⁾							
All members		8.58%	5.17%	0.00%	13.75%	12.25%	112.2%
Safety Members							
Plan 7: ⁽⁴⁾							
All members		8.97%	5.28%	0.00%	14.25%	13.00%	109.6%

(1) Effective with the 2013 actuarial valuation members of the Union of American Physicians and Dentists will contribute 25% of the cost of the COLA. See Appendix D of this report for a full schedule of rates.

(2) Effective with the 2013 actuarial valuation Probation Managers will not receive any employer pick-up. See Appendix D of this report for a full schedule of rates.

(3) Current rates shown for Probation Managers are from the 2012 actuarial valuation and reflect 20% employer pick-up.

(4) Plan 7 member rates are included in the actuarial valuation for the first time in 2013.

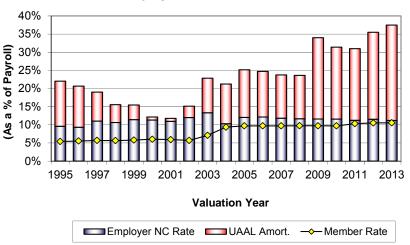


Employer Contribution Rate

Under the Board's current funding objectives, the calculated employer contribution rate for the fiscal year beginning July 1, 2014 is 37.47% of payroll. This is equal to the payment of the Employer Normal Cost rate plus a 15-year layered amortization of the UAAL for each year beginning with the UAAL as of June 30, 2008. It should be noted that this is a weighted average for all SamCERA plans. The actual percent of payroll to be contributed by the employer varies by plan. See Exhibits 10 through 10e for the total employer contribution rates by plan.

This contribution rate is currently adequate to maintain the funding of the retirement system benefits based on the actuarial methods and assumptions shown in Appendix A of this report.

A historical perspective of the total employer contribution rate is shown in the following graph.



Employer Contribution Rate

Comparison with Last Year A detailed analysis of the sources of the changes in both the employer contribution rate and the Funded Ratio was performed. There were several factors that influenced the Funded Ratio and the employer contribution rate, with the overall impact of these additional factors being an increase in the Funded Ratio and the employer rates from the last valuation.



Comparison with Last Year (continued)

The following chart shows how the various factors affected the overall funding of SamCERA, as compared to the last valuation.

Sources of Change	Employer Contribution Rate	Funded Ratio
June 30, 2012 Actuarial Valuation	35.49%	72.0%
Expected Year-to-Year Change Recognized Asset Gain/Loss	0.00%	2.1%
From Current Year	-0.50%	0.6%
From Prior Years	2.63%	-3.2%
Retiree COLAs Less than Expected	-0.20%	0.2%
Salary Increase < Assumed	-1.35%	1.2%
Payroll Decrease	1.68%	0.0%
Employer Rate > Required	-0.32%	0.4%
PEPRA Savings	-0.05%	0.0%
Other Experience Changes	0.08%	0.0%
Total Change	1.98%	1.3%
June 30, 2013 Actuarial Valuation	37.47%	73.3%

Funding ProgressBased on the 2012 valuation, the expected UAAL as of June 30,
2013 was \$928 million. The actual UAAL for the fiscal year
ending June 30, 2013 is \$954 million. This difference was
primarily caused by the recognition of asset losses. Other
factors, such as salary increases and CPI increases, less than
assumed somewhat offset this loss on the UAAL. These factors
are shown in detail at the end of Section 4.

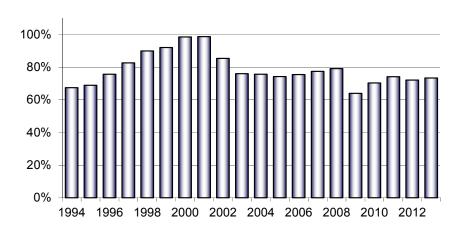
One measure of the funding adequacy of the system is the Funded Ratio, which compares the value of the Actuarial Value of Assets (net of certain non-valuation reserves) to the Actuarial Accrued Liability (AAL), for all SamCERA plans combined. SamCERA's Funded Ratio increased rapidly in the last half of the 1990s, reaching almost 100% in 2001. However, due primarily to asset losses since that time, the Funded Ratio has decreased significantly since then. Currently, the Funded Ratio is 73.3%; that is, the actuarial value of assets of \$2,619 million is about 27% less than the actuarial accrued liabilities of \$3,573 million. Note that if the market value of assets was used, the Funded Ratio would be 76.4%.



Funding Progress (continued)

(All dollar amounts in millions)

	Market	Actuaria	al Value	·	
	Value of Total Assets	Valuation	Non- Valuation	Actuarial Accrued Liability	Funded Ratio
2004	\$1,435	\$1,453	\$31	\$1,921	75.6%
2005	1,599	1,616	0	2,178	74.2
2006	1,790	1,769	0	2,345	75.4
2007	2,132	1,977	0	2,555	77.4
2008	2,011	2,219	0	2,806	79.1
2009	1,591	1,910	0	2,988	63.9
2010	1,816	2,179	0	3,098	70.3
2011	2,318	2,405	0	3,247	74.1
2012	2,360	2,480	0	3,443	72.0
2013	2,728	2,619	0	3,573	73.3



Historical Funded Ratios

Assets

For the fiscal year ending June 30, 2013, we estimate that SamCERA earned 13.8%, net of investment expenses, on its market assets. Note that our return figure may be slightly different than that shown in the 2013 CAFR due to timing of contributions and benefit payments, as well as the treatment of expenses.

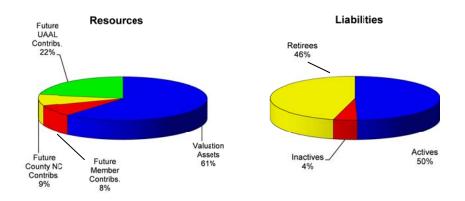
SamCERA uses an asset-smoothing method in the calculation of the UAAL contribution. Under this method, the market value returns are smoothed over a five-year period (10 six-month periods). Due to the recognition of deferred prior year asset losses, the return on actuarial valuation assets, at 3.7%, net of expenses, was less than the expected return of 7.50% for the prior year.



Actuarial Balance Sheet

The first step in the valuation process is to compare the total valuation assets of SamCERA with its total liabilities for all plans. In this analysis, SamCERA's resources equal the actuarial assets plus the expected future contributions by both the employers and members. Liabilities reflect benefits already earned in the past and those expected to be earned in the future by current members. This relationship is shown in the following chart. The AAL is the total of these liabilities less expected future Normal Cost contributions.

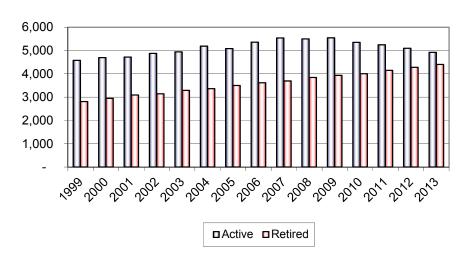
Comparing the current and future resources to the current and future liabilities, we then determine the annual contribution amount for the coming fiscal year.





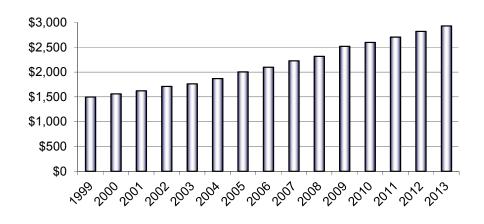
Member Information The number of active members included in the valuation decreased by 3.5% from 5,095 in 2012 to 4,917 in 2013.

Retired member counts and average retirement benefit amounts continue to increase steadily. For 2013, there were 4,398 retired members and beneficiaries with an average benefit of \$2,933 per month. This represents a 2.9% increase in count (up from 4,275 in 2012), and a 3.9% increase in the average monthly benefit (up from \$2,823 over the period).



Membership Count

Average Monthly Retirement Benefit





Analysis of Change in Member Population

The following table summarizes the year-to-year change in member population.

	Active Contributing Members	Deferred Members	Retirees, Disabilities, & Beneficiaries
June 30, 2012 Valuation	5,095	1,212	4,275
Termination without Refund	(287)	287	-
Termination with Refund	(173)	(46)	-
Active/Deferred Death with Annuity	(5)	(2)	7
Service Retirement	(141)	(68)	209
Disability Retirement	(4)	(8)	12
Retiree Death without Beneficiary	-	-	(107)
New Entrants	365	-	-
Rehires	67	(69)	2
Total Change	(178)	94	123
June 30, 2013 Valuation	4,917	1,306	4,398

Summary Valuation Results

The following Exhibit 2 presents a comparison of the key results from the June 30, 2013 and June 30, 2012 valuations. More detail on each of these elements can be found in the following sections and exhibits of this report.



Exhibit 2: Summary of Significant Valuation Results

			June 30, 2013		June 30, 2012	Relative Change
1.	Total Membership					
	A. Active Members		4,917		5,095	(3.5)%
	B. Retired Members & Beneficiaries		4,398		4,275	2.9%
	C. Vested Terminated Members		1,306		1,212	7.8%
	D. Total		10,621		10,582	0.4 %
2.	Pay Rate					
	A. Annual Total (\$thousands)	\$	414,551	\$	427,650	(3.1)%
	B. Monthly Average	\$	7,026	\$	6,995	0.4%
3.	Average Monthly Benefit to Current Retirees and Beneficiaries					
	A. Service Retirement	\$	3,071	\$	2,955	3.9%
	B. Disability Retirement	\$ \$	3,032	\$	2,927	3.6%
	C. Surviving Spouse and Dependents		2,008	\$	1,943	3.3%
	D. Total	\$	2,933	\$	2,823	3.9%
4.	Actuarial Accrued Liability (\$thousands)					
	A. Active Members	\$	1,415,160	\$	1,419,762	(0.3)%
	B. Retired Members	\$ \$ \$	1,964,840	\$	1,854,820	5.9%
	C. Vested Terminated Members	\$	192,750	\$	167,971	14.8%
	D. Total	\$	3,572,750	\$	3,442,553	3.8%
5.	Assets					
	A. Market Value of Fund (\$thousands)	\$	2,727,825	\$	2,360,304	15.6%
	B. Return on Market Value		13.6%		-0.4%	
	C. Actuarial Value (\$thousands)	\$	2,618,639	\$	2,480,271	5.6%
	D. Return on Actuarial Value		3.7%		0.7%	
6.	Unfunded Actuarial Accrued Liability	•	054.444	•	000 000	(0,0))(
	or Surplus Funding (\$thousands)	\$	954,111	\$	962,282	(0.8)%
7.	combined as a percent of total payroll					
	A. Gross Normal Cost		21.74%		22.04%	(1.4)%
	B. Member Contributions		(10.55)%		(10.52)%	0.3%
	C. Employer Normal Cost		11.19%		11.52%	(2.9)%
	D. UAAL Amortization		26.28%		23.97%	9.6%
	E. Total Employer Rate		37.47%		35.49%	5.6%
8.	Funded Ratio (5C / 4D)		73.3%		72.0%	1.7%
9.	Results Based on Market Value (No Asset Smooth	ing) -	For Informational	Purpo	ses Only	
	A. Total Employer Rate		34.99%		37.98%	(7.9)%
	B. Funded Ratio (5A / 4D)		76.4%		68.6%	11.4%

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Section 2: Scope of the Report



This report presents the actuarial valuation of the San Mateo County Employees' Retirement Association as of June 30, 2013. This valuation was requested by the Board. Section 31453 of the County Employees Retirement Law of 1937 (the '37 Act) requires an actuarial valuation to be performed at least every three years for the purposes of setting contribution rates.

In reading our cover letter, please pay particular attention to the guidelines employed in the preparation of this report. We also comment on the sources and reliability of both the data and the actuarial assumptions upon which our findings depend. Those comments are the basis for our certification that this report is complete and accurate to the best of our knowledge and belief.

A summary of the findings resulting from this valuation is presented in the previous section. Section 3 describes the assets and investment experience of SamCERA. The assets and investment income are presented in Exhibits 3-5. Exhibits 6-8 develop the Actuarial Value of Assets as of June 30, 2013.

Section 4 describes the benefit obligations of SamCERA. Exhibit 9 is the Actuarial Balance Sheet. Additional analysis on the change in UAAL is also provided in this section.

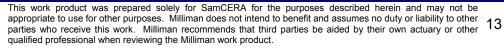
Section 5 discusses the Member contribution rates.

Section 6 discusses the employer contributions needed to fund the benefits under the actuarial cost method in use.

Section 7 discloses the information required under Statement No. 25 of the Governmental Accounting Standards Board (GASB).

This report includes several appendices:

- Appendix A A summary of the actuarial procedures and assumptions used to estimate liabilities and contributions.
- Appendix B A summary of the current benefit structure, as determined by the provisions of governing law on June 30, 2013.
- Appendix C Schedules of valuation data classified by various categories of members by plan.
- Appendix D Member contribution rates by plan.
- Appendix E A glossary of actuarial terms used in this report.



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Section 3: Assets



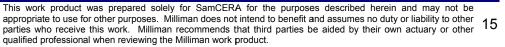
In many respects, an actuarial valuation can be thought of as an inventory process. The inventory is taken as of the actuarial valuation date which, for this valuation, is June 30, 2013. On that date, the assets available for the payment of retirement benefits are appraised. These assets are compared with the accrued and future actuarial liabilities, which are generally well in excess of the actuarial assets. The purpose of the valuation is to determine what future contributions by the members and employer are needed to pay all expected future benefits.

This section of the report deals with the determination of assets used for funding purposes. In the next section, the actuarial liabilities will be discussed. Sections 5 and 6 deal with the process for determining required contributions based on the relationship between the actuarial assets and the actuarial liabilities.

A historical summary of SamCERA's assets is presented below:

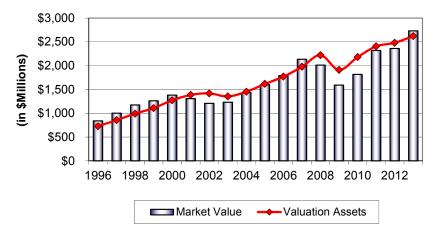
All dollar amounts in millions									
	Actuarial Value								
	Market Value of <u>Total Assets</u>	Non- Valuation <u>Reserves</u>	Valuation <u>Assets</u>						
2000 2001 2002 2003 2004	\$ 1,381 1,308 1,207 1,233 1,435	\$ 49 51 32 34 31	\$ 1,271 1,385 1,417 1,354 1,453						
2005 2006 2007 2008 2009	1,599 1,790 2,132 2,011 1,591	0 0 0 0	1,616 1,769 1,977 2,219 1,910						
2010 2011 2012 2013	1,816 2,318 2,360 2,728	0 0 0 0	2,179 2,405 2,480 2,619						

On June 30, 2013, the total market value of the fund was about \$2.73 billion. The actuarial value of the fund was determined to be \$2.62 billion, including the non-valuation reserves.



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Financial Exhibits	Exhibit 3 presents a Statement of Plan Net Assets and Exhibit 4 presents a Statement of Changes in Plan Net Assets. Exhibit 5 describes the allocation of SamCERA's assets by the various reserve values determined for accounting purposes.
	Exhibits 3-5 are taken directly from data furnished to us by SamCERA for its annual financial report. We have accepted these tables for use in this report without audit, but we have reviewed them for reasonableness and consistency with previous reports.
Actuarial Asset Method	The actuarial asset method computes the expected market value of assets based on the prior year's market value of assets, the actual cash flow of contributions and benefit payments, and the assumed investment rate of return. For the current valuation, the assumed rate of return on the prior year's assets is 7.50%, net of all expenses. The difference between the actual market value and the computed expected market value is smoothed, or recognized over a five-year period.
Actuarial Value of Assets	The development of the June 30, 2013 actuarial value of assets is shown in Exhibits 6 and 7. Note that the smoothing process has recognized all of the investment gains and losses from 2008 and earlier over the last few years. However, there are still portions of investment gains and losses that have not yet been recognized by the asset smoothing method, including the current year gain. The result is a market value of assets that is higher than the actuarial value. The following graph shows a historical comparison of the actuarial and market assets used for valuation purposes.



Applicable Valuation Assets

Valuation Assets

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Valuation Assets are the actuarial value of the fund, less the value of any reserves which have been set aside for current liabilities and special benefits (if any) that are to be funded outside of the actuarially determined contribution rates.

Allocation of Assets Valuation assets are allocated by classification (general, safety and probation) as shown in Exhibit 8. This is because UAAL contribution rates are determined separately by class.

In the calculation of the required contribution rate, the Normal Cost is determined separately for each plan. The UAAL portion of the rate is allocated proportionately to each classification. To determine the UAAL amount by classification, the valuation assets are allocated in proportion to the expected UAAL, after reflecting expected contributions from the prior year to pay down the UAAL.



Exhibit 3: Statement of Plan Net Assets for the Years Ended June 30, 2012 and 2013

	2013	2012
Assets		
Cash and Cash Equivalents	39,405,154	49,733,227
Securities Lending Cash Collateral	136,413,481	199,380,508
Total Cash	\$ 175,818,636 \$	249,113,735
Receivables		
Contributions	3,611,259	3,702,233
Due from broker for investments sold	139,326,538	125,066,558
Investment Income	4,998,825	5,414,934
Other receivables	113,812	113,496
Securities Lending Income	60,596	97,138
Total Receivables	148,111,030	134,394,359
Prepaid Expense	7,669	7,669
Investments at Fair Value		
Domestic fixed income securities	428,578,645	554,504,406
International fixed income securities	112,393,585	-
Domestic equities	1,135,856,342	902,422,401
International equities	494,939,553	408,832,756
Real estate	166,154,482	146,917,122
Private Equities	64,325,070	19,404,901
Risk Parity	157,444,012	152,628,991
Hedge Funds	73,717,734	68,994,760
Commodities	69,083,062	69,902,427
Total Investments	2,702,492,485	2,323,607,764
Capital Assets Net of Depreciation	-	_
Total Assets	3,026,429,819	2,707,123,527
Liabilities		
Payables		
Investment management fees	2,519,194	2,533,960
Due to broker for investments purchased	154,293,081	141,487,676
Collateral Payable for Securities Lending	136,413,481	199,380,508
Mortgage Note Payable		
Due within one year	-	-
Due in more than one year	-	-
Other	5,378,731	3,417,729
Total Liabilities	298,604,487	346,819,873
Net Assets Held in Trust for Pension Benefits	\$ 2,727,825,332 \$	2,360,303,654



Exhibit 4:Statement of Changes in Plan Net Assets
for the Years Ended June 30, 2012 and 2013

	2013	2012
Additions		
Contributions Employer Employee Total Contributions	\$ 144,308,171 \$ 55,407,941 199,716,112	150,949,761 49,687,136 200,636,897
Investment Income/(Loss) Interest and dividends Net appreciation/(depreciation) in Fair Value	55,101,945 293,808,144 348,910,089	61,653,951 (51,737,514) 9,916,437
Less investment expense Net Investment Income/(Loss)	21,926,630 326,983,459	20,940,955 (11,024,519)
Securities Lending Income Earnings Less securities lending expense Net Securities Lending Income Other Additions Total Additions/(Declines)	402,803 (219,089) 621,892 159,510 527,480,973	452,442 (268,777) 721,219 29,025 190,362,623
Deductions		
Association Benefits Service retirement allowances Disability retirement allowances Medical Benefits Death and other death benefits Total Association Benefits Refunds of members' contributions Administrative Expense Other Expense	131,638,612 16,705,247 - 921,788 149,265,647 5,749,776 4,914,187 29,685	122,541,648 15,532,365 - 1,133,577 139,207,590 3,627,492 5,033,047 (33,331)
Total Deductions	159,959,295	147,834,798
Net Increase/(Decrease)	367,521,678	42,527,825
Net Assets Held in Trust for Pension Benefits:		
Beginning of Year	2,360,303,654	2,317,775,829
End of Year	2,727,825,332	2,360,303,654
Estimated Return, Net of Investment Expenses	13.6%	-0.4%

* May differ from return reported in CAFR due to timing of contributions and benefit payments and treatment of expenses.



Exhibit 5: Allocation of Assets by Accounting Reserve Amounts for the Years Ended June 30, 2012 and 2013

Valuation Reserves	2013	2012
1. Member Deposit Reserve	\$ 534,275,685	\$ 498,568,652
2. County Advance Reserve	422,581,774	361,197,981
3. Retiree Reserves	918,589,967	858,440,088
4. Cost of Living Reserve	930,358,295	843,061,707
5. Total Valuation Reserves	\$ 2,805,805,721	\$ 2,561,268,428
Non-Valuation Reserves	2013	2012
1. Contingency Reserve		
a. Reserves for Deficiencies in Interest Earnings	\$ -	\$ -
 b. Unallocated Earnings / Loss Account 	 (187,166,322)	 (80,997,723)
c. Total	\$ (187,166,322)	\$ (80,997,723)
2. Market Stabilization Account	109,185,933	(119,967,051)
3. Total Non-Valuation Reserves	\$ (77,980,389)	\$ (200,964,774)
4. Total Reserves (Market Value of Assets)	\$ 2,727,825,332	\$ 2,360,303,654

Note: These amounts were determined by SamCERA for accounting purposes.



Exhibit 6: Five-Year Smoothing of Gains and Losses on Market Value – History

	History of Unexpected Asset Gains and Losses										
Six-Month Period Ended	Market Value at Beginning of Period	Contributions	Benefit Payments	Market Value at End of Period	Assumed Rate of Return	Expected Return	Actual Return	Unexpected Gain / (Loss)			
6/30/2013 \$	2,558,508,635	\$ 99,631,258	\$ 78,520,689	2,727,825,332	3.750%	\$ 97,496,612	\$ 148,206,128	\$ 50,709,516			
12/31/2012	2,360,303,654	100,084,854	76,494,734	2,558,508,635	3.750%	89,983,040	174,614,861	84,631,821			
6/30/2012	2,280,940,966	28,676,113	73,157,072	2,360,303,654	3.875%	87,461,531	123,843,647	36,382,116			
12/31/2011	2,317,775,829	171,960,784	69,678,010	2,280,940,966	3.875%	91,600,467	(139,117,637)	(230,718,104)			
6/30/2011 *	2,167,939,516	96,998,690	67,484,144	2,317,775,829	3.875%	85,497,449	120,321,766	34,824,317			
12/31/2010	1,815,896,455	102,489,209	64,824,842	2,167,939,516	3.875%	72,262,382	314,378,695	242,116,312			
6/30/2010	1,863,720,265	80,266,609	63,207,613	1,815,896,455	3.875%	73,179,765	(64,882,806)	(138,062,572)			
12/31/2009	1,591,399,558	76,317,198	61,669,503	1,863,720,265	3.875%	61,835,437	257,673,013	195,837,576			
6/30/2009	1,594,401,527	27,183,773	59,331,550	1,591,399,558	3.875%	61,167,136	29,145,808	(32,021,328)			
12/31/2008	2,010,738,768	129,310,873	57,454,173	1,594,401,527	3.875%	80,910,069	(488,193,941)	(569,104,010)			

* 2011 "Market Value at End of Period" reflects revisions to assets by SamCERA following publication of the June 30, 2011 actuarial valuation.



Exhibit 7: Five-Year Smoothing – Development of Valuation Assets

Development of Market Stabilization Reserve										
Phase-Out of Gain / (Loss)										
Six-Month Period Ended	Percent Excluded	_		Unexpected Gain / (Loss)			Gain / (Loss) Excluded			
6/30/2013	90%	x	\$	50,709,516	=	\$	45,638,565			
12/31/2012	80%	x		84,631,821	=		67,705,456			
6/30/2012	70%	х		36,382,116	=		25,467,481			
12/31/2011	60%	х		(230,718,104)	=		(138,430,862)			
6/30/2011	50%	х		34,824,317	=		17,412,158			
12/31/2010	40%	х		242,116,312	=		96,846,525			
6/30/2010	30%	х		(138,062,572)	=		(41,418,772)			
12/31/2009	20%	х		195,837,576	=		39,167,515			
6/30/2009	10%	х		(32,021,328)	=		(3,202,133)			
12/31/2008	0%	х		(569,104,010)	=		0			
Total Gain / (Loss) Excluded = Mar	ket S	Stab	ilization Reserve	=	\$	109,185,933			

Development of Valuation Assets

1.	Market Value of Assets as of June 30, 2013		\$ 2,727,825,332
2.	Preliminary Market Stabilization Reserve		 109,185,933
3.	Preliminary Actuarial Value of Assets (1) - (2)		2,618,639,399
4.	Corridor Around Market Value a) Minimum = 80% of Market b) Maximum = 120% of Market c) Corridor Adjustment	2,182,260,266 3,273,390,399	0
5.	Market Stabilization Reserve	109,185,933	
6.	Gross Actuarial Valuation of Assets (3) - (4c)		\$ 2,618,639,399
7.	Non-Valuation Reserves and Designations a) Reserves for Interest Fluctuations b) Medicare Part B Reserve c) Total	0 0	0
8.	Valuation Assets (6) - (7c)		\$ 2,618,639,399

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Exhibit 8: Allocation of Valuation Assets

(Dollars in Thousands)

	General	Safety	F	Probation	Total
1. Prior Year UAAL	\$ 666,247	\$ 234,517	\$	61,518	\$ 962,282
2. Expected UAAL Contribution for Preceding Year	(67,715)	(27,117)		(6,062)	(100,894)
3. Expected Interest at 7.50%	 47,475	16,590		4,391	68,456
4 Expected UAAL Based on Prior Year Assumptions	 646,007	223,990		59,847	929,844
5. Percentage of Total Expected UAAL	69.47%	24.09%		6.44%	100.00%
6. Actual UAAL Based on Prior Year Assumptions					954,111
7. Actual AAL Based on Prior Year Assumptions	\$ 2,630,355	\$ 725,160	\$	217,235	\$ 3,572,750
8. Allocated UAAL Based on Prior Year Assumptions	 662,866	229,836		61,409	954,111
9. Actuarial Value of Assets	\$ 1,967,489	\$ 495,324	\$	155,826	\$ 2,618,639



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Section 4: Actuarial Liabilities

	In the previous section, an actuarial valuation was compared with an inventory process, and an analysis was given of the inventory of SamCERA's assets as of the valuation date, June 30, 2013. In this section, the discussion will focus on the commitments of SamCERA for retirement benefits, which are referred to as its actuarial liabilities.
	In an active system, the combined current and future actuarial liabilities will almost always exceed the actuarial assets. This is usually expected in all but a fully closed down fund, where no further contributions of any sort are anticipated. This deficiency has to be provided by future contributions. An actuarial valuation method sets out a schedule of future contributions that will deal with this deficiency in an orderly fashion. The determination of the level of future contributions needed is discussed in the next section.
Actuarial Balance Sheet – Liabilities	First, we need to determine the amount of the deficiency. We compare the Actuarial Value of the Valuation Assets to the Actuarial Liabilities. The difference is the amount that needs to be funded by the member and employer contributions in the future. Both the current and future assets (contributions) are compared to the actuarial liabilities in the Actuarial Balance Sheet.
	Exhibit 9 contains an analysis of the actuarial present value of all future benefits for retired, deferred vested and active members. The analysis is given by class of membership and by type of benefit.
	The actuarial liabilities include the actuarial present value of all future benefits expected to be paid with respect to each member. For an active member, this value includes measures of both benefits already earned and future benefits to be earned. For all members, active and inactive, the value extends over the rest of their lives and for the lives of any surviving beneficiaries. All liabilities reflect the benefits effective through June 30, 2013.
	The actuarial assumptions used to determine the liabilities are based on the results of our investigation of experience report for the period ending April 30, 2011. These assumptions were adopted by the Board at their July 2011 meeting and are shown in Appendix A. The economic assumptions, including an investment return assumption of 7.50%, were adopted at the May 2012 meeting for use in the June 30, 2012 actuarial valuation. The Board re-adopted all assumptions with no changes at the May 2013 meeting. The assumptions will next be reviewed in detail in 2014 as part of the triennial investigation.



Exhibit 9: Actuarial Balance Sheet – June 30, 2013 (Dollars in Thousands)

Resources										
		General		Safety		robation		Total		
Valuation Assets (Actuarial)	\$	1,967,489	\$	495,324	\$	155,826	\$	2,618,639		
Present Value of Future Member										
Contributions	\$	270,644	\$	55,786	\$	24,841	\$	351,271		
Present Value of Future Employer										
Contributions to Fund:										
a) Normal Cost	\$	246,935	\$	71,384	\$	37,473	\$	355,792		
b) Unfunded Actuarial Accrued Liability	\$	662,866	\$	229,836	\$	61,409	\$	954,111		
Total Resources	\$	3,147,934	\$	852,330	\$	279,549	\$	4,279,813		

		Liabilities					
	General			Safety	F	Probation	Total
Present Value of Future Benefits							
1. Present Retired Members	\$	1,397,822	\$	468,060	\$	98,958	\$ 1,964,840
2. Current Inactive Members		161,250		23,828		7,672	192,750
3. Current Active Members							
- Service Retirement		1,436,723		327,297		156,489	1,920,509
- Disability Retirement		55,124		16,761		8,189	80,074
- Death Benefits		23,414		6,998		3,268	33,680
- Deferred Vested Benefit		51,673		7,746		4,521	63,940
- Refund of Member Contributions		21,928		1,640		452	24,020
- Total Active		1,588,862		360,442		172,919	2,122,223
Total Actuarial Liabilities	\$	3,147,934	\$	852,330	\$	279,549	\$ 4,279,813



Actuarial Balance Sheet – Resources	For the purpose of the Actuarial Balance Sheet, SamCERA's resources are equal to the sum of:						
	(a) Assets currently available to pay benefits and considered for funding purposes, the Valuation Assets,						
	(b) The present value of future contributions expected to be made by current active Members, and						
	(c) The present value of future contributions expected to be made by the employer.						
Actuarial Cost Method	The Actuarial Balance sheet determines the amount of future contributions that are needed, but the method used to determine the incidence of when those future contributions are yet to be made in future years is called the "actuarial cost method." For this valuation, the entry age actuarial cost method has been used. Under this method – or essentially any actuarial cost method – the contributions required to meet the difference between current assets and current actuarial liabilities are allocated each year between two elements:						
	 A Normal Cost amount; and Whatever amount is left over, which is used to amortize what is called the UAAL. 						
Normal Cost	The two items described above, the Normal Cost and UAAL, are the keys to understanding the actuarial cost method.						
	The Normal Cost is the theoretical contribution rate that will meet the ongoing costs of a group of average new employees. Suppose that a group of new employees was covered under a separate fund from which all benefits and to which all contributions and associated investment returns were paid.						
	Under the entry age actuarial cost method, the Normal Cost contribution rate maintains the funding of benefits as a level percentage of pay. If experience follows the actuarial assumptions precisely, the fund would be completely liquidated when the last payment to the last survivor of the group was made.						



Normal Cost (continued)	By applying the Normal Cost contribution rate to the present value of salaries expected to be paid in the future, we determine the present value of future Normal Cost contributions. Future contributions are expected to be made by both the members and the employer. The basic member contribution rates are determined based upon requirements established in the '37 Act and the actuarial assumptions. Members may also make additional contributions as part of a cost sharing or COLA cost sharing arrangements. Based on these member contribution rates, we determine the present value of future member contributions. We subtract that value from the total future Normal Cost contributions expected, based on the entry age cost method. The remaining difference is the employer's portion of the future Normal Cost contributions.							
Actuarial Accrued Liability	The difference between the present value of all future obligation and the present value of the future Normal Cost contributions referred to as the "actuarial accrued liability." The AAL is then compared to the value of assets available to fund benefits, and the difference is referred to as the UAAL. The results for SamCERA for all plans are summarized below:							
	(Dollars in millions) A. Actuarial present value of all future benefits for contributing members, former contributing members, and their survivors	2013 \$ 4,280	2012 \$ 4,189	Change 2.2%				
	 B. Actuarial present value of total future Normal Costs for current members 	707	747	(5.4)%				
	C. Actuarial accrued liability [A-B]	\$ 3,573	\$ 3,442	3.8%				
	D. Valuation Assets	2,619	2,480	5.6%				
	E. UAAL or Surplus Funding [C-D]	\$ 954	\$ 962	(0.8)%				
	F. Funded Ratio [D/C]	73.3%	72.0%	1.8%				



Unfunded Actuarial Accrued Liability/ Surplus Funding	The portion allocated to service already rendered or accrued is called the Actuarial Accrued Liability. The difference between Actuarial Accrued Liability and the Valuation Assets is called th Unfunded Actuarial Accrued Liability (UAAL). If a UAAL amou exists, it usually results from prior years' benefit or assumption changes and the net effect of accumulated gains and losses. the employer had always contributed the current Normal Cost, there were no prior benefit or assumption changes and if actua experience exactly matched the actuarial assumptions, the present value of all future Normal Cost contributions would be sufficient to fund all benefits and there would be no UAAL. Exhibit 9 shows how the UAAL was derived for each classification. In the Actuarial Balance sheet, the total actuaria accrued liability for all future benefits must be equal to the curr					
	and future assets.					
Funding Adequacy	A key consideration in determining the adequacy of the funding of SamCERA is how the UAAL is being funded. If the UAAL amoun is positive, that is, the Actuarial Accrued Liability to be funded is greater than the Valuation Assets, then the UAAL is amortized. Under the current funding method, the June 30, 2008 UAAL is amortized over a fixed period ending June 30, 2023. Changes in the UAAL in years following June 30, 2008 are being amortized separately over new 15-year periods from the valuation date at which the difference is calculated, including the change in UAAL as of June 30, 2013.					
Analysis of Change in UAAL	The UAAL, at any date after establishment of a syste affected by any actuarial gains or losses arising when experience of the system varies from the experience by the actuarial assumptions used in the valuations. extent actual experience, as it develops, differs from expected according to the assumptions used, so also emerging costs differ from the estimated costs.	n the antic To th that will t	actual ipated ie the			
	The 2013 actuarial valuation reflects a decrease in th \$8.2 million for the fiscal year just ended.	ne UA	AL of			
	Unfunded Actuarial Accrued Liability - June 30, 2012	\$	962.3			
	Expected Increase / (Decrease) *		(34.6)			
	Expected UAAL - June 30, 2013	\$	927.7			
	Asset (Gains) and Losses Retiree COLA Less than Expected Salary Increases Less than Expected Assumption Changes Other Liability (Gain)/Loss		94.0 (8.6) (59.4) - 0.4			
	Total Changes		26.4			
	Actual UAAL - June 30, 2013	\$	954.1			
	* Based on actual contribution					

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Section 5: Member Contributions



Basic Contributions (Plans 1-6) For SamCERA members in Plans 1-6, contributions are of three types: Basic contributions, Cost Sharing contributions, and COLA Cost Sharing contributions. SamCERA members in Plan 7 pay contributions equal to one-half of the total Normal Cost rate for all members.

Contributions for each Plans 1-6 are defined in the following sections of the County Employees' Retirement Law:

	Code	Contribution Provides
Plan	Section	Average Annuity of
General Plans 1, 2 & 4	31621.9	1/120 th of FAC at age 55
General Plan 5	31621	1/120 th of FAC at age 60
Probation & Safety	31639.25	1/100 th of FAC at age 50

FAC = Final Average Compensation

There are no member contributions under General Plan 3.

Basic member contributions are determined using the Entry Age Normal Funding Method and the following actuarial assumptions:

- 1. Expected rate of return on assets
- 2. Individual salary increase rate (wage growth + merit)
- 3. Mortality for members based on service retirement
- 4. No COLAs are assumed

The basic member contribution rates were recalculated as of the June 30, 2012 valuation to reflect the investment return and wage growth assumptions adopted in the June 30, 2012 actuarial valuation. The rates are shown in Appendix D.

In addition to the basic rate, Plan 1, 2 and 4 General employees (excluding San Mateo County Mosquito and Vector Control District employees [SMCM&VCD]), as well as Plan 5 Safety and Probation employees, make additional cost-sharing contributions as shown in Appendix B. Plan 6 employees do not participate in cost-sharing. For valuation purposes, cost-sharing contributions are assumed to be permanent. The cost-sharing contributions are fixed and not impacted by changes in assumptions.



Cost-Sharing

Contributions

(Plans 1-5)

Cost-of-Living Contributions (Plans 1-6) Members of the California Nurses Association, members of the Union of American Physicians and Dentists, and members of the Probation and Detention Association in Plans 1, 2, and 4 contribute 25% of the cost of COLA, in addition to all basic and cost-sharing rates applicable.

All members of General Plan 5 contribute 50% of the cost of COLA. Additionally, General members (Plans 1, 2 and 4) rehired on or after August 7, 2011 contribute 50% of the cost of COLA for their current Plan.

Members of Safety and Probation Plan 5 and 6 contribute 50% of the cost of COLA. Additionally, Probation members (Plans 1, 2 and 4) rehired on or after July 10, 2011 and Safety members (Plans 1, 2 and 4) rehired on or after January 8, 2012 contribute 50% of the cost of COLA for their current Plan.

Other current members do not contribute towards the COLA benefit.

COLA member rates are determined by calculating and applying a load factor to the basic member rates. COLA load factors are determined for each class and plan of member separately, as shown in the following table:

Plan	COLA Share	COLA Load
General 1 (County & Courts)*	50%	41.75%
General 2 (County & Courts)*	50%	32.79%
General 4 (County & Courts)*	50%	22.36%
General 1 (CNA and UAPD)	25%	20.87%
General 2 (CNA and UAPD)	25%	16.40%
General 4 (CNA and UAPD)	25%	11.18%
General 5	50%	21.30%
Safety 1*	50%	62.54%
Safety 2*	50%	50.00%
Safety 4*	50%	32.81%
Safety 5	50%	30.07%
Safety 6	50%	26.88%
Probation 1 (PDA)	25%	31.29%
Probation 2 (PDA)	25%	31.29%
Probation 4 (PDA)	25%	20.39%
Probation 1 (PDA)*	50%	62.57%
Probation 2 (PDA)*	50%	62.57%
Probation 4 (PDA)*	50%	40.78%
Probation 5 (PDA)	50%	37.02%
Probation 6 (PDA)	50%	33.36%

* Only applicable in cases where member rehires or transfers (if eligible).

Example:

A member who enters General Plan 5 at age 35 has a basic member contribution rate of 6.14% (Exhibit D-1). The General Plan 5 COLA load is 21.30% for a member COLA contribution of 1.31% (6.14% x 21.30%) of pay. The basic plus COLA member contribution rate is 7.45% (6.14% + 1.31%).

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Cost-of-Living Contributions (Plans 1-6) (continued)	The COLA factor is determined as the present value of future normal cost contributions for the applicable plan COLA divided by the present value of future basic member contributions. This ratio is then multiplied by the applicable COLA share percentage (0%, 25% or 50%)					
Member Contribution Rates – Pickup (Plans 1-6)	Note that a portion of some of the member contribution rates is paid for ("picked up") by the employer and may or may not be considered part of the member's contribution account for refund purposes. Consistent with past practice, we have reflected the pickup for Probation members (excluding managers), but not other classes, due to the differing treatment of contributions for refund purposes.					
	Full disclosure of the member rates can be found in Appendix D.					
Member Contribution Rates (Plan 7)	Contributions for Plan 7 are defined in Section 7522.30 of the Government Code.					
	All employees of the same class who are members of Plan 7 shall contribute the same percentage of payroll. Such percentage will be 50% of the total Normal Cost rate for that class. Member contribution rates shall be adjusted when the normal cost expressed as a percentage of payroll, calculated at each valuation date increases or decreases by more than 1% of payroll above or below the rate then in effect. Member rates shall be rounded to the nearest 0.25% of payroll.					
	Effective July 1, 2014, Plan 7 member rates are as follows:					
	General members: 7.75% Safety members: 14.25% (increased from 13.00%) Probation members: 13.75% (increased from 12.25%)					



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Section 6: Employer Contributions



Calculated Contribution Rate Contributions to SamCERA are determined using the Entry Age Normal Cost Funding Method. The portion of the actuarial present value of retirement benefits allocated to a valuation year by the Actuarial Cost Method is called the Normal Cost. These amounts are usually expressed as a percentage of payroll and called the Normal Cost Contribution Rate. Exhibits 10 through 10e illustrate the Normal Cost Rates by type of benefit and for each plan based on this valuation. A comparison with last year is also shown.

It should be noted that when we use the term "Gross Normal Cost rate," we are referring to the value of benefits earned by active members allocated to the valuation year. The Employer Normal Cost is the portion of the annual benefit that the employer is responsible for. This is simply the Gross Normal Cost rate less the contributions made by the members.

The total calculated employer contribution rates for each plan, along with a comparison to the prior year's computed rates, can be found in Exhibits 10 through 10e. These results are expressed as a percentage of payroll. Note that SamCERA's UAAL is determined separately for each class. Thus, the employer funds the UAAL evenly as a percentage of pay over salaries for all members within a class.

The total calculated employer contribution rate was 35.49% for the fiscal year beginning July 1, 2013. For the fiscal year beginning in 2014, the calculated rate based on this report increased to 37.47%. This is equal to the aggregate Employer Normal Cost contribution rate of 11.19% based on Milliman's 2013 valuation, plus appropriate amounts to amortize the UAAL according to the funding policy, over layered 15-year closed periods.

Employer Contribution Rate

(all values as a % of Payroll)

Employer Normal Cost	11.19%
Total Amortization of UAAL	<u>26.28%</u>
Total Employer Contribution	37.47%



Calculated Contribution Rate (continued)	The UAAL rate reflects a layered 15-year amortization beginning with the June 30, 2008 valuation. Gains and losses after that date are reflected over new 15-year periods starting with the valuation date. A one-year deferral in the implementation of the new rate is reflected. Therefore, the new employer contribution rate calculated in the 2013 valuation is paid over the remaining 14 years and is effective July 1, 2014.							
	Exhibit 11 shows detailed information on how the contribution rate is calculated using the layered method.							
	Note that in the following exhibits "SMCM&VCD" refers to the San Mateo County Mosquito and Vector Control District.							
Changes in the Normal Cost Rate	The change in the calculated Normal Cost contribution rates from year-to-year is generally due to two factors. The two factors are:							
	1. Experience: Normal experience from year-to-year, reflecting differences in both the weighting between membership groups and in their characteristics, as well as on what was assumed to occur during the past fiscal year and what actually occurred, particularly with respect to salary increases and turnover experience. Based on current system benefit provisions, the aggregate Normal Cost rate is expected to decrease as a greater number of members are covered by Plans 5, 6 and 7, instead of the more expensive previous plans. However, the change will be fairly gradual.							
	2. Contribution Shut-Off: For general members hired prior to March 7, 1973 and all Safety and Probation members, basic member contributions are not collected after the member has 30 years of service. Thereafter, the member contributions towards the total annual Normal Cost are equal to the cost sharing, resulting in a sizable increase in the employer's share of the Normal Cost contributions for the years when the member has more than 30 years of service. The employer's share of the Normal Cost rates for those groups can be expected to increase rather than remain level, as otherwise expected under the entry age cost method.							



Exhibit 10: Calculated Employer Contribution Rates – June 30, 2013

All Plans									
		Employer Rates							
	Gross Normal Cost	Member Contributions	Basic Normal Cost	COLA Normal Cost	Total Normal Cost	UAAL Contribution Rate	Total Contribution Rate	Prior Year Total Contribution Rate	
General Members									
County	19.59%	(9.85)%	6.19%	3.55%	9.74%	22.35%	32.09%	30.15%	
Courts	19.59%	(9.85)%	6.19%	3.55%	9.74%	22.35%	32.09%	30.15%	
CNA	19.59%	(10.67)%	5.67%	3.25%	8.92%	22.35%	31.27%	29.13%	
UAPD	19.59%	(10.67)%	5.67%	3.25%	8.92%	22.35%	31.27%	29.13%	
Total	19.59%	(9.98)%	6.11%	3.50%	9.61%	22.35%	31.96%	30.03%	
SMCM&VCD Members									
Total	18.80%	(7.10)%	8.33%	3.37%	11.70%	22.35%	34.05%	31.85%	
Safety Members									
Total	32.22%	(13.71)%	11.69%	6.82%	18.51%	50.33%	68.84%	67.56%	
Probation Members									
PDA	30.48%	(12.15)%	11.89%	6.45%	18.33%	29.32%	47.65%	46.70%	
Managers	30.48%	(12.63)%	11.58%	6.28%	17.85%	29.32%	47.17%	46.70%	
Total	30.48%	(12.22)%	11.84%	6.42%	18.26%	29.32%	47.58%	46.70%	
All Plans									
Total	21.74%	(10.55)%	7.12%	4.06%	11.19%	26.28%	37.47%	35.49%	



All Plans

		Al	Plans									
		Normal Cost										
Plan	Service Retirement	Disability Retirement	Death while Active	Termination (No Refund)	Termination (Refund)	Total Gross Normal Cost						
General Plan 1	15.81%	1.29%	0.42%	2.04%	1.58%	21.14%						
General Plan 2	15.69%	1.26%	0.41%	1.79%	1.57%	20.72%						
General Plan 3	7.34%	0.00%	0.00%	0.49%	0.00%	7.83%						
General Plan 4	15.34%	1.27%	0.38%	1.55%	1.60%	20.14%						
General Plan 5	13.01%	1.28%	0.35%	1.19%	1.24%	17.07%						
General Plan 7	11.55%	1.21%	0.30%	0.86%	1.23%	15.15%						
General Total	14.92%	1.23%	0.37%	1.55%	1.52%	19.59%						
SMCM&VCD Plan 1	N/A	N/A	N/A	N/A	N/A	N/A						
SMCM&VCD Plan 2	21.34%	1.68%	0.64%	1.58%	1.23%	26.47%						
SMCM&VCD Plan 4	13.85%	1.13%	0.38%	1.54%	1.08%	17 .9 8%						
SMCM&VCD Plan 7	N/A	N/A	N/A	N/A	N/A	N/A						
SMCM&VCD Total	14.57%	1.19%	0.40%	1.55%	1.09%	18.80%						
Safety Plan 1	32.93%	3.51%	1.51%	2.12%	1.01%	41.08%						
Safety Plan 2	26.38%	2.83%	1.38%	1.86%	0.68%	33.13%						
Safety Plan 4	25.40%	2.97%	1.17%	1.61%	0.75%	31.90%						
Safety Plan 5	25.66%	3.43%	1.16%	1.21%	0.99%	32.45%						
Safety Plan 6	26.05%	3.54%	1.11%	0.78%	0.77%	32.25%						
Safety Plan 7	22.12%	4.01%	1.01%	0.62%	0.80%	28.56%						
Safety Total	25.63%	3.00%	1.22%	1.62%	0.75%	32.22%						
Probation Plan 1	28.90%	1.81%	1.05%	1.45%	0.49%	33.70%						
Probation Plan 2	26.11%	2.77%	1.23%	1.87%	0.65%	32.63%						
Probation Plan 4	23.99%	2.55%	1.06%	1.70%	0.65%	29.95%						
Probation Plan 5	21.11%	2.50%	1.10%	1.28%	0.65%	26.64%						
Probation Plan 6	18.50%	2.54%	1.22%	1.26%	0.47%	23.99%						
Probation Plan 7	22.25%	3.13%	0.97%	0.55%	0.65%	27.55%						
Probation Total	24.40%	2.61%	1.10%	1.72%	0.65%	30.48%						
All Plans	16.77%	1.52%	0.52%	1.56%	1.37%	21.74%						

Exhibit 10a: Calculated Normal Cost Contribution Rates – June 30, 2013

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	General Members									
					Em	ployer Rates				
	Gross Normal Cost	Member Contributions	Basic Normal Cost	COLA Normal Cost	Total Normal Cost	UAAL Contribution Rate	Total Contribution Rate	Prior Year Total Contribution Rate		
<u>Plan 1</u>										
County	21.14%	(9.89)%	5.24%	6.01%	11.25%	22.35%	33.60%	30.92%		
Courts	21.14%	(9.89)%	5.24%	6.01%	11.25%	22.35%	33.60%	30.92%		
CNA	21.14%	(11.33)%	4.57%	5.24%	9.81%	22.35%	32.16%	29.49%		
UAPD	21.14%	(11.33)%	4.57%	5.24%	9.81%	22.35%	32.16%	29.49%		
Total	21.14%	(10.05)%	5.16%	5.93%	11.09%	22.35%	33.44%	30.79%		
Plan 2										
County	20.72%	(10.20)%	5.65%	4.87%	10.52%	22.35%	32.87%	30.82%		
Courts	20.72%	(10.20)%	5.65%	4.87%	10.52%	22.35%	32.87%	30.82%		
CNA	20.72%	(11.37)%	5.02%	4.33%	9.35%	22.35%	31.70%	29.63%		
UAPD	20.72%	(11.37)%	5.02%	4.33%	9.35%	22.35%	31.70%	29.63%		
Total	20.72%	(10.37)%	5.56%	4.79%	10.35%	22.35%	32.70%	30.68%		
Plan 3										
County	7.83%	0.00%	7.83%	0.00%	7.83%	22.35%	30.18%	28.11%		
Courts	7.83%	0.00%	7.83%	0.00%	7.83%	22.35%	30.18%	28.11%		
CNA	7.83%	0.00%	7.83%	0.00%	7.83%	22.35%	30.18%	28.11%		
UAPD	7.83%	0.00%	7.83%	0.00%	7.83%	22.35%	30.18%	28.11%		
Total	7.83%	0.00%	7.83%	0.00%	7.83%	22.35%	30.18%	28.11%		
Plan 4										
County	20.14%	(10.41)%	6.37%	3.36%	9.73%	22.35%	32.08%	30.01%		
Courts	20.14%	(10.41)%	6.37%	3.36%	9.73%	22.35%	32.08%	30.01%		
CNA	20.14%	(11.23)%	5.84%	3.07%	8.91%	22.35%	31.26%	29.18%		
UAPD	20.14%	(11.23)%	5.84%	3.07%	8.91%	22.35%	31.26%	29.18%		
Total	20.14%	(10.54)%	6.29%	3.31%	9.60%	22.35%	31.95%	29.92%		
Plan 5										
County	17.07%	(7.99)%	6.30%	2.78%	9.08%	22.35%	31.43%	29.52%		
Courts	17.07%	(7.99)%	6.30%	2.78%	9.08%	22.35%	31.43%	29.52%		
CNA	17.07%	(7.99)%	6.30%	2.78%	9.08%	22.35%	31.43%	29.52%		
UAPD	17.07%	(7.99)%	6.30%	2.78%	9.08%	22.35%	31.43%	29.52%		
Total	17.07%	(7.99)%	6.30%	2.78%	9.08%	22.35%	31.43%	29.52%		
Plan 7										
County	15.15%	(7.75)%	4.95%	2.45%	7.40%	22.35%	29.75%	27.82%		
Courts	15.15%	(7.75)%	4.95%	2.45%	7.40%	22.35%	29.75%	27.82%		
CNA	15.15%	(7.75)%	4.95%	2.45%	7.40%	22.35%	29.75%	27.82%		
UAPD	15.15%	(7.75)%	4.95%	2.45%	7.40%	22.35%	29.75%	27.82%		
Total	15.15%	(7.75)%	4.95%	2.45%	7.40%	22.35%	29.75%	27.82%		
All Plans										
County	19.59%	(9.85)%	6.19%	3.55%	9.74%	22.35%	32.09%	30.15%		
Courts	19.59%	(9.85)%	6.19%	3.55%	9.74%	22.35%	32.09%	30.15%		
CNA	19.59%	(10.67)%	5.67%	3.25%	8.92%	22.35%	31.27%	29.13%		
UAPD	19.59%	(10.67)%	5.67%	3.25%	8.92%	22.35%	31.27%	29.13%		
Total	19.59%	(10.87)%	6.11%	3.25%	8.92% 9.61%	22.35%	31.27%	30.03%		

Exhibit 10b: Calculated Employer Contribution Rates – June 30, 2013

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SMCM&VCD Members									
					Em	ployer Rates			
	Gross Normal Cost	Member Contributions	Basic Normal Cost	COLA Normal Cost	Total Normal Cost	UAAL Contribution Rate	Total Contribution Rate	Prior Year Total Contribution Rate	
Plan 1									
Total	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
<u>Plan 2</u> Total	26.47%	(8.78)%	11.46%	6.23%	17.69%	22.35%	40.04%	37.87%	
<u>Plan 4</u> Total	17.98%	(6.93)%	7.99%	3.06%	11.05%	22.35%	33.40%	31.07%	
<u>Plan 7</u> Total	15.65%	(7.75)%	6.60%	1.30%	7.90%	22.35%	30.25%	28.07%	
<u>All Plans</u> Total	18.80%	(7.10)%	8.33%	3.37%	11.70%	22.35%	34.05%	31.85%	

Exhibit 10c: Calculated Employer Contribution Rates – June 30, 2013



Safety Members											
		Employer Rates									
	Gross Normal Cost	Member Contributions	Basic Normal Cost	COLA Normal Cost	Total Normal Cost	UAAL Contribution Rate	Total Contribution Rate	Prior Year Total Contribution Rate			
<u>Plan 1</u>											
Total	41.08%	(15.92)%	12.00%	13.16%	25.16%	50.33%	75.49%	75.20%			
Plan 2											
Total	33.13%	(13.47)%	10.79%	8.87%	19.66%	50.33%	69.99%	68.59%			
Plan 4											
Total	31.90%	(13.40)%	12.38%	6.12%	18.50%	50.33%	68.83%	67.16%			
<u>Plan 5</u>											
Total	32.45%	(16.38)%	10.03%	6.04%	16.07%	50.33%	66.40%	64.99%			
<u>Plan 6</u>											
Total	32.25%	(13.99)%	12.20%	6.06%	18.26%	50.33%	68.59%	64.49%			
Plan 7											
Total	28.56%	(14.25)%	9.01%	5.30%	14.31%	50.33%	64.64%	61.73%			
All Plans											
Total	32.22%	(13.71)%	11.69%	6.82%	18.51%	50.33%	68.84%	67.56%			

Exhibit 10d: Calculated Employer Contribution Rates – June 30, 2013



Exhibit 10e: Calculated Employer Contribution Rates – June 30, 2013

			Probati	on Membe	rs						
			Employer Rates								
	Gross Normal Cost	Member Contributions	Basic Normal Cost	COLA Normal Cost	Total Normal Cost	UAAL Contribution Rate	Total Contribution Rate	Prior Year Total Contribution Rate			
Plan 1											
PDA Members	33.70%	(3.50)%	14.59%	15.61%	30.20%	29.32%	59.52%	56.91%			
Managers	33.70%	(12.11)%	10.43%	11.16%	21.59%	29.32%	50.91%	56.91%			
Total	33.70%	(3.50)%	14.59%	15.61%	30.20%	29.32%	59.52%	56.91%			
<u>Plan 2</u>											
PDA Members	32.63%	(12.77)%	11.26%	8.59%	19.86%	29.32%	49.18%	49.19%			
Managers	32.63%	(12.11)%	11.64%	8.88%	20.52%	29.32%	49.84%	49.19%			
Total	32.63%	(12.57)%	11.38%	8.68%	20.06%	29.32%	49.38%	49.19%			
<u>Plan 4</u>											
PDA Members	29.95%	(11.97)%	12.17%	5.81%	17.98%	29.32%	47.30%	45.93%			
Managers	29.95%	(13.08)%	11.42%	5.45%	16.87%	29.32%	46.19%	45.93%			
Total	29.95%	(12.07)%	12.10%	5.78%	17.88%	29.32%	47.20%	45.93%			
<u>Plan 5</u>											
PDA Members	26.64%	(12.85)%	8.73%	5.06%	13.79%	29.32%	43.11%	41.63%			
Managers	26.64%	(15.32)%	7.24%	4.08%	11.32%	29.32%	40.64%	41.63%			
Total	26.64%	(12.85)%	8.73%	5.06%	13.79%	29.32%	43.11%	41.63%			
<u>Plan 6</u>											
PDA Members	23.99%	(9.27)%	10.10%	4.62%	14.72%	29.32%	44.04%	42.75%			
Managers	23.99%	(11.87)%	8.35%	3.77%	12.12%	29.32%	41.44%	42.75%			
Total	23.99%	(9.27)%	10.10%	4.62%	14.72%	29.32%	44.04%	42.75%			
<u>Plan 7</u>											
PDA Members	27.55%	(13.75)%	8.61%	5.19%	13.80%	29.32%	43.12%	39.02%			
Managers	27.55%	(13.75)%	8.61%	5.19%	13.80%	29.32%	43.12%	39.02%			
Total	27.55%	(13.75)%	8.61%	5.19%	13.80%	29.32%	43.12%	39.02%			
All Plans											
PDA Members	30.48%	(12.15)%	11.89%	6.45%	18.33%	29.32%	47.65%	46.70%			
Managers	30.48%	(12.63)%	11.58%	6.28%	17.85%	29.32%	47.17%	46.70%			
Total	30.48%	(12.22)%	11.84%	6.42%	18.26%	29.32%	47.58%	46.70%			



Exhibit 11: Supplemental Detail on UAAL Payments (Dollars in Thousands)

						Gener	ral			Remaining		y 1, 2014
Date Established	Description ⁽⁴⁾		ance as of le 30, 2013		erest on alance	Amort. Payment on June 30, 2014 ¹			ance as of e 30, 2014 ²	Period as of June 30, 2014	Amortization Payment	
June 30, 2008	Initial UAAL	\$	353.832	\$	26.537	\$	44.396	\$	335.973	9 Years	\$	43.677
June 30, 2009	(Gain) / Loss	\$	341,105	\$	25,583	\$	39,561	\$	327,127	10 Years	\$	38,921
June 30, 2010	(Gain) / Loss	\$	(126,544)	\$	(9,491)	\$	(13,678)	\$	(122,357)	11 Years	\$	(13,456
June 30, 2011	(Gain) / Loss	\$	(37,916)	\$	(2,844)	\$	(3,846)	\$	(36,914)	12 Years	\$	(3,784
June 30, 2012	(Gain) / Loss	\$	116,966	\$	8,772	\$	11,198	\$	114,541	13 Years	\$	11,010
June 30, 2013	(Gain) / Loss	\$	15,423	\$	1,157	\$	(5,021) ³		21,601	14 Years	\$	1,96
								Total	Amortization Pag	yment July 1, 2014:	\$	78,33
									Projected F	Payroll July 1, 2014:	\$	350,50
UAAL as	of June 30, 2013:	\$	662,866			UAAL	Contribution R	ate (as	,	FYB July 1, 2014:		22.35
						Safet	ty			Remaining	l I	y 1, 2014
Date		Pal	ance as of	Int	erest on	Amort	. Payment on	Bal	ance as of	Period as of		ortization
Established	Description ⁽⁴⁾		ance as of le 30, 2013		alance		e 30. 2014 ¹		e 30. 2014 ²	June 30, 2014		ayment
LStabilished	Description	Jui	10 30, 2013		alance	Jun	6 30, 2014	Jun	6 30, 2014	Julie 30, 2014		ayment
June 30, 2008	Initial UAAL	\$	129,120	\$	9,684	\$	16,201	\$	122,603	9 Years	\$	15,93
June 30, 2009	(Gain) / Loss	\$	125,097	\$	9,382	\$	14,509	\$	119,970	10 Years	\$	14,27
June 30, 2010	(Gain) / Loss	\$	(47,336)	\$	(3,550)	\$	(5,116)	\$	(45,770)	11 Years	\$	(5,03
June 30, 2011	(Gain) / Loss	\$	(17,585)	\$	(1,319)	\$	(1,783)	\$	(17,121)	12 Years	\$	(1,75
June 30, 2012	(Gain) / Loss	\$	34,776	\$	2,608	\$	3,329	\$	34,055	13 Years	\$	3,27
June 30, 2013	(Gain) / Loss	\$	5,764	\$	432	\$	(120) ³	\$	6,316	14 Years	\$	57
								Total	Amortization Pay	yment July 1, 2014:	\$	27,27
									Projected F	Payroll July 1, 2014:	\$	54,19
UAAL as	of June 30, 2013:	\$	229,836			UAAL	Contribution R	ate (as	a % of Payroll)	FYB July 1, 2014:		50.33
						Probat	ion			Remaining	lul	y 1, 2014
Date		Bal	ance as of	Int	erest on	Amort	. Payment on	Bal	ance as of	Period as of		ortization
Established	Description ⁽⁴⁾		ie 30, 2013		alance		e 30, 2014 ¹	Jun	e 30, 2014 ²	June 30, 2014	Payment	
lune 20, 2000		¢	20.050	¢	0.400	¢	4.050	¢	20 740	0. V	¢	2.00
June 30, 2008	Initial UAAL	\$	32,350	\$	2,426	\$	4,059	\$ \$	30,718	9 Years	\$	3,99
June 30, 2009	(Gain) / Loss	\$	31,486	\$	2,361	\$	3,652		30,195	10 Years	\$	3,59
June 30, 2010	(Gain) / Loss	\$	(11,553)	\$	(866)	\$	(1,248)	\$	(11,171)	11 Years	\$	(1,22
June 30, 2011	(Gain) / Loss	\$	(4,034)	\$	(303)	\$	(409)	\$	(3,928)	12 Years	\$	(40
June 30, 2012	(Gain) / Loss	\$	11,727	\$	880	\$	1,123	\$	11,484	13 Years	\$	1,10
	(Gain) / Loss	\$	1,433	\$	107	\$	(72) ³	\$	1,612	14 Years	\$	14
June 30, 2013								Total	Amortization Par	ment July 1 2014	\$	7,20
June 30, 2013								Total				
	of June 30, 2013:		61,409						Projected F	Payroll July 1, 2014: FYB July 1, 2014:	ծ \$	24,57

Explanatory Notes:

¹ Amortization Payments are based on a fixed schedule that increases by the payroll assumption each year.

- ² The calculation of assets and liabilities used in the calculation of UAAL are as of June 30, 2013; whereas, the contribution rates are not effective until July 1, 2014. Therefore, the UAAL is adjusted to June 30, 2014 in the calculation of contribution rates.
- ³ The 15-year amortization of UAAL does not begin until July 1, 2014; however, the UAAL amount is adjusted based on the July 1, 2013 contribution rate.

⁴ (Gain)/Loss includes new assumptions adopted effective June 30, 2011 based on the Investigation of Experience report, and new economic assumptions effective June 30, 2012.



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Section 7: Information for Comprehensive Annual Financial Report (CAFR)



The Governmental Accounting Standards Board (GASB) sets standards for defined benefit pension plan reporting and disclosures (Statement No. 25). The reporting requirements for Statement No. 25 include certain supplementary information that must be added to the financial statements. These include:

- 1. A Schedule of Funding Progress
- 2. A Schedule of Employer Contributions

The Schedule of Funding Progress, Exhibit 12, compares actuarial assets and liabilities of SamCERA, based on the actuarial funding method used. The required Schedule of Employer Contributions, Exhibit 13, compares the employer contributions required based on the actuarial valuation (the Actuarial Required Contribution, or ARC) with the employer contributions actually made. The ARC must be calculated based on certain parameters required for disclosure purposes.

We believe the actuarial methods and assumptions used in this valuation to determine the employer's contribution for funding purposes satisfy the GASB reporting requirements.

GASB Statement No. 27 specifies required reporting for pension accounting by state and local governmental employers.

The comparability of the data from year-to-year can be affected by changes in actuarial assumptions, benefit provisions, accounting policies, etc.

Exhibit 14 compares the Actuarial Value of Valuation Assets to the types of Actuarial Accrued Liabilities, applying them first to Active Member contributions, then to retirees and beneficiaries, and then the remaining amount to the active members' benefits. This is referred to as the Solvency Test. Although not required under GASB, this test is part of the CAFR guidelines specified by the Government Finance Officers Association (GFOA).

It should be noted that GASB recently adopted Statements 67 and 68 dealing with accounting disclosure for public retirement systems. These new standards will have a material impact on pension accounting. The effective date for GASB Statement No. 67 is for periods beginning after June 15, 2013 and the effective date for GASB Statement No. 68 is for periods beginning after June 15, 2014.



CAFR (continued)	In addition to the exhibits mentioned above, the following supporting information is supplied for inclusion in SamCERA's CAFR:
	 Exhibit 15 – History of employer contribution rates.
	 Exhibit 16 – Actuarial analysis of financial experience.
	 Exhibit 17 – Summary of significant actuarial statistics and measurements.
	 Exhibit 18 – Summary of SamCERA membership. For more detailed information on the valuation data, see Appendix C.
	 Exhibit 19 – Summary of active member valuation data.
	 Exhibit 20 – Summary of demographic activity of retirees and beneficiaries.
	 Exhibit 21 – Average salary and active counts by employer.
	 Exhibit 22 – Summary of retired and inactive benefits.
	 Exhibits 23a and 23b – Summary of actuarial assumptions and cost method. For more detailed information, see Appendix A.



Exhibit 12: Schedule of Funding Progress

(Dollars In Thousands)

Actuarial Valuation Date*	(a) Actuarial Value f Valuation Assets	(b) Actuarial Accrued Liabilities	A	(b-a) nfunded Actuarial Accrued lities (UAAL)	(a/b) Funded Ratio	Cove	(c) ered Payroll	[(b-a)/c] UAAL as a Percentage of Covered Payroll
June 30, 2004	\$ 1,452,621	\$ 1,921,328	\$	468,707	75.6%	\$	365,385	128.28%
June 30, 2005	1,615,585	2,177,759		562,174	74.2%		334,315	168.16%
June 30, 2006	1,769,021	2,345,149		576,128	75.4%		368,972	156.14%
June 30, 2007	1,976,731	2,555,504		578,773	77.4%		407,912	141.92%
June 30, 2008	2,218,937	2,806,222		587,285	79.1%		416,243	141.09%
June 30, 2009	1,909,679	2,987,712		1,078,033	63.9%		436,424	247.02%
June 30, 2010	2,179,076	3,098,453		919,377	70.3%		428,559	214.53%
June 30, 2011	2,405,140	3,246,727		841,587	74.1%		424,061	198.46%
June 30, 2012	2,480,271	3,442,553		926,282	72.0%		419,779	229.24%
June 30, 2013	2,618,639	3,572,750		954,111	73.3%		406,921	234.47%

*Information for years prior to 2005 reported by prior actuaries.



Exhibit 13: Schedule of Contributions from the Employer (All Dollars In Thousands)

Fiscal Year Ending*	Annual Required Contribution (ARC)**	Actual Employer Contributions	Percentage of ARC Contributed
6/30/2004	60,042	60,042	100%
6/30/2005	76,931	76,931	100%
6/30/2006	76,090	76,090	100%
6/30/2007	100,550	100,550	100%
6/30/2008	105,340	105,340	100%
6/30/2009	106,123	106,123	100%
6/30/2010	106,265	106,265	100%
6/30/2011	150,475	150,475	100%
6/30/2012	150,950	150,950	100%
6/30/2013	144,308	144,308	100%

* Information for years prior to 2005 reported by prior actuaries.

** GASB Annual Required Contribution (ARC) is set equal to actual employer contribution when the actual employer contribution meets GASB ARC criteria.



Exhibit 14: Solvency Test (Dollars In Thousands)

		Act	uarial Accrued Liabi	lities for			
		Active Member	Retirees and	Active Members (Employer Financed		n of Actuarial A abilities Covered Assets	
Actuarial Valuation Date ⁽¹⁾	Valuation Assets	Contributions (A)	Beneficiaries ⁽²⁾ (B)	Portion) (C)	(A)	(B)	(C)
June 30, 2004	\$ 1,452,621	\$ 259,731	\$ 942,765	\$ 718,832	100%	100%	35%
June 30, 2005	1,615,585	281,231	1,133,351	763,177	100%	100%	26%
June 30, 2006	1,769,021	317,521	1,234,005	793,623	100%	100%	27%
June 30, 2007	1,976,731	359,484	1,348,013	848,007	100%	100%	32%
June 30, 2008	2,218,937	385,300	1,550,875	870,047	100%	100%	32%
June 30, 2009	1,909,679	412,147	1,670,547	905,018	100%	90%	0%
June 30, 2010	2,179,076	449,355	1,745,146	903,952	100%	99%	0%
June 30, 2011	2,405,140	485,126	1,866,219	895,382	100%	100%	6%
June 30, 2012	2,480,271	498,569	2,022,791	921,193	100%	98%	0%
June 30, 2013	2,618,639	534,276	2,157,590	880,884	100%	97%	0%

(1) Information for years prior to 2005 reported by prior actuaries.

(2) Includes deferred vested.



Exhibit 15: History of Calculated Employer Contribution Rates⁽⁴⁾ (Dollars In Thousands)

	Employer Contribution Rates ⁽¹⁾⁽⁵⁾									
Valuation	General Members (County & Courts)			General Members (Nurses & UAPD) ⁽³⁾			General Members (SMCM&VCD) ⁽²⁾			
Year	Normal	UAAL	Total	Normal	UAAL	Total	Normal	UAAL	Total	
2004	9.76%	8.25%	18.01%	Same as County General			Same	ne as County General		
2005	10.36%	10.38%	20.74%	Same as County General			Same	me as County General		
2006	10.49%	9.97%	20.46%	Same as County General			Same	e as County Ge	eneral	
2007	10.19%	9.46%	19.65%	Same	as County Ge	eneral	8.50%	7.76%	16.26%	
2008	10.16%	9.81%	19.97%	Same	as County Ge	eneral	8.55%	8.04%	16.59%	
2009	10.11%	18.40%	28.51%	Same	as County Ge	eneral	8.25%	15.09%	23.34%	
2010	10.05%	16.35%	26.40%	Same	as County Ge	eneral	11.70%	16.35%	28.05%	
2011	9.71%	16.41%	26.12%	8.70%	16.41%	25.11%	11.97%	16.41%	28.38%	
2012	9.98%	20.17%	30.15%	8.96%	20.17%	29.13%	11.68%	20.17%	31.85%	
2013	9.74%	22.35%	32.09%	8.92%	22.35%	31.27%	11.70%	22.35%	34.05%	

	Employer Contribution Rates ⁽¹⁾⁽⁵⁾								
Valuation	Safety Member			Probation Members (excluding Managers)			Probation Members (Managers)		
Year	Normal	UAAL	Total	Normal	UAAL	Total	Normal	UAAL	Total
2004	15.34%	24.82%	40.16%	16.17%	15.28%	31.45%	Same as I	Probation (ex N	/lanagers)
2005	20.43%	32.02%	52.45%	21.10%	16.43%	37.53%	Same as I	Probation (ex N	/lanagers)
2006	20.18%	30.52%	50.70%	21.59%	14.85%	36.44%	Same as I	Probation (ex N	/lanagers)
2007	19.94%	29.32%	49.26%	20.83%	14.06%	34.89%	Same as I	Probation (ex N	/lanagers)
2008	19.32%	27.31%	46.63%	20.05%	12.81%	32.86%	Same as I	Probation (ex N	/lanagers)
2009	19.21%	51.83%	71.04%	19.92%	23.84%	43.76%	Same as I	Probation (ex N	/lanagers)
2010	19.01%	44.50%	63.51%	19.85%	21.62%	41.47%	Same as I	Probation (ex N	/lanagers)
2011	18.87%	41.75%	60.62%	19.50%	22.30%	41.80%	Same as	Probation (ex N	/lanagers)
2012	19.05%	48.51%	67.56%	19.99%	26.71%	46.70%	Same as I	Probation (ex N	/lanagers)
2013	18.51%	50.33%	68.84%	18.33%	29.32%	47.65%	17.85%	29.32%	47.17%

(1) Information for years prior to 2005 reported by prior actuaries.

(2) Beginning with the 2010 actuarial valuation, the Mosquito and Vector Control District adopted the same benefit formula and member contribution rates as Plan 1, 2 & 4 General County members (excluding cost sharing on member rates).

(3) Beginning with the 2011 actuarial valuation, Plan 1, 2, and 4 members of the California Nurses Association contribute 25% of the cost of COLA, in addition to current member rates and cost sharing.

Beginning with the 2013 actuarial valuation, Plan 1, 2, and 4 members of the Union of American Physicians and Dentists contribute 25% of the cost of COLA, in addition to current member rates and cost sharing. In 2011 and 2012 these members contributed the same as County General members.

(4) Beginning with the 2012 actuarial valuation, Plan 1, 2, and 4 Probation members (excluding Managers) contribute 25% of the cost of COLA, in addition to current member rates and cost sharing.

(5) Contribution rates shown are those calculated in the corresponding actuarial valuation. In some cases, actual contributions were higher.



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Exhibit 16: Actuarial Analysis of Financial Experience

Summary of (Gains) / Losses		Change In Liability	
	2013	2012 2011 20	010 2009
Unfunded Liability as of July 1	\$ 962,282,000	\$ 841,587,000 \$ 919,377,000 \$ 1,078	8,033,000 \$ 587,285,000
Expected Change in UAAL	(34,535,000)	(39,621,000) (31,508,000) 2	7,388,000 (11,786,000)
Salary (Gain) / Loss	(59,411,000)	(45,526,000) (51,831,000) (43	3,598,000) (10,081,000)
Fewer Withdrawals than expected	0	0 0	0 0
Retiree COLA more / (less) than expected	(8,606,000)	(11,756,000) (27,561,000) (41	,258,000) 1,080,000
Asset (Gain) / Loss	93,999,000	171,268,000 12,548,000 (88	3,485,000) 522,444,000
Change due to Assumption Changes	0	36,443,000 19,402,000	0 0
Miscellaneous Experience	382,000	9,887,000 1,160,000 (12	2,703,000) (10,909,000)
Change Due to New Formula			
Unfunded Liability as of June 30	\$ 954,111,000	\$ 962,282,000 \$ 841,587,000 \$ 919	9,377,000 \$ 1,078,033,000



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Exhibit 17: Summary of Significant Actuarial Statistics and Measures

			June	e 30th	of	Relative
			2013		2012	Change
١.	Active Members					
	Number of Members		4,917		5,095	(3.5)%
	Average Age		46.0		46.0	-
	Average Credited Service		11.2		10.9	2.8%
	Total Active Payroll (\$thousands)	\$	414,551	\$	427,650	(3.1)%
	Average Monthly Salary	\$	7,026	\$	6,995	0.4%
١١.	Retired Members					
	Number of Members					
	Service Retirement		3,446		3,355	2.7 %
	Disability Retirement Beneficiaries		393 559		374 546	5.1 % 2.4 %
	Average Age		71.3		540 71.2	2.4 %
	Actual Retiree Benefits Paid (\$thousands)	\$	149,266	\$	139,208	7.2 %
	Average Monthly Pension	\$	2,933	\$	2,823	3.9%
		Ŷ	2,000	Ψ	2,020	0.070
III.	Number of Inactive Vested Members		1,306		1,212	7.8 %
IV.	Assets					
	Market Value of Fund (\$thousands)	\$	2,727,825	\$	2,360,304	15.6%
	Return on Market Value		13.6%		-0.4%	
	Valuation Assets (\$thousands)	\$	2,618,639	\$	2,480,271	5.6%
	Return on Valuation Assets		3.7%		0.7%	
V.	Liability Values (\$thousands)					
	Actuarial Accrued Liability	\$	3,572,750	\$	3,442,553	3.8%
	Unfunded Actuarial Accrued Liability	\$	954,111	\$	962,282	(0.8)%
	Deferred Asset (Gains) / Losses	\$	(109,186)	\$	119,966	
VI.	Funded Ratio					
	GASB 25 (based on valuation assets)		73.3%		72.0%	1.7%



Exhibit 18: Summary of SamCERA Membership

Plan	One	Two	Three	Four	Five	Six	Seven	Total
Retirees and beneficiaries curren	tly receiving	benefits:						
General	1,848	1,572	114	284	-	-	-	3,818
Safety	284	140	-	20	-	-	-	444
Probation	72	51	-	13	-	-	-	136
Subotal	2,204	1,763	114	317	-	-	-	4,398
Ferminated employees entitled to	o but not curr	ently receivi	ng benefits (E	Deferred):				
General	21	417	108	647	5	-	1	1,199
Safety	1	29	-	42	-	-	-	72
Probation	-	11	-	23	-	1	-	3
Subotal	22	457	108	712	5	1	1	1,30
Current employees:								
Vested:								
General	39	936	73	2,216	1	-	1	3,26
Safety	3	102	-	219	-	-	-	324
Probation	1	64	-	208	-	-	-	27
Non-Vested:								
General	-	2	51	451	262	-	141	90
Safety	-	-	-	71	42	1	14	12
Probation	-	-	-	7	8	1	3	1
Subotal	43	1,104	124	3,172	313	2	159	4,91
Total SamCERA Membership	2,269	3,324	346	4,201	318	3	160	10,62



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6.8% 13.4% 11.6% 6.8% 1.8% -1.4% 0.2% 1.4% -1.7% -1.1% -1.6% -1.7% 7.1% 5.9% 5.3% 6.9% 2.6% 4.7% 2.8% 2.8% 4.1% 2.9% 4.6% 4.0% 1.6% 3.6% 1.3% 1.8% 0.5% 2.2% 0.0% 0.9% 1.9% 0.7% 1.9% 1.8% 0.5% -1.7%

-1.1%

0.4%

Valu	ation Date	Members	Annual Salary	Average	% Change
0004		4.407	<u> </u>	Annual Salary	Average Sala
2004	General	4,487	\$303,786,879	\$67,700	
	Safety	411	\$40,796,852	\$99,202	
	Probation	288	\$20,800,813	\$72,225	
	Total	5,186	\$365,384,544	\$70,448	
2005	General	4,411	\$304,289,437	\$68,984	
	Safety	409	\$39,999,593	\$97,799	
	Probation	278	\$20,123,863	\$72,388	
	Total	5,098	\$364,412,893	\$71,482	
2006*	General	4,614	\$312,934,324	\$67,823	
	Safety	428	\$41,407,772	\$96,747	
	Probation	313	\$22,009,210	\$70,317	
	Total	5,355	\$376,351,306	\$70,280	
2007	General	4,767	\$346,319,017	\$72,649	
	Safety	443	\$45,386,411	\$102,452	
	Probation	329	\$24,364,268	\$74,056	
	Total	5,539	\$416,069,696	\$75,116	
2008	General	4,743	\$353,518,525	\$74,535	
	Safety	432	\$46,326,906	\$107,238	
	Probation	325	\$24,741,003	\$76,126	
	Total	5,500	\$424,586,434	\$77,198	
2009	General	4,777	\$370,760,830	\$77,614	
	Safety	436	\$48,120,081	\$110,367	
	Probation	330	\$26,270,802	\$79,608	
	Total	5,543	\$445,151,713	\$80,309	
2010	General	4,609	\$363,305,740	\$78,825	
	Safety	425	\$48,576,912	\$114,299	
	Probation	313	\$25,247,595	\$80,663	
	Total	5,347	\$437,130,248	\$81,752	
2011	General	4,494	\$355,876,715	\$79,189	
	Safety	446	\$52,073,940	\$116,758	
	Probation	305	\$24,591,392	\$80,628	
	Total	5,245	\$432,542,046	\$82,468	
2012	General	4,361	\$351,965,689	\$80,708	
	Safety	435	\$51,129,267	\$117,539	
	Probation	299	\$24,554,583	\$82,122	
	Total	5,095	\$427,649,539	\$83,935	
2013	General	4,173	\$338,595,633	\$81,140	
_0.0	Safety	452	\$52,233,510	\$115,561	
	Dart	402	¢02,200,010	\$110,001	

Exhibit 19: Summary of Active Member Valuation Data

*Numbers prior to 2006 were reported on a different basis.

292

4,917



\$81,240

\$84,310

\$23,722,165

\$414,551,308

Probation

Total

Exhibit 20: Summary of Demographic Activity of Retirees and Beneficiaries

		Add	ed to Rolls ⁽¹⁾	Remo	ved from Rolls	Rolls	s end of year		
Year Ended		No.	Annual Allowances in Thousands	No.	Annual Allowances in Thousands	No. ⁽²⁾	Total Retiree Payroll in Thousands	% Increase in Payroll	Average Monthly Allowances
June 30, 2004		193	N/A	120	N/A	3,539	75,943	8.7	1,778
June 30, 2005		238	N/A	95	N/A	3,682	84,183	11.5	1,905
June 30, 2006		206	N/A	112	N/A	3,613	91,006	8.1	2,099
June 30, 2007		155	N/A	74	N/A	3,694	98,790	8.6	2,229
June 30, 2008		218	N/A	70	N/A	3,842	109,616	11.0	2,378
June 30, 2009		159	12,717	66	3,281	3,935	119,052	8.6	2,521
June 30, 2010		163	9,076	96	3,240	4,002	124,888	4.9	2,601
June 30, 2011	(3)	209	12,703	64	2,916	4,147	134,675	7.8	2,706
June 30, 2012		218	14,379	90	4,209	4,275	144,845	7.6	2,823
June 30, 2013		186	13,024	63	3,095	4,398	154,774	6.9	2,933

⁽¹⁾ Amount added to rolls includes COLAs granted in year to continuing retirees and beneficiaries.

(2) For 6/30/2004 and 6/30/2005, retirees/beneficiaries who are entitled to multiple benefits are counted more than once. Starting 6/30/2006, the counts reflect only one benefit per retiree.

⁽³⁾ Revised from June 30, 2011 valuation for corrections.



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Exhibit 21: Average Salary and Active Counts by Employer

Schedule of Average Monthly Salary of Active Members* (By Plan and Membership Type)

	2013	2012	2011	2010	2009
General Plan 1	\$8,104	\$7,843	\$7,630	\$7,543	\$7,534
General Plan 2	\$7,355	\$7,340	\$7,208	\$7,193	\$7,120
General Plan 3	\$6,254	\$6,138	\$5,968	\$5,818	\$5,791
General Plan 4	\$6,662	\$6,580	\$6,398	\$6,348	\$6,212
General Plan 5	\$6,418	\$5,799	N/A	N/A	N/A
General Plan 7	\$5,433	N/A	N/A	N/A	N/A
General Plan Total	\$6,762	\$6,726	\$6,599	\$6,569	\$6,468
Safety Plan 1	\$13,185	\$12,624	\$12,073	\$11,578	\$10,889
Safety Plan 2	\$10,935	\$10,892	\$10,789	\$10,548	\$10,135
Safety Plan 4	\$9,402	\$9,351	\$9,230	\$8,931	\$8,610
Safety Plan 5	\$8,699	\$9,667	N/A	N/A	N/A
Safety Plan 6	\$12,374	N/A	N/A	N/A	N/A
Safety Plan 7	\$6,695	N/A	N/A	N/A	N/A
Safety Plan Total	\$9,630	\$9,795	\$9,730	\$9,525	\$9,197
Probation Plan 1	\$6,618	\$6,618	\$7,533	\$8,922	\$9,751
Probation Plan 2	\$7,445	\$7,454	\$7,349	\$7,393	\$7,341
Probation Plan 4	\$6,622	\$6,686	\$6,505	\$6,456	\$6,291
Probation Plan 5	\$5,242	\$4,949	N/A	N/A	N/A
Probation Plan 6	\$4,808	\$5,239	N/A	N/A	N/A
Probation Plan 7	\$7,742	\$5,239	N/A	N/A	N/A
Probation Plan Total	\$6,770	\$6,844	\$6,719	\$6,722	\$6,634
Grand Total	\$7,026	\$6,995	\$6,872	\$6,813	\$6,692

* Numbers prior to 2006 were reported on a different basis.

Participating Employers and Active Members

2013	2012	2011	2010	2009
3,906	4,078	4,476	4,589	4,758
452	435	446	425	436
292	299	305	313	330
4,650	4,812	5,227	5,327	5,524
18	15	18	20	19
249	268	N/A	N/A	N/A
4,917	5,095	5,245	5,347	5,543
	3,906 452 292 4,650 18 249	3,906 4,078 452 435 292 299 4,650 4,812 18 15 249 268	3,906 4,078 4,476 452 435 446 292 299 305 4,650 4,812 5,227 18 15 18 249 268 N/A	3,906 4,078 4,476 4,589 452 435 446 425 292 299 305 313 4,650 4,812 5,227 5,327 18 15 18 20 249 268 N/A N/A

* Courts not split out for years prior to 2012. County of San Mateo counts exclude Courts in 2012.

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Exhibit 22: Summary of Retired and Inactive Benefits

Retired Members	2013	2012	2011	2010	2009
Service Retirement					
Number Annual Allowance	3,446	3,355	3,242	3,108	3,032
Basic Only	\$ 100,411,000	\$ 94,234,000	\$ 87,254,000	\$ 79,007,000	\$ 73,038,000
COLA	\$ 26,594,000	\$ 24,748,000	\$ 23,212,000	\$ 22,542,000	\$ 22,964,000
Total	\$ 127,005,000	\$ 118,982,000	\$ 110,466,000	\$ 101,549,000	\$ 96,002,000
Average Monthly Payment	\$ 3,071	\$ 2,955	\$ 2,839	\$ 2,723	\$ 2,639
Disability Retirement					
Number	393	374	370	365	369
Annual Allowance					
Basic Only	\$ 10,733,000	\$ 9,909,000	\$ 9,414,000	\$ 8,988,000	\$ 8,722,000
COLA	\$ 3,564,000	\$ 3,225,000	\$ 3,005,000	\$ 2,926,000	\$ 3,070,000
Total	\$ 14,297,000	\$ 13,134,000	\$ 12,419,000	\$ 11,914,000	\$ 11,792,000
Average Monthly Payment	\$ 3,032	\$ 2,927	\$ 2,797	\$ 2,720	\$ 2,663
Beneficiaries					
Number	559	546	535	529	534
Annual Allowance					
Basic Only	\$ 7,668,000	\$ 7,235,000	\$ 6,672,000	\$ 6,309,000	\$ 6,052,000
COLA	\$ 5,804,000	\$ 5,494,000	\$ 5,118,000	\$ 5,116,000	\$ 5,206,000
Total	\$ 13,472,000	\$ 12,729,000	\$ 11,790,000	\$ 11,425,000	\$ 11,258,000
Average Monthly Payment	\$ 2,008	\$ 1,943	\$ 1,836	\$ 1,800	\$ 1,757
Total Retired Members					
Number Annual Allowance	4,398	4,275	4,147	4,002	3,935
Basic Only	\$ 118,812,000	\$ 111,378,000	\$ 103,340,000	\$ 94,304,000	\$ 87,812,000
COLA	\$ 35,962,000	\$ 33,467,000	\$ 31,335,000	\$ 30,584,000 \$ 30,584,000	\$ 31,240,000
Total	\$ 35,962,000 \$ 154,774,000	\$ 33,467,000 \$ 144,845,000	\$ 134,675,000	\$ 124,888,000	\$ 31,240,000 \$ 119,052,000
Average Monthly Payment	\$ 2,933	\$ 2,823	\$ 2,706	\$ 2,601	\$ 119,052,000 \$ 2,521
Inactive Members	1,306	1,212	1,190	1,207	1,230

The data in the table above originates from PensionGold, SamCERA's retirement benefit administration system.



Exhibit 23a: Summary of Assumptions

Assumptions & Methods for Most Recent Actuarial Valuation

June 30, 2013
Entry Age
Level Percent of Payroll
Original UAAL as of June 30, 2008 is amortized over 15 years as of the valuation date. Future actuarial gains and losses are amortized over new 15-year periods (including the change in UAAL as of June 30, 2013). This is referred to as 15-year layered amortization.
5-year smoothed market with 20% corridor
 7.50% 3.25% 3.75% 4.95% 3.75% 1.20% (actual rates vary by service) Shown on following page Shown in Appendix A



Exhibit 23b: Summary of Assumptions

Probability of Separation During Active Service

Years of	Other Ter	minations		Disal	oilitv	Death wh	ile Active	Service
Service	Ordinary	Vested	Age	Ordinary	Service	Ordinary	Service	Retirement
General Plan	1. 2. 4. 5 & 7 N	Aale Members			-			
0	0.1300	0.0000	20	0.0002	0.0004	0.0003	0.0000	0.0000
5	0.0285	0.0348	30	0.0003	0.0004	0.0004	0.0000	0.0000
10	0.0172	0.0238	40	0.0006	0.0010	0.0009	0.0000	0.0000
15	0.0099	0.0191	50	0.0010	0.0016	0.0017	0.0000	0.0500
20	0.0040	0.0150	60	0.0015	0.0022	0.0036	0.0000	0.1500
30 & Above	0.0000	0.0000	70	0.0000	0.0000	0.0000	0.0000	1.0000
General Plan	1, 2, 4 5 & 7 F	emale Members						
0	0.1200	0.0000	20	0.0002	0.0003	0.0002	0.0000	0.0000
5	0.0285	0.0348	30	0.0002	0.0004	0.0002	0.0000	0.0000
10	0.0153	0.0212	40	0.0004	0.0007	0.0006	0.0000	0.0000
15	0.0088	0.0172	50	0.0012	0.0017	0.0013	0.0000	0.0400
20	0.0040	0.0150	60	0.0019	0.0029	0.0030	0.0000	0.1500
30 & Above	0.0000	0.0000	70	0.0000	0.0000	0.0000	0.0000	1.0000
General Plan	3 Male Memb	ers						
0	0.1300	0.0000	20	0.0000	0.0000	0.0003	0.0000	0.0000
5	0.0285	0.0348	30	0.0000	0.0000	0.0004	0.0000	0.0000
10	0.0172	0.0238	40	0.0000	0.0000	0.0009	0.0000	0.0000
15	0.0099	0.0191	50	0.0000	0.0000	0.0017	0.0000	0.0000
20	0.0040	0.0150	60	0.0000	0.0000	0.0036	0.0000	0.0300
30 & Above	0.0000	0.0000	70	0.0000	0.0000	0.0000	0.0000	1.0000
General Plan								
0	0.1200	0.0000	20	0.0000	0.0000	0.0002	0.0000	0.0000
5	0.0285	0.0348	30	0.0000	0.0000	0.0002	0.0000	0.0000
10	0.0153	0.0212	40	0.0000	0.0000	0.0006	0.0000	0.0000
15	0.0088	0.0172	50	0.0000	0.0000	0.0013	0.0000	0.0000
20	0.0040	0.0150	60	0.0000	0.0000	0.0030	0.0000	0.0400
30 & Above	0.0000	0.0000	70	0.0000	0.0000	0.0000	0.0000	1.0000
		1, 2, 4, 5 & 7 Male N						
0	0.0700	0.0000	20	0.0000	0.0015	0.0003	0.0010	0.0000
5	0.0082	0.0151	30	0.0000	0.0018	0.0004	0.0010	0.0000
10	0.0050	0.0105	40	0.0000	0.0028	0.0009	0.0010	0.0000
15	0.0016	0.0094	50	0.0000	0.0044	0.0017	0.0010	0.1500
20 & Above	0.0000	0.0000	60	0.0000	0.0000	0.0036	0.0010	1.0000
			70	0.0000	0.0000	0.0000	0.0000	1.0000
		1, 2, 4, 5 & 7 Femal			0.0045		0.0040	0.0000
0	0.0700	0.0000	20	0.0000	0.0015	0.0002	0.0010	0.0000
5	0.0082	0.0151	30	0.0000	0.0018	0.0003	0.0010	0.0000
10	0.0050	0.0105	40	0.0000	0.0028	0.0007	0.0010	0.0000
15	0.0016	0.0094	50	0.0000	0.0044	0.0017	0.0010	0.1500
20 & Above	0.0000	0.0000	60 70	0.0000	0.0000	0.0039	0.0010	1.0000
Cofety and Dr	abation Dian	C Mala Manahana	70	0.0000	0.0000	0.0000	0.0000	1.0000
		6 Male Members	20	0.0000	0.0015	0.0002	0.0010	0.0000
0 5	0.0700 0.0082	0.0000 0.0151	20 30	0.0000 0.0000	0.0015 0.0018	0.0003 0.0004	0.0010 0.0010	0.0000 0.0000
5 10	0.0082	0.0105	30 40	0.0000	0.0018	0.0004	0.0010	0.0000
15	0.0030	0.0094	40 50	0.0000	0.0028	0.0009	0.0010	0.0500
20 & Above	0.0000	0.00094	60	0.0000	0.00044	0.0036	0.0010	1.0000
	0.0000	0.0000	70	0.0000	0.0000	0.0000	0.0000	1.0000
Safety and Pr	obation Plan	6 Female Members		0.0000	0.0000	0.0000	0.0000	1.0000
	0.0700	0.0000	20	0.0000	0.0015	0.0002	0.0010	0.0000
5	0.0700	0.0000	30	0.0000	0.0018	0.0002	0.0010	0.0000
10	0.0050	0.0105	40	0.0000	0.0028	0.0007	0.0010	0.0000
15	0.0030	0.0094	40 50	0.0000	0.0028	0.0007	0.0010	0.0500
20 & Above	0.0000	0.0004	60	0.0000	0.00044	0.0039	0.0010	1.0000
	0.0000	0.0000	70	0.0000	0.0000	0.0000	0.0000	1.0000
				0.0000	0.0000	0.0000	0.0000	1.0000



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Appendix A: Actuarial Procedures and Assumptions



The actuarial procedures and assumptions used in the valuation are described in this section. The demographic assumptions were reviewed and changed as a result of the 2011 Investigation of Experience Study. New economic assumptions were adopted for use in the 2012 actuarial valuation.

The actuarial assumptions used in the valuations are intended to estimate the future experience of the members of SamCERA and of SamCERA itself in areas that affect the projected benefit flow and anticipated investment earnings. Any variations in future experience from that expected from these assumptions will result in corresponding changes in the estimated costs of SamCERA's benefits.

Table A-1 summarizes the assumptions. The mortality rates are taken from the sources listed.

Tables A-2 and A-3 show how members are expected to leave retired status due to death.

Table A-4 presents the probability of refund of contributions upon termination of employment while vested.

Table A-5 presents the expected annual percentage increase in salaries.

Tables A-6 to A-11 present the probabilities a member will leave the system for various reasons.

NOTE: Assumptions for Probation members are assumed to be the same as Safety members unless otherwise noted.



Actuarial Cost Method

The actuarial valuation is prepared using the entry age actuarial cost method (CERL 31453.5). Under the principles of this method, the actuarial present value of the projected benefits of each individual included in the valuation is allocated as a level percentage of the individual's projected compensation between entry age and assumed exit (until maximum retirement age).

For members who transferred from Plan 3 to another General plan, entry age is based on the transfer date.

The portion of this actuarial present value allocated to a valuation year is called the normal cost. The portion of this actuarial present value not provided for at a valuation date by the sum of (a) the actuarial value of the assets, and (b) the actuarial present value of future normal costs is called the Unfunded Actuarial Accrued Liability (UAAL). The UAAL as of June 30, 2008 is amortized as a level percentage of the projected salaries of present and future members of SamCERA over the remaining period from the valuation date to June 30, 2023. This is commonly referred to as a "closed amortization method". Actuarial gains and losses after the June 30, 2008 valuation are amortized over new closed 15-year periods from their respective valuation dates.

Beginning with the June 30, 2010 actuarial valuation, the San Mateo County Mosquito and Vector Control District adopted the same "enhanced" benefit formula that applies to Plan 1, 2 & 4 County General members and the same member rates currently being paid by County General members from those plans. However, because the Mosquito and Vector Control District does not participate in cost sharing on the member rates, it will have a separate normal cost rate and expected member contribution rate from the County General group.

The normal cost rate is calculated separately for County General and for the Mosquito and Vector Control District. These normal cost rates will differ from each other for two reasons:

- The demographics within the two groups will vary (specifically, the groups will have different average entry ages), and
- The expected refund of contributions, which is a component of the normal cost, will differ between the County and the Mosquito and Vector Control District, since the District does not participate in cost sharing on the member rates.

Records and Data	The data used in this valuation consist of financial information and the age, service, and income records for active and inactive members and their survivors. All of the data were supplied by SamCERA and are accepted for valuation purposes without audit.
Replacement of Terminated Members	The ages and relative salaries at entry of future members are assumed to follow a new entrant distribution based on the pattern of current members. Under this assumption, the normal cost rates for active members will remain fairly stable in future years unless there are changes in the governing law, the actuarial assumptions or the pattern of the new entrants.
Growth in Membership	For benefit determination purposes, no growth in the membership of SamCERA is assumed. For funding purposes, if amortization is required, the total payroll of covered members is assumed to grow due to the combined effects of future wage increases of current active members and the replacement of the current active members by new employees. No growth in the total number of active members is assumed.
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 after retirement.
Internal Revenue Code Section 401(a)(17)	The Internal Revenue Code Section 401(a)(17) maximum compensation limitation is not reflected in the valuation for funding purposes. Any limitation is reflected in a member's benefit after retirement.
Employer Contributions	The employer contribution rate is set by the Retirement Board based on actuarial valuations.
Member Contributions	The member contribution rates vary by entry age and are described in the law. Code references are shown in Appendix B of the valuation report. The methods and assumptions used are detailed later in this section.
	The individual member rates by entry age, plan and class are illustrated in Appendix D of the valuation report.
Valuation of Assets	The assets are valued using a five-year smoothed method based on the difference between the expected market value and the actual market value of the assets as of the valuation date. The expected market value is the prior year's market value increased with the net increase in the cash flow of funds, all increased with interest during the past fiscal year at the expected investment return rate assumption.



Investment Earnings and Expenses

The future investment earnings of the assets of SamCERA are assumed to accrue at an annual rate of 7.50% compounded annually, net of both investment and administrative expenses. This rate was adopted effective June 30, 2012.

Postretirement Benefit Increases

Postretirement increases are described in Appendix B. Assumed increases for valuation purposes are:

	General	Safety	Probation
Plan 1	3.25%	3.25%	2.90%
Plan 2	2.65%	2.65%	2.65%
Plan 3	0.00%	N/A	N/A
Plans 4, 5 & 7	1.90%	1.90%	1.90%
Plan 6	N/A	1.90%	1.90%

Assumed Plan 1 General and Safety COLAs are set at the inflation (CPI) assumption of 3.25% per year. Since Plan 2 does not have a COLA bank, it is expected that increases will be limited in some years. This reduces the overall expected rate and is reflected in a lower assumed increase.

- Interest on Member Contributions The annual credited interest rate on member contributions is assumed to be 7.50% compounded semi-annually for an annualized rate of 7.64%. This rate was adopted effective June 30, 2012 for valuation purposes, although the change in member crediting was not effective until July 1, 2013.
- **Future Salaries** The rates of annual salary increase assumed for the purpose of the valuation are illustrated in Table A-5. In addition to increases in salary due to promotions and longevity, this scale includes an assumed 3.75% per annum rate of increase in the general wage level of the membership.

Increases are assumed to occur mid-year. The mid-year timing reflects that salary increases occur throughout the year, or on average mid-year.

SamCERA supplied two types of compensation data: 1) pensionable pay from the most recent bi-weekly pay period; and 2) pensionable pay from the prior year. We annualized by bi-weekly pay (by multiplying by 26) and then used the greater of the two amounts.

Social Security Wage Base Plan 3 members have their benefits offset by an assumed Social Security Benefit. For valuation funding purposes, we need to project the Social Security Benefit. We assume the current Social Security provisions will continue and the annual Wage Base will increase at the rate of 3.25% per year. Note, statutory provisions describe how to compute a member's offset amount at time of termination or retirement.

Retirement	The retirement rates vary by age and are shown by plan in Tables A-6 through A-11.			
	and all Safety me to retire immediat to or greater than assumed to retire	bers who attain or who have attained age 70 ombers who have attained age 60 are assumed tely. Additionally, if a member's benefit is equal the 100% of compensation limit, they are also immediately. For purposes of the valuation, nent is assumed at:		
	Plan 7) Age 67 with 4 Any age with Plans 5 and 6 Age 55 with 3 Age 55 with 3	8 years of service (General, except Plan 3 and 0 years of service (General Plan 7) 33 years of service (Safety & Probation, except 3) 33 years of service (Safety & Probation Plan 5) 8 years of service (Safety & Probation Plan 6) 8 years of service (Safety & Probation Plan 7)		
	current age and: Age 55 (Gene Age 65 (Gene Age 62 (Gene	members are assumed to retire at the later of eral Members, except Plan 3 and Plan 7) eral Plan 3 Members) eral Plan 7 Members) ation and Safety members)		
	The retirement ra	tes were adopted June 30, 2011.		
Disablement		blement used in the valuation are also es A-6 through A-11.		
	The disability rate	es were adopted June 30, 2011.		
Mortality – Other Than Disabled Members	valuation for active beneficiaries. The Beneficiary mortane members. Beneficiary	tirement mortality rates are used in the ve members, members retired for service, and ese rates are illustrated in Table A-2. Ility is assumed to be the same as for healthy iciaries are assumed to be of the opposite sex, ne mortality as General members.		
	General Males	RP-2000 Healthy Combined Mortality Table for Males with adjustment for White Collar workers. Ages are set back three years.		
	Safety Males	Same as General.		
	General Females	RP-2000 Healthy Combined Mortality Table for Females with adjustment for White Collar workers. Ages are set back three years.		
	Safety Females	Same as General.		

The rates of retired mortality were adopted June 30, 2011.

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Mortality – Disabled Members	For disabled members, the mortality rates used in the valuation are illustrated in Table A-3.			
	General Males	Average of RP-2000 Healthy Combined Mortality Table for Males with adjustment for White Collar workers and the RP-2000 Disabled Annuitant Mortality Table for Males, both set back three years.		
	Safety Males	RP-2000 Healthy Combined Mortality Table for Males with adjustment for White Collar workers (minimum is 1.0%).		
	General Females	Average of RP-2000 Healthy Combined Mortality Table for Females with adjustment for White Collar workers and the RP-2000 Disabled Annuitant Mortality Table for Females, both set back three years.		
	Safety Females	RP-2000 Healthy Combined Mortality Table for Females with adjustment for White Collar workers (minimum is 1.0%).		
	The rates of morta	ality were adopted June 30, 2011.		
Other Employment Terminations	Tables A-6 to A-11 show, for all ages, the rates assumed in this valuation for future termination from active service other than for death, disability or retirement. These rates do not apply to members eligible for service retirement.			
	Terminating employees may withdraw their contributions immediately upon termination of employment and forfeit the right to further benefits, or they may leave their contributions with SamCERA. Former contributing members whose contributions are on deposit may later elect to receive a refund, may return to work or may remain inactive until becoming eligible to receive a retirement benefit under either SamCERA or a reciprocal retirement system. All terminating members who are not eligible for vested benefits are assumed to withdraw their contributions immediately.			
	The rates of term	ination were adopted June 30, 2011.		
Probability of Refund	he assumed probabilities that vested members contributions and elect a refund immediately and the probability the remaining members will ested benefit. For Plan 3, 100% of members lect a vested benefit. All non-vested members lect a refund and withdraw their contributions.			
	The probability of refund assumptions were adopted June 30 2011.			



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Probability of Eligible Survivor	For members not currently in pay status, 80% of all males and 55% of all females are assumed to have eligible survivors (spouses or qualified domestic partners). Survivors are assumed to be three years younger than male members and three years older than female members. Survivors are assumed to be of the opposite sex as the member. There is no explicit assumption for children's benefits. We believe the survivor benefits based on this assumption are sufficient to cover children's benefits as they occur.		
Valuation of Current Deferred Members	Current non-vested members who have terminated active employment are assumed to take a refund of their contributions.		
	Current vested members who have terminated active employment are assumed to keep their accounts with SamCERA and retire as specified in this section. An adjustment is made to the salary data provided for these individuals, as it is our understanding that the salary data may not be complete in many cases. The adjustment is based on the average pay for all members of the active group divided by average pay for the deferred group. The average pay for the active group is based on the average pay over the last five-year period using the information supplied in the CAFR.		
Reciprocal Benefits	35% of future deferred vested General members and 45% of future deferred vested Safety members are assumed to immediately join a reciprocal agency. For future reciprocal members, salaries are assumed to increase at the same rate as if they had remained in active employment with SamCERA. For current deferred vested members, eligibility is based on the data supplied by SamCERA and future salaries are assumed to increase at 4.27% annually.		
Part-Time Employees	For valuation purposes, part-time employees are assumed to continue working the same number of hours in the future.		
Member Contribution Rate Assumptions	The following assumptions summarize the procedures used to compute member contribution rates based on entry age:		
	In general, the member rate is determined by the present value of the future benefit (PVFB) payable at retirement age, divided by the present value of all future salaries payable between age at entry and retirement age. For these purposes, per the CERL:		
	A. The annuity factor used for General members is based on a 33% / 67% blend of the male and female annuity factors using current valuation assumptions and no COLA. For Safety members it is based on an 83% / 17% blend of the male and female annuity factors using current valuation assumptions.		

Member Contribution Rate Assumptions (continued)

- B. The annuity factor used in determining the present value of future benefits (PVFB) at entry age is equal to the life only annuity factor at 7.50%.
- C. The Final Compensation is based on the salary paid in the year prior to attaining the retirement age.

Example: For a Plan 4 Member who enters at age 54 or earlier, the Final Compensation at retirement (age 55) will be the monthly average of the annual salary for age 54.

- D. For purposes of calculating the value of the member's future contribution, interest is assumed to be credited at 7.50% semiannually (7.64% annual rate).
- E. Member Rates are assumed to increase with entry age, except in Plan 7. There are a few exceptions at the higher entry ages where the calculated rate is less than the previous entry age. In these cases the member contribution rate is adjusted so that it is no less than the value for the previous entry age.
- F. Member Rates for members of the California Nurses Association, members of the Union of American Physicians and Dentists and members of the Probation and Detention Association in Plans 1, 2, and 4 are loaded to account for a 25% COLA share. The COLA loads are applied to the otherwise applicable basic member rates, prior to the addition of cost-sharing. The loads were determined based on 2012 information and were applied as follows:

Plan 1 General members: 20.87% load Plan 2 General members: 16.40% load Plan 4 General members: 11.18% load

Plan 1 Probation members: 31.29% load Plan 2 Probation members: 31.29% load Plan 4 Probation members: 20.39% load

G. General members rehired on or after August 7, 2011, Safety members rehired on or after January 8, 2012 and Probation members rehired on or after July 10, 2011 in Plans 1, 2, and 4 are loaded to account for a 50% COLA share. The COLA loads are applied to the otherwise applicable basic member rates, prior to the addition of cost-sharing. The loads were determined based on 2012 information and were applied as follows:

Plan 1 General members: 41.75% load Plan 2 General members: 32.79% load Plan 4 General members: 22.36% load



Member Contribution Rate Assumptions (continued) Plan 1 Safety members: 62.54% load Plan 2 Safety members: 50.00% load Plan 4 Safety members: 32.81% load

Plan 1 Probation members: 62.57% load Plan 2 Probation members: 62.57% load Plan 4 Probation members: 40.78% load

H. Member rates for members in Plans 5 and 6 are loaded to account for 50% COLA share. The COLA loads are applied to the otherwise applicable basic member rates, prior to the addition of cost-sharing where applicable. The loads were determined based on 2012 information and were applied as follows:

Plan 5 General members: 21.30% load

Plan 5 Probation members: 37.02% load Plan 6 Probation members: 33.36% load

Plan 5 Safety members: 30.07% load Plan 6 Safety members: 26.88% load



Table A-1: Summary of Valuation Assumptions as of June 30, 2013

I.	А. В. С.	onomic assumptions General wage increases Investment earnings Growth in active member CPI inflation assumption		3.75% 7.50% 0.00% 3.25%
II.	А. В. С.	mographic assumptions Salary increases due to s Retirement Disablement Mortality for active memb		Table A-5 Tables A-6 to A-11 Tables A-6 to A-11 Tables A-6 to A-11
		Basis RP-2000 Employ Class of Members	ees Table with age adjustments: Age <u>Adjustment</u>	
		General – Males General – Females	-3 years -3 years	
		Safety – Males Safety – Females	-3 years -3 years	
	E.	Mortality for active memb service retired members?		Table A-2
		Basis – RP-2000 Healthy adjustment for White Col	/ Combined Mortality Table with lar workers:	
		Class of Members	Age <u>Adjustment</u>	
		General – Males General – Females	-3 years -3 years	

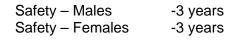




Table A-1:Summary of Valuation Assumptions as of June 30, 2013
(continued)

F. Mortality among disabled members* Table A-3

Basis – Average of RP-2000 Healthy Combined Mortality Table with adjustment for White Collar workers and RP-2000 Disabled Annuitant Mortality Table:

Class of Members	Age Adjustment	<u>Rate</u>
General – Males	-3 years	None
General – Females	-3 years	None

Basis – RP-2000 Healthy Combined Mortality Table with adjustment for White Collar workers:

<u>Class of Members</u>	Age <u>Adjustment</u>	Minimum <u>Rate</u>
Safety – Males	none	1.00%
Safety – Females	none	0.40%

G.	Mortality for beneficiaries*	Table A-2			
	Basis – Beneficiaries are assumed to be of the opposite sex and have the same mortality as General members.				
Η.	Other terminations of employment	Tables A-6 to A-11			
I.	Refund of contributions on vested termination	Table A-4			
	* The current mortality assumptions contain a margin to account for expected future mortality improvement. Refer to the 2011 Investigation				

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of Experience Report for details.

Table A-2: Mortality for Members Retired for Service

Age	General Male	General Female	Safety Male	Safety Female
20	0.030%	0.018%	0.030%	0.018%
25	0.037%	0.019%	0.037%	0.019%
30	0.038%	0.022%	0.038%	0.022%
35	0.043%	0.036%	0.043%	0.036%
40	0.071%	0.053%	0.071%	0.053%
45	0.103%	0.076%	0.103%	0.076%
50	0.158%	0.123%	0.158%	0.123%
55	0.250%	0.192%	0.250%	0.192%
60	0.409%	0.332%	0.409%	0.332%
65	0.731%	0.599%	0.731%	0.599%
70	1.404%	1.094%	1.404%	1.094%
75	2.387%	1.878%	2.387%	1.878%
80	4.236%	3.155%	4.236%	3.155%
85	7.493%	5.337%	7.493%	5.337%
90	13.019%	9.248%	13.019%	9.248%
30	13.01370	3.240 /0	13.01370	3.24070



Table A-3: Mortality for Members Retired for Disability

Age	General Male	General Female	Safety Male	Safety Female
AAG	Male	Temale	Wale	Temale
20	1.144%	0.382%	1.000%	0.400%
25	1.147%	0.382%	1.000%	0.400%
30	1.148%	0.384%	1.000%	0.400%
35	1.150%	0.391%	1.000%	0.400%
40	1.164%	0.399%	1.000%	0.400%
45	1.180%	0.411%	1.000%	0.400%
50	1.335%	0.509%	1.000%	0.400%
55	1.703%	0.769%	1.000%	0.400%
60	2.106%	1.099%	1.000%	0.468%
65	2.615%	1.503%	1.106%	0.865%
70	3.424%	2.114%	1.928%	1.519%
75	4.664%	3.082%	3.363%	2.572%
80	6.725%	4.555%	5.941%	4.308%
85	9.840%	6.783%	10.467%	7.419%
90	14.271%	10.350%	17.827%	12.615%



Table A-4:Immediate Refund of Contributions Upon Termination of Employment
(Excludes Plan 3)

Years of		
Service	General	Safety
0	100%	100%
1	100%	100%
2	100%	100%
3	100%	100%
4	100%	100%
5	45%	35%
6	45%	35%
7	45%	35%
8	44%	34%
9	43%	33%
10	42%	32%
11	41%	31%
12	40%	30%
13	38%	25%
14	36%	20%
15	34%	15%
16	32%	10%
17	30%	5%
18	27%	4%
19	24%	3%
20	21%	0%
21	18%	0%
22	15%	0%
23	12%	0%
24	9%	0%
25	6%	0%
26	3%	0%
27	0%	0%
28	0%	0%
29	0%	0%
30 & Up	0%	0%



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Years of	Due to Promotion	Total
Service	and Longevity	Annual Increase*
<1	6.00%	9.97%
1	4.00%	7.90%
2	3.00%	6.86%
3	2.50%	6.34%
4	2.00%	5.82%
5	1.75%	5.57%
6	1.50%	5.31%
7	1.25%	5.05%
8	1.05%	4.84%
9	0.90%	4.68%
10	0.80%	4.58%
11	0.70%	4.48%
12	0.60%	4.37%
13	0.50%	4.27%
14	0.50%	4.27%
15	0.50%	4.27%
16	0.50%	4.27%
17	0.50%	4.27%
18	0.50%	4.27%
19	0.50%	4.27%
20 or More	0.50%	4.27%

Table A-5: Annual Increase in Salary

* The total expected increase in salary is the increase due to promotions and longevity, adjusted for an assumed 3.75% per annum increase in the general wage level of the membership. The total result is compounded rather than additive.



Appendix A: Rates of Separation From Active Service Tables A-6 to A-11

A schedule of the probabilities of termination of employment due to the following causes can be found on the following pages:

Service Retirement:	Member retires after meeting age and service requirements for reasons other than disability.
Withdrawal:	Member terminates and elects a refund of member contributions, or a deferred vested retirement benefit.
Service Disability:	Member receives disability retirement; disability is service related.
Ordinary Disability:	Member receives disability retirement; disability is not service related.
Service Death:	Member dies before retirement; death is service related.
Ordinary Death:	Member dies before retirement; death is not service related.

Each rate represents the probability that a member will separate from service at each age due to the particular cause. For example, a rate of 0.0300 for a member's service retirement at age 50 means we assume that 30 out of 1,000 members who are age 50 will retire at that age.

Each table represents the detailed rates needed for each SamCERA plan by sex:

Table	A-6:	General Plan 1, 2, 4, 5 & 7 Males
	A-7:	General Plan 1, 2, 4, 5 & 7 Females
	A-8:	General Plan 3 Males
	A-9:	General Plan 3 Females

A-10: Safety and Probation Plans 1, 2, 4, 5, 6 & 7 Males
A-11: Safety and Probation Plans 1, 2, 4, 5, 6 & 7 Females



Table A-6:Rate of Separation From Active Service
General Plans 1, 2, 4, 5 & 7 – Male

Age	Service Retirement*	Service Disability	Ordinary Disability	Service Death	Ordinary Death	Years of Service	Other Terminations
	-						
18	0.0000	0.0004	0.0002	N/A	0.0003	0	0.1300
19	0.0000	0.0004	0.0002	N/A	0.0003	1	0.1100
20	0.0000	0.0004	0.0002	N/A	0.0003	2	0.0900
21	0.0000	0.0004	0.0002	N/A	0.0003	3	0.0800
22	0.0000	0.0004	0.0002	N/A	0.0003	4	0.0700
23	0.0000	0.0004	0.0002	N/A	0.0003	5	0.0633
24	0.0000	0.0004	0.0002	N/A	0.0004	6	0.0567
25	0.0000	0.0004	0.0002	N/A	0.0004	7	0.0500
26	0.0000 0.0000	0.0004 0.0004	0.0002 0.0002	N/A	0.0004 0.0004	8 9	0.0470 0.0440
27 28		0.0004		N/A	0.0004		
	0.0000		0.0002	N/A		10	0.0410
29	0.0000	0.0004	0.0003	N/A	0.0004	11	0.0380
30	0.0000	0.0004	0.0003	N/A	0.0004	12	0.0350
31	0.0000	0.0005	0.0003	N/A	0.0004	13	0.0330
32	0.0000	0.0005	0.0003	N/A	0.0004	14	0.0310
33	0.0000	0.0005	0.0004	N/A	0.0004	15	0.0290
34	0.0000	0.0006	0.0004	N/A	0.0005	16	0.0270
35	0.0000	0.0006	0.0004	N/A	0.0006	17	0.0250
36	0.0000	0.0007	0.0004	N/A	0.0006	18	0.0230
37	0.0000	0.0007	0.0005	N/A	0.0007	19	0.0210
38	0.0000	0.0008	0.0005	N/A	0.0008	20	0.0190
39	0.0000	0.0008	0.0006	N/A	0.0008	21	0.0170
40	0.0000	0.0010	0.0006	N/A	0.0009	22	0.0150
41	0.0000	0.0010	0.0007	N/A	0.0010	23	0.0140
42	0.0000	0.0011	0.0007	N/A	0.0010	24	0.0130
43	0.0000	0.0011	0.0008	N/A	0.0011	25	0.0120
44	0.0000	0.0012	0.0008	N/A	0.0011	26	0.0110
45	0.0000	0.0013	0.0009	N/A	0.0012	27	0.0100
46	0.0000	0.0014	0.0009	N/A	0.0013	28	0.0100
47	0.0000	0.0014	0.0010	N/A	0.0014	29	0.0100
48	0.0000	0.0015	0.0010	N/A	0.0015	30 & Above	0.0000
49	0.0000	0.0016	0.0010	N/A	0.0016		
50	0.0500	0.0016	0.0010	N/A	0.0017		
51	0.0450	0.0016	0.0011	N/A	0.0019		
52	0.0450	0.0017	0.0011	N/A	0.0020		
53	0.0500	0.0017	0.0012	N/A	0.0021		
54	0.0500	0.0018	0.0012	N/A	0.0023		
55	0.0600	0.0018	0.0012	N/A	0.0024		
56	0.0600	0.0019	0.0012	N/A	0.0026		
57	0.0800	0.0019	0.0013	N/A	0.0028		
58	0.1200	0.0020	0.0014	N/A	0.0030		
59	0.1200	0.0021	0.0014	N/A	0.0033		
60	0.1500	0.0022	0.0015	N/A	0.0036		
61	0.2000	0.0023	0.0015	N/A	0.0040		
62	0.3250	0.0024	0.0016	N/A	0.0044		
63	0.2500	0.0025	0.0017	N/A	0.0049		
64	0.2500	0.0026	0.0018	N/A	0.0054		
65	0.2500	0.0028	0.0018	N/A	0.0059		
66	0.3500	0.0029	0.0019	N/A	0.0065		
67	0.3500	0.0030	0.0020	N/A	0.0070		
68	0.3000	0.0031	0.0021	N/A	0.0076		
69	0.3000	0.0032	0.0022	N/A	0.0081		
70	1.0000	0.0000	0.0000	N/A	0.0000		

* 100% probability of retirement is assumed at ages 62 and above with 38 or more years of service.

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Table A-7:Rate of Separation From Active Service
General Plans 1, 2, 4, 5 & 7 – Female

18 0.0000 0.0012 N/A 0.0002 1 0.1000 19 0.0000 0.0033 0.0002 N/A 0.0002 2 0.0450 21 0.0000 0.0033 0.0002 N/A 0.0002 3 0.0750 22 0.0000 0.0033 0.0002 N/A 0.0002 4 0.0760 23 0.0000 0.0033 0.0002 N/A 0.0002 6 0.0557 24 0.0000 0.0033 0.0002 N/A 0.0002 7 0.0550 26 0.0000 0.0033 0.0002 N/A 0.0002 9 0.0416 28 0.0000 0.0033 0.0002 N/A 0.0002 11 0.0336 30 0.0000 0.0012 N/A 0.0002 14 0.0276 31 0.0000 0.0012 N/A 0.0002 14 0.0265 32 0.0000 0.0014 0.0003 N/A 0.0002 14 0.0276 32 0.0000 0.0014 0.	Age	Service Retirement*	Service Disability	Ordinary Disability	Service Death	Ordinary Death	Years of Service	Other Terminations
19 0.0000 0.0003 0.0002 N/A 0.0002 2 0.0850 21 0.0000 0.0003 0.0002 N/A 0.0002 4 0.0760 23 0.0000 0.0003 0.0002 N/A 0.0002 6 0.0633 24 0.0000 0.0003 0.0002 N/A 0.0002 6 0.0567 25 0.0000 0.0003 0.0002 N/A 0.0002 8 0.0445 27 0.0000 0.0003 0.0002 N/A 0.0002 1 0.0336 28 0.0000 0.0003 0.0002 N/A 0.0002 1 0.0336 29 0.0000 0.0003 0.0002 N/A 0.0002 14 0.0326 30 0.0000 0.0014 0.0002 N/A 0.0002 14 0.0226 31 0.0000 0.0014 0.0002 N/A 0.0002 14 0.0226 33 0.0000 0.0014 0.0003 N/A 0.0003 16 0.0226 <t< td=""><td>18</td><td>0.0000</td><td>0.0003</td><td>0.0002</td><td>N/A</td><td>0.0002</td><td>0</td><td>0.1200</td></t<>	18	0.0000	0.0003	0.0002	N/A	0.0002	0	0.1200
20 0.0000 0.0003 0.0002 N/A 0.0002 3 0.0750 22 0.0000 0.0003 0.0002 N/A 0.0002 4 0.0750 23 0.0000 0.0003 0.0002 N/A 0.0002 5 0.0633 24 0.0000 0.0003 0.0002 N/A 0.0002 6 0.0567 25 0.0000 0.0003 0.0002 N/A 0.0002 8 0.0455 26 0.0000 0.0003 0.0002 N/A 0.0002 10 0.0385 28 0.0000 0.0003 0.0002 N/A 0.0002 11 0.0326 30 0.0000 0.0004 0.0002 N/A 0.0002 13 0.0275 31 0.0000 0.0004 0.0002 N/A 0.0002 14 0.0266 34 0.0000 0.0004 0.0003 N/A 0.0003 16 0.0276 35 0.0000 </td <td></td> <td>0.0000</td> <td></td> <td>0.0002</td> <td></td> <td>0.0002</td> <td></td> <td>0.1000</td>		0.0000		0.0002		0.0002		0.1000
21 0.0000 0.0003 0.0002 N/A 0.0002 4 0.0700 23 0.0000 0.0003 0.0002 N/A 0.0002 5 0.0633 24 0.0000 0.0003 0.0002 N/A 0.0002 7 0.0560 25 0.0000 0.0003 0.0002 N/A 0.0002 8 0.0455 27 0.0000 0.0003 0.0002 N/A 0.0002 10 0.0365 28 0.0000 0.0003 0.0002 N/A 0.0002 11 0.0320 30 0.0000 0.0004 0.0002 N/A 0.0002 13 0.0270 31 0.0000 0.0004 0.0002 N/A 0.0002 13 0.0270 32 0.0000 0.0004 0.0003 N/A 0.0003 15 0.0260 34 0.0000 0.0004 0.0003 N/A 0.0003 17 0.2550 35 0.0000 0.0005 0.0004 N/A 0.0006 23 0.0170								
22 0.0000 0.0003 0.0002 N/A 0.0002 5 0.0633 24 0.0000 0.0003 0.0002 N/A 0.0002 6 0.0567 25 0.0000 0.0003 0.0002 N/A 0.0002 7 0.0500 26 0.0000 0.0003 0.0002 N/A 0.0002 8 0.0455 27 0.0000 0.0003 0.0002 N/A 0.0002 10 0.3365 28 0.0000 0.0004 0.0002 N/A 0.0002 11 0.3365 30 0.0000 0.0004 0.0002 N/A 0.0002 14 0.0275 31 0.0000 0.0004 0.0002 N/A 0.0003 15 0.0265 34 0.0000 0.0004 0.0003 N/A 0.0003 16 0.0265 35 0.0000 0.0005 0.0003 N/A 0.0005 20 0.0190 36 0.0000<								
23 0.0000 0.0003 0.0002 N/A 0.0002 5 0.0667 25 0.0000 0.0003 0.0002 N/A 0.0002 7 0.0500 26 0.0000 0.0003 0.0002 N/A 0.0002 9 0.0455 27 0.0000 0.0003 0.0002 N/A 0.0002 10 0.0365 28 0.0000 0.0003 0.0002 N/A 0.0002 10 0.0365 29 0.0000 0.0003 0.0002 N/A 0.0002 12 0.0275 31 0.0000 0.0004 0.0002 N/A 0.0002 14 0.0265 32 0.0000 0.0004 0.0003 N/A 0.0003 16 0.0255 34 0.0000 0.0005 0.0003 N/A 0.0004 18 0.0251 36 0.0000 0.0006 0.0004 N/A 0.0005 20 0.0170 38 0.0000 0.0006 0.0005 N/A 0.0006 23 0.0140 14								
24 0.0000 0.0003 0.0002 N/A 0.0002 7 0.0500 26 0.0000 0.0003 0.0002 N/A 0.0002 8 0.0455 27 0.0000 0.0003 0.0002 N/A 0.0002 10 0.0365 29 0.0000 0.0003 0.0002 N/A 0.0002 11 0.0326 30 0.0000 0.0004 0.0002 N/A 0.0002 13 0.0275 31 0.0000 0.0004 0.0002 N/A 0.0002 14 0.0266 33 0.0000 0.0004 0.0003 N/A 0.0003 15 0.0266 34 0.0000 0.0005 0.0003 N/A 0.0003 17 0.0250 35 0.0000 0.0005 0.0003 N/A 0.0004 18 0.0230 36 0.0000 0.0006 0.0004 N/A 0.0006 22 0.0150 37 0.000							5	
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27 0.0000 0.0003 0.0002 N/A 0.0002 10 0.0365 28 0.0000 0.0003 0.0002 N/A 0.0002 11 0.0320 30 0.0000 0.0004 0.0002 N/A 0.0002 12 0.0275 31 0.0000 0.0004 0.0002 N/A 0.0002 14 0.0225 32 0.0000 0.0004 0.0003 N/A 0.0003 16 0.0225 33 0.0000 0.0004 0.0003 N/A 0.0003 17 0.0220 34 0.0000 0.0005 0.0003 N/A 0.0003 17 0.0220 36 0.0000 0.0005 0.0004 N/A 0.0005 20 0.0190 38 0.0000 0.0006 0.0004 N/A 0.0006 22 0.0170 40 0.0000 0.0007 0.0006 N/A 0.0006 23 0.1140 41 0.0000 0.0007 0.0006 N/A 0.0006 24 0.0170	26	0.0000	0.0003	0.0002		0.0002	8	0.0455
29 0.0000 0.0003 0.0002 N/A 0.0002 11 0.0320 30 0.0000 0.0004 0.0002 N/A 0.0002 13 0.0275 31 0.0000 0.0004 0.0002 N/A 0.0002 14 0.0265 32 0.0000 0.0004 0.0003 N/A 0.0003 16 0.0255 34 0.0000 0.0005 0.0003 N/A 0.0003 17 0.0250 36 0.0000 0.0005 0.0003 N/A 0.0004 18 0.0230 37 0.0000 0.0005 0.0004 N/A 0.0005 20 0.1190 38 0.0000 0.0005 0.0004 N/A 0.0005 21 0.1170 40 0.0000 0.0007 0.0004 N/A 0.0006 22 0.1170 41 0.0000 0.0007 0.0004 N/A 0.0006 24 0.0130 43 0.0000 0.0007 0.0006 N/A 0.0009 28 0.1100		0.0000	0.0003	0.0002	N/A	0.0002	9	0.0410
30 0.0000 0.0004 0.0002 N/A 0.0002 12 0.0276 31 0.0000 0.0004 0.0002 N/A 0.0002 14 0.0265 33 0.0000 0.0004 0.0003 N/A 0.0003 15 0.0255 34 0.0000 0.0005 0.0003 N/A 0.0003 17 0.0250 35 0.0000 0.0005 0.0003 N/A 0.0004 18 0.0200 37 0.0000 0.0006 0.0004 N/A 0.0005 20 0.0190 38 0.0000 0.0006 0.0004 N/A 0.0005 22 0.0170 40 0.0000 0.0007 0.0004 N/A 0.0006 23 0.0140 42 0.0000 0.0007 0.0006 N/A 0.0006 24 0.0130 43 0.0000 0.0010 0.0006 N/A 0.0009 28 0.0100 44 0.0	28	0.0000	0.0003	0.0002	N/A	0.0002	10	0.0365
30 0.0000 0.0004 0.0002 N/A 0.0002 12 0.0276 31 0.0000 0.0004 0.0002 N/A 0.0002 14 0.0265 33 0.0000 0.0004 0.0003 N/A 0.0003 15 0.0255 34 0.0000 0.0005 0.0003 N/A 0.0003 17 0.0250 35 0.0000 0.0005 0.0003 N/A 0.0004 18 0.0200 37 0.0000 0.0006 0.0004 N/A 0.0005 20 0.0190 38 0.0000 0.0006 0.0004 N/A 0.0005 22 0.0170 40 0.0000 0.0007 0.0004 N/A 0.0006 23 0.0140 42 0.0000 0.0007 0.0006 N/A 0.0006 24 0.0130 43 0.0000 0.0010 0.0006 N/A 0.0009 28 0.0100 44 0.0		0.0000	0.0003	0.0002	N/A	0.0002	11	0.0320
32 0.0000 0.0004 0.0002 N/A 0.0002 14 0.0260 33 0.0000 0.0004 0.0003 N/A 0.0003 15 0.0260 34 0.0000 0.0005 0.0003 N/A 0.0003 17 0.0250 35 0.0000 0.0005 0.0003 N/A 0.0004 18 0.0230 37 0.0000 0.0006 0.0004 N/A 0.0005 20 0.0190 38 0.0000 0.0006 0.0004 N/A 0.0005 21 0.0170 40 0.0000 0.0007 0.0004 N/A 0.0006 22 0.0130 41 0.0000 0.0007 0.0005 N/A 0.0006 23 0.0140 42 0.0000 0.0008 0.0005 N/A 0.0006 24 0.0130 44 0.0000 0.0010 0.0006 N/A 0.0009 27 0.0100 45 0.0000 0.011 0.0007 N/A 0.0013 0.0101 0.0014 <tr< td=""><td></td><td>0.0000</td><td>0.0004</td><td>0.0002</td><td>N/A</td><td>0.0002</td><td>12</td><td>0.0275</td></tr<>		0.0000	0.0004	0.0002	N/A	0.0002	12	0.0275
33 0.0000 0.0004 0.0003 N/A 0.0003 15 0.0250 34 0.0000 0.0005 0.0003 N/A 0.0003 17 0.0250 35 0.0000 0.0005 0.0003 N/A 0.0004 18 0.0210 36 0.0000 0.0005 0.0004 N/A 0.0004 19 0.0210 38 0.0000 0.0006 0.0004 N/A 0.0005 20 0.0190 39 0.0000 0.0006 0.0004 N/A 0.0006 22 0.0150 40 0.0000 0.0007 0.0004 N/A 0.0006 23 0.0140 42 0.0000 0.0007 0.0005 N/A 0.0006 24 0.0130 43 0.0000 0.0008 0.0006 N/A 0.0009 27 0.0100 44 0.0000 0.0010 0.0007 N/A 0.0009 28 0.0100 45 0.0000 0.011 0.0007 N/A 0.0012 9 0.0100	31	0.0000	0.0004	0.0002	N/A	0.0002	13	0.0270
34 0.0000 0.0004 0.0003 N/A 0.0003 16 0.0255 35 0.0000 0.0005 0.0003 N/A 0.0004 18 0.0230 37 0.0000 0.0005 0.0004 N/A 0.0004 19 0.0210 38 0.0000 0.0006 0.0004 N/A 0.0005 20 0.0190 39 0.0000 0.0006 0.0004 N/A 0.0006 22 0.0150 41 0.0000 0.0007 0.0004 N/A 0.0006 23 0.0140 42 0.0000 0.0007 0.0005 N/A 0.0006 24 0.0130 43 0.0000 0.0008 0.0006 N/A 0.0008 26 0.0110 44 0.0000 0.0010 0.0007 N/A 0.0009 28 0.0100 45 0.0000 0.0011 0.0007 N/A 0.0012 29 0.0100 46 0.0000 0.0113 0.0009 28 0.0100 14 47	32	0.0000	0.0004	0.0002	N/A	0.0002	14	0.0265
35 0.0000 0.0005 0.0003 N/A 0.0003 17 0.0250 36 0.0000 0.0005 0.0003 N/A 0.0004 18 0.0230 37 0.0000 0.0006 0.0004 N/A 0.0005 20 0.0190 38 0.0000 0.0006 0.0004 N/A 0.0005 21 0.0170 40 0.0000 0.0007 0.0004 N/A 0.0006 22 0.0150 41 0.0000 0.0007 0.0004 N/A 0.0006 23 0.0140 42 0.0000 0.0007 0.0005 N/A 0.0006 24 0.0120 43 0.0000 0.0008 0.0006 N/A 0.0008 26 0.0110 44 0.0000 0.0010 0.0007 N/A 0.0009 27 0.0100 45 0.0000 0.0011 0.0007 N/A 0.0012 29 0.0100 46 0.0000 0.013 0.009 N/A 0.011 30 & Above 0.0001 <	33	0.0000	0.0004	0.0003	N/A	0.0003	15	0.0260
36 0.0000 0.0005 0.0003 N/A 0.0004 18 0.0230 37 0.0000 0.0006 0.0004 N/A 0.0005 20 0.0190 38 0.0000 0.0006 0.0004 N/A 0.0005 21 0.0190 40 0.0000 0.0007 0.0004 N/A 0.0006 23 0.0140 41 0.0000 0.0007 0.0004 N/A 0.0006 24 0.0130 42 0.0000 0.0007 0.0005 N/A 0.0006 24 0.0130 43 0.0000 0.0006 N/A 0.0007 25 0.0100 44 0.0000 0.0006 N/A 0.0009 27 0.0100 45 0.0000 0.0011 0.0007 N/A 0.0010 29 0.0100 46 0.0000 0.0015 0.0010 N/A 0.0012 22 0.0100 47 0.0000 0.0017 0.0012 N/A 0.0012 23 0.0100 48 0.0000	34	0.0000	0.0004	0.0003	N/A	0.0003	16	0.0255
37 0.0000 0.0005 0.0004 N/A 0.0004 19 0.0210 38 0.0000 0.0006 0.0004 N/A 0.0005 20 0.0190 39 0.0000 0.0007 0.0004 N/A 0.0006 22 0.0170 40 0.0000 0.0007 0.0004 N/A 0.0006 23 0.0140 42 0.0000 0.0007 0.0005 N/A 0.0006 24 0.0130 43 0.0000 0.0008 0.0005 N/A 0.0007 25 0.0120 44 0.0000 0.0008 0.0006 N/A 0.0009 27 0.0100 45 0.0000 0.0011 0.0007 N/A 0.0012 29 0.0100 46 0.0000 0.0113 0.0007 N/A 0.0011 30 & Above 0.0000 47 0.0000 0.0115 0.0010 N/A 0.0013 30 & Above 0.0000 48 0.0000 0.0123 0.0015 N/A 0.0013 1.5 1.6	35	0.0000	0.0005	0.0003	N/A	0.0003	17	0.0250
38 0.0000 0.0006 0.0004 N/A 0.0005 20 0.0190 39 0.0000 0.0006 0.0004 N/A 0.0006 22 0.0150 40 0.0000 0.0007 0.0004 N/A 0.0006 23 0.0130 41 0.0000 0.0007 0.0005 N/A 0.0006 24 0.0130 43 0.0000 0.0008 0.0005 N/A 0.0007 25 0.0120 44 0.0000 0.0008 0.0006 N/A 0.0008 26 0.0110 45 0.0000 0.0010 0.0006 N/A 0.0009 27 0.0100 46 0.0000 0.0011 0.0007 N/A 0.0010 29 0.0100 47 0.0000 0.0013 0.0007 N/A 0.0012 29 0.0100 48 0.0000 0.0117 0.012 N/A 0.0012 0.0014 52 0.0400 0.0123 0.016 N/A 0.0012 0.0014 52 0.0400 0.0025 0.014	36	0.0000	0.0005	0.0003	N/A	0.0004	18	0.0230
39 0.0000 0.0006 0.0004 N/A 0.0005 21 0.0170 40 0.0000 0.0007 0.0004 N/A 0.0006 22 0.0150 41 0.0000 0.0007 0.0005 N/A 0.0006 23 0.0140 42 0.0000 0.0007 0.0005 N/A 0.0006 24 0.0120 43 0.0000 0.0008 0.0006 N/A 0.0008 26 0.0110 44 0.0000 0.0010 0.0006 N/A 0.0009 27 0.0100 45 0.0000 0.0011 0.0007 N/A 0.0010 28 0.0100 46 0.0000 0.0015 0.0010 N/A 0.0011 30 & Above 0.0000 47 0.0000 0.0015 0.0012 N/A 0.0012 30 & Above 0.0000 48 0.0000 0.0017 0.0012 N/A 0.0014 52 0.0400 0.0022 0.014 N/A 0.0014 54 0.0500 0.0025 0.016 N/A	37	0.0000	0.0005	0.0004	N/A	0.0004	19	0.0210
40 0.0000 0.0007 0.0004 N/A 0.0006 22 0.0150 41 0.0000 0.0007 0.0005 N/A 0.0006 23 0.0140 42 0.0000 0.0008 0.0005 N/A 0.0006 24 0.0130 43 0.0000 0.0008 0.0006 N/A 0.0007 25 0.0120 44 0.0000 0.0010 0.0006 N/A 0.0009 27 0.0100 45 0.0000 0.0011 0.0007 N/A 0.0009 28 0.0100 46 0.0000 0.0011 0.0007 N/A 0.0011 30 & Above 0.0000 47 0.0000 0.0013 0.0007 N/A 0.0011 30 & Above 0.0000 48 0.0000 0.0017 0.0012 N/A 0.0012 0.0014 52 0.0400 0.0023 0.0016 N/A 0.0014 52 0.0400 0.0025 0.0016 N/A 0.0017 53 0.0600 0.0025 0.0016 N/A 0.0021 57 <td>38</td> <td>0.0000</td> <td>0.0006</td> <td>0.0004</td> <td>N/A</td> <td>0.0005</td> <td>20</td> <td>0.0190</td>	38	0.0000	0.0006	0.0004	N/A	0.0005	20	0.0190
41 0.0000 0.0007 0.0004 N/A 0.0006 23 0.0140 42 0.0000 0.0007 0.0005 N/A 0.0006 24 0.0130 43 0.0000 0.0008 0.0006 N/A 0.0007 25 0.0120 44 0.0000 0.0010 0.0006 N/A 0.0009 27 0.0100 45 0.0000 0.0011 0.0007 N/A 0.0009 28 0.0100 46 0.0000 0.0011 0.0007 N/A 0.0011 29 0.0100 47 0.0000 0.0015 0.0010 N/A 0.0011 30 & Above 0.0000 48 0.0000 0.0015 0.0012 N/A 0.0013 30 & Above 0.0000 49 0.0000 0.0017 0.012 N/A 0.0014 53 0.0400 0.0022 0.014 N/A 0.0014 53 0.0400 0.0023 0.015 N/A 0.0014 54 0.500 0.025 0.017 N/A 0.0021 57 0.0800	39	0.0000	0.0006	0.0004	N/A	0.0005	21	0.0170
42 0.0000 0.0007 0.0005 N/A 0.0006 24 0.0130 43 0.0000 0.0008 0.0006 N/A 0.0009 25 0.0110 44 0.0000 0.0010 0.0006 N/A 0.0009 27 0.0100 45 0.0000 0.0010 0.0007 N/A 0.0009 28 0.0100 46 0.0000 0.0011 0.0007 N/A 0.0010 29 0.0100 47 0.0000 0.0013 0.0009 N/A 0.0011 30 & Above 0.0000 48 0.0000 0.0017 0.012 N/A 0.0012 0.0001 48 0.0000 0.0017 0.014 0.0013 0.0014 0.0013 0.0014 0.0014 0.0017 53 0.4000 0.0022 0.0016 N/A 0.0017 54 0.0500 0.0025 0.0016 N/A 0.0017 54 0.0500 0.0025 0.0016 N/A 0.0021 55 59 0.1200 0.0027 0.0018 N/A 0.0023 55 59 <td>40</td> <td>0.0000</td> <td>0.0007</td> <td>0.0004</td> <td>N/A</td> <td>0.0006</td> <td>22</td> <td>0.0150</td>	40	0.0000	0.0007	0.0004	N/A	0.0006	22	0.0150
43 0.0000 0.0008 0.0005 N/A 0.0007 25 0.0120 44 0.0000 0.0008 0.0006 N/A 0.0008 26 0.0110 45 0.0000 0.0010 0.0006 N/A 0.0009 27 0.0100 46 0.0000 0.0011 0.0007 N/A 0.0009 28 0.0100 47 0.0000 0.0013 0.0009 N/A 0.0011 29 0.0100 48 0.0000 0.0015 0.0010 N/A 0.0013 30 & Above 0.0000 49 0.0000 0.0017 0.0012 N/A 0.0013 0.0013 0.0013 0.014 0.0113 0.0001 0.0013 0.014 0.0014 1.11	41	0.0000	0.0007	0.0004	N/A	0.0006	23	0.0140
44 0.0000 0.0008 0.0006 N/A 0.0009 27 0.0110 45 0.0000 0.0010 0.0007 N/A 0.0009 28 0.0100 46 0.0000 0.0011 0.0007 N/A 0.0010 29 0.0100 47 0.0000 0.0013 0.0009 N/A 0.0011 30 & Above 0.0000 48 0.0000 0.0015 0.0010 N/A 0.0012 0.0000 0.0015 0.0012 50 0.0400 0.0017 0.0012 N/A 0.0014 VA 0.0016 51 0.0400 0.0022 0.0014 N/A 0.0017 VA 0.0016 53 0.0400 0.0023 0.0016 N/A 0.0021 VA VA VA VA 54 0.0500 0.0025 0.0016 N/A 0.0021 VA	42	0.0000	0.0007	0.0005	N/A	0.0006	24	0.0130
45 0.0000 0.0010 0.0006 N/A 0.0009 27 0.0100 46 0.0000 0.0011 0.0007 N/A 0.0009 28 0.0100 47 0.0000 0.0011 0.0007 N/A 0.0011 29 0.0100 48 0.0000 0.0015 0.0010 N/A 0.0012 30 & Above 0.0000 49 0.0000 0.0017 0.0012 N/A 0.0013	43	0.0000	0.0008	0.0005	N/A	0.0007	25	0.0120
46 0.0000 0.0010 0.0007 N/A 0.0009 28 0.0100 47 0.0000 0.0011 0.0007 N/A 0.0010 29 0.0100 48 0.0000 0.0015 0.0010 N/A 0.0011 30 & Above 0.0000 49 0.0000 0.0017 0.0012 N/A 0.0013 30 & Above 0.0000 50 0.0400 0.0019 0.0013 N/A 0.0014	44	0.0000	0.0008	0.0006	N/A	0.0008		0.0110
47 0.0000 0.0011 0.0007 N/A 0.0010 29 0.0100 48 0.0000 0.0013 0.0009 N/A 0.0011 30 & Above 0.0000 49 0.0000 0.0017 0.0012 N/A 0.0013 30 & Above 0.0000 50 0.0400 0.0017 0.0012 N/A 0.0013 1	45	0.0000	0.0010	0.0006		0.0009		0.0100
48 0.0000 0.0013 0.0009 N/A 0.0011 30 & Above 0.0000 49 0.0000 0.0015 0.0010 N/A 0.0012 50 0.0400 0.0017 0.0012 N/A 0.0013 51 0.0400 0.0019 0.0013 N/A 0.0014 52 0.0400 0.0022 0.0014 N/A 0.0016 53 0.0400 0.0023 0.0015 N/A 0.0017 54 0.0500 0.0023 0.0016 N/A 0.0021 56 0.0600 0.0025 0.0017 N/A 0.0023 56 0.0600 0.0025 0.0017 N/A 0.0023 57 0.0800 0.0026 0.0018 N/A 0.0028 58 0.1200 0.0029 0.0018 N/A 0.0028 60 0.1500 0.0029 0.0019 N/A 0.0038 61 0.2000 0.0029 0.0020 N/A 0.0039 62 0.3000 0.0030 0.0020 N/A	46	0.0000	0.0010	0.0007		0.0009		0.0100
49 0.0000 0.0015 0.0010 N/A 0.0012 50 0.0400 0.0017 0.0012 N/A 0.0013 51 0.0400 0.0022 0.0014 N/A 0.0016 52 0.0400 0.0023 0.0015 N/A 0.0017 54 0.0500 0.0023 0.0016 N/A 0.0018 55 0.0600 0.0025 0.0017 N/A 0.0021 56 0.0600 0.0025 0.0017 N/A 0.0021 57 0.0800 0.0026 0.0018 N/A 0.0023 58 0.1200 0.0027 0.0018 N/A 0.0025 59 0.1200 0.0029 0.0018 N/A 0.0028 60 0.1500 0.0029 0.0020 N/A 0.0030 61 0.2500 0.0030 0.0020 N/A 0.0036 63 0.2500 0.0030 0.0020 N/A 0.0043 65 0.3000 0.0030 0.0020 N/A 0.0043 <td< td=""><td></td><td></td><td>0.0011</td><td>0.0007</td><td></td><td></td><td></td><td>0.0100</td></td<>			0.0011	0.0007				0.0100
50 0.0400 0.0017 0.0012 N/A 0.0013 51 0.0400 0.0022 0.0014 N/A 0.0016 52 0.0400 0.0023 0.0015 N/A 0.0017 53 0.0400 0.0023 0.0016 N/A 0.0017 54 0.0500 0.0023 0.0016 N/A 0.0020 56 0.0600 0.0025 0.0016 N/A 0.0021 57 0.0800 0.0026 0.0018 N/A 0.0023 58 0.1200 0.0027 0.0018 N/A 0.0025 59 0.1200 0.0028 0.018 N/A 0.0028 60 0.1500 0.0029 0.0020 N/A 0.0033 61 0.2000 0.0030 0.0020 N/A 0.0033 62 0.3000 0.0030 0.0020 N/A 0.0036 63 0.2500 0.0301 0.0020 N/A 0.0043 65 0.3000 0.0030 0.0020 N/A 0.0043			0.0013				30 & Above	0.0000
51 0.0400 0.0019 0.0013 N/A 0.0014 52 0.0400 0.0022 0.0014 N/A 0.0016 53 0.0400 0.0023 0.0015 N/A 0.0017 54 0.0500 0.0025 0.0016 N/A 0.0020 55 0.0600 0.0025 0.0017 N/A 0.0021 56 0.0600 0.0026 0.0017 N/A 0.0023 57 0.0800 0.0026 0.0018 N/A 0.0023 58 0.1200 0.0027 0.0018 N/A 0.0028 59 0.1200 0.0029 0.0019 N/A 0.0030 61 0.2000 0.0029 0.0020 N/A 0.0033 62 0.3000 0.0030 0.0020 N/A 0.0036 63 0.2500 0.0030 0.0020 N/A 0.0043 65 0.3000 0.0030 0.0020 N/A 0.0043 65 0.3000 0.0030 0.0020 N/A 0.0050 <td< td=""><td></td><td>0.0000</td><td>0.0015</td><td>0.0010</td><td></td><td>0.0012</td><td></td><td></td></td<>		0.0000	0.0015	0.0010		0.0012		
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620.30000.00300.0020N/A0.0036630.25000.00300.0020N/A0.0039640.25000.00300.0020N/A0.0043650.30000.00300.0020N/A0.0047660.40000.00300.0020N/A0.0050670.40000.00300.0020N/A0.0054680.30000.00300.0020N/A0.0058690.30000.00300.0020N/A0.0062		0.1500	0.0029	0.0019		0.0030		
630.25000.00300.0020N/A0.0039640.25000.00300.0020N/A0.0043650.30000.00300.0020N/A0.0047660.40000.00300.0020N/A0.0050670.40000.00300.0020N/A0.0054680.30000.00300.0020N/A0.0058690.30000.00300.0020N/A0.0062		0.2000	0.0029	0.0020	N/A			
640.25000.00300.0020N/A0.0043650.30000.00300.0020N/A0.0047660.40000.00300.0020N/A0.0050670.40000.00300.0020N/A0.0054680.30000.00300.0020N/A0.0058690.30000.00300.0020N/A0.0062	62	0.3000	0.0030	0.0020	N/A	0.0036		
650.30000.00300.0020N/A0.0047660.40000.00300.0020N/A0.0050670.40000.00300.0020N/A0.0054680.30000.00300.0020N/A0.0058690.30000.00300.0020N/A0.0062								
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670.40000.00300.0020N/A0.0054680.30000.00300.0020N/A0.0058690.30000.00300.0020N/A0.0062								
68 0.3000 0.0030 0.0020 N/A 0.0058 69 0.3000 0.0030 0.0020 N/A 0.0062								
69 0.3000 0.0030 0.0020 N/A 0.0062								
70 1.0000 0.0000 0.0000 N/A 0.0000								
	70	1.0000	0.0000	0.0000	N/A	0.0000		

* 100% probability of retirement is assumed at ages 62 and above with 38 or more years of service.

This work product was prepared solely for SamCera for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other A-18 qualified professional when reviewing the Milliman work product.

Table A-8:Rate of Separation From Active Service
General Plan 3 – Male

Age	Service Retirement	Service Disability	Ordinary Disability	Service Death	Ordinary Death	Years of Service	Other Terminations
18	0.0000	N/A	N/A	N/A	0.0003	0	0.1300
19	0.0000	N/A	N/A	N/A	0.0003	1	0.1100
20	0.0000	N/A	N/A	N/A	0.0003	2	0.0900
21	0.0000	N/A	N/A	N/A	0.0003	3	0.0800
22	0.0000	N/A	N/A	N/A	0.0003	4	0.0700
23	0.0000	N/A	N/A	N/A	0.0003	5	0.0633
24	0.0000	N/A	N/A	N/A	0.0004	6	0.0567
25	0.0000	N/A	N/A	N/A	0.0004	7	0.0500
26	0.0000	N/A	N/A	N/A	0.0004	8	0.0470
27	0.0000	N/A	N/A	N/A	0.0004	9	0.0440
28	0.0000	N/A	N/A	N/A	0.0004	10	0.0410
29	0.0000	N/A	N/A	N/A	0.0004	11	0.0380
30	0.0000	N/A	N/A	N/A	0.0004	12	0.0350
31	0.0000	N/A	N/A	N/A	0.0004	13	0.0330
32	0.0000	N/A	N/A	N/A	0.0004	14	0.0310
33	0.0000	N/A	N/A	N/A	0.0004	15	0.0290
34	0.0000	N/A	N/A	N/A	0.0005	16	0.0270
35	0.0000	N/A	N/A	N/A	0.0006	17	0.0250
36	0.0000	N/A	N/A	N/A	0.0006	18	0.0230
37	0.0000	N/A	N/A	N/A	0.0007	19	0.0210
38	0.0000	N/A	N/A	N/A	0.0008	20	0.0190
39	0.0000	N/A	N/A	N/A	0.0008	21	0.0170
40	0.0000	N/A	N/A	N/A	0.0009	22	0.0150
41	0.0000	N/A	N/A	N/A	0.0010	23	0.0140
42	0.0000	N/A	N/A	N/A	0.0010	24	0.0130
43	0.0000	N/A	N/A	N/A	0.0011	25	0.0120
44	0.0000	N/A	N/A	N/A	0.0011	26	0.0110
45	0.0000	N/A	N/A	N/A	0.0012	27	0.0100
46	0.0000	N/A	N/A	N/A	0.0013	28	0.0100
47	0.0000	N/A	N/A	N/A	0.0014	29	0.0100
48	0.0000	N/A	N/A	N/A	0.0015	30 & Above	0.0100
49	0.0000	N/A	N/A	N/A	0.0016		
50	0.0000	N/A	N/A	N/A	0.0017		
51	0.0000	N/A	N/A	N/A	0.0019		
52	0.0000	N/A	N/A	N/A	0.0020		
53	0.0000	N/A	N/A	N/A	0.0021		
54	0.0000	N/A	N/A	N/A	0.0023		
55	0.0300	N/A	N/A	N/A	0.0024		
56	0.0300	N/A	N/A	N/A	0.0026		
57	0.0300	N/A	N/A	N/A	0.0028		
58	0.0300	N/A	N/A	N/A	0.0030		
59	0.0300	N/A	N/A	N/A	0.0033		
60	0.0300	N/A	N/A	N/A	0.0036		
61	0.0600	N/A	N/A	N/A	0.0040		
62	0.1500	N/A	N/A	N/A	0.0044		
63	0.1000	N/A	N/A	N/A	0.0049		
64	0.1500	N/A	N/A	N/A	0.0054		
65	0.3000	N/A	N/A	N/A	0.0059		
66	0.3000	N/A	N/A	N/A	0.0065		
67	0.3000	N/A	N/A	N/A	0.0070		
68	0.3000	N/A	N/A	N/A	0.0076		
69	0.3000	N/A	N/A	N/A	0.0081		
70	1.0000	N/A	N/A	N/A	0.0000		

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Table A-9:Rate of Separation From Active Service
General Plan 3 – Female

Age	Service Retirement	Service Disability	Ordinary Disability	Service Death	Ordinary Death	Years of Service	Other Terminations
18	0.0000	N/A	N/A	N/A	0.0002	0	0.1200
18	0.0000	N/A N/A	N/A N/A	N/A N/A	0.0002	1	0.1000
20	0.0000	N/A	N/A	N/A	0.0002	2	0.0850
20	0.0000	N/A	N/A	N/A	0.0002	3	0.0750
22	0.0000	N/A	N/A	N/A	0.0002	4	0.0700
23	0.0000	N/A	N/A	N/A	0.0002	5	0.0633
24	0.0000	N/A	N/A	N/A	0.0002	6	0.0567
25	0.0000	N/A	N/A	N/A	0.0002	7	0.0500
26	0.0000	N/A	N/A	N/A	0.0002	8	0.0455
27	0.0000	N/A	N/A	N/A	0.0002	9	0.0410
28	0.0000	N/A	N/A	N/A	0.0002	10	0.0365
29	0.0000	N/A	N/A	N/A	0.0002	11	0.0320
30	0.0000	N/A	N/A	N/A	0.0002	12	0.0275
31	0.0000	N/A	N/A	N/A	0.0002	13	0.0270
32	0.0000	N/A	N/A	N/A	0.0002	14	0.0265
33	0.0000	N/A	N/A	N/A	0.0003	15	0.0260
34	0.0000	N/A	N/A	N/A	0.0003	16	0.0255
35	0.0000	N/A	N/A	N/A	0.0003	17	0.0250
36	0.0000	N/A	N/A	N/A	0.0004	18	0.0230
37	0.0000	N/A	N/A	N/A	0.0004	19	0.0210
38	0.0000	N/A	N/A	N/A	0.0005	20	0.0190
39	0.0000	N/A	N/A	N/A	0.0005	21	0.0170
40	0.0000	N/A	N/A	N/A	0.0006	22	0.0150
41	0.0000	N/A	N/A	N/A	0.0006	23	0.0140
42	0.0000	N/A	N/A	N/A	0.0006	24	0.0130
43	0.0000	N/A	N/A	N/A	0.0007	25	0.0120
44	0.0000	N/A	N/A	N/A	0.0008	26	0.0110
45	0.0000	N/A	N/A	N/A	0.0009	27	0.0100
46	0.0000	N/A	N/A	N/A	0.0009	28	0.0100
47	0.0000	N/A	N/A	N/A	0.0010	29	0.0100
48	0.0000	N/A	N/A	N/A	0.0011	30 & Above	0.0100
49 50	0.0000 0.0000	N/A N/A	N/A N/A	N/A N/A	0.0012 0.0013		
50	0.0000	N/A N/A	N/A N/A	N/A N/A	0.0013		
52	0.0000	N/A	N/A N/A	N/A	0.0014		
53	0.0000	N/A N/A	N/A N/A	N/A	0.0017		
54	0.0000	N/A	N/A	N/A	0.0018		
55	0.0400	N/A	N/A	N/A	0.0020		
56	0.0400	N/A	N/A	N/A	0.0021		
57	0.0400	N/A	N/A	N/A	0.0023		
58	0.0400	N/A	N/A	N/A	0.0025		
59	0.0400	N/A	N/A	N/A	0.0028		
60	0.0400	N/A	N/A	N/A	0.0030		
61	0.0600	N/A	N/A	N/A	0.0033		
62	0.1500	N/A	N/A	N/A	0.0036		
63	0.1000	N/A	N/A	N/A	0.0039		
64	0.1500	N/A	N/A	N/A	0.0043		
65	0.3000	N/A	N/A	N/A	0.0047		
66	0.3000	N/A	N/A	N/A	0.0050		
67	0.3000	N/A	N/A	N/A	0.0054		
68	0.3000	N/A	N/A	N/A	0.0058		
69	0.3000	N/A	N/A	N/A	0.0062		
70	1.0000	N/A	N/A	N/A	0.0000		

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Table A-10: Rate of Separation From Active Service Safety & Probation Plans – Male

Age	Plans 1, 2, 4 Service Retirement*	Plans 5, 6, 7 Service Retirement**	Service Disability	Ordinary Disability	Service Death	Ordinary Death	Years of Service	Other Terminations
18	0.0000	0.0000	0.0015	0.0000	0.0010	0.0003	0	0.0700
19	0.0000	0.0000	0.0015	0.0000	0.0010	0.0003	1	0.0650
20	0.0000	0.0000	0.0015	0.0000	0.0010	0.0003	2	0.0450
21	0.0000	0.0000	0.0015	0.0000	0.0010	0.0003	3	0.0300
22	0.0000	0.0000	0.0015	0.0000	0.0010	0.0003	4	0.0250
23	0.0000	0.0000	0.0015	0.0000	0.0010	0.0003	5	0.0233
24	0.0000	0.0000	0.0015	0.0000	0.0010	0.0004	6	0.0217
25	0.0000	0.0000	0.0015	0.0000	0.0010	0.0004	7	0.0200
26	0.0000	0.0000	0.0015	0.0000	0.0010	0.0004	8	0.0185
27	0.0000	0.0000	0.0015	0.0000	0.0010	0.0004	9	0.0170
28	0.0000	0.0000	0.0016	0.0000	0.0010	0.0004	10	0.0155
29	0.0000	0.0000	0.0017	0.0000	0.0010	0.0004	11	0.0140
30	0.0000	0.0000	0.0018	0.0000	0.0010	0.0004	12	0.0125
31	0.0000	0.0000	0.0019	0.0000	0.0010	0.0004	13	0.0120
32	0.0000	0.0000	0.0020	0.0000	0.0010	0.0004	14	0.0115
33	0.0000	0.0000	0.0021	0.0000	0.0010	0.0004	15	0.0110
34	0.0000	0.0000	0.0022	0.0000	0.0010	0.0005	16	0.0105
35	0.0000	0.0000	0.0023	0.0000	0.0010	0.0006	17	0.0100
36 37	0.0000 0.0000	0.0000 0.0000	0.0024 0.0025	0.0000 0.0000	0.0010 0.0010	0.0006 0.0007	18 19	0.0080 0.0060
38	0.0000	0.0000	0.0025	0.0000	0.0010	0.0007	20 & Above	0.0000
39	0.0000	0.0000	0.0028	0.0000	0.0010	0.0008	20 & ADUVE	0.0000
40	0.0000	0.0000	0.0027	0.0000	0.0010	0.0008		
40	0.0000	0.0000	0.0028	0.0000	0.0010	0.0010		
42	0.0000	0.0000	0.0030	0.0000	0.0010	0.0010		
43	0.0000	0.0000	0.0031	0.0000	0.0010	0.0011		
44	0.0000	0.0000	0.0032	0.0000	0.0010	0.0011		
45	0.0000	0.0000	0.0033	0.0000	0.0010	0.0012		
46	0.0000	0.0000	0.0034	0.0000	0.0010	0.0013		
47	0.0000	0.0000	0.0035	0.0000	0.0010	0.0014		
48	0.0000	0.0000	0.0038	0.0000	0.0010	0.0015		
49	0.0000	0.0000	0.0041	0.0000	0.0010	0.0016		
50	0.1500	0.0500	0.0044	0.0000	0.0010	0.0017		
51	0.1500	0.0500	0.0047	0.0000	0.0010	0.0019		
52	0.1500	0.0500	0.0050	0.0000	0.0010	0.0020		
53	0.2000	0.0500	0.0064	0.0000	0.0010	0.0021		
54	0.1300	0.1000	0.0078	0.0000	0.0010	0.0023		
55	0.3000	0.3000	0.0092	0.0000	0.0010	0.0024		
56	0.2500	0.3000	0.0106	0.0000	0.0010	0.0026		
57	0.2000	0.3000	0.0120	0.0000	0.0010	0.0028		
58	0.2500	0.3000	0.0108	0.0000	0.0010	0.0030		
59	0.2500	0.3000	0.0096	0.0000	0.0010	0.0033		
60	1.0000	1.0000	0.0000	0.0000	0.0000	0.0000		

* 100% probability of retirement is assumed at ages 50 and above with 33 or more years of service for Safety and Probation Plans 1, 2, and 4.

** 100% probability of retirement is assumed at ages 55 and above with 33 or more years of service for Safety and Probation Plan 5, and at ages 55 and above with 38 or more years of service for Safety and Probation Plan 6.



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Table A-11: Rate of Separation From Active Service Safety & Probation Plans – Female

Age	Plans 1, 2, 4 Service Retirement*	Plans 5, 6, 7 Service Retirement**	Service Disability	Ordinary Disability	Service Death	Ordinary Death	Years of Service	Other Terminations
18	0.0000	0.0000	0.0015	0.0000	0.0010	0.0002	0	0.0700
19	0.0000	0.0000	0.0015	0.0000	0.0010	0.0002	1	0.0650
20	0.0000	0.0000	0.0015	0.0000	0.0010	0.0002	2	0.0450
21	0.0000	0.0000	0.0015	0.0000	0.0010	0.0002	3	0.0300
22	0.0000	0.0000	0.0015	0.0000	0.0010	0.0002	4	0.0250
23	0.0000	0.0000	0.0015	0.0000	0.0010	0.0002	5	0.0233
24	0.0000	0.0000	0.0015	0.0000	0.0010	0.0002	6	0.0217
25	0.0000	0.0000	0.0015	0.0000	0.0010	0.0002	7	0.0200
26	0.0000	0.0000	0.0015	0.0000	0.0010	0.0002	8	0.0185
27	0.0000	0.0000	0.0015	0.0000	0.0010	0.0002	9	0.0170
28	0.0000	0.0000	0.0016	0.0000	0.0010	0.0002	10	0.0155
29	0.0000	0.0000	0.0017	0.0000	0.0010	0.0002	11	0.0140
30	0.0000	0.0000	0.0018	0.0000	0.0010	0.0002	12	0.0125
31	0.0000	0.0000	0.0019	0.0000	0.0010	0.0002	13	0.0120
32	0.0000	0.0000	0.0020	0.0000	0.0010	0.0002	14	0.0115
33	0.0000	0.0000	0.0021	0.0000	0.0010	0.0003	15	0.0110
34	0.0000	0.0000	0.0022	0.0000	0.0010	0.0003	16	0.0105
35	0.0000	0.0000	0.0023	0.0000	0.0010	0.0003	17	0.0100
36	0.0000	0.0000	0.0024	0.0000	0.0010	0.0004	18	0.0080
37	0.0000	0.0000	0.0025	0.0000	0.0010	0.0004	19	0.0060
38	0.0000	0.0000	0.0026	0.0000	0.0010	0.0005	20 & Above	0.0000
39	0.0000	0.0000	0.0027	0.0000	0.0010	0.0005		
40	0.0000	0.0000	0.0028	0.0000	0.0010	0.0006		
41	0.0000	0.0000	0.0029	0.0000	0.0010	0.0006		
42	0.0000	0.0000	0.0030	0.0000	0.0010	0.0006		
43	0.0000	0.0000	0.0031	0.0000	0.0010	0.0007		
44	0.0000	0.0000	0.0032	0.0000	0.0010	0.0008		
45	0.0000	0.0000	0.0033	0.0000	0.0010	0.0009		
46	0.0000	0.0000	0.0034	0.0000	0.0010	0.0009		
47	0.0000	0.0000	0.0035	0.0000	0.0010	0.0010		
48	0.0000	0.0000	0.0038	0.0000	0.0010	0.0011		
49	0.0000	0.0000	0.0041	0.0000	0.0010	0.0012		
50	0.1500	0.0500	0.0044	0.0000	0.0010	0.0013		
51	0.1500	0.0500	0.0047	0.0000	0.0010	0.0014		
52	0.1500	0.0500	0.0050	0.0000	0.0010	0.0016		
53	0.2000	0.0500	0.0064	0.0000	0.0010	0.0017		
54	0.1300	0.1000	0.0078	0.0000	0.0010	0.0018		
55	0.3000	0.3000	0.0092	0.0000	0.0010	0.0020		
56	0.2500	0.3000	0.0106	0.0000	0.0010	0.0021		
57	0.2000	0.3000	0.0120	0.0000	0.0010	0.0023		
58	0.2500	0.3000	0.0108	0.0000	0.0010	0.0025		
59	0.2500	0.3000	0.0096	0.0000	0.0010	0.0028		
60	1.0000	1.0000	0.0000	0.0000	0.0000	0.0000		

* 100% probability of retirement is assumed at ages 50 and above with 33 or more years of service.

** 100% probability of retirement is assumed at ages 55 and above with 33 or more years of service for Safety and Probation Plan 5, and at ages 55 and above with 38 or more years of service for Safety and Probation Plan 6.



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Appendix B: Summary of Benefit Provisions



All actuarial calculations are based on our understanding of the statutes governing the SamCERA as contained in the County Employees Retirement Law (CERL) of 1937, with provisions adopted by the SamCERA Board, effective through June 30, 2010. The benefit and contribution provisions of this law are summarized briefly below, along with corresponding references to the Code Section. This summary does not attempt to cover all the detailed provisions of the law.

MEMBERSHIP IN RETIREMENT PLANS

The County has established 12 defined benefit plans based on a member's date of entry into SamCERA. Plans 1, 2, 4, 5, 6, and 7 are open to all members depending on their date of entry. Only General members are eligible for Plan 3.

Employees of the Mosquito and Vector Control District are eligible for participation in all General retirement plans, except for Plan 3.

- Plan 1: Employees hired on or before July 6, 1980.
- Plan 2: Employees hired after July 6, 1980 but on or before July 12, 1997.
- Plan 3: General members hired on or before December 22, 2012 may (31496) elect to participate in Plan 3. After five years of service, Plan 3 members can elect membership under the open contributory plan. Members currently working in a contributory plan with Plan 3 service may purchase an upgrade of their Plan 3 service.
- Plan 4: Employees hired after July 12, 1997 and before August 7, 2011 (General members, except Plan 5 transfers; see below); before July 10, 2012 (Probation members); and before January 8, 2012 (Safety members).
- Plan 5: General members hired on or after August 7, 2011, and Deputy Sheriffs hired on or after January 8, 2012. Probation members hired on or after July 10, 2011 and Safety members (except Deputy Sheriffs) hired on or after January 8, 2012 may elect this Plan. Members must be first hired before January 1, 2013 to be eligible to elect this Plan.

After 10 years of service, General Plan 5 members can elect to transfer to Plan 4 and must pay the total actuarial equivalent cost of the increase in past service benefits at the date of transfer.

- Plan 6: Probation members hired on or after July 10, 2011 and Safety members (except Deputy Sheriffs) hired on or after January 8, 2012 may elect this Plan. Members must be first hired before January 1, 2013 to be eligible to elect this Plan.
- **Plan 7:** Employees first hired on or after January 1, 2013.

MEMBER CONTRIBUTIONS

<u>Basic:</u> Plans 1, 2, 4, 5, & 6:	Contributions are based on the entry age and class of each member and are required of all members. See section 5 for details on this calculation. Current member rates are shown in Appendix D.	
	Contributions cease when general members are credited with 30 years of service in a contributory plan provided they were members of SamCERA or a reciprocal system on March 7, 1973, and continuously thereafter. All safety members are eligible for the 30-year cessation of contributions. This provision does not apply to cost- sharing contributions.	(31625.2, 31664.1)
Plan 7:	Members contribute 50% of the aggregate Normal Cost rate for their Plan.	
Plan 3:	No member contributions are required under Plan 3.	
<u>Cost-of-Living:</u> Plans 1, 2, & 4:	Members of the California Nurses Association (CNA), the Union of American Physicians and Dentists (UAPD), and the Probation and Detention Association (PDA) in Plans 1, 2, and 4 contribute 25% of the cost of the COLA, in addition to other current member rates and cost sharing.	
	General members (County and Courts) who rehire on or after August 7, 2011, Probation members who rehire on or after July 10, 2011, and Safety members who rehire on or after January 8, 2012 into Plans 1, 2, and 4 contribute 50% of the cost of COLA, in addition to other current member rates and cost sharing.	
	No other Plan 1, 2 & 4 members contribute towards the COLA benefit.	
Plans 5 & 6:	All members of Plans 5 and 6 contribute 50% of the cost of the COLA, in addition to other current member rates and cost sharing.	
Plan 7:	Members contribute 50% of the aggregate Normal Cost rate for their Plan.	

Appendix B (continued)

MEMBER CONTRIBUTIONS (Continued)

<u>Cost Sharing:</u> General Members:	All members of Plans 1, 2, and 4 (except SN contribute an additional 3.0% for cost sharing		(31678.2)
	All other General members do not participate sharing.	e in cost	
Safety Members:	Deputy Sheriffs in Plans 1, 2, 4, and 5 contril following additional cost sharing rates based service:		
	If age 45 or older If age is less than 45 • Service is less than 5 years:	4.5% 3.0%	
	Service between 5 & 15 years:Service is more than 15 years	3.5% 4.5%	
	Safety members (except Deputy Sheriffs) in and 4 contribute an additional 5.0% cost sha		
	Safety members (except Deputy Sheriffs) in contribute an additional 4.0% cost sharing.	Plan 5	
	Safety members in Plan 6 and 7 do not parties sharing.	cipate in cost	
Probation Members:	Members of Plans 1, 2, 4, and 5 contribute a 3.5% for cost sharing.	n additional	
	Members of Plans 6 and 7 do not participate sharing.	in cost	
Interest Crediting:	Interest is credited to contributions semiannu June 30 and December 31 at an interest rate Board of Retirement on amounts that have b deposit for at least six months.	e set by the	(31591, 31700)



Appendix B (continued)

MEMBER CONTRIBUTIONS (Continued)

Employer Pick-Up: General members:	The County provides a variety of refundable service- based employer pick-up of contribution programs for members in several of its unions.	(31581.2)	
	Employer rates have not been adjusted to reflect the payment of the refundable employer pick-up of member contributions programs because the county payroll system captures these costs on a pay-as-you-go basis while processing each individual's biweekly pay.		
Safety members:	The County provides a variety of refundable service- based employer pick-up of contribution programs for members in several of its unions.	(31678.2)	
	Employer rates have not been adjusted to reflect the payment of the refundable employer pick-up of member contributions programs because the county payroll system captures these costs on a pay-as-you-go basis while processing each individual's biweekly pay.		
Probation members:	The County provides a variety of refundable service- based employer pick-up of contribution programs for members in several of its unions.	(31639.85)	
	Employer rates have been adjusted to reflect the 20% non-refundable County pick-up, effective April 2006.		
EMPLOYER CONTRIBUTIONS			
	or district) contributes to the retirement fund a percent of provided for all members based on an actuarial	(31453, 31453.5,	

investigation, valuation and recommendation of the actuary.

31453.6, 31454 31581)



SERVICE RETIREMENT ALLOWANCE

<u>Eligibility:</u> General Members:	 All members of Plans 1, 2, 4, and 5 are eligible to retire after meeting one of the following age and service requirements: Age 50 with 10 years of service*; Any age with 30 years of service; or Age 70 regardless of service. 	(31672)
	Plan 3 members are eligible to retire at age 65 with 10 years of service. A reduced benefit is also payable at age 55 with 10 years of service.	(31496)
	Plan 7 members are eligible to retire at age 52 with 5 years of service.	
Safety and Probation Members:	 Members of all plans except Plan 7 are eligible to retire after meeting one of the following age and service requirements: Age 50 with 10 years of service*; Any age with 20 years of service. 	(31663.25)
	Plan 7 members are eligible to retire at age 50 with 5 years of service.	
	* For part-time employees, age 50 is replaced with age 55.	(31672.1)
<u>Final</u> <u>Compensation:</u> Plans 1 & 2:	Monthly average of a member's highest 12 consecutive months of compensation.	(31462.1)
All other Plans:	Monthly average of a member's highest compensation during any three years. Years do not have to be consecutive, except for Plan 7.	[31462, 31496.3(d)]
<u>Compensation</u> <u>Limit:</u> All Plans, except Plan 7:	The amount of compensation that is taken into account in computing benefits payable to any person who first becomes a member on or after July 1, 1996, shall not exceed the dollar limitations in Section 401(a)(17) of Title 26 of the US Code.	(31671)



SERVICE RETIREMENT ALLOWANCE (Continued)

Plan 7:	The amount of compensation taken into account shall not exceed the following applicable percentage of the Social Security Taxable Wage Base:	
	 100% for a member covered by Social Security (County and Courts General members); 120% for a member not covered by Social Security (all other members). 	
	The amount of compensation taken into account shall be adjusted based on changes in the Consumer Price Index for All Urban Consumers. Adjustments shall be effective annually on January 1.	
Monthly		
<u>Allowance</u> : Plans 1, 2, 4, & 5:	General members: 1/60 x Final Compensation x General age factor x years of service.	(31676.14) (31676.1)
	Safety & Probation members: 3% x Final Compensation x Safety age factor x years of service.	(31664.1) (31664.2)
Plan 6:	Safety & Probation members: 2% x Final Compensation x Safety age factor x years of service.	(31664)
Plan 7:	General members: 2% x Final Compensation x General age factor x years of service.	
	Safety and Probation members: 2% x Final Compensation x Safety age factor x years of service.	



Appendix B (continued)

SERVICE RETIREMENT ALLOWANCE (Continued)

Plan 3: General members: (a)+(b)-(c) where:

(31496)

- (a) 2% x Final Compensation x (Years of Service, (up to 35 years), plus
- (b) 1 % x Final Compensation x Years of Service in excess of 35 (up to 10)
- (c) Estimated Primary Insurance Amount (PIA) x Years of Covered Service (up to 35) divided by 35.

The PIA is calculated based on certain assumptions specified by statute, and an assumed Social Security retirement age of 65.

If retirement occurs prior to age 65, benefit amount is adjusted by an actuarial equivalent factor (see Sample Plan Age Factors).

Percentage of Final Average Compensation at Sample Ages:

Plan	Age 50	Age 55	Age 60	Age 65	
County General 1,2&4	1.475%	1.948%	2.440%	2.611%	(31676.14)
SMCM&VCD*	1.475%	1.948%	2.440%	2.611%	(31676.14)
General Plan 3**	N/A	0.780%	1.220%	2.000%	(31496)
General Plan 5	1.182%	1.492%	1.917%	2.432%	(31676.1)
General Plan 7	N/A	1.300%	1.800%	2.300%	
Safety/Probation 1,2,&4	3.000%	3.000%	3.000%	3.000%	(31664.1)
Safety/Probation Plan 5	2.290%	3.000%	3.000%	3.000%	(31664.2)
Safety/Probation Plan 6	2.000%	2.620%	2.620%	2.620%	(31664)
Safety/Probation Plan 7	2.000%	2.500%	2.700%	2.700%	

* As of the June 30, 2010 actuarial valuation, SMCM&VCD has adopted the same benefit structure as County General.

** Prior to reduction for PIA benefit. Actual percentage will be less.



SERVICE RETIREMENT ALLOWANCE (Continued)

<u>Maximum</u> <u>Allowance:</u>			
All Plans Except 3:	Allowance may not exceed 100% of final compensation.		
Plan 3:	The sum of the normal retirement allowance and the estimated PIA cannot exceed 70% of Final Compensation for a member with 35 or less years of service, and cannot exceed 80% of Final Compensation if service exceeds 35 years.	(31496)	
Unmodified Retiremo	ent Allowance (Normal Form):		
All Plans Except 3:	Life Annuity payable to retired member with 60% continuance to an eligible survivor (or eligible children).	(31760.1)	
Plan 3:	Life Annuity payable to retired member with 50% continuance to an eligible survivor (or eligible children).	(31497.71)	
Eligible survivor incluc	des certain domestic partners.	(31780.2)	
Optional Retirement Allowance: A member may elect to have the actuarial equivalent of the service or disability retirement allowance applied to a lesser retirement allowance during the retired member's life in order to provide an optional survivor allowance.			
Option 1:	Member's allowance is reduced to pay a cash refund of any unpaid annuity payments (up to the amount of the member's contributions at retirement) to the member's estate or to a beneficiary having an insurable interest in the life of the member.	(31761)	
Option 2:	100% of member's reduced allowance is payable to an eligible survivor or beneficiary having an insurable interest in the life of the member.	(31762)	
Option 3:	50% of member's reduced allowance is payable to an eligible survivor or beneficiary having an insurable interest in the life of the member.	(31763)	
Option 4:	Other % of member's reduced allowance is payable to an eligible survivor or beneficiary(ies) having an insurable interest in the life of the member.	(31764)	
For Options 2, 3 or 4, the continuance will not be paid if the member revokes their election and names another beneficiary after retirement.			
All Allowances:	All allowances are made on a pro rata basis (based on the number of days in that month) if not in effect for the entire month of retirement. For deaths that occur mid- month, the full month's payment is made.	(31600)	

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SERVICE-CONNECTED DISABILITY RETIREMENT ALLOWANCE

<u>Eligibility:</u> All Plans Except 3:	Any age or years of service; disability must result from occupational injury or disease, and member must be permanently incapacitated for the performance of duty.	(31720, 31720.5, 31720.6, 31720.7, 31720.9)
Plan 3:	Not available under Plan 3.	(31487)
Monthly Allowance:	Greater of (1) 50% of final compensation, and (2) the service retirement allowance, if eligible to retire.	(31727.4)
Normal Form Of Payment:	Life Annuity with 100% continuance to a surviving spouse (or eligible children).	(31760, 31786)

RECIPROCAL SERVICE-CONNECTED DISABILITY ALLOWANCE

one entity.

<u>Eligibility:</u>

All Plans Except 3:	Any member regardless of age or years of service who leaves their accumulated contributions on deposit and receives a disability retirement allowance from CaIPERS or another '37 Act system. The member must be eligible for a reciprocal benefit and the disability must be service- connected.	(31837)
Plan 3:	Not available under Plan 3.	
Monthly Allowance:	Same as nonservice-connected disability, but in no case shall the allowance be greater than if all service was with	(31837, 31838.5)

Normal Form of
Payment:Life Annuity with 100% continuance to a surviving spouse (31760, 31786)
(or eligible children).



NONSERVICE-CONNECTED DISABILITY RETIREMENT ALLOWANCE

<u>Eligibility:</u> All Plans Except 3:	Any age with five years of service and permanently incapacitated for the performance of duty.	(31720, 31836)
Plan 3:	Not available under Plan 3.	(31487)
Monthly Allowance:	The monthly allowance is equal to a service retirement allowance if the member is eligible to retire, otherwise allowance equals (a) or (b) where:	(31726, 31726.5)
General Members:	(a) 90% of 1/60th of Final Compensation x years of service, if member must rely on service in another retirement system in order to be eligible to retire, or allowance exceeds 1/3 of final compensation.	(31727(a))
	(b) 90% of 1/60th of Final Compensation x years of service projected to age 65, not to exceed 1/3 of Final Compensation.	(31727(b))
Safety Members:	1/60 is replaced by 1/50 and age 65 is replaced by age 55 in (a) and (b) above.	(31727.2)
<u>Normal Form Of</u> <u>Payment:</u>	Life Annuity with 60% continuance to a surviving spouse (or eligible children).	(31760.1)

SERVICE-CONNECTED DEATH BENEFITS

<u>Eligibility</u> All Plans Except 3:	Active members who die in service as a result of injury or disease arising out of and in the course of employment.	(31787)
Plan 3:	Not available under Plan 3.	(31487)
Monthly Allowance:	An annual death allowance is payable monthly to an eligible survivor (or eligible children) equal to 50% of the member's Final Compensation.	(31787)



Appendix B (continued)

SERVICE-CONNECTED DEATH BENEFITS (Continued)			
Optional Combined Benefit:	(31781.3)		
In lieu of the monthly allowance above, an eligible survivor may elect:			
(a) A lump sum equal to 1/12 of the compensation earned in the preceding 12 months x years of service (benefit not to exceed 50% of the 12 months' compensation), plus			
(b) A monthly payment equal to 50% of the member's Final Compensation, reduced by a monthly amount, which is the actuarial equivalent of (a) above based on the age of eligible survivor.			
Death Benefit (Lump Sum): The member's normal contributions and interest, plus 1/12 of the compensation earned in the preceding 12 months x years of service (benefit not to exceed 50% of the 12 months' compensation).	(31781)		
Additional Allowance for Children: 25% of death allowance (whether or not the monthly allowance or combined benefit is chosen) for one child, 40% for two children, and 50% for three or more children.	(31787.5)		
Additional Amount for Spouse of Safety Member: An eligible survivor of a safety member is also entitled to receive a lump-sum death benefit equal to 12 x monthly rate of compensation at the time of member's death in addition to all other benefits.	(31787.6)		

Note: For valuation purposes, an unmarried member is assumed to take the lump sum benefit. A married member is assumed to take the monthly allowance or the lump sum, whichever is more valuable.

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Appendix B (continued)

NONSERVICE-CONNECTED DEATH BENEFITS

<u>Eligibility:</u> All Plans Except 3:	Active members who die while in service or while physically or mentally incapacitated for the performance of duty.	(31780)
Plan 3:	Not available under Plan 3.	
earned in preceding 12	Sum): contributions and interest, plus 1/12 of the Compensation 2 months x the number of completed years of service 50% of the 12 months' compensation).	(31781)
Optional Death Bener In lieu of the lump-sum to provide flexibility to a	n death benefit, several optional death benefits are available	
First Optional Death Benefit: If a member who would have been entitled to a nonservice-connected disability retirement allowance dies prior to retirement as a result of such disability, the eligible survivor (or eligible children) may elect to receive an optional death allowance equal to 60% of the monthly retirement allowance to which the member would have been entitled as of the date of death.		
Second Optional Death Benefit: If a member dies prior to reaching the minimum retirement age but has 10 or more years of service, an eligible survivor (or eligible children) may elect to leave the amount of the death benefit on deposit until the earliest date the member could have retired and at that time receive the allowance provided for in 31765.2 (a 60% continuance).		(31781.2, 31765.2)
Third Optional Death An eligible survivor of a combined benefit equa	a member who dies after five years of service may elect a	
months x the numb	to 1/12 of the compensation earnable in the preceding 12 per of completed years of service (benefit not to exceed ths' compensation), plus	(31781.3)
which the member retired for a nonser	t equal to 60% of the monthly retirement allowance to would have been entitled if the member retired or had been rvice-connected disability as of the date of death, reduced int which is the actuarial equivalent of (a) above based on ble survivor.	(31781.1)

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NONSERVICE-CONNECTED DEATH BENEFITS (Continued)

Fourth Optional Death Benefit:

If a member dies while eligible for a service retirement and the eligible survivor is (31765.1) designated as beneficiary, the spouse (or eligible children) may elect to receive 60% of the monthly retirement allowance to which the member would have been entitled as of the date of death.

Note for Third and Fourth Optional Death Benefits: In order to leave the eligible survivor the greatest benefit, the member is assumed to have retired for nonservice-connected disability, elected the Option 2 retirement allowance, and then died the next day.

Fifth Optional Death Benefit:

If a member dies while eligible for a service retirement and the eligible survivor is designated as beneficiary and survives the member by not less than 30 days the spouse (or eligible children) may elect to receive the same retirement allowance as the spouse would have received had the member retired on the date of death and selected Option 3.

Note: For valuation purposes, an unmarried member is assumed to take the lump sum benefit. A married member is assumed to receive an annuity or a lump-sum, whichever is more valuable. The annuity is equal to the Option 2-100% Continuance calculation for the larger of either (1) a non-service connected disability benefit or (2) the member's earned service retirement benefit (if eligible).



Appendix B (continued)

DEFERRED VESTED BENEFITS

Eligibility: All Plans, except Plans 3 and 7:	Age 50 with 10 years of membership. Member contributions must be left on deposit and the member must have terminated with five years of service or entered a reciprocal agency. Members are eligible for service retirement when they would have reached eligibility if they would have remained in an active position.	(31700)
Plan 3:	Age 55 with 10 years of service.	(31496)
Plan 7:	General members: Age 52 with 5 years of service.	
	Safety and Probation members: Age 50 with 5 years of service.	
All Plans:	Member contributions must be left on deposit and the member must have terminated with five years of service or entered a reciprocal agency. Members (except for Plan 7) are eligible for service retirement when they would have reached eligibility if they would have remained in an active position.	
Monthly Allowance: All Plans Except 3:	Same as service retirement allowance; payable anytime after the member would have been eligible for service retirement.	(31703, 31704, 31705)
	If a terminated member dies before the effective date of the deferred retirement allowance, the member's accumulated contributions are paid to the estate or to the named beneficiary.	(31702)
Plan 3:	Same as service retirement allowance at normal retirement age 65 or in an actuarially equivalent reduced amount at early retirement, after age 55.	(31496)
	No benefit is paid for death while deferred.	



COST-OF-LIVING INCREASES

(service and disability) effective April 1, based	s (or decreases) are applied to all retirement allowances , optional death allowances, and annual death allowances I on changes in the Consumer Price Index (CPI) from the the current January 1, to the nearest ½ of 1%.	(31870, 31870.1, 31870.2, 31874.4)							
Plan 1:	General & Safety Members (and their beneficiaries) are limited to a maximum 5% cost-of-living increase.	(31870.2)							
	Probation Members (and their beneficiaries) are limited to a maximum 3% cost-of-living increase.								
Plan 2:	Plan 2:All membersMembers (and their beneficiaries) are limited to a maximum 3% cost-of-living increase.								
Plan 3:	Plan 3 does not have a COLA.	(31487)							
Other Plans:	All members Members (and their beneficiaries) are limited to a maximum 2% cost-of-living increase.	(31870)							
COLA Bank Plan 1:	When the CPI exceeds the applicable percentage (3% or 5%), the difference between the actual CPI and the maximum cost-of-living increase given in any year is credited to the COLA Accumulation (COLA Bank). It may be used in future years to provide cost-of-living increases when the CPI falls below the applicable percentage.	(31870.1, 31870.2)							
Other Plans:	All other Plans do not have a COLA bank.	(31874.4)							



Appendix C: Valuation Data and Schedules



Data on SamCERA membership as of June 30, 2013 was supplied to us by the system staff. On the following table, Exhibit C-1, we present a summary of SamCERA membership at June 30, 2013 for active members. Similar information is shown in Exhibit C-2 for deferred vested members and Exhibits C-3a and C-3b for retired members.

Note that salary amounts shown are annualized amounts based on the biweekly pay for the period prior to the valuation date. If the annualized amount was less than the total prior earnings, total prior year earnings were used.

Additional statistical data on both active and retired members is shown in the following tables.

- Exhibit C-4: Age, Service, Compensation Distribution of Active Members
- Exhibit C-5: Age, Retirement Year, Benefit Amount and Plan Distribution of Retired Members

Exhibits C-4 and C-5 are shown for all plans combined as well as for classification separately.



	Total Number	Annual Salary		Average Age	Average e Monthly Salary		Average Credited Service
General Mem	bers						
Plan 1	39	\$	3,792,810	61.7	\$	8,104	32.2
Plan 2	938		82,785,077	53.8		7,355	22.1
Plan 3	124		9,306,675	45.7		6,254	10.0
Plan 4	2,667		213,197,377	45.2		6,662	8.7
Plan 5	263		20,255,973	38.2		6,418	1.1
Plan 7	142		9,257,723	35.0		5,433	0.3
Total	4,173	\$	338,595,633	46.5	\$	6,762	11.2
Safety Membe	ers						
Plan 1	3	\$	474,644	60.0	\$	13,185	31.7
Plan 2	102		13,383,891	50.3		10,935	21.9
Plan 4	290		32,717,308	42.9		9,402	8.8
Plan 5	42		4,384,363	37.8		8,699	0.7
Plan 6	1		148,493	43.0		12,374	0.6
Plan 7	14		1,124,810	33.4		6,695	0.3
Total	452	\$	52,233,510	43.9	\$	9,630	10.9
Probation Me	mbers						
Plan 1	1	\$	79,410	62.0	\$	6,618	30.8
Plan 2	64		5,717,982	47.7		7,445	20.4
Plan 4	215		17,085,085	40.4		6,622	10.5
Plan 5	8		503,262	28.6		5,242	0.9
Plan 6	1		57,699	30.0		4,808	0.9
Plan 7	3		278,727	34.3		7,742	0.1
Total	292	\$	23,722,165	41.7	\$	6,770	12.3
Grand Total	4,917	\$	414,551,308	46.0	\$	7,026	11.2

Exhibit C-1: SamCERA Membership – Active Members as of June 30, 2013



	Number	Average Age
General Memi	bers	
Plan 1	21	60.3
Plan 2	417	51.5
Plan 3	108	53.8
Plan 4	647	45.9
Plan 5	5	45.6
Plan 7	1	40.0
Total	1,199	48.8
Safety Membe	ers	
Plan 1	1	62.0
Plan 2	29	48.4
Plan 4	42	44.6
Total	72	46.4
Probation Me	mbers	
Plan 1	-	-
Plan 2	11	44.4
Plan 4	23	40.6
Plan 6	1	32.0
Total	35	41.5
Grand Total	1,306	48.5

Exhibit C-2: SamCERA Membership – Deferred Vested Members as of June 30, 2013



			Monthly		Average
_	Number	Average Age	Allowance	Мо	nthly Benefit
General Memb	ers				
Plan 1	1,848	77.9	\$ 5,322,057	\$	2,880
Plan 2	1,572	67.1	3,675,637		2,338
Plan 3	114	70.1	108,416		951
Plan 4	284	63.3	472,868		1,665
Total	3,818	72.1	\$ 9,578,979	\$	2,509
Safety Member	rs				
Plan 1	284	70.9	\$ 1,762,631	\$	6,206
Plan 2	140	58.8	881,957		6,300
Plan 4	20	54.1	74,560		3,728
Total	444	66.3	\$ 2,719,148	\$	6,124
Probation Men	nbers				
Plan 1	72	69.6	\$ 356,899	\$	4,957
Plan 2	51	61.0	214,032		4,197
Plan 4	13	64.9	28,799		2,215
Total	136	65.9	\$ 599,730	\$	4,410
Grand Total	4,398	71.3	\$ 12,897,857	\$	2,933

Exhibit C-3a: SamCERA Membership – Retired Members as of June 30, 2013



Plan	Retirement Type	Number	Monthly Benefit		•	
General Plans:						
	Healthy	3,037	\$	8,027,279	\$	2,643
	Disabled	297		709,760		2,390
	Beneficiaries	484		841,941		1,740
	Total	3,818	\$	9,578,979	\$	2,509
Safety Plans:						
-	Healthy	284	\$	1,999,585	\$	7,041
	Disabled	91		465,419		5,114
	Beneficiaries	69		254,144		3,683
	Total	444	\$	2,719,148	\$	6,124
Probation Plans:						
	Healthy	125	\$	556,897	\$	4,455
	Disabled	5		16,255		3,251
	Beneficiaries	6		26,579		4,430
	Total	136	\$	599,730	\$	4,410
Grand Totals						
	Healthy	3,446	\$	10,583,760	\$	3,071
	Disabled	393		1,191,433		3,032
	Beneficiaries	559		1,122,664	_	2,008
	Total	4,398	\$	12,897,857	\$	2,933

Exhibit C-3b: SamCERA Membership – Retired Members as of June 30, 2013 Subtotaled by Class and Retirement Type



Exhibit C-4: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2013 All Members

Count										
				Ye	ars of Servio	ce				Total
Age	0-1	1-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Count
Under 25	25	8	0	0	0	0	0	0	0	33
25-29	88	99	56	0	0	0	0	0	0	243
30-34	72	161	239	48	0	0	0	0	0	520
35-39	54	124	299	203	17	0	0	0	0	697
40-44	29	93	249	262	116	18	0	0	0	767
45-49	16	66	190	200	137	96	35	2	0	742
50-54	19	55	145	178	110	114	80	17	0	718
55-59	25	66	139	124	79	94	70	45	3	645
60-64	11	30	106	90	45	51	30	21	12	396
65 & Over	2	11	30	31	34	19	15	7	7	156
Total Count	341	713	1,453	1,136	538	392	230	92	22	4,917

Compensation										
				Ye	ars of Servic	e				Average
Age	0-1	1-2	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Comp.
Under 25	54,371	49,044	-	-	-	-	-	-	-	53,079
25-29	62,385	67,102	66,274	-	-	-	-	-	-	65,203
30-34	70,771	78,744	77,593	67,800	-	-	-	-	-	76,101
35-39	80,833	84,372	80,896	83,777	78,990	-	-	-	-	82,302
40-44	92,644	87,302	85,066	85,227	89,416	77,155	-	-	-	86,151
45-49	98,525	91,067	85,208	91,569	92,495	90,918	102,032	73,227	-	90,576
50-54	84,585	89,907	81,267	82,092	90,877	90,505	93,625	86,742	-	86,667
55-59	87,750	92,129	82,576	81,651	92,765	92,617	90,136	97,146	95,163	88,183
60-64	72,573	85,476	83,929	79,959	89,010	94,817	95,601	86,328	87,117	85,916
65 & Over	79,132	112,673	77,517	85,652	88,272	76,936	98,570	79,911	103,783	87,217
Avg. Annual Compensation	74,282	82,937	81,417	84,061	90,555	90,403	94,423	90,923	93,517	84,310



This work product was prepared solely for SamCERA for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work. Milliman recommends that third parties be aided by their own actuary or other qualified professional when reviewing the Milliman work product.

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Exhibit C-4a: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2013 **General Members**

Count										
	-			Ye	ars of Servio	e				Total
Age	0-1	1-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Count
Under 25	15	8	0	0	0	0	0	0	0	23
25-29	78	88	46	0	0	0	0	0	0	212
30-34	62	143	184	42	0	0	0	0	0	431
35-39	47	112	261	136	13	0	0	0	0	569
40-44	24	74	216	195	78	16	0	0	0	603
45-49	13	58	174	151	90	78	20	2	0	586
50-54	13	46	138	159	97	105	62	15	0	635
55-59	23	51	130	118	70	84	65	44	3	588
60-64	11	28	97	88	42	48	30	19	12	375
65 & Over	2	11	30	29	33	19	14	7	6	151
Total Count	288	619	1,276	918	423	350	191	87	21	4,173

Compensation Years of Service										
Age	0-1	1-2	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Average Comp.
Under 25	46,271	49,044	-	-	-	-	-	-	-	47,236
25-29	60,916	64,550	62,344	-	-	-	-	-	-	62,734
30-34	68,036	76,635	74,513	63,345	-	-	-	-	-	73,197
35-39	76,459	81,727	79,746	78,928	70,080	-	-	-	-	79,448
40-44	86,057	80,020	82,576	80,945	82,957	75,750	-	-	-	81,741
45-49	97,815	87,244	83,811	89,115	81,625	86,801	73,695	73,227	-	85,509
50-54	79,264	85,077	80,126	79,372	89,360	88,077	85,503	79,923	-	83,524
55-59	86,095	84,694	81,313	81,060	89,789	90,116	85,192	96,829	95,163	85,670
60-64	72,573	82,941	80,771	79,452	87,707	94,110	95,601	84,612	87,117	84,451
65 & Over	79,132	112,673	77,517	84,652	87,386	76,936	93,784	79,911	96,794	85,939
Avg. Annual Compensation	71,394	79,097	79,624	80,901	85,694	87,941	86,354	89,342	91,031	81,140

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Exhibit C-4b: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2013 Safety Members

	Years of Service											
Age	0-1	1-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Count		
Under 25	8	0	0	0	0	0	0	0	0	8		
25-29	6	8	4	0	0	0	0	0	0	18		
30-34	9	13	27	5	0	0	0	0	0	54		
35-39	6	10	14	29	3	0	0	0	0	62		
40-44	4	19	21	30	17	1	0	0	0	92		
45-49	3	8	9	26	28	8	11	0	0	93		
50-54	6	9	3	12	8	6	12	2	0	58		
55-59	2	15	7	2	8	5	5	1	0	45		
60-64	0	2	9	1	3	2	0	1	0	18		
65 & Over	0	0	0	2	0	0	1	0	1	4		
otal Count	44	84	94	107	67	22	29	4	1	452		

Compensation	1			Ye	ears of Servi	се				Average
Age	0-1	1-2	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Comp.
Under 25	70,294	-	-	-	-	-	-	-	-	70,294
25-29	81,042	94,915	101,739	-	-	-	-	-	-	91,807
30-34	91,064	106,036	106,630	103,767	-	-	-	-	-	103,628
35-39	118,953	117,251	109,427	110,602	120,094	-	-	-	-	112,677
40-44	112,712	115,665	115,130	118,192	122,962	97,512	-	-	-	117,390
45-49	101,599	118,791	116,953	113,726	130,456	134,057	153,681	-	-	125,594
50-54	96,115	114,597	141,910	111,635	111,140	131,397	130,463	137,890	-	118,832
55-59	106,791	117,408	104,444	114,915	119,579	138,127	154,398	111,057	-	121,466
60-64	-	120,958	117,970	108,778	107,258	113,403	-	125,849	-	115,936
65 & Over	-	-	-	100,158	-	-	165,574	-	145,717	127,902
Avg. Annual Compensation	93,814	113,008	111,775	113,154	123,447	130,718	144,607	128,172	145,717	115,561



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Compensation

Exhibit C-4c: Age & Service Distribution of Active Members by Count and Average Compensation as of June 30, 2013 Probation Members

Count										
	-			Ye	ears of Servio	ce				Total
Age	0-1	1-5	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Count
Under 25	2	0	0	0	0	0	0	0	0	2
25-29	4	3	6	0	0	0	0	0	0	13
30-34	1	5	28	1	0	0	0	0	0	35
35-39	1	2	24	38	1	0	0	0	0	66
40-44	1	0	12	37	21	1	0	0	0	72
45-49	0	0	7	23	19	10	4	0	0	63
50-54	0	0	4	7	5	3	6	0	0	25
55-59	0	0	2	4	1	5	0	0	0	12
60-64	0	0	0	1	0	1	0	1	0	3
65 & Over	0	0	0	0	1	0	0	0	0	1
Total Count	9	10	83	111	48	20	10	1	0	292

Compensation				Y	ears of Servio	e				Average
Age	0-1	1-2	5-9	10-14	15-19	20-24	25-29	30-34	35&Over	Comp.
Under 25	51,422	-	-	-	-	-	-	-	-	51,422
25-29	63,046	67,789	72,762	-	-	-	-	-	-	68,625
30-34	57,699	68,090	69,835	75,050	-	-	-	-	-	69,388
35-39	57,690	68,111	76,751	80,660	71,511	-	-	-	-	78,372
40-44	170,456	-	77,273	81,065	86,247	79,276	-	-	-	83,161
45-49	-	-	79,115	82,630	88,043	88,519	101,684	-	-	86,017
50-54	-	-	75,134	93,215	87,900	93,692	103,879	-	-	91,876
55-59	-	-	88,122	82,460	86,611	89,107	-	-	-	86,519
60-64	-	-	-	95,798	-	91,582	-	79,410	-	88,930
65 & Over	-	-	-	-	117,514	-	-	-	-	117,514
Avg. Annual Compensation	71,208	68,004	74,601	82,146	87,482	89,133	103,001	79,410	-	81,240



Exhibit C-5: Distribution of Retired Members by Age and Retirement Year as of June 30, 2013 All Plans Combined

				Retire	ment Year				Total	verage Ionthly
Age	Pre-1979	1980-84	1985-89	1990-94	1995-99	2000-04	2005-09	2010-14	Count	Benefit
Under 35	-	1	-	-	3	2	-	-	6	\$ 1,423
35-39	-	-	-	-	-	1	3	2	6	2,726
40-44	-	-	1	1	-	3	6	3	14	2,655
45-49	-	-	1	1	3	7	8	8	28	2,815
50-54	1	-	-	1	10	13	26	97	148	2,834
55-59	-	-	1	4	10	36	131	142	324	3,308
60-64	-	-	6	22	33	118	259	240	678	3,432
65-69	3	7	9	30	111	194	330	190	874	3,646
70-74	4	4	24	99	170	218	208	64	791	3,050
75-79	11	18	58	119	141	109	30	8	494	2,564
80-84	13	52	68	124	101	25	12	3	398	2,134
85-89	50	82	117	82	19	2	2	1	355	1,970
90-94	51	79	75	15	2	-	-	-	222	1,919
95-99	27	18	4	1	1	-	-	-	51	1,571
100 & Over	7	2	-	-	-	-	-	-	9	1,610
Total Count	167	263	364	499	604	728	1,015	758	4,398	
Avg Monthly Benefit	\$ 1,714	\$ 1,602	\$ 2,089	\$ 2,175	\$ 2,353	\$ 3,062	\$ 3,900	\$ 3,609		\$ 2,933



				Retire	ment Year				Total	Aver Mon	
Age	Pre-1979	1980-84	1985-89	1990-94	1995-99	2000-04	2005-09	2010-14	Count	Ben	-
Under 35	-	1	-	-	3	2	-	-	6	\$1	,423
35-39	-	-	-	-	-	1	2	2	5	3	,272
40-44	-	-	1	1	-	1	5	2	10	1	,613
45-49	-	-	1	1	1	4	4	7	18	2	2,023
50-54	1	-	-	-	9	10	17	68	105	1	,570
55-59	-	-	1	2	8	28	101	109	249	2	2,279
60-64	-	-	2	13	27	105	217	217	581	2	2,898
65-69	2	4	7	21	93	125	306	181	739	3	,210
70-74	2	3	14	78	112	189	199	59	656	2	2,648
75-79	6	18	47	107	133	102	30	8	451	2	2,334
80-84	11	48	62	123	100	23	12	3	382	2	2,046
85-89	45	76	116	82	19	2	2	1	343	1	,903
90-94	44	79	74	15	2	-	-	-	214	1	,850
95-99	26	18	4	1	1	-	-	-	50	1	,574
100 & Over	7	2	-	-	-	-	-	-	9	1	,610
Total Count	144	249	329	444	508	592	895	657	3,818		
Avg Monthly Benefit	\$ 1,437	\$ 1,501	\$ 1,924	\$ 1,885	\$ 1,851	\$ 2,474	\$ 3,463	\$ 3,081		\$2	,509

Exhibit C-5a: Distribution of Retired Members by Age and Retirement Year as of June 30, 2013 General Plans Combined



Age	Pre-1979	1980-84	1985-89	Retire 1990-94	nent Year 1995-99	2000-04	2005-09	2010-14	Total Count	Average Monthly Benefit
Under 35	-	-	-	-	-	-	-	-	-	\$-
35-39	-	-	-	-	-	-	1	-	1	-
40-44	-	-	-	-	-	2	1	1	4	5,260
45-49	-	-	-	-	2	2	4	1	9	3,852
50-54	-	-	-	1	1	3	7	23	35	6,482
55-59	-	-	-	2	2	5	24	20	53	7,663
60-64	-	-	4	9	4	12	32	14	75	7,172
65-69	1	3	2	9	16	56	13	4	104	6,391
70-74	2	1	10	19	42	16	3	2	95	5,347
75-79	5	-	11	12	5	1	-	-	34	5,248
80-84	2	4	6	1	-	-	-	-	13	4,623
85-89	5	6	1	-	-	-	-	-	12	3,871
90-94	7	-	1	-	-	-	-	-	8	3,745
95-99	1	-	-	-	-	-	-	-	1	1,418
100 & Over	-	-	-	-	-	-	-	-	-	-
Total Count	23	14	35	53	72	97	85	65	444	
Avg Monthly Benefit	\$ 3,450	\$ 3,402	\$ 3,645	\$ 4,387	\$ 5,120	\$ 6,490	\$ 8,298	\$ 8,132		\$ 6,124

Exhibit C-5b: Distribution of Retired Members by Age and Retirement Year as of June 30, 2013 Safety Plans Combined



				Retire	ment Year				Total	Average Monthly	
Age	Pre-1979	1980-84	1985-89	1990-94	1995-99	2000-04	2005-09	2010-14	Count	Benefit	
Under 35	-	-	-	-	-	-	-	-	-	\$-	
35-39	-	-	-	-	-	-	-	-	-	-	
40-44	-	-	-	-	-	-	-	-	-	-	
45-49	-	-	-	-	-	1	-	-	1	7,728	
50-54	-	-	-	-	-	-	2	6	8	3,480	
55-59	-	-	-	-	-	3	6	13	22	4,466	
60-64	-	-	-	-	2	1	10	9	22	4,802	
65-69	-	-	-	-	2	13	11	5	31	4,835	
70-74	-	-	-	2	16	13	6	3	40	4,193	
75-79	-	-	-	-	3	6	-	-	9	3,907	
80-84	-	-	-	-	1	2	-	-	3	2,499	
85-89	-	-	-	-	-	-	-	-	-	-	
90-94	-	-	-	-	-	-	-	-	-	-	
95-99	-	-	-	-	-	-	-	-	-	-	
100 & Over	-	-	-	-	-	-	-	-	-	-	
Total Count	-	-	-	2	24	39	35	36	136		
Avg Monthly Benefit	\$ -	\$ -	\$-	\$ 7,962	\$ 4,673	\$ 3,457	\$ 4,389	\$ 5,089		\$ 4,410	

Exhibit C-5c: Distribution of Retired Members by Age and Retirement Year as of June 30, 2013 Probation Plans Combined



Appendix D: Member Contribution Rates



This section illustrates the member basic contribution rates and 50% COLA sharing contribution rates by entry age for Plans 1 through 6. For different COLA sharing percentages, the 50% COLA contribution rates may be adjusted ratably, and should be rounded to two decimal places.

Member contribution rates for Plan 7 are not defined by entry age. Plan 7 members contribute 50% of the total Normal Cost rate. For the 2013-2014 fiscal year, Plan 7 member contribution rates are:

•	General Plan 7 members:	7.75%
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- Safety Plan 7 members: 14.25%
- Probation Plan 7 members: 13.75%

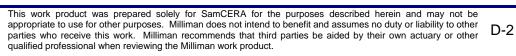
Please refer to Appendix B for a detailed description of member contribution rates.



	Basic Member Rates								
Entry Age (1)	Plans 1&2	Plan 4	Plan 5	Plan 7					
16	5.25%	5.04%	4.34%	7.75%					
17	5.35%	5.14%	4.42%	7.75%					
18	5.45%	5.23%	4.50%	7.75%					
19	5.55%	5.33%	4.59%	7.75%					
20	5.66%	5.43%	4.67%	7.75%					
21	5.76%	5.53%	4.76%	7.75%					
22	5.87%	5.63%	4.85%	7.75%					
23	5.97%	5.73%	4.94%	7.75%					
24	6.08%	5.84%	5.03%	7.75%					
25	6.19%	5.94%	5.12%	7.75%					
26	6.31%	6.05%	5.22%	7.75%					
27	6.42%	6.16%	5.31%	7.75%					
28	6.54%	6.28%	5.41%	7.75%					
29	6.66%	6.39%	5.51%	7.75%					
30	6.78%	6.51%	5.61%	7.75%					
31	6.90%	6.62%	5.71%	7.75%					
32	7.03%	6.75%	5.82%	7.75%					
33	7.16%	6.87%	5.93%	7.75%					
33 34	7.29%	6.99%	6.03%	7.75%					
35	7.42%	7.12%	6.14%	7.75%					
36	7.56%	7.25%	6.25%	7.75%					
37	7.70%	7.39%	6.37%	7.75%					
38	7.84%	7.52%	6.48%	7.75%					
39	7.99%	7.66%	6.60%	7.75%					
39 40	7.99 <i>%</i> 8.14%	7.81%	6.72%	7.75%					
40 41	8.29%	7.95%	6.85%	7.75%					
41	8.45%	8.10%	6.97%	7.75%					
42 43	8.45% 8.61%	8.10% 8.24%	6.97% 7.10%	7.75% 7.75%					
43 44	8.76%	8.38%	7.10%	7.75%					
45	8.91%	8.51%	7.37%	7.75%					
46	9.06%	8.64%	7.51%	7.75%					
47	9.21%	8.76%	7.64%	7.75%					
48	9.34%	8.86%	7.78%	7.75%					
49	9.47%	8.96%	7.91%	7.75%					
50	9.58%	9.03%	8.04%	7.75%					
51	9.68%	9.07%	8.16%	7.75%					
52	9.75%	9.07%	8.27%	7.75%					
53	9.78%	9.38%	8.37%	7.75%					
54	9.78%	9.72%	8.46%	7.75%					
55	9.78%	9.72%	8.52%	7.75%					
56	9.78%	9.72%	8.56%	7.75%					
57	9.78%	9.72%	8.56%	7.75%					
58	9.78%	9.72%	8.85%	7.75%					
59	9.78%	9.72%	9.17%	7.75%					
60	9.78%	9.72%	9.17%	7.75%					

Exhibit D-1: General Member Contribution Rates (including SMCM&VCD)

⁽¹⁾ For County General members (except plan 5 members) entering after age 55, the rate equals the rate at age 55. For County General plan 5 members entering after age 60, the rate equals the rate at age 60.



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	Basic Member Rates									
Entry Age ⁽¹⁾	Plans 1&2	Plans 4&5&6	Plan 7							
		/								
16	7.14%	6.86%	14.25%							
17	7.28%	6.98%	14.25%							
18	7.41%	7.11%	14.25%							
19	7.55%	7.24%	14.25%							
20	7.68%	7.37%	14.25%							
21	7.82%	7.51%	14.25%							
22	7.97%	7.65%	14.25%							
23	8.11%	7.79%	14.25%							
24	8.26%	7.93%	14.25%							
25	8.41%	8.07%	14.25%							
26	8.56%	8.22%	14.25%							
27	8.72%	8.37%	14.25%							
28	8.88%	8.52%	14.25%							
29	9.04%	8.68%	14.25%							
30	9.21%	8.83%	14.25%							
31	9.37%	9.00%	14.25%							
32	9.55%	9.16%	14.25%							
33	9.72%	9.33%	14.25%							
34	9.91%	9.51%	14.25%							
35	10.09%	9.68%	14.25%							
36	10.29%	9.86%	14.25%							
37	10.48%	10.04%	14.25%							
38	10.68%	10.22%	14.25%							
39	10.87%	10.39%	14.25%							
40	11.06%	10.56%	14.25%							
41	11.24%	10.72%	14.25%							
42	11.42%	10.86%	14.25%							
43	11.59%	11.00%	14.25%							
44	11.74%	11.11%	14.25%							
45	11.89%	11.20%	14.25%							
46	12.00%	11.25%	14.25%							
47	12.09%	11.25%	14.25%							
48	12.13%	11.63%	14.25%							
49	12.13%	12.05%	14.25%							
50	12.13%	12.05%	14.25%							

Exhibit D-2: Safety Member Contribution Rates

⁽¹⁾ For Safety members entering after age 50, the rate equals the rate at age 50.



	Basi	c Member Rates - P	DA ⁽²⁾	Basic Membe	Managers ⁽³⁾	
Entry Age ⁽¹⁾	Plans 1&2	Plans 4&5&6	Plan 7	Plans 1&2	Plans 4&5&6	Plan 7
16	5.72%	5.49%	13.75%	7.14%	6.86%	13.75%
17	5.82%	5.59%	13.75%	7.28%	6.98%	13.75%
18	5.93%	5.69%	13.75%	7.41%	7.11%	13.75%
19	6.04%	5.79%	13.75%	7.55%	7.24%	13.75%
20	6.15%	5.90%	13.75%	7.68%	7.37%	13.75%
21	6.26%	6.01%	13.75%	7.82%	7.51%	13.75%
22	6.37%	6.12%	13.75%	7.97%	7.65%	13.75%
23	6.49%	6.23%	13.75%	8.11%	7.79%	13.75%
24	6.61%	6.34%	13.75%	8.26%	7.93%	13.75%
25	6.73%	6.46%	13.75%	8.41%	8.07%	13.75%
26	6.85%	6.57%	13.75%	8.56%	8.22%	13.75%
27	6.98%	6.69%	13.75%	8.72%	8.37%	13.75%
28	7.10%	6.82%	13.75%	8.88%	8.52%	13.75%
29	7.23%	6.94%	13.75%	9.04%	8.68%	13.75%
30	7.36%	7.07%	13.75%	9.21%	8.83%	13.75%
31	7.50%	7.20%	13.75%	9.37%	9.00%	13.75%
32	7.64%	7.33%	13.75%	9.55%	9.16%	13.75%
33	7.78%	7.47%	13.75%	9.72%	9.33%	13.75%
34	7.93%	7.61%	13.75%	9.91%	9.51%	13.75%
35	8.08%	7.75%	13.75%	10.09%	9.68%	13.75%
36	8.23%	7.89%	13.75%	10.29%	9.86%	13.75%
37	8.39%	8.03%	13.75%	10.48%	10.04%	13.75%
38	8.54%	8.17%	13.75%	10.68%	10.22%	13.75%
39	8.69%	8.31%	13.75%	10.87%	10.39%	13.75%
40	8.85%	8.45%	13.75%	11.06%	10.56%	13.75%
41	9.00%	8.57%	13.75%	11.24%	10.72%	13.75%
42	9.14%	8.69%	13.75%	11.42%	10.86%	13.75%
43	9.27%	8.80%	13.75%	11.59%	11.00%	13.75%
44	9.40%	8.89%	13.75%	11.74%	11.11%	13.75%
45	9.51%	8.96%	13.75%	11.89%	11.20%	13.75%
46	9.60%	9.00%	13.75%	12.00%	11.25%	13.75%
47	9.67%	9.00%	13.75%	12.09%	11.25%	13.75%
48	9.70%	9.31%	13.75%	12.13%	11.63%	13.75%
49	9.70%	9.64%	13.75%	12.13%	12.05%	13.75%
50	9.70%	9.64%	13.75%	12.13%	12.05%	13.75%

Exhibit D-3: Probation Member Contribution Rates

⁽¹⁾ For Probation members entering after age 50, the rate equals the rate at age 50.

⁽²⁾ PDA basic member rates reflect 20% pickup.

⁽³⁾ Probation manager basic member contribution rates except Plan 7 are based on rates in corresponding Safety Plan.



		25% Member C	OLA Rates		50% Member COLA Rates				
Entry Age (1)	Plan 1	Plan 2	Plan 4	Plan 5	Plan 1	Plan 2	Plan 4	Plan 5	
16	1.10%	0.86%	0.56%	0.46%	2.19%	1.72%	1.13%	0.92%	
17	1.12%	0.88%	0.57%	0.47%	2.23%	1.75%	1.15%	0.94%	
18	1.14%	0.89%	0.58%	0.48%	2.28%	1.79%	1.17%	0.96%	
19	1.16%	0.91%	0.60%	0.49%	2.32%	1.82%	1.19%	0.98%	
20	1.18%	0.93%	0.61%	0.50%	2.36%	1.86%	1.21%	0.99%	
21	1.20%	0.94%	0.62%	0.51%	2.40%	1.89%	1.24%	1.01%	
22	1.23%	0.96%	0.63%	0.52%	2.45%	1.92%	1.26%	1.03%	
23	1.25%	0.98%	0.64%	0.53%	2.49%	1.96%	1.28%	1.05%	
24	1.27%	1.00%	0.65%	0.54%	2.54%	1.99%	1.31%	1.07%	
25	1.29%	1.01%	0.66%	0.55%	2.58%	2.03%	1.33%	1.09%	
26	1.32%	1.03%	0.68%	0.56%	2.63%	2.07%	1.35%	1.11%	
27	1.34%	1.05%	0.69%	0.57%	2.68%	2.11%	1.38%	1.13%	
28	1.37%	1.07%	0.70%	0.58%	2.73%	2.14%	1.40%	1.15%	
29	1.39%	1.09%	0.71%	0.59%	2.78%	2.18%	1.43%	1.17%	
30	1.42%	1.11%	0.73%	0.60%	2.83%	2.22%	1.46%	1.19%	
31	1.44%	1.13%	0.74%	0.61%	2.88%	2.26%	1.48%	1.22%	
32	1.47%	1.15%	0.75%	0.62%	2.94%	2.31%	1.51%	1.24%	
33	1.49%	1.17%	0.77%	0.63%	2.99%	2.35%	1.54%	1.26%	
34	1.52%	1.20%	0.78%	0.64%	3.04%	2.39%	1.56%	1.28%	
35	1.55%	1.22%	0.80%	0.65%	3.10%	2.43%	1.59%	1.31%	
36	1.58%	1.24%	0.81%	0.67%	3.16%	2.48%	1.62%	1.33%	
37	1.61%	1.26%	0.83%	0.68%	3.21%	2.52%	1.65%	1.36%	
38	1.64%	1.29%	0.84%	0.69%	3.27%	2.57%	1.68%	1.38%	
39	1.67%	1.31%	0.86%	0.70%	3.34%	2.62%	1.71%	1.41%	
40	1.70%	1.33%	0.87%	0.72%	3.40%	2.67%	1.75%	1.43%	
41	1.73%	1.36%	0.89%	0.73%	3.46%	2.72%	1.78%	1.46%	
42	1.76%	1.39%	0.91%	0.74%	3.53%	2.77%	1.81%	1.48%	
43	1.80%	1.41%	0.92%	0.76%	3.59%	2.82%	1.84%	1.51%	
44	1.83%	1.44%	0.94%	0.77%	3.66%	2.87%	1.87%	1.54%	
45	1.86%	1.46%	0.95%	0.78%	3.72%	2.92%	1.90%	1.57%	
46	1.89%	1.49%	0.97%	0.80%	3.78%	2.97%	1.93%	1.60%	
47	1.92%	1.51%	0.98%	0.81%	3.85%	3.02%	1.96%	1.63%	
48	1.95%	1.53%	0.99%	0.83%	3.90%	3.06%	1.98%	1.66%	
49	1.98%	1.55%	1.00%	0.84%	3.95%	3.11%	2.00%	1.68%	
50	2.00%	1.57%	1.01%	0.86%	4.00%	3.14%	2.02%	1.71%	
51	2.02%	1.59%	1.01%	0.87%	4.04%	3.17%	2.03%	1.74%	
52	2.04%	1.60%	1.01%	0.88%	4.07%	3.20%	2.03%	1.76%	
53	2.04%	1.60%	1.05%	0.89%	4.08%	3.21%	2.10%	1.78%	
54	2.04%	1.60%	1.09%	0.90%	4.08%	3.21%	2.17%	1.80%	
55	2.04%	1.60%	1.09%	0.91%	4.08%	3.21%	2.17%	1.81%	
56	2.04%	1.60%	1.09%	0.91%	4.08%	3.21%	2.17%	1.82%	
57	2.04%	1.60%	1.09%	0.91%	4.08%	3.21%	2.17%	1.82%	
58	2.04%	1.60%	1.09%	0.94%	4.08%	3.21%	2.17%	1.89%	
59	2.04%	1.60%	1.09%	0.98%	4.08%	3.21%	2.17%	1.95%	
60	2.04%	1.60%	1.09%	0.98%	4.08%	3.21%	2.17%	1.95%	

Exhibit D-4: General Member Contribution Rates (including SMCM&VCD)

⁽¹⁾ For County General members (except plan 5 members) entering after age 55, the rate equals the rate at age 55. For County General plan 5 members entering after age 60, the rate equals the rate at age 60.



	25% Member COLA Rates						50% Member COLA Rates					
Entry Age (1)	Plan 1	Plan 2	Plan 4	Plan 5	Plan 6	Plan 1	Plan 2	Plan 4	Plan 5	Plan 6		
16	2.23%	1.79%	1.13%	1.03%	0.92%	4.47%	3.57%	2.25%	2.06%	1.84%		
17	2.28%	1.82%	1.15%	1.05%	0.94%	4.55%	3.64%	2.29%	2.10%	1.88%		
18	2.32%	1.85%	1.17%	1.07%	0.96%	4.63%	3.71%	2.33%	2.14%	1.91%		
19	2.36%	1.89%	1.19%	1.09%	0.97%	4.72%	3.78%	2.38%	2.18%	1.95%		
20	2.40%	1.92%	1.21%	1.11%	0.99%	4.80%	3.84%	2.42%	2.22%	1.98%		
21	2.45%	1.96%	1.23%	1.13%	1.01%	4.89%	3.91%	2.46%	2.26%	2.02%		
22	2.49%	1.99%	1.25%	1.15%	1.03%	4.98%	3.99%	2.51%	2.30%	2.06%		
23	2.54%	2.03%	1.28%	1.17%	1.05%	5.07%	4.06%	2.56%	2.34%	2.09%		
24	2.58%	2.07%	1.30%	1.19%	1.07%	5.17%	4.13%	2.60%	2.38%	2.13%		
25	2.63%	2.10%	1.32%	1.21%	1.08%	5.26%	4.21%	2.65%	2.43%	2.17%		
26	2.68%	2.14%	1.35%	1.24%	1.10%	5.35%	4.28%	2.70%	2.47%	2.21%		
27	2.73%	2.18%	1.37%	1.26%	1.12%	5.45%	4.36%	2.75%	2.52%	2.25%		
28	2.78%	2.22%	1.40%	1.28%	1.15%	5.55%	4.44%	2.80%	2.56%	2.29%		
29	2.83%	2.26%	1.42%	1.31%	1.17%	5.65%	4.52%	2.85%	2.61%	2.33%		
30	2.88%	2.30%	1.45%	1.33%	1.19%	5.76%	4.61%	2.90%	2.66%	2.37%		
31	2.93%	2.34%	1.48%	1.35%	1.21%	5.86%	4.69%	2.95%	2.71%	2.42%		
32	2.99%	2.39%	1.50%	1.38%	1.23%	5.97%	4.78%	3.01%	2.75%	2.46%		
33	3.04%	2.43%	1.53%	1.40%	1.25%	6.08%	4.86%	3.06%	2.81%	2.51%		
34	3.10%	2.48%	1.56%	1.43%	1.28%	6.20%	4.96%	3.12%	2.86%	2.56%		
35	3.16%	2.52%	1.59%	1.46%	1.30%	6.31%	5.05%	3.18%	2.91%	2.60%		
36	3.22%	2.57%	1.62%	1.48%	1.33%	6.44%	5.15%	3.24%	2.96%	2.65%		
37	3.28%	2.62%	1.65%	1.51%	1.35%	6.55%	5.24%	3.29%	3.02%	2.70%		
38	3.34%	2.67%	1.68%	1.54%	1.37%	6.68%	5.34%	3.35%	3.07%	2.75%		
39	3.40%	2.72%	1.70%	1.56%	1.40%	6.80%	5.44%	3.41%	3.12%	2.79%		
40	3.46%	2.77%	1.73%	1.59%	1.42%	6.92%	5.53%	3.46%	3.18%	2.84%		
41	3.51%	2.81%	1.76%	1.61%	1.44%	7.03%	5.62%	3.52%	3.22%	2.88%		
42	3.57%	2.86%	1.78%	1.63%	1.46%	7.14%	5.71%	3.56%	3.27%	2.92%		
43	3.62%	2.90%	1.80%	1.65%	1.48%	7.25%	5.80%	3.61%	3.31%	2.96%		
44	3.67%	2.94%	1.82%	1.67%	1.49%	7.34%	5.87%	3.65%	3.34%	2.99%		
45	3.72%	2.97%	1.84%	1.68%	1.51%	7.44%	5.95%	3.67%	3.37%	3.01%		
46	3.75%	3.00%	1.85%	1.69%	1.51%	7.50%	6.00%	3.69%	3.38%	3.02%		
47	3.78%	3.02%	1.85%	1.69%	1.51%	7.56%	6.05%	3.69%	3.38%	3.02%		
48	3.79%	3.03%	1.91%	1.75%	1.56%	7.59%	6.07%	3.82%	3.50%	3.13%		
49	3.79%	3.03%	1.98%	1.81%	1.62%	7.59%	6.07%	3.95%	3.62%	3.24%		
50	3.79%	3.03%	1.98%	1.81%	1.62%	7.59%	6.07%	3.95%	3.62%	3.24%		

Exhibit D-5: Safety Member Contribution Rates

⁽¹⁾ For Safety members entering after age 50, the rate equals the rate at age 50.



Exhibit D-6: Probation Member Contribution Rates

	25%	DLA Rates -	PDA	50% N	Member CO)LA Rates -	PDA	50% Member Probation M		
Entry Age (1)	Plans 1&2	Plan 4	Plan 5	Plan 6	Plans 1&2	Plan 4	Plan 5	Plan 6	Plan 5	Plan 6
16	1 700/	1 1 2 9 /	1.000/	0.029/	2 5 90/	2 2 4 9/	2.020/	1 0 2 0/	2.06%	1 9 4 9 /
	1.79%	1.12%	1.02%	0.92%	3.58%	2.24%	2.03%	1.83%	2.06%	1.84%
17	1.82%	1.14%	1.03%	0.93%	3.64%	2.28%	2.07%	1.86%	2.10%	1.88%
18	1.86%	1.16%	1.05%	0.95%	3.71%	2.32%	2.11%	1.90%	2.14%	1.91%
19	1.89%	1.18%	1.07%	0.97%	3.78%	2.36%	2.14%	1.93%	2.18%	1.95%
20	1.92%	1.20%	1.09%	0.98%	3.85%	2.41%	2.18%	1.97%	2.22%	1.98%
21	1.96%	1.23%	1.11%	1.00%	3.92%	2.45%	2.22%	2.00%	2.26%	2.02%
22	1.99%	1.25%	1.13%	1.02%	3.99%	2.50%	2.27%	2.04%	2.30%	2.06%
23	2.03%	1.27%	1.15%	1.04%	4.06%	2.54%	2.31%	2.08%	2.34%	2.09%
24	2.07%	1.29%	1.17%	1.06%	4.14%	2.59%	2.35%	2.12%	2.38%	2.13%
25	2.11%	1.32%	1.20%	1.08%	4.21%	2.63%	2.39%	2.16%	2.43%	2.17%
26	2.14%	1.34%	1.22%	1.10%	4.29%	2.68%	2.43%	2.19%	2.47%	2.21%
27	2.18%	1.36%	1.24%	1.12%	4.37%	2.73%	2.48%	2.23%	2.52%	2.25%
28	2.22%	1.39%	1.26%	1.14%	4.44%	2.78%	2.52%	2.28%	2.56%	2.29%
29	2.26%	1.42%	1.28%	1.16%	4.52%	2.83%	2.57%	2.32%	2.61%	2.33%
30	2.30%	1.44%	1.31%	1.18%	4.61%	2.88%	2.62%	2.36%	2.66%	2.37%
31	2.35%	1.47%	1.33%	1.20%	4.69%	2.94%	2.67%	2.40%	2.71%	2.42%
32	2.39%	1.49%	1.36%	1.22%	4.78%	2.99%	2.71%	2.45%	2.75%	2.46%
33	2.43%	1.52%	1.38%	1.25%	4.87%	3.05%	2.77%	2.49%	2.81%	2.51%
34	2.48%	1.55%	1.41%	1.27%	4.96%	3.10%	2.82%	2.54%	2.86%	2.56%
35	2.53%	1.58%	1.43%	1.29%	5.06%	3.16%	2.87%	2.59%	2.91%	2.60%
36	2.57%	1.61%	1.46%	1.32%	5.15%	3.22%	2.92%	2.63%	2.96%	2.65%
37	2.62%	1.64%	1.49%	1.34%	5.25%	3.27%	2.97%	2.68%	3.02%	2.70%
38	2.67%	1.67%	1.51%	1.36%	5.34%	3.33%	3.02%	2.73%	3.07%	2.75%
39	2.72%	1.69%	1.54%	1.39%	5.44%	3.39%	3.08%	2.77%	3.12%	2.79%
40	2.77%	1.72%	1.56%	1.41%	5.54%	3.45%	3.13%	2.82%	3.18%	2.84%
41	2.82%	1.75%	1.59%	1.43%	5.63%	3.49%	3.17%	2.86%	3.22%	2.88%
42	2.86%	1.77%	1.61%	1.45%	5.72%	3.54%	3.22%	2.90%	3.27%	2.92%
43	2.90%	1.79%	1.63%	1.47%	5.80%	3.59%	3.26%	2.94%	3.31%	2.96%
44	2.94%	1.81%	1.65%	1.48%	5.88%	3.63%	3.29%	2.97%	3.34%	2.99%
45	2.98%	1.83%	1.66%	1.49%	5.95%	3.65%	3.32%	2.99%	3.37%	3.01%
46	3.00%	1.84%	1.67%	1.50%	6.01%	3.67%	3.33%	3.00%	3.38%	3.02%
47	3.03%	1.84%	1.67%	1.50%	6.05%	3.67%	3.33%	3.00%	3.38%	3.02%
48	3.03%	1.90%	1.72%	1.55%	6.07%	3.80%	3.45%	3.11%	3.50%	3.13%
49	3.03%	1.97%	1.78%	1.61%	6.07%	3.93%	3.57%	3.22%	3.62%	3.24%
50	3.03%	1.97%	1.78%	1.61%	6.07%	3.93%	3.57%	3.22%	3.62%	3.24%

⁽¹⁾ For Probation members entering after age 50, the rate equals the rate at age 50.

⁽²⁾ Probation manager member contribution rates based on rates in corresponding Safety Plan.



Appendix E:	Glossary
hav dic tion d'rian, n. e. krai did tion arin, n. e. krai tion arin, n. e. krai did tion arin, n. e. krai did tion arin, n. e. krai did tion arin, n. e. krai tion arin, n. e. krai did tion arin, n. e. krai tion arin, n. e. krai did tion arin, n. e. krai di arin, n. e. krai di arin, n. e. krai did tion a	The following definitions include excerpts from a list adopted by the major actuarial organizations in the United States. In some cases, the definitions have been modified for specific applicability to SamCERA and include terms used exclusively by SamCERA. Defined terms are capitalized throughout this Appendix.
Accrued Benefit	The amount of an individual's benefit (whether or not vested) as of a specific date, determined in accordance with the terms of a pension plan and based on compensation and service to that date.
Actuarial Accrued Liability	That portion, as determined by a particular Actuarial Cost Method, of the Actuarial Present Value of pension plan benefits and expenses which is not provided for by future Normal Costs.
Actuarial Assumptions	Assumptions as to the occurrence of future events affecting pension costs, such as: mortality, withdrawal, disablement, and retirement; changes in compensation; rates of investment earnings and asset appreciation or depreciation; procedures used to determine the Actuarial Value of Assets; and other relevant items.
Actuarial Gain (Loss)	A measure of the difference between actual experience and that expected based on a set of Actuarial Assumptions during the period between two Actuarial Valuation dates, as determined in accordance with a particular Actuarial Cost Method.
Actuarial Present Value	The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions.
Actuarial Valuation	The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a pension plan.
Actuarial Value of Assets	The value of cash, investments and other property belonging to a pension plan, as used by the actuary for the purpose of an Actuarial Valuation.
Actuarially Equivalent	Of equal Actuarial Present Value, determined as of a given date with each value based on the same set of Actuarial Assumptions.
Amortization Payment	That portion of the pension plan contribution which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.
COLA	Cost of living adjustments to benefit payments are made each April 1. See full description in Appendix B.

Li Milliman

- **Employer Reserve** The accumulation of employer contributions for future retirement benefit payments. Additions include contributions from employers and related earnings. Deductions include annuity payments to retired members and survivors, lump sum death benefit payments to member survivors, and supplemental disability payments.
- Entry Age
 A method under which the Actuarial Present Value of the Projected
 Benefits of each individual included in an Actuarial Valuation is allocated
 on a level basis over the earnings or service of the individual between
 entry age and assumed exit ages. The portion of this Actuarial Present
 Value allocated to a valuation year is called the Normal Cost. The
 portion of this Actuarial Present Value not provided for at a valuation
 date by the Actuarial Present Value of future Normal Costs is called the
- **Funded Ratio** A measurement of the funded status of the system. The Funded Ratio is calculated by dividing the Valuation Assets by the Actuarial Accrued Liability. For example, a Funded Ratio of 90% indicates assets are 10% less than liabilities.
- **Member Reserve** The accumulation of member contributions. Additions include member contributions and related earnings. Deductions include annuity payments to retirees and refunds to members.
- **Non-Valuation** Reserves excluded from the calculation of contribution rates.
- **Normal Cost** That portion of the Actuarial Present Value of pension plan benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method.
- Plan Year A 12-month period beginning July 1 and ending June 30.
- **Projected Benefits** Those pension plan benefit amounts which are expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age and past and anticipated future compensation and service credits.

UnfundedThe excess, if any, of the Actuarial Accrued Liability over the ActuarialActuarial AccruedValue of Assets.Liability

- **Valuation Date** The date upon which the Normal Cost, Actuarial Accrued Liability, and Actuarial Value of Assets are determined. Generally, the Valuation Date will coincide with the ending of a Plan Year.
- **Valuation** All reserves excluding the Non-Valuation Reserves.

Reserves

Reserves

September 24, 2013

FROM:

Agenda Item 5.3

TO:	Board	of Retirement
		0

Ad Bas

SUBJECT: Acceptance of the Fiscal Year 2014-2015 Employer and Member Contribution Rates

David Bailey, Chief Executive Officer

Staff Recommendation

That the Board of Retirement adopt the attached "*Resolution Accepting Contribution rates to Recommend to the Board of Supervisors for the 2014-2015 Fiscal Year.*" The resolution accepts the employer and member contribution rates, as recommended by SamCERA's actuarial consulting firm, Milliman, Inc., in the June 30, 2013, Actuarial Valuation. It further recommends to the Board of Supervisors that these rates be adopted and implemented for the 2014-2015 fiscal year.

Background

At its May 2013 meeting, the Board of Retirement adopted the economic and demographic assumptions to be used in the valuation as recommended by the actuary. The assumptions were unchanged from the prior valuation. They include:

Investment Returns	7.50%
General Wage Growth	3.75%
Payroll Growth	3.75%
COLA (Plan 1 G&S)	3.25%
COLA (Plan 1 P)	2.90%
COLA (Plan 2)	2.65%
COLA (Plan 3)	0.00%
COLA (Plans 4, 5 & 6)	1.90%
All Demographic Assumptions	(no change)

SamCERA staff members David Bailey, Scott Hood, Michael Coultrip, Mabel Wong and Gladys Smith read the valuation and met with Milliman actuaries to discuss and understand the document and its recommendations. Staff supports the results and recommendations of the valuation.

RESOLUTION 13-14-___

RESOLUTION ACCEPTING CONTRIBUTION RATES TO RECOMMEND TO THE BOARD OF SUPERVISORS FOR THE 2014-2015 FISCAL YEAR.

- WHEREAS, Government Code §31453 mandates the periodic actuarial valuation of the Retirement Fund and requires that the Board..."shall, at least 45 days prior to the beginning of the succeeding fiscal year, recommend to the Board of Supervisors such changes in the rates of interest, in the rates of contributions of members, and in the county and district appropriations as are necessary...;" and
- WHEREAS, the Board has received and accepted the June 30, 2013, valuation report from its actuarial firm, Milliman, Inc., and
- WHEREAS, the Chief Executive Officer has recommended, in agreement with Milliman, Inc., the contribution rates necessary to assure the actuarial soundness of the Retirement Fund,

Therefore, be it

RESOLVED that the Board hereby accepts the employer and member contribution rates as recommended by Milliman, Inc. in its June 30, 2013, Actuarial Valuation of the San Mateo County Employees' Retirement Association effective for the fiscal year 2014-2015.

Be it further

RESOLVED that the Board recommends that the Board of Supervisors adopt the recommended employer contribution rates for the County of San Mateo, the San Mateo Superior Court and the San Mateo County Mosquito & Vector Control District in accordance with the schedules provided by Milliman, Inc. in its June 30, 2013, Actuarial Valuation, effective July 1, 2014.

Be it further

RESOLVED that the Board of Retirement hereby recommends that the Board of Supervisors adopt the recommended **member contribution rates** for SamCERA active members of the County of San Mateo, the San Mateo County Superior Court and the San Mateo County Mosquito & Vector Control District in accordance with the schedules provided by Milliman, Inc. in its June 30, 2013, Actuarial Valuation, effective July 1, 2014.

Be it further

RESOLVED that the Chief Executive Officer is hereby authorized to transmit these rates and recommendations to the Board of Supervisors and to take all actions necessary to provide for their implementation effective July 1, 2014.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION Board of Retirement

September 24, 2013

Agenda Item 5.4

To: Board of Retirement

From: David Bailey, Chief Executive Officer

Subject: Annual Review of SamCERA's Actuarial Services Firm, Milliman, Inc.

Staff Recommendation: Staff recommends that the Board review the information summarizing Milliman, Inc.'s performance as SamCERA's actuarial services provider and comment accordingly during this agenda item.

Summary: Milliman again received high marks from the Board and staff for the services they provide to SamCERA. Ratings were similar to those of the last few years and all comments were constructive and positive.

Background: The annual evaluation of SamCERA's actuarial services firm has three parts:

- 1. A survey completed by trustees, staff and the actuary
- 2. Responses to questions submitted to the actuary
- 3. A discussion at the Board meeting to present the findings of the survey and question responses.

1. Survey

This year the survey was provided online. Results were collected from eight trustees, five staff members and one response was received from the actuarial firm. (Only one was allowed.)

Similar to prior years, ratings from staff and trustees were higher than that by Milliman of themselves. Nonetheless, the ratings converged this year, the range of difference dropped from last year's 0.74 to 0.49. On a scale of 1 through 5, with 5 being the highest rating, staff gave the firm an average rating of 4.76; trustees rated the firm 4.60 and Milliman rated themselves at 4.27.

Most comments are neutral and complimentary; the timely implementation of PEPRA in January and responsiveness of recent plan sponsor interaction were highlighted. Please see the attached summary sheet for more details.

2. Responses to Questions

Milliman responded to a series of questions about the firm. Their responses are attached. Staff did not find any comments of concern.

3. Discussion at Board Meeting

SamCERA's consulting actuary, Nick Collier, ASA, will be available to respond to any questions or comments regarding the relationship.

Summary of Actuarial Performance Survey Results

Sept. 24, 2013

1= Low, 2=Below Average, 3=Average, 4=Above Average, 5=High

	Board	Staff	Actuary	
	Results	Results	Results	Average
1. How would you rate the firm's understanding of				
the system's goals and objectives?	5.00	5.00	5.00	5.00
2. How would you rate the firm's ability to custom-				
tailor services?	4.67	5.00	4.00	4.56
3. How would you rate the firm's ability to respond				
to plan sponsor needs?	5.00	5:00	5.00	5.00
4. How would you rate the firm's ability to				
communicate effectively?	4.83	4.80	4.00	4.54
5. How would you rate the firm's responsiveness to				
questions and requests?	4.83	4.60	4.00	4.48
6. How would you rate the adequacy of				
information provided by the firm?	4.83	4.8	4.00	4.54
7. How would you rate the firm's knowledge in				
their substantive actuarial areas?	4.83	5.00	5.00	4.94
8. How would you rate the effectiveness of the				
firm's educational presentations?	4.57	4.20	4.00	4.26
9. The firm provides practical and effective advice.	4.57	4.75	4.00	4.44
10. The firm provides creative solutions to difficult				
problems.	4.29	4.50	4.00	4.26
11. The firm achieves results that meet your				
expectations.	4.33	4.75	4.00	4.36
12. The firm keeps you informed about the				
progress of your matters.	4.33	4.40	4.00	4.24
13. The firm keeps you informed about changes in				
the law that could affect the plan	4.00	4.60	4.00	4.20
14. The actuary demonstrates a high standard of				
ethics and integrity.	4.33	5.00	5.00	4.78
15. What is your overall opinion of the firm?	<u>4.60</u>	<u>5.00</u>	<u>4.00</u>	<u>4.53</u>
Average	4.60	4.76	4.27	4.54

September 5, 2013

To: Mabel Wong

From: Nick Collier \swarrow Nick Collier Subject: Actuarial Review – Milliman Inc.

As requested we have completed the requested questionnaire form. Please note that Milliman is a large, multi-office firm with services covering a variety of types of actuarial and other consulting issues. For purposes of this review we have responded with answers that apply to the Seattle Employee Benefits practice and have provided client information regarding only the public sector clients. If additional information on other offices or other clients is needed, please let us know.

Organizational Update

1) What is the ownership structure of your firm? Identify all owners with 5% ownership or more.

Milliman is a corporate organization owned by its approximate 400 Principals. No Principal owns 5% or more of the firm. The firm is comprised of profit centers overseen by Principals who have a considerable amount of flexibility with respect to the management of their profit centers.

2) Provide an update on your firm's organization, with particular emphasis on (a) changes to your management structure over the past eighteen months, and (b) clients gained or lost in the past eighteen months. All significant changes should be accompanied by an explanation. An organizational chart should accompany this response.

Milliman is a firm of actuaries and consultants serving the full spectrum of business, government, and financial organizations in over 30 offices around the United States.

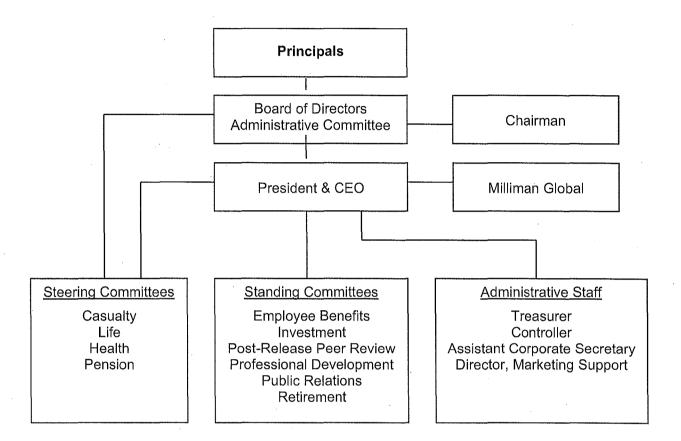
(a) Other than the normal growth of the firm, there have been no changes in the management structure of Milliman in the last 18 months. Normal growth includes new Principals being nominated and a few Principals leaving the firm, primarily due to retirement.

(b) The Seattle Employee Benefits practice has had the following changes in its retained public sector pension clients in the last 18 months.

<u>Added</u>: Actuarial audits for the retirement systems of the following counties: Marin, San Diego, San Bernardino & San Francisco (City & County).

Lost: Santa Barbara ERS

(c) On the following page is an organizational chart of the Milliman firm. The Principals of the firm as a whole are responsible for establishing the governing principles of Milliman. Principals are active senior professionals within Milliman who have been elected in recognition of their technical, professional and business achievements. The Board of Directors of Milliman and the officers of Milliman are delegated the authority by the Principals to assume day-to-day responsibilities for carrying out the management directives established by the Principals. The Board of Directors of Milliman consists of eleven Principals including the President, the Chairman, four National Directors of our major practice areas, and five rotating positions.



3) Provide a list of services available through your firm, including the number of staff supporting those services.

See the attached one-page summary of the Milliman Seattle Employee Benefits Services. Further information on all other services that Milliman provides can be viewed by going to our website: http://www.milliman.com/

4) What are your firm's philosophy and current policy regarding new business?

The Seattle Employee Benefits practice believes we can add new business only when we have the capacity to maintain the high level of service we promise to all clients. Within the public sector, the opportunity to attain new business is driven by the RFP process. In order to respond to any RFP situations, we are continuing hiring new actuarial analysts – at the rate of one or two a year, and growing from within. In addition, Milliman has access to additional staff from other offices if special projects create a need for a temporary increase in staffing support. We have on occasion, when needed, hired additional experienced staff from other firms, but our preferred method of growth is from within our own staff.

5) Specify separately the individuals (up to five) who you feel are key to the success of your firm. If the list has changed in the last eighteen months, identify and explain the change(s).

With respect to the Seattle Employee Benefit practice and public sector work, the key individuals are:

Mark Olleman Nick Collier Daniel Wade Jennifer Senta (formerly Sorensen) Robert Schmidt

The above individuals comprise the core senior staff working on public sector work in the Seattle practice. Each of these consultants is supported by a variety of actuarial and support staff members, all of whom are important to the efficiency of our work, but are not necessarily key to our public sector clients. No changes have occurred over the last 18 months.

6) Update all significant personnel changes to the "SamCERA Team".

There have been no significant changes to the SamCERA team over the last year.

7) Has your firm or any of its employees been involved in regulatory or litigation actions related to your business in the past eighteen months?

The Seattle office and members of the SamCERA actuarial team have not been involved in any litigation of any kind against Milliman. Milliman does not normally provide disclosures with respect to other litigation which may be pending for other offices or practices not involved in the services for a specific client.

8) Has an actuarial audit been performed on any of your firm's actuarial products within the past eighteen months? If yes, discuss the audit and the findings. Any material findings or recommendations must be accompanied by an explanation.

No actuarial audits within the past 18 months. All of our practices's major public-sector clients have been audited within the last five years. There were no material issues found in each the audits.

9) Describe the levels of insurance coverage maintained by your firm. E-mail a current certification of insurance to <u>mwong@samcera.org</u>.

We will email a copy of our certificate of insurance to Mabel Wong.

10) Do you have a written policy on ethics? If so, please e-mail the policy to <u>mwong@samera.org</u>.

Yes. We have an internal confidential policy but it is not available for public distribution. We would be glad to give you a brief review of it if needed? In addition, as members of the various professional organizations, we are expected to comply with the Actuarial Standards of Practice and as members of the American Academy of Actuaries there are a number of policies including a professional ethics policy. Their information is available from their websites or we can provide them to you.

11) Describe the relative strength and longevity of your staff. Are any of your operations outsourced? If the answer is yes, provide details regarding the firm(s) with which your firm has contracted.

Name and Title	Years of Experience
Nick J. Collier, Principal and Consulting Actuary	26 (26 with Milliman)
Daniel Wade, Consulting Actuary	17 (10 with Milliman)
Craig Glyde, Associate Actuary	17 (10 with Milliman)
Jennifer Senta, Associate Actuary	9 (9 with Milliman)
John Botsford, Consulting Actuary	22 (18 with Milliman)
Robert Schmidt, Principal and Consulting Actuary	26 (26 with Milliman)
Mark Olleman, Principal and Consulting Actuary	23 (23 with Milliman)

Note that the career stability of each team member. Based on our culture and professional freedoms, we experience low professional employee turnover. Additional public plan consultants in the Seattle office and throughout the firm give us the capacity to meet our clients' needs.

We do not outsource our actuarial or IT services.

12) What are your mission critical systems? Has your firm experienced any problems with these systems in the past eighteen months? When were these systems implemented and when were they last upgraded? Do you anticipate any changes to these systems in the next eighteen months?

The only critical system we use to perform services for SamCERA at the current time is our proprietary valuation system called PVS (Pension Valuation System). This system is continuously being updated and improved to reflect changes in the employee benefit arena. It has a scheduled update every 6 months and more as needed.

13) Provide an overview of your firm's business continuity plan.

The Seattle office has an extensive disaster recovery plan. Smoke detectors, fire alarms, fire extinguishers, sprinklers, physical firewalls and fire barriers are in place throughout the building. The servers are mounted in racks which are secured to other racks which prevent earthquake damage. Filing cabinets and shelves are secured to the walls where necessary. Policies are in place which disallows space heaters and other potential fire starting devices. The server room has two air conditioning units. The servers are on uninterruptible power supplies. We have a business continuity plan. It is tested by Milliman staff annually and audited annually by the independent accounting firm, Moss Adams. The building management company inspects tenant's space annually. The fire marshal does unannounced inspections approximately twice per year.

In addition, we have had a SAS 70 review, part of which states:

"Milliman has placed into operation a risk assessment process to identify and manage risks that could affect their ability to provide reliable transaction processing for user organizations. This process requires managers to identify significant risks in their areas of responsibility and to implement appropriate measures to address those risks. This process has identified risks resulting from the nature of the services Milliman provides, and management has implemented various measures to manage those risks".

Actuarial Process

14) Provide a description, in detail, of your actuarial process.

The following summarizes our standard valuation procedures (as stated in our proposal):

1. Data checking and Preliminary Processing

SamCERA will supply us with information for each active, vested and retired member, along with certain financial items. The data will then be checked for reasonableness. Any data issues will be submitted to SamCERA staff for verification.

2. Choosing Assumptions

Actuarial valuations are necessarily based on assumptions as to future rates of retirement, disablement and death among active members, rates of mortality after retirement, rates of investment income, rates of salary increases, and rates of increase in the Consumer Price Index, where applicable. In valuing SamCERA's benefits, we will use the assumptions adopted by the Board, based on the most recent experience investigation.

3. Valuation Calculations

Each valuation determines the actuarial present value of all future benefits payable from SamCERA. These benefits are those provided to members under current law. We will determine the actuarial present value of future benefit payments by using a standard Milliman computer program customized for SamCERA. The program can automatically compute costs under the entry age normal cost method, which is specified in the '37 Act. Liability calculations will be checked for accuracy and reasonableness on both an individual and aggregate basis.

We will then calculate each valuation group's unfunded actuarial accrued liability (UAAL) as the value of the benefits in excess of the sum of the future normal cost contributions and the current value of assets. Finally, we determine the contribution rate needed for each group to satisfy the amortization period requirements.

4. GASB Disclosures

As a by-product of our normal actuarial valuation procedures and included in our valuation fees, we develop the information required to be disclosed by Statement Nos. 25 and 27 of the Governmental Accounting Standards Board (GASB), soon to be Statement Nos. 67 and 68. Similar information is required to be disclosed to meet the Guidelines of the Government Finance Officers Association (GFOA) regarding a Comprehensive Annual Financial Report (CAFR). We will provide all necessary information required for these disclosures.

5. Report

Our report will include our conclusions regarding the financial condition and the unfunded actuarial accrued liability, recommendations as to future contribution rates, discussion of the calculations, GASB disclosures, descriptions of the benefit provisions of the applicable laws and summaries of assumptions and data. Our report typically shows a breakdown of liabilities by source of decrement for active members, as well as subtotals for inactive members. We are open to discuss with SamCERA staff and the Board possible changes in the reporting format for their particular needs. We reflect each system's own characteristics in our report.

Our goal is to provide enough information for the Board to make reasonable financial decisions, without becoming too complex to undermine the basic intent of disclosing the valuation results. However, we are always open to suggestions for improving the communications of our valuation work, if a modified approach is preferred.

15) Describe your peer review procedures in detail.

Peer review is not actually a separate step in our valuation process. Rather it is an ongoing process. We review and check our work at every step of the project.

Our internal peer review processes provide assurances that the highest quality standards are being maintained at all times. Each valuation, study or projections will be reviewed by at least two consultants. The first level of review will occur within the SamCERA team. Two of the three consultants on the project team will review each step of the project. The final internal review will be performed by Nick Collier and Jennifer Senta. Additionally, another Milliman public sector consultant who did not work on the project will review the work. This provides the project with an independent set of eyes. This review will not only verify the calculations, but will evaluate whether or not the assumptions, methods and results are reasonable.

16) Does your firm engage in peer review with other actuarial firms?

We do actuarial audits for clients where we review the work of another actuarial firm, but we do not have another actuarial firm with whom we do mutual peer reviews.

Outlook

17) What issues are other clients concerned with in regards to products, education and governance?

There are a number of issues concerning our public sector clients right now. Probably the most significant are:

- PEPRA Legislation PEPRA has a significant impact on benefits provided to new public employees hired after 2012. We have been working with our clients on ongoing issues related to these changes.
- Pension Accounting and Financial Reporting GASB has issued Standards #67 and #68 for accounting and financial reporting. These new standards will significantly impact how pension costs are reported (but not how retirement systems are funded).
- Funding Benchmark GASB has provided a de facto standard for pension funding with its 30-year amortization requirement. Under the new standards, this benchmark no longer exists. Actuarial and industry groups are currently discussing model funding policies for the public sector to fill this void.

18) Describe your assessment of the relationship between your firm and SamCERA. How can SamCERA better assist you in accomplishing the goals it has established for your firm? How can we better utilize your firm's capabilities?

As with all relationships, communication is the key factor. We have attempted to reply promptly and effectively to all inquiries. We have attempted to alert SamCERA of any relevant issues as they become apparent to us or are reported to us. We have felt very positive about being supported by SamCERA and hope we have been and will continue to grow the relationship.

Probably the most significant way we can assist SamCERA is the understanding of the volatility of future investment returns and the impact on future contribution rates. We have provided SamCERA some fairly simple projections in the past, but have the capability to do more sophisticated analysis as the need arises.

19) What is your firm's outlook and readiness regarding implementation of the enacted changes in GASB 67 and 68 accounting standards relative to the pension industry? Please list and discuss each proposal separately

Internally, Milliman has a GASB taskforce, made up of a group of public plan consultants, who are exploring issues related to the implementation of the new GASB standards.

Milliman has also held internal educational sessions on the new GASB standards, both via conference call and at our annual education session.

We have conducted, or are in the process of conducting, "dry runs" for implementation of the new GASB standards for several of our large clients.

Conclusion

20) Is there any information that would be timely pursuant to SamCERA's contract and this annual review?

No.

21) Are your clients making significant changes in their asset mixes or economic and noneconomic assumptions? Describe these changes.

We continue to see modest increases to various types of alternative asset classes at the expense of decreasing either equities or fixed income or both. The changes are fairly minor – normally less than 10% of the total assets. We do have one client (a large statewide system) that has moved their asset allocation to look more like endowments (more alternatives, less equities and fixed income)

The trend we have seen in regard to economic assumptions is a lower investment return assumption and lower wage and price assumptions. We believe this will continue, at least for the short term. Investment consultants have come out with lower capital market assumptions based on the current and expected economic environment. Retirement systems are generally cautious about making changes, particularly those that increase costs (the result of a lower investment return assumption). However, we believe there is strong evidence supporting reductions in both the investment return and inflation assumptions. We are starting to see some movement in this direction by some large systems who have lowered their return assumption by ½%.

On the non-economic area, about the only real changes are a strengthening in the mortality assumptions. We now have several clients who have decided to adopt generational mortality assumptions which build in future expected mortality improvements based on an individual member's year of birth. This type of assumption may be difficult under the '37 Act, as our understanding is that at least some attorneys feel the system must use valuation assumptions for your benefit option conversion factors.

22) What actuarial related changes should SamCERA consider?

We do not believe there are any actuarial related changes that need to be made at this moment. However, SamCERA should continue to monitor the investment return assumption in light of the continued decline in capital market assumptions. Also, SamCERA should continue to under its current funding approach. We believe it provides a strong funding level, but it is subject to more contribution rate volatility than most retirement systems. In particular, the current corridor used in the asset smoothing method may cause significant contribution rate volatility. We are not recommending a change, but we will continue to work with the Board to make sure they understand the implications.

23) Relative to your expertise, what trends are occurring in the retirement industry that SamCERA should be tracking?

We believe the key trends are as follows:

- Reductions in Benefit Levels Across the country, states and municipalities have adopted lower benefit levels. In particular, some governing bodies have reduced COLAs based on benefits already earned. However, there does not appear to be any movement toward this type of change in California.
- Lower Investment Return Assumption Retirement systems have been adopting lower investment return assumptions over the last ten years. Of particular note is a proposed change in the actuarial standard of practice pertaining to economic assumptions that would give the actuary less latitude in their recommendations. We believe this could result in further decreases.

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION Board of Retirement

September 24, 2013

Agenda Item 6.1

TO: Board of Retirement

And a try

FROM: Michael Coultrip, Chief Investment Officer

SUBJECT: Preliminary Monthly Portfolio Performance Report for the Period Ending August 31, 2013

Staff Recommendation:

Review the preliminary performance report dated August 31, 2013.

Background:

This preliminary report is intended to provide a high-level view of the portfolio and its trends. It is not intended to provide short-term performance upon which the Board would act. As discussed previously, preliminary performance estimates are now included for Angelo Gordon's PPIP, Angelo Gordon's STAR, AQR's risk parity, and AQR's hedge fund portfolios. The quarterly performance metrics are not yet available for our private equity and real estate portfolios. The performance for these portfolios will be reflected in the quarterly performance report generated by SIS.

The attached performance report shows both net and gross of fee returns for the total plan on page one, with net composite returns (pages 2-3) and net manager returns (pages 4-8) also shown.

Discussion:

The fund's net preliminary return for August was -1.4%, while the preliminary trailing twelve month return was +11.5% net (+11.95% gross). The twelve-month net return is lower than SamCERA's Total Plan Policy Benchmark return of 11.7% but above the Actuarial Assumed Earnings Rate of 7.50%. As a reminder, SamCERA should expect performance to vary substantially from that of the Total Plan Policy Benchmark in the initial stages of its private equity implementation.

In August global equity markets were down as investors digested possible U.S. military action in Syria, continued interest rate volatility, and uneven economic reports.

Most domestic equity indices were down between -2% and -4% (the S&P 500 was down -2.9%), with value stocks down more than growth stocks across the market capitalization spectrum.

International equity indices were also lower on the month, with developed markets (as measured by MSCI EAFE) down -1.3% and emerging markets down -1.7%.

1

SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION Board of Retirement

The general fixed income market was lower by -0.5% as interest rates (as measured by 10 year Treasuries) increased by 18 basis points. Emerging market bonds were down over -2.5% on the month and are now down -9.8% for the year.

Commodities rebounded 3.4%, with gold higher by 6.3% during the month, although both are still negative on the year (-6.2% and -17.1%, respectively).

Attachments:

SIS Market Update State Street Performance Report

MARKET UPDATE

U.S. EQUITY

Global stocks closed lower in the month of August as investors weighed a continuation of a rise in interest rates, economic data reports released, and the uncertainty of military action in Syria.

In the U.S. markets, Growth outperformed Value and Large caps outperformed Small caps. The Russell 1000 Growth Index was down -1.7% and the Russell 1000 Value Index down by -3.8% for the month. The Russell 2000 Growth Index was down -1.95% and the Russell 2000 Value was down -4.4%. The S&P 500 Index ended the month lower by -2.9%.

The S&P 500 Index has a trailing P/E ratio of 17.8, a forward 12-month estimate P/E ratio of 14.9 and dividend yield of 2.1%.

Corporate merger highlights for the month included: Jarden will acquire Yankee Candle for \$1.75 billion; Hub International will be acquired by Hellman & Friedman in a deal that values the insurance broker at \$4.4 billion; Spectra Energy Corp. will sell its remaining U.S. transmission, storage and liquid assets to Spectra Energy Partners for close to \$10 billion; Pioneer Natural Resources will buy Pioneer Southwest Energy Partners at roughly \$1.5 billion; The CEO of the Dole Food Company will buy full control of the fruit and vegetable producer for about \$1.6 billion; Rockwell Collins will buy the Carlyle Group's Arinc Inc. for \$1.4 billion; Baidu will buy mobile game operator 91 Wireless Websoft from NetDragon for \$1.85 billion; Statoil sold stakes in North Sea oil fields to Austria's OMV in a deal worth \$2.65 billion; Edwards Group will be acquired by Atlas Copco for up to \$1.2 billion; Blackstone will sell its 50% stake in London's Broadgate complex for more than \$2.7 billion; Biotech drugmaker Amgen will acquire cancer drug maker Onyx Pharmaceuticals for about \$10.4 billion; ING sold its South Korean insurance unit for \$1.7 billion to MBK Partners; and, TMS International will sell itself to the Pritzker family in a deal valued at \$1 billion.

FIXED INCOME

U.S. gross domestic product grew at a 2.5% annual rate in the April-June period – much faster than originally estimated (+1.7\%) – bolstering the case for the Fed to wind down a major economic stimulus program.

The Labor Dept. reported that the unemployment rate fell to 7.4% in July, its lowest level since December 2008. The Commerce Department's gauge of core inflation ticked up to 1.2% in June from 1.1% in May.

The yield on the bellwether 10-year Treasury note rose to 2.78% at the close of August from its July close at 2.59%. At month-end, the 30-year bond yield was 3.70% with the 3-month T-bill at 0.03%. The Barclays Capital US Aggregate Index was down -0.51% in August. Emerging Markets bonds were the weakest sector, down -4.1%, as measured by the JPM GBI-EM Global Diversified Unhedged Index.

The minutes of the FOMC's July 30-31 policy setting meeting revealed broad support for the start of tapering later this year. However, the minutes also showed less conviction that economic growth is on track as expected in the second half of the year.

On the economic front, the following key data was released in August:

THE GOOD

*The Institute of Supply Management reported that its index of factory activity rose to 55.4 in July from 50.9 in June.

*The Commerce Dept. reported that consumer spending rose +0.5% in June, lifted by automobile purchases and higher gasoline prices.

*The Institute of Supply Management reported that its services index rose to 56.0 from 52.2 in June, the fastest expansion since February.

*The Commerce Dept. reported that the U.S. trade gap deficit plunged -22.4% to \$34.2 billion in June from a revised \$44.1 billion in May.

*U.S. exports rose +2.2% to a record \$191.2 billion in June, the largest increase in nine months.

*The Commerce Dept. reported that retail sales excluding car, gasoline and building materials rose +0.5% in July, the largest gain since December 2012.

*The U.S. Dept. of Labor reported that the core producer price index, which excludes food and energy, increased +0.1% in July.

*U.S. consumer prices rose by +0.2% in July as measured by CPI.

MARKET UPDATE

*For the first time since 2009, previously occupied U.S. homes are selling at a pace associated with a healthy market. Sales jumped +6.5% in July to a seasonally adjusted annual rate of 5.4 million.

*The index of leading indicators rose +0.6% last month to a reading of 96.0 suggesting economic growth is picking up after a weak start to the year.

*The S&P Case-Shiller 20-city index showed that June home prices were up +12.1% from a year earlier and all 20 cities in the index posted gains on a monthly basis.

*The Conference Board reported that its index of consumer attitudes rose to 81.5. from 80.3 in July, beating economists' expectations for 79.0.

THE NOT SO GOOD

*The Commerce Dept. reported that construction spending dropped -0.6% in June and was the biggest decline since January.

*IDC expects global IT spending to grow +4.6% to \$2 trillion in 2013, down from its previous forecast of +4.9% and below growth of +5.6% in 2012.

*U.S. wholesalers cut their inventories in June for a third straight month even as their sales rose again. The decline shows that many remain cautious and are keeping stockpiles lean, despite three months of solid sales growth.

*U.S. worker productivity accelerated to a positive +0.9% annual pace between April and June but the trend remains sub-par.

*The U.S. ran a budget deficit of \$98 billion in July and the Congressional Budget Office forecast that the annual budget deficit will be \$670 billion when the budget year ends September 30 far below last year's \$1.09 trillion.

*Sales of new single-family homes in the U.S. fell sharply in July to their lowest level in nine months, casting a shadow over the country's housing recovery.

*The Commerce Dept. reported that durable goods orders dropped -7.3% in July, the largest decline since August 2012.

*U.S. consumer spending rose a weak +0.1% in July. *Personal income edged up just +0.1% in July as employee compensation slipped -0.2%, its first decline since January.

NON-U.S. MARKETS

Britain's economy expanded +0.7% in the second quarter, faster than expected and on par with Germany.

The Bank of England kept its key lending rate at a record low 0.5% where it has stood since March 2009.

The eurozone recession appears to have ended. GDP grew +0.3% in the second quarter following six consecutive declines. However, the country data revealed quite a disparity among the members. Portugal (+1.1%), Germany (+0.7%) and Finland (+0.7%) were the best performers. The worst were Cyprus (-1.4%), Italy (-0.2%) and the Netherlands (-0.2%).

The European Central Bank held its key rates steady in August but said it was cautious about the eurozone's recovery and stood ready to cut rates again if the situation deteriorated.

Japan's gross domestic product grew at an annualized rate of +2.6% in the 2^{nd} quarter, much weaker than the +3.6% growth forecast by economists.

China's exports and imports both increased in July, beating expectations and easing concerns over the slowdown in the world's second largest economy.

India's economy grew by +4.4% in the first three months of the fiscal year, the slowest quarterly expansion since 2009.

Brazil's central bank will launch a \$60 billion program designed to prop up its currency which has fallen in recent days to its lowest level since 2008.

Non-U.S. equities were lower in August. The MSCI ACWI Ex-U.S. was down -1.4 % (US dollars) for the month. International Developed stocks (EAFE) were down -1.3% while Emerging Markets lost -1.7%.

CONCLUSION

The number of people aged 18-31, living at home rose to 36% last year, the highest percentage in the last four decades. One outcome of the recent financial crisis is a number of recent shifts in social trends:

- The challenges of college grads getting decent jobs and hence living at home
- Working people putting off retirement
- High unemployment of people aged 18-31
- The lowering of family formations

Monthly Market Update

US Equity Indices Trailing Performance

Annualized Performance to Date:	1	3	YTD	1	2	3	5	7	10
Ending Aug-13	Month	Months	YID	Year	Years	Years	Years	Years	Years
Russell 3000 Index	-2.79	1.21	16.95	20.32	18.66	18.87	7.63	5.86	7.60
Russell TOP 200 Index	-2.80	0.75	15.76	17.75	18.39	18.31	7.02	5.24	6.50
Russell TOP 200 Growth Index	-1.62	0.95	14.16	13.51	16.58	18.86	8.18	7.17	6.57
Russell TOP 200 Value Index	-3.91	0.55	17.32	22.11	20.21	17.72	5.77	3.30	6.44
S&P 500 Index	-2.90	0.67	16.15	18.70	18.35	18.40	7.32	5.52	7.12
Russell 1000 Index	-2.76	1.05	16.69	19.84	18.58	18.74	7.59	5.82	7.50
Russell 1000 Growth Index	-1.71	1.55	15.71	16.43	16.90	19.20	8.40	7.34	7.24
Russell 1000 Value Index	-3.79	0.51	17.53	23.10	20.17	18.20	6.69	4.17	7.61
Russell Mid-Cap Index	-2.66	1.74	18.89	24.91	18.96	19.73	9.08	7.32	10.14
Russell Mid-Cap Growth Index	-1.90	2.93	19.52	23.97	17.69	20.27	9.14	7.95	9.42
Russell Mid-Cap Value Index	-3.50	0.43	18.01	25.37	19.97	19.14	8.87	6.36	10.37
Russell 2000 Index	-3.18	3.07	20.03	26.27	19.66	20.50	7.98	6.41	8.76
Russell 2000 Growth Index	-1.95	4.81	23.85	28.14	20.18	22.59	9.01	8.08	8.84
Russell 2000 Value Index	-4.42	1.31	16.36	24.38	19.12	18.36	6.88	4.66	8.55
DJ US REIT Index	-6.86	-7.79	-0.84	-0.54	9.08	12.54	4.56	2.17	9.32
DJ-UBS US Commodity Index TR	3.40	-0.13	-6.16	-10.60	-10.87	-0.02	-7.10	-2.66	2.41
DJ-UBS US Gold Index TR	6.33	0.06	-17.10	-17.76	-13.33	3.07	10.05	11.06	13.05

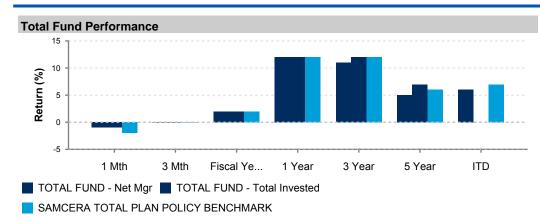
Non-US Indices Trailing Performance

Annualized Performance to Date: Ending Aug-13	1 Month	3 Months	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
MSCI AC World Index ex USA	-1.36	-1.45	3.26	13.47	5.75	7.41	1.94	2.51	8.81
MSCI AC World Index	-2.04	-0.28	9.23	16.11	11.37	12.33	4.39	3.96	7.93
MSCI EAFE Index	-1.31	0.24	8.54	19.17	9.42	9.78	2.11	1.87	8.05
MSCI Emerging Markets index	-1.68	-6.88	-9.94	0.87	-2.36	1.41	2.20	5.43	12.53
ML Global Government Bond Ex. U.S. Index	-0.07	1.56	-8.08	-11.62	-5.94	-0.39	4.03	4.92	5.13
Euro	-0.70	1.74	0.02	4.61	-4.30	1.23	-2.18	0.42	1.85
Japanese Yen	0.24	2.91	-11.87	-20.20	-11.72	-5.06	2.04	2.58	1.75
UK Pound Sterling	2.04	2.03	-4.83	-2.61	-2.53	0.22	-3.24	-2.91	-0.22

US Fixed Income Indices Trailing Performance

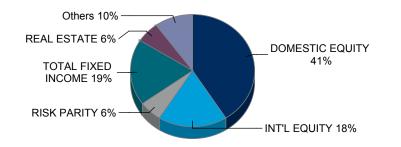
Annualized Performance to Date: Ending Aug-13	1 Month	3 Months	YTD	1 Year	2 Years	3 Years	5 Years	7 Years	10 Years
ML 3-month T-bill Total Return Index	0.00	0.02	0.05	0.11	0.08	0.10	0.22	1.33	1.71
BarCap Aggregate Bond Index	-0.51	-1.92	-2.81	-2.47	1.57	2.58	4.93	5.11	4.77
ML U.S. Corp/Govt Master Index	-0.62	-2.34	-3.30	-2.82	1.83	2.67	4.97	5.13	4.75
ML U.S. Corporate Master Index	-0.67	-2.70	-3.25	-1.35	4.18	4.35	7.22	6.01	5.56
BarCap Mortgage Backed Securities Index	-0.29	-1.33	-2.38	-2.37	0.60	2.04	4.53	4.99	4.78
ML U.S. High Yield Master Index	-0.61	-1.43	2.73	7.44	10.21	9.52	11.05	8.55	8.80
JPM EMBI Global	-2.68	-6.70	-9.83	-5.45	3.75	4.98	7.83	7.38	8.79

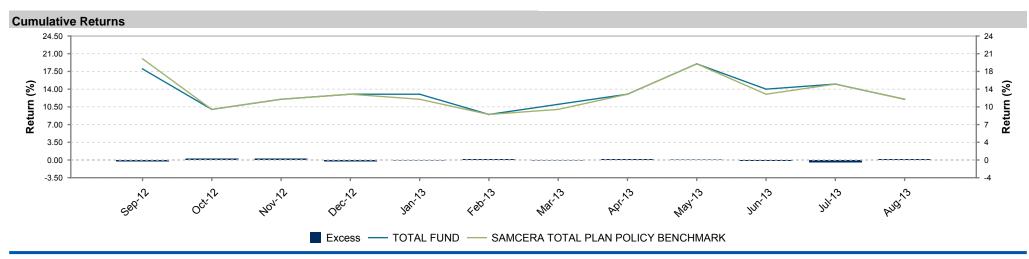
San Mateo County Total Fund Characteristics



1-Mth	3-Mth	YTD	Fiscal YTD	1-Yr	3-Yr	5-Yr	10-Yr	ITD
-1.42	-0.16	7.75	1.72	11.95	11.87	5.27	6.57	6.56
-1.42	-0.29	7.53	1.67	11.53	11.43	4.99	6.41	6.47
-1.60	0.10	7.75	1.95	11.71	12.17	5.95	7.28	6.81
0.19	-0.39	-0.22	-0.28	-0.17	-0.73	-0.96	-0.87	-0.34
	-1.42 -1.42 -1.60	-1.42 -0.16 -1.42 -0.29 -1.60 0.10	-1.42 -0.16 7.75 -1.42 -0.29 7.53 -1.60 0.10 7.75	-1.42 -0.16 7.75 1.72 -1.42 -0.29 7.53 1.67 -1.60 0.10 7.75 1.95	-1.42 -0.16 7.75 1.72 11.95 -1.42 -0.29 7.53 1.67 11.53 -1.60 0.10 7.75 1.95 11.71	-1.42 -0.16 7.75 1.72 11.95 11.87 -1.42 -0.29 7.53 1.67 11.53 11.43 -1.60 0.10 7.75 1.95 11.71 12.17	-1.42 -0.16 7.75 1.72 11.95 11.87 5.27 -1.42 -0.29 7.53 1.67 11.53 11.43 4.99 -1.60 0.10 7.75 1.95 11.71 12.17 5.95	-1.42 -0.16 7.75 1.72 11.95 11.87 5.27 6.57 -1.42 -0.29 7.53 1.67 11.53 11.43 4.99 6.41 -1.60 0.10 7.75 1.95 11.71 12.17 5.95 7.28

Asset Allocation		
	Ending Market Value (\$)	Allocation (%)
DOMESTIC EQUITY	1,151,459,002	40.7
INTERNATIONAL EQUITY	521,231,938	18.4
PRIVATE EQUITY	91,095,809	3.2
RISK PARITY	159,447,917	5.6
HEDGE FUND	82,028,502	2.9
COMMODITIES	78,030,158	2.8
FIXED INCOME	547,817,910	19.4
REAL ESTATE	166,154,482	5.9
CASH	25,098,670	0.9
CLIFTON GROUP - CASH OVERLAY	5,468,466	0.2
TOTAL FUND	2,827,832,854	100.0

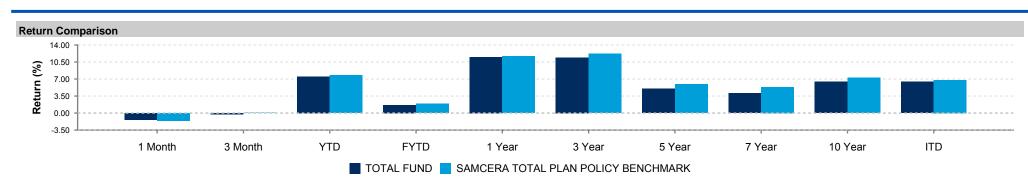






San Mateo County Composite Return Summary





Composite Returns (Net)											
	Market Value (\$)	1 Mth	3 Mth	YTD	FYTD	1 Year	3 Year	5 Year	7 Year	10 Year	ITD
Total Fund	2,827,832,854	-1.42	-0.29	7.53	1.67	11.53	11.43	4.99	4.08	6.41	6.47
SAMCERA TOTAL PLAN POLICY BENCHMARK		-1.60	0.10	7.75	1.95	11.71	12.17	5.95	5.36	7.28	6.81
Excess		0.19	-0.39	-0.22	-0.28	-0.17	-0.73	-0.96	-1.27	-0.87	-0.34
Total Equity	1,672,690,940	-2.24	0.64	13.03	2.70	18.44	14.62	4.60	3.29	6.64	7.28
SAMCERA TOTAL EQUITY BENCHMARK		-2.35	0.51	12.51	2.81	18.68	15.11	5.82	4.81	7.79	7.71
Excess		0.10	0.13	0.52	-0.10	-0.24	-0.48	-1.21	-1.52	-1.14	-0.43
Total Fixed Income	547,817,910	-0.94	-2.76	-2.08	-0.36	1.06	5.35	7.05	5.63	5.31	5.89
SAMCERA TOTAL FIXED INCOME BENCHMARK		-0.73	-2.29	-4.12	-0.19	-3.21	2.90	5.13	5.25	4.87	5.47
Excess		-0.21	-0.48	2.04	-0.17	4.27	2.45	1.92	0.38	0.44	0.42
Total Risk Parity	159,447,917	-1.46	-6.74	-6.33	-0.21	-2.89					4.72
RISK PARITY BENCHMARK		-1.88	-0.02	8.74	1.40	10.78					8.18
Excess		0.42	-6.73	-15.07	-1.61	-13.66					-3.47
Hedge Funds	82,028,502	-2.26	-2.05	1.30	-1.99	2.60					1.42
LIBOR + 4%		0.34	1.03	2.78	0.69	4.21					4.23
Excess		-2.60	-3.08	-1.48	-2.68	-1.61					-2.81
Private Equity	91,095,809	2.35	2.39	4.59	2.39	4.80					-56.32
PRIVATE EQUITY BENCHMARK		-2.54	1.95	19.23	3.04	23.87					18.18
Excess		4.89	0.43	-14.64	-0.65	-19.08					-74.50

San Mateo County Composite Return Summary



Composite Returns (Net)											
	Market Value (\$)	1 Mth	3 Mth	YTD	FYTD	1 Year	3 Year	5 Year	7 Year	10 Year	ITD
Commodities	78,030,158	3.52	1.37	-2.71	5.42	-7.24					-1.72
DJ-UBS COMMODITY		3.40	-0.13	-6.19	4.81	-10.66					-10.08
Excess		0.12	1.50	3.48	0.61	3.42					8.36
Total Real Estate	166,154,482	0.00	4.61	7.79	0.00	13.80	15.06	-0.40	2.72	7.06	7.66
SAMCERA NCREIF NFI ODCE EW (Gross)		0.00	2.87	5.51	0.00	11.22	14.33	-0.09	3.53	7.07	7.77
Excess		0.00	1.73	2.28	0.00	2.58	0.73	-0.31	-0.81	-0.01	-0.11
Total Cash	25,098,670	0.05	0.14	0.34	0.10	0.49	0.70	0.01	1.15	1.74	2.41
91 DAY TREASURY BILL		0.00	0.02	0.05	0.01	0.11	0.10	0.23	1.34	1.73	2.32
Excess		0.04	0.12	0.29	0.08	0.38	0.60	-0.22	-0.19	0.01	0.08



Manager Returns (Net)											
Manager Neturns (Net)	\$ EMV	1 Mth	3 Mth	FYTD	Cal YTD	1 Year	3 Year	5 Year	7 Year	10 Year	ITD
TOTAL EQUITY	1,672,690,940	-2.24	0.64	2.70	13.03	18.44	14.62	4.60	3.29	6.64	7.28
SAMCERA TOTAL EQUITY BENCHMARK		-2.35	0.51	2.81	12.51	18.68	15.11	5.82	4.81	7.79	7.71
Excess		0.10	0.13	-0.10	0.52	-0.24	-0.48	-1.21	-1.52	-1.14	-0.43
TOTAL DOMESTIC EQUITY	1,151,459,002	-2.39	2.14	3.22	17.35	21.25	18.62	6.72	4.44	6.80	7.78
SAMCERA DOMESTIC EQUITY BENCHMARK	1,101,400,002	-2.84	1.45	2.68	17.36	21.20	19.13	7.73	5.99	7.80	8.10
Excess		0.45	0.69	0.54	-0.01	0.13	-0.50	-1.01	-1.55	-1.01	-0.32
	940,795,236	-2.48	1.49	2.66	16.88	19.83	17.94	6.35	4.43	6.76	8.33
RUSSELL 1000 INDEX		-2.76	1.05	2.44	16.69	19.84	18.74	7.59	5.82	7.50	8.88
Excess		0.27	0.44	0.21	0.18	-0.01	-0.80	-1.25	-1.39	-0.74	-0.55
DE SHAW INVESTMENT MGT, LLC	151,435,699	-2.97	1.31	2.56	18.04	21.12	19.68				16.41
RUSSELL 1000 INDEX		-2.76	1.05	2.44	16.69	19.84	18.74				15.96
Excess		-0.21	0.27	0.11	1.35	1.28	0.94				0.45
BARROW HANLEY	160,605,173	-2.70	2.95	3.59	21.92	27.22	19.93				16.45
Russell 1000 Value Index		-3.79	0.51	1.40	17.53	23.10	18.20				15.85
Excess		1.09	2.44	2.18	4.39	4.11	1.73				0.60
BLACKROCK S&P 500	476,545,422	-2.89	0.69								10.44
S&P 500		-2.90	0.67	10.43							10.43
Excess		0.00	0.01								0.01
BROWN ADVISORY LARGE GROWTH	152,208,941	-0.44	2.72								E 60
Russell 1000 Growth Index	152,200,941	-0.44	1.55	3.44							5.69 3.44
		-1.71		3.44							
Excess		1.27	1.17								2.25
SMALL CAP COMPOSITE	210,663,766	-1.96	5.16	5.84	21.45	29.07	22.06	8.36	4.56	6.90	6.20
RUSSELL 2000 INDEX		-3.18	3.07	3.60	20.03	26.27	20.50	7.98	6.41	8.76	7.15
Excess		1.22	2.09	2.24	1.42	2.80	1.56	0.38	-1.85	-1.86	-0.95



Manager Returns (Net)											
	\$ EMV	1 Mth	3 Mth	FYTD	Cal YTD	1 Year	3 Year	5 Year	7 Year	10 Year	ITD
BOSTON COMPANY ASSET MGT, LLC	102,905,639	-3.57	2.64	3.41	18.51	27.07	20.08				16.80
RUSSELL 2000 VALUE INDEX		-4.42	1.31	1.72	16.36	24.38	18.36				16.13
Excess		0.86	1.33	1.69	2.16	2.69	1.71				0.67
CHARTWELL INVESTMENT MGMT	107,757,774	-0.38	7.70	8.28	25.08	31.72	25.09	9.89	8.44		8.46
RUSSELL 2000 GROWTH		-1.95	4.81	5.46	23.85	28.14	22.59	9.01	8.09		7.77
Excess		1.58	2.89	2.82	1.23	3.57	2.51	0.88	0.35		0.69
TOTAL INTERNATIONAL EQUITY	521,231,938	-1.92	-2.60	1.56	4.09	12.23	6.04	-0.26	0.72	6.95	5.40
MSCI AC WORLD ex US (GROSS)		-1.36	-1.45	2.98	3.26	13.47	7.41	1.94	2.51	8.81	5.51
Excess		-0.56	-1.15	-1.42	0.83	-1.24	-1.37	-2.20	-1.79	-1.85	-0.11
BAILLIE GIFFORD OVERSEAS LIMITED	179.320.650	-1.17	-1.30	3.27	9.25	17.78					11.52
MSCI ACWI ex US GROWTH (GROSS)	179,320,030	-1.17	-1.95	2.14	3.82	13.15					6.84
Excess		0.34	0.65	1.13	5.44	4.64					4.68
		0.34	0.00	1.15	5.44	4.04					4.00
EATON VANCE MANAGEMENT	63,336,423	-2.76	-6.46	-0.71	-7.12	2.90					-2.60
MSCI Em Markets (USD) GDR		-1.68	-6.88	-0.60	-9.94	0.87					-4.54
Excess		-1.08	0.42	-0.11	2.82	2.03					1.95
MONDRIAN INVESTMENT PARTNERS	220,021,546	-2.28	-2.68	0.72	3.41	10.16	7.06	1.49	1.94		5.55
MSCI ACWI EX US VALUE (GROSS)		-1.21	-0.95	3.83	2.68	13.78	7.03	2.14	2.12		5.83
Excess		-1.07	-1.73	-3.11	0.73	-3.61	0.03	-0.65	-0.18		-0.28
PYRAMIS	55,873,171	-1.97	-2.19	2.14	4.60	15.06					6.89
MSCI ACWI ex US Small Cap Gross		-0.84	-1.13	4.11	6.25	17.19					7.30
Excess		-1.13	-1.06	-1.97	-1.65	-2.13					-0.41
TOTAL FIXED INCOME	547,817,910	-0.94	-2.76	-0.36	-2.08	1.06	5.35	7.05	5.63	5.31	5.89
SAMCERA TOTAL FIXED INCOME BENCHMARK		-0.73	-2.29	-0.19	-4.12	-3.21	2.90	5.13	5.25	4.87	5.47
Excess		-0.21	-0.48	-0.17	2.04	4.27	2.45	1.92	0.38	0.44	0.42



Manager Returns (Net)											
	\$ EMV	1 Mth	3 Mth	FYTD	Cal YTD	1 Year	3 Year	5 Year	7 Year	10 Year	ITD
ANGELO GORDON GECC PPI FUND	19,342										
Barclays BA Intermediate High Yield Index		-0.78									
Excess											
		0.40	4.07		7.00						7.00
ANGELO GORDON MANAGEMENT	31,959,551	-0.40	1.07		7.22						7.22
Barclays BA Intermediate High Yield Index		-0.78	-1.76		0.96						2.03
Excess		0.38	2.83		6.25						5.19
PYRAMIS GLOBAL ADVISORS	144,994,708	-0.66	-2.27	-0.41	-2.76	-1.96	3.62	6.44	5.46		5.36
Barclays Aggregate Bond		-0.51	-1.92	-0.38	-2.81	-2.47	2.58	4.93	5.11		5.00
Excess		-0.15	-0.35	-0.03	0.05	0.51	1.05	1.51	0.35		0.36
WESTERN ASSET MGMT	116,325,140	-0.58	-2.42	-0.06	-2.87	1.24	4.52	7.12	5.50		5.18
Barclays Aggregate Bond	110,325,140	-0.58	-2.42	-0.06	-2.81	-1.34 -2.47	2.58	4.93	5.50		4.58
Excess		-0.07	-0.51	0.32	-0.06	1.13	1.95	2.19	0.39		0.60
		0.07	0.01	0.02	0.00	1.10	1.00	2.10	0.00		0.00
BRIGADE CAPITAL MANAGEMENT	60,222,825	-0.33	-1.56	1.07	3.29	8.60	9.79				9.53
Barclays BA Intermediate High Yield Index		-0.78	-1.76	0.91	0.96	4.89	8.46				8.45
Excess		0.45	0.20	0.16	2.32	3.70	1.33				1.08
BROWN BROTHERS HARRIMAN & CO	77,155,816	-1.22	-4.19	-0.42	-7.99	-6.73	3.88				4.49
Barclays US TIPS Index		-1.49	-4.56	-0.82	-8.60	-7.46	3.74				4.23
Excess		0.26	0.37	0.40	0.60	0.73	0.14				0.26
FRANKLIN TEMPLETON INVESTMENTS	117,131,901	-1.92	-4.26	-1.74	-2.05	5.10					5.77
Barclays Multiverse		-0.53	-0.50	0.76	-3.90	-2.98					2.33
Excess		-1.39	-3.76	-2.51	1.85	8.07					3.44
TOTAL PRIVATE EQUITY	91,095,809	2.35	2.39	2.39	4.59	4.80					-56.32
PRIVATE EQUITY BENCHMARK		-2.54	1.95	3.04	19.23	23.87					18.18
				-0.65							-74.50



Manager Returns (Net)											
	\$ EMV	1 Mth	3 Mth	FYTD	Cal YTD	1 Year	3 Year	5 Year	7 Year	10 Year	ITD
TOTAL RISK PARITY	159,447,917	-1.46	-6.74	-0.21	-6.33	-2.89					4.72
RISK PARITY BENCHMARK		-1.88	-0.02	1.40	8.74	10.78					8.18
Excess		0.42	-6.73	-1.61	-15.07	-13.66					-3.47
AQR GLOBAL RISK PREM III LP	159,447,917	-1.46	-6.74	-0.21	-6.33	-2.89					4.72
RISK PARITY BENCHMARK	100,111,011	-1.88	-0.02	1.40	8.74	10.78					8.18
Excess		0.42	-6.73	-1.61	-15.07	-13.66					-3.47
HEDGE FUND COMPOSITE	82,028,502	-2.26	-2.05	-1.99	1.30	2.60					1.42
LIBOR + 4%		0.34	1.03	0.69	2.78	4.21					4.23
Excess		-2.60	-3.08	-2.68	-1.48	-1.61					-2.81
AQR DELTA FUND II, L.P.	82,028,502	-2.26	-2.05	-1.99	1.30	2.60					1.42
LIBOR + 4%		0.34	1.03	0.69	2.78	4.21					4.23
Excess		-2.60	-3.08	-2.68	-1.48	-1.61					-2.81
TOTAL COMMODITIES	78,030,158	3.52	1.37	5.42	-2.71	-7.24					-1.72
DJ-UBS COMMODITY		3.40	-0.13	4.81	-6.19	-10.66					-10.08
Excess		0.12	1.50	0.61	3.48	3.42					8.36
SSGA MULTISOURCE ACT COMM NL	78,030,158	3.52	1.37	5.42	-2.71	-7.24					-1.72
DJ-UBS COMMODITY		3.40	-0.13	4.81	-6.19	-10.66					-10.08
Excess		0.12	1.50	0.61	3.48	3.42					8.36
	400 454 400		4.04	0.00	7 70	40.00	45.00	0.40	0.70	7.00	7.00
	166,154,482	0.00	4.61	0.00	7.79	13.80	15.06	-0.40	2.72	7.06	7.66
SAMCERA NCREIF NFI ODCE EW (Gross)		0.00	2.87	0.00	5.51	11.22	14.33	-0.09	3.53	7.07	7.77
Excess		0.00	1.73	0.00	2.28	2.58	0.73	-0.31	-0.81	-0.01	-0.11
INVESCO REAL ESTATE	166,154,482	0.00	4.61	0.00	7.90	13.09	15.08	-0.39	2.72		6.25
SAMCERA NCREIF NFI ODCE EW (Gross)		0.00	2.87	0.00	5.51	11.22	14.33	-0.09	3.53		6.32
Excess		0.00	1.73	0.00	2.39	1.88	0.75	-0.31	-0.81		-0.07

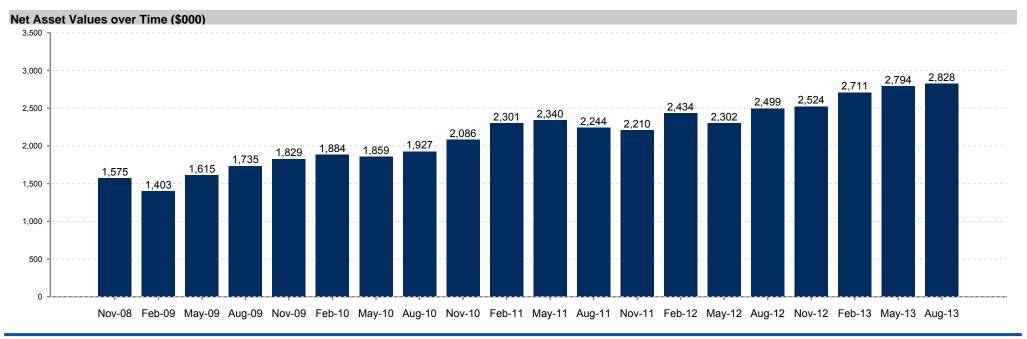


Manager Returns (Net)											
	\$ EMV	1 Mth	3 Mth	FYTD	Cal YTD	1 Year	3 Year	5 Year	7 Year	10 Year	ITD
TOTAL CASH	25,098,670	0.05	0.14	0.10	0.34	0.49	0.70	0.01	1.15	1.74	2.41
91 DAY TREASURY BILL		0.00	0.02	0.01	0.05	0.11	0.10	0.23	1.34	1.73	2.32
Excess		0.04	0.12	0.08	0.29	0.38	0.60	-0.22	-0.19	0.01	0.08
SAMCERA GENERAL ACCOUNT	23,060,062	0.00	0.02	0.01	0.07	0.12	0.25	0.38	1.58	1.91	2.44
SAMCERA TREASURY & LAIF	2,038,608	0.05	0.14	0.10	0.39	0.65	0.89	-0.08	1.11	1.63	
CLIFTON GROUP - CASH OVERLAY	5,468,466										
91 DAY TREASURY BILL		0.00									
Excess											
TOTAL FUND	2,827,832,854	-1.42	-0.29	1.67	7.53	11.53	11.43	4.99	4.08	6.41	6.47
SAMCERA TOTAL PLAN POLICY BENCHMARK		-1.60	0.10	1.95	7.75	11.71	12.17	5.95	5.36	7.28	6.81
Excess		0.19	-0.39	-0.28	-0.22	-0.17	-0.73	-0.96	-1.27	-0.87	-0.34

San Mateo County Accounting Change in Market Value Details

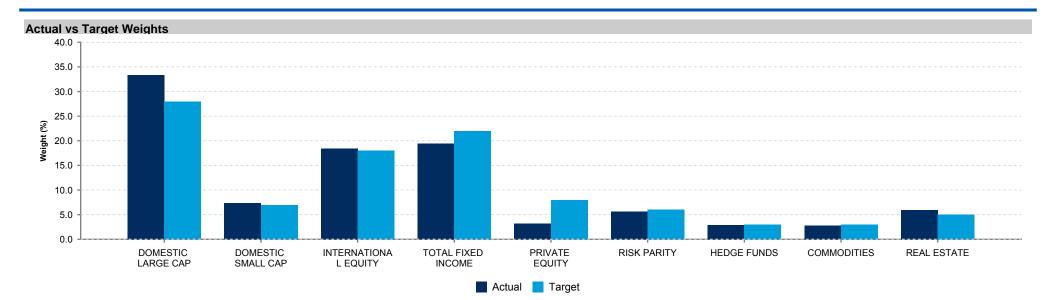


Record of Asset Growth		
	One Quarter	One Year
TOTAL FUND		
Beginning Market Value	2,793,600,295	2,499,069,018
Contributions	377,509,453	2,392,692,379
Withdrawals	339,272,179	2,553,700,958
Income Received	9,068,479	41,360,920
Gain/Loss	-13,073,194	257,435,487
Ending Market Value	2,827,832,854	2,827,832,854



San Mateo County Asset Allocation





Portfolio Weight					
-	Min	Actual	Target	Deviation	Мах
DOMESTIC LARGE CAP	26.0	33.3	28.0	5.3	30.0
BLACKROCK S&P 500	10.3	16.9	12.3	4.6	14.3
DE SHAW INVESTMENT MGT, LLC	3.3	5.4	5.0	0.4	7.3
BARROW HANLEY	3.3	5.7	5.1	0.6	7.3
DOMESTIC SMALL CAP	5.0	7.4	7.0	0.4	9.0
BOSTON COMPANY ASSET MGT, LLC	1.5	3.6	3.5	0.1	5.5
CHARTWELL INVESTMENT MGMT	1.5	3.8	3.5	0.3	5.5
INTERNATIONAL EQUITY	15.0	18.4	18.0	0.4	21.0
BAILLIE GIFFORD OVERSEAS LIMITED	3.0	6.3	6.0	0.3	9.0
EATON VANCE MANAGEMENT	0.0	2.2	2.3	-0.0	5.3
MONDRIAN INVESTMENT PARTNERS	5.0	7.8	8.0	-0.2	11.0
PYRAMIS	0.0	2.0	1.8	0.2	4.8
TOTAL FIXED INCOME	19.0	19.4	22.0	-2.6	25.0

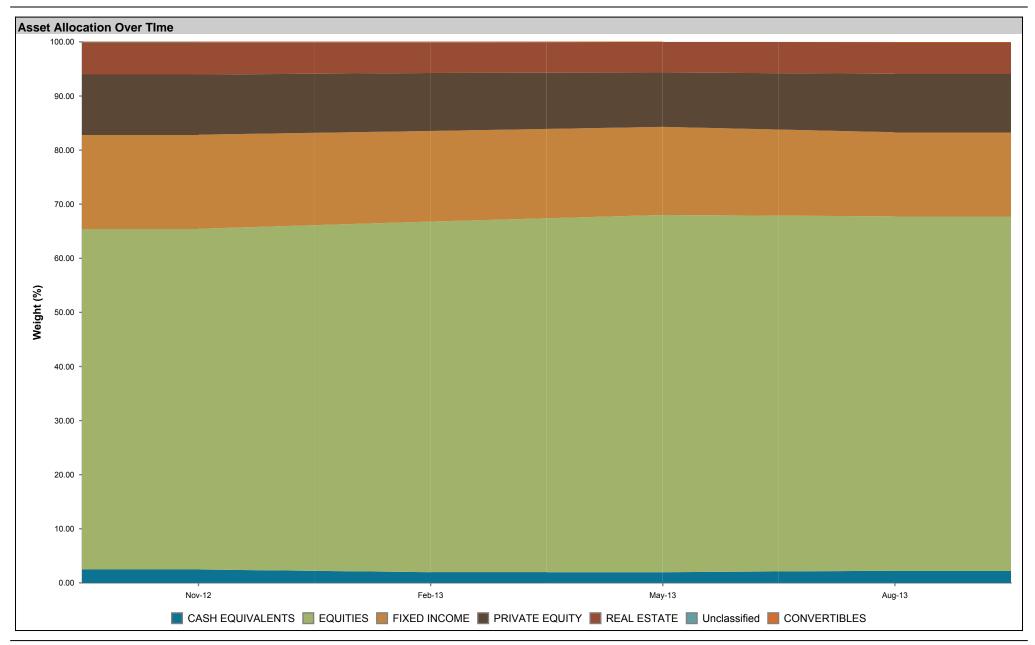
San Mateo County Asset Allocation



Min	Actual	Target	Deviation	Max
0.0	1.1	1.8	-0.7	3.8
0.0	2.1	1.8	0.3	3.8
1.1	2.7	3.1	-0.4	5.1
2.4	4.1	4.4	-0.3	6.4
2.4	4.1	4.4	-0.3	6.4
4.6	5.1	6.6	-1.5	8.6
8.0	3.2	8.0	-4.8	8.0
6.0	5.6	6.0	-0.4	6.0
6.0	5.6	6.0	-0.4	6.0
3.0	2.9	3.0	-0.1	3.0
3.0	2.9	3.0	-0.1	3.0
3.0	2.8	3.0	-0.2	3.0
3.0	2.8	3.0	-0.2	3.0
3.0	5.9	5.0	0.9	7.0
3.0	5.9	5.0	0.9	3.0
	0.0 0.0 1.1 2.4 2.4 4.6 8.0 6.0 6.0 6.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0 3.0	0.0 1.1 0.0 2.1 1.1 2.7 2.4 4.1 2.4 4.1 4.6 5.1 8.0 3.2 6.0 5.6 6.0 5.6 3.0 2.9 3.0 2.8 3.0 5.9	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$

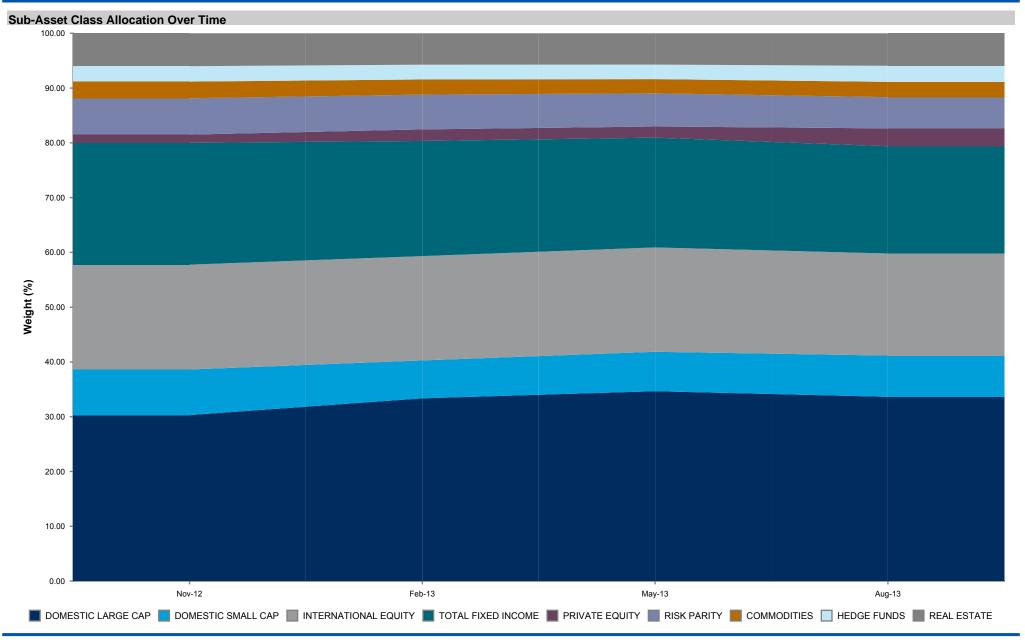
San Mateo County Asset Allocation Over Time





San Mateo County Sub-Asset Class Allocation Over TIme





SAN MATEO COUNTY EMPLOYEES' RETIREMENT ASSOCIATION Board of Retirement

September 24, 2013

Agenda Item 6.2

TO: Board of Retirement

Mich & Conthe

FROM: Michael Coultrip, Chief Investment Officer

SUBJECT: Approval of New Asset Class Target Portfolio: Follow-Up

Staff Recommendation:

Approve new asset class target portfolio.

Background:

In July, the Board reviewed asset-liability basics, approved both the capital market assumptions to be used in the study and the efficient frontier mixes to be used in the asset-liability simulations. In August, the Board reviewed the asset-liability simulation results and potential changes to the current asset class target portfolio. During the meeting it was decided that, in September, the Board would review more detailed justifications for the proposed policy portfolio changes.

Discussion:

The attached memo from SIS summarizes the proposed changes to the target policy portfolio and provides justification for the proposed changes.

Marcel Gesell and Patrick Thomas from SIS will present an updated asset class target portfolio for Board review, discussion, and potential approval.

Attachments:

- A. Asset-Liability Study Part IV
- B. SIS Asset Allocation Review Memo

SamCERA 2013 Asset-Liability Study Part IV September 24, 2013

Marcel Gesell, CFA Vice President

Patrick Thomas, CFA Senior Vice President

STRATEGIC INVESTMENT SOLUTIONS, INC.

333 BUSH STREET SUITE 2000 SAN FRANCISCO 94104 www.sis-sf.com 415 362 3484

Study Progress

- I. Introduction (complete!)
- II. Asset Allocation (complete!)
- III. Asset-Liability Integration (complete!)
- IV. Asset-Liability Decisions (today)

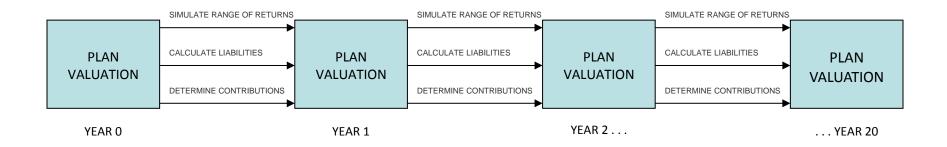
Possible Policy Objectives (Review)

- Things to Achieve
 - 100% Funded Status
 - Low Cost/Average Contribution Rate
 - Assumed Earnings Rate Return (Currently 7.5%)
 - Intergenerational Equity
- Things to Avoid
 - Minimum Funded Status Over the Short-Term
 - High Cost/Average Contribution Rate
 - Large Changes in Contribution Rates Over Short-Term
 - Significant Negative Cash Flow or Liquidity Problems
- Unacceptable Outcomes
 - Funded Status?
 - Contribution Level?
 - Changes in Contribution Level?

Risk Options (Review)



Asset/Liability Modeling



- Asset Simulations
 - Monte Carlo 1000 "Random" Investment Outcomes Per Year
- Liability Simulations/Contribution Determinations
 - Based on Range of Investment Results
 - Annual Valuation for Range of Outcomes
 - Year-by-Year, NOT Straight-Line Projection

Current SIS Expected Return & Risk = Basis of Asset Projections

	Expected Return	Standard Deviation		Expected Return	Standard Deviation
Public Equity			Alternatives		
US Lrg Cap	7.7	17.5	Priv Equity	10.2	33.0
US Sml Cap	8.0	20.0	Hedge Funds	5.5	11.8
Intl Stock			Commod	4.0	30.0
Dev Mkt	8.0	20.0	Real Assets		
EM	8.5	29.0	Infrast	6.5	24.0
Fixed Income			Real Est	6.2	18.0
US Fixed	2.4	5.0	Risk Parity	7.6	14.7
Intl Bond	2.4	9.0			
TIPS	2.2	4.5			
Opp Credit					
High Yield	4.5	11.0			
EM Debt	4.4	10.0			

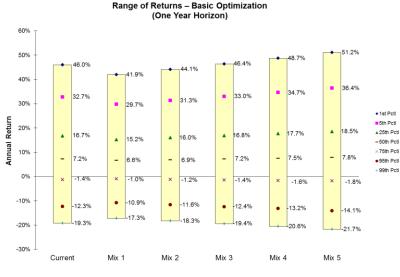
Basic Asset Mix Optimization

		Lowe	r Risk		Highe	r Risk
	Current	Mix	Mix	Mix	Mix	Mix
	Policy	1	2	3	4	5
US Lrg Cap	28	23	26	29	32	34
US Sml Cap	20	6	-20		8	9
Intl Stock	, 18	15	, 16	, 18	20	22
Public Equity	53	44	49	54	60	65
Core Bonds	16	21	18	15	11	7
TIPS	3	5	4	3	2	2
Opp Credit	3	5	4	3	2	2
Fixed Income	22	31	26	21	15	11
Priv Equity	8	8	8	8	8	8
Hedge Funds	3	3	3	3	3	3
Commod	3	3	3	3	3	3
Alternatives	14	14	14	14	14	14
Real Est	5	5	5	5	5	4
Risk Parity	6	6	6	6	6	- 6
MSK Failty	0	0	0	0	0	0
Expected Return	7.4	7.0	7.2	7.5	7.7	8.0
Total Risk	13.8	12.5	13.2	13.9	14.7	15.5

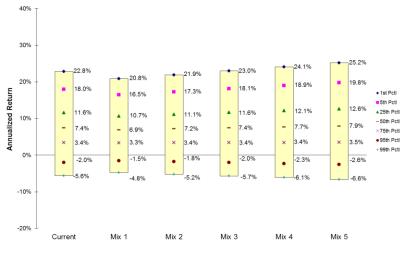
Asset Mix Optimization from SIS/Staff Discussions ("Less Constrained")

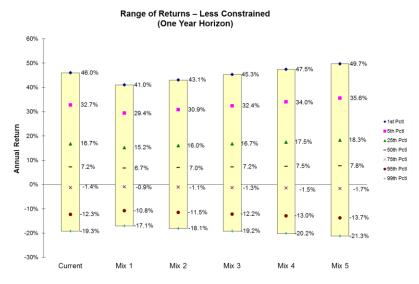
		Low	er Risk		Highe	er Risk	
	Current	Mix	Mix	Mix	Mix	Mix	Mix 3
	Policy	1	2	3	4	5	Variation
	20	10	24	24	20	20	24
US Lrg Cap	28	19	21	24	26	29	24
US Sml Cap	7	5	5	6	7	7	6
Intl Stock	18	13	15	17	18	20	20
Public Equity	53	37	41	47	51	56	50
Core Bonds	16	20	17	13	10	7	
TIPS	3	3	3	2	2	1	2
Opp Credit	3	8	6	5	4	3	5
Fixed Income	22	31	26	20	16	11	20
	0	-	-	-	-	-	-
Priv Equity	8	7	7	7	7	7	7
Hedge Funds	3	5	5	5	5	5	4
Commod	3	3	3	3	3	3	3
Real Assets	0	2	3	3	3	3	2
Alternatives	14	17	18	18	18	18	16
Real Est	5	6	6	6	6	6	6
Risk Parity	6	9	9	9	9	9	8
Expected Return	7.44	6.97	7.21	7.45	7.68	7.91	7.50
Total Risk	13.83		12.99		14.40		13.89

Range of Returns



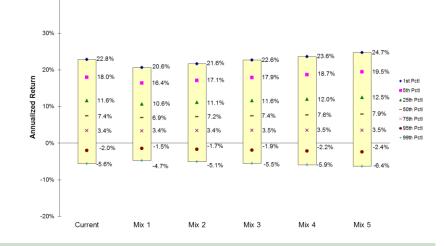
Range of Returns – Basic Optimization (Five Year Horizon)





Range of Returns – Less Constrained (Five Year Horizon)

40%



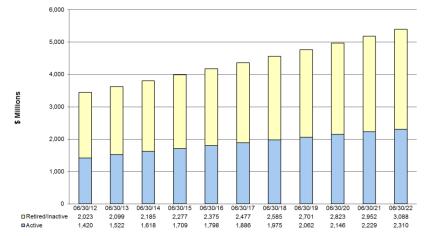
Basis of Asset-Liability Projections

- Starts with June 30, 2012 actuarial valuation data and fund value
- Additional assumptions
 - Annual workforce growth rate: 0%
 - Annual total payroll growth: 3.75% (actuarial assumption)
- All projections pass through actual fund value on June 30, 2012
- Ten year projection with focus on five year planning horizon (June 30, 2018)

Constant-Rate Projections

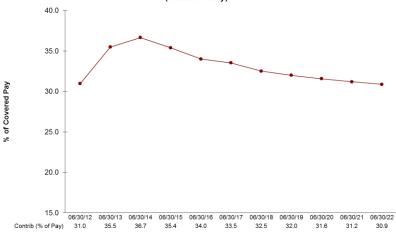
14,000 12,000 10,000 8,000 Members 6,000 4,000 2,000 0 06/30/12 06/30/13 06/30/14 06/30/15 06/30/16 06/30/17 06/30/18 06/30/19 06/30/20 06/30/21 06/30/22 Retired/Inactive 5,487 5,654 5,825 5,990 6,149 6,301 6,452 6,605 6,761 6,917 7,074 Active 5,095 5,095 5,095 5,095 5.095 5,095 5,095 5,095 5,095 5,095 5,095 6,000 Expected Actuarial Liability vs Market Value of Assets 5,500 5,000 4,500 4,000 3,500 \$ Millions 3,000 2,500

Expected Plan Membership



Expected Actuarial Liability

Expected Employer Contribution as % of Pay (Current Policy)



06/30/13

2,732

2732

2,732

2,732

2.732

2,732

3,621

06/30/14

2,970

2 957

2,964

2,971

2.978

2,985

3,804

06/30/15

3,229

3,201

3,216

3,231

3.245

3,260

3,987

06/30/16

3,497

3 4 5 3

3,476

3,500

3.524

3,547

4,173

06/30/17

3,774

3712

3,745

3,779

3.813

3,846

4,364

06/30/18

4,066

3 983

4,028

4,072

4.117

4,161

4,560

06/30/19

4,369

4,265

4,321

4,377

4.433

4,490

4,762

06/30/20

4,687

4 560

4,628

4,697

4.766

4,835

4,969

06/30/21

5,021

4 870

4,950

5,033

5.114

5,197

5,181

06/30/22

5,371 5,195

5,289

5,384

5.480

5,577

5,398

2,000

1,500

· Mix 2

- Mix 3

- - Current

- Mix 1

– ⊕ – Mix 4

- Mix 5

Liability

06/30/12

2,360

2,360 2,360

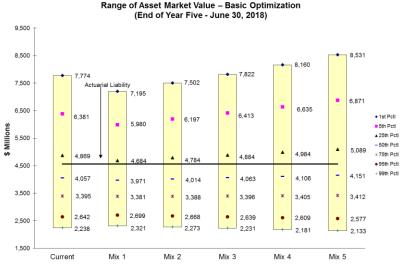
2,360

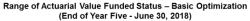
2.360

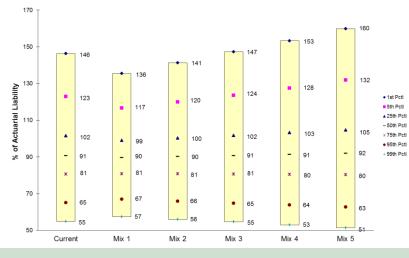
2,360

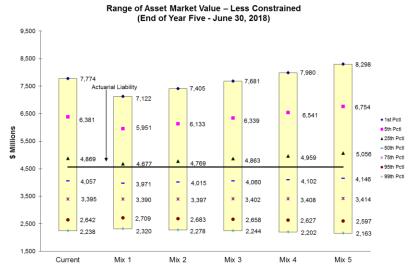
3,443

Range of Fund Value & Funded Status

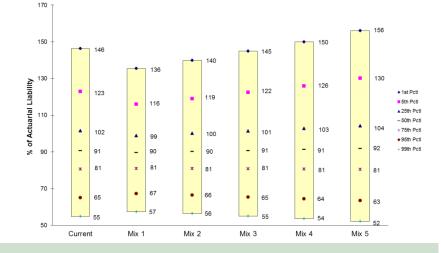




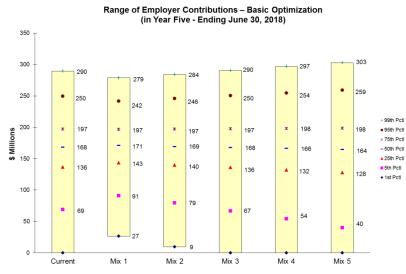


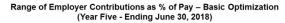


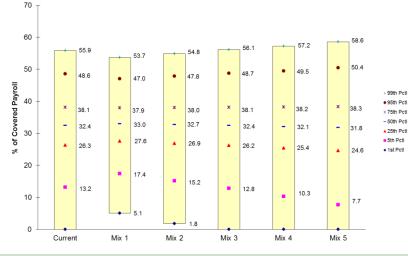
Range of Actuarial Value Funded Status – Less Constrained (End of Year Five - June 30, 2018)

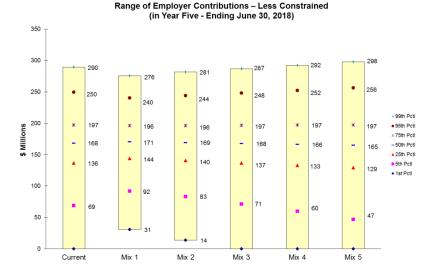


Range of Contributions

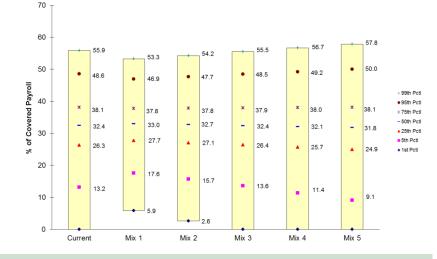






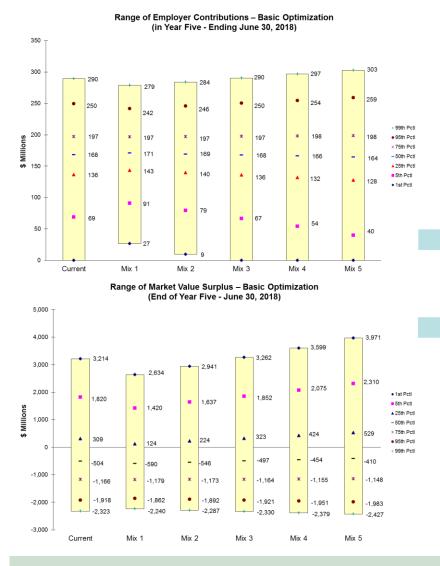


Range of Employer Contributions as % of Pay – Less Constrained (Year Five - Ending June 30, 2018)

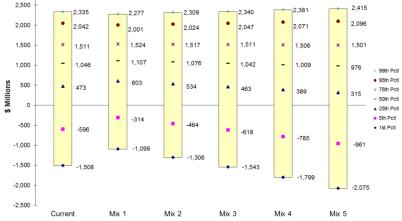


Ultimate Net Cost = PV Contributions Plus Ending Deficit (or Minus Surplus)

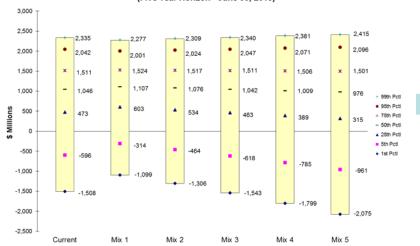
3,000







Ultimate Net Cost Risk/Reward Tradeoff



Range of Ultimate Net Cost Less Surplus - Basic Optimization (Five Year Horizon - June 30, 2018)

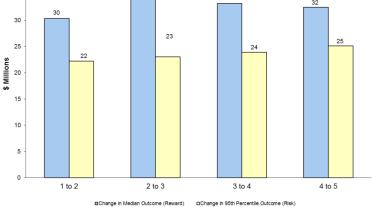


40

35

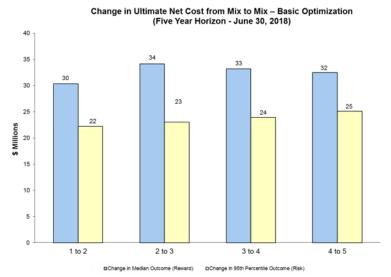
Change in Ultimate Net Cost from Mix to Mix – Basic Optimization

(Five Year Horizon - June 30, 2018)

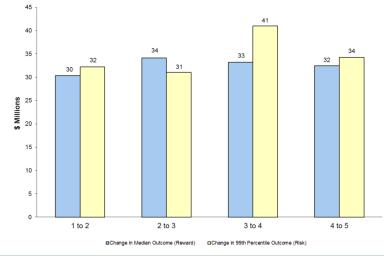


SamCERA A-L Study Part IV, 9/24/2013

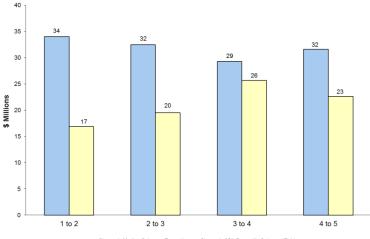
Ultimate Net Cost Risk/Reward Tradeoff (Cont.)



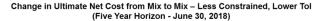
Change in Ultimate Net Cost from Mix to Mix – Basic Opt, Lower Tolerance (Five Year Horizon - June 30, 2018)

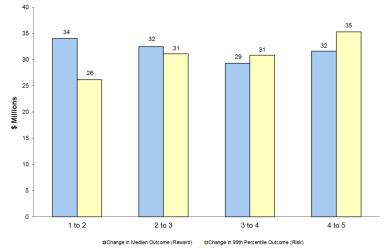


Change in Ultimate Net Cost from Mix to Mix – Less Constrained (Five Year Horizon - June 30, 2018



Change in Median Outcome (Reward)





Risk/Reward Tradeoff at Current Level is Appropriate

	Current Policy	Mix 3	Mix 3 Variation
US Lrg Cap	28	24	24
US Sml Cap	7	6	6
Intl Stock	18	17	20
Public Equity	53	47	50
Core Bonds	16	13	13
TIPS	3	2	2
Opp Credit	3	5	5
Fixed Income	22	20	20
Priv Equity	8	7	7
Hedge Funds	3	5	4
Commod	3	3	3
Real Assets	0	3	2
Alternatives	14	18	16
Real Est	5	6	6
Risk Parity	6	9	8
Expected Return	7.44	7.45	7.50
Total Risk	13.83	13.70	13.89

Capital Allocation by Economic Environment

Capital Allocation - Traditional

			Mix 3
	Current		Variation
	Policy (%)	Mix 3 (%)	(%)
US Lrg Cap	28	24	24
US Sml Cap	7	6	6
Intl Stock	18	17	20
Public Equity	53	47	50
Core Bonds	16	13	13
TIPS	3	2	2
Opp Credit	3	5	5
Fixed Income	22	20	20
Priv Equity	8	7	7
Hedge Funds	3	5	4
Commod	3	3	3
Real Assets	0	3	2
Alternatives	14	18	16
Real Est	5	6	6
Risk Parity	6	9	8

Capital Allocation - Economic Environment

	Current		Mix 3 Variation
	Policy (%)	Mix 3 (%)	(%)
US Lrg Cap	28	24	24
US Sml Cap	7	6	6
Intl Stock	18	17	20
Opp Credit	3	5	5
Priv Equity	8	7	7
Risk Parity (Equities)	2	3	3
Growth Assets	66	62	65
Core Bonds	16	13	13
Hedge Funds	3	5	4
Risk Parity (Bonds)	8	12	10
Risk Parity (Cash)	-6	-9	-8
Diversifying	21	21	19
TIPS	3	2	2
Commod	3	3	3
Real Est	5	6	6
Real Assets	0	3	2
Risk Parity (Commod+)	2	3	3
Inflation	13	17	16

Risk Allocation by Economic Environment

Capital Allocation - Economic Environment

			Mix 3
	Current		Variation
	Policy (%)	Mix 3 (%)	(%)
US Lrg Cap	28	24	24
US Sml Cap	7	6	6
Intl Stock	18	17	20
Opp Credit	3	5	5
Priv Equity	8	7	7
Risk Parity (Equities)	2	3	3
Growth Assets	66	62	65
Core Bonds	16	13	13
Hedge Funds	3	5	4
Risk Parity (Bonds)	8	12	10
Risk Parity (Cash)	-6	-9	-8
Diversifying	21	21	19
TIPS	3	2	2
Commod	3	3	3
Real Est	5	6	6
Real Assets	0	3	2
Risk Parity (Commod+)	2	3	3
Inflation	13	17	16

Risk Allocation - Economic Environment

	Current		Mix 3 Variation
	Policy (%)	Mix 3 (%)	(%)
US Lrg Cap	34	28	28
US Sml Cap	9	8	8
Intl Stock	24	24	28
Opp Credit	2	3	3
Priv Equity	15	12	12
Risk Parity (Equities)	3	5	4
Growth Assets	87	80	83
Core Bonds	1	1	1
Hedge Funds	2	3	2
Risk Parity (Bonds)	0	1	1
Risk Parity (Cash)	0	0	0
Diversifying	3	5	4
TIPS	0	0	0
Commod	3	3	3
Real Est	5	5	5
Real Assets	0	4	2
Risk Parity (Commod+)	2	3	3
Inflation	10	15	13

Historical Scenarios

	Current Policy	Mix 3	Mix 3 Variation
87 Crash	-		
Oct-87	-14	-12	-12
Oct-87 - Nov-87	-17	-14	-15
LTCM/Russia			
Aug-98	-2	-2	-2
9-11			
Sep-01	-6	-5	-6
Tech Bubble End			
Apr-00 - Feb-03	-16	-11	-11
08 Meltdown			
Nov-07 - Feb-09	-38	-37	-38
April-08 - Feb-09	-34	-33	-33
Mexican Peso Crisi	S		
Oct-94 - Feb-95	2	1	1

Conclusions

- 1) The current policy mix is risk-efficient no imperative need for increased diversification
- Risk-efficiency can be improved a bit by adopting the less constrained mix at the equivalent risk level (Mix 3 or Mix 3 Variation)
- The current total fund risk level is appropriate if risk tolerance is fairly represented by 95th and 99th percentile events
- Mix 3 also appears to be a bit better diversified when viewed through additional risk lenses

	Current Policy	Mix 3	Mix 3 Variation
US Lrg Cap	28	24	24
US Sml Cap	7	6	6
Intl Stock	18	17	20
Public Equity	53	47	50
Core Bonds	16	13	13
TIPS	3	2	2
Opp Credit	3	5	5
Fixed Income	22	20	20
Priv Equity	8	7	7
Hedge Funds	3	5	4
Commod	3	3	3
Real Assets	0	3	2
Alternatives	14	18	16
Real Est	5	6	6
Risk Parity	6	9	8
Expected Return	7.44	7.45	7.50
Total Risk	13.83	13.70	13.89

Definitions

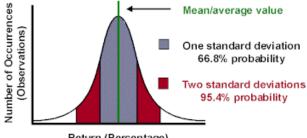
STRATEGIC ASSET ALLOCATION

EXPECTED RATE OF RETURN

STANDARD DEVIATION

Risk Measurement

Probability of Dispersion Above or Below the Mean/Average



Return (Percentage)

The discipline used to determine which assets and what proportion among those assets meet an investor's cash flow requirements, planning horizon, and attitude toward risk.

The expected value or mean of a probability distribution of returns. In our case, the expected return is the compounded annual return which is the same as the geometric mean. After tax expected return nets out the expected income and capital gains taxes paid by the trust.

A statistical measure of the degree to which an individual value in a probability distribution tends to vary from the mean of the distribution. The square root of the variance. When returns are normally distributed, an individual return will fall within one standard deviation of the mean about two-thirds of the time. For example, if a portfolio had an expected return of 5% and an expected risk (standard deviation) of 13, then:

One Standard Deviation	68% of the time, returns can be expected to fall between –8.0% and +18%
Two Standard Deviations	95% of the time, returns can be expected to fall between -21% and +31%

Standard deviation is a useful historical measure of the variability of return earned by an investment portfolio. In performance measurement, it is generally assumed that a larger degree of dispersion implies that greater risk was taken to achieve the return.

Definitions

CORRELATION COEFFICIENT

Correlation coefficient (r) is a measure of the degree of **correlation** between two quantities or variables, such as the rates of return on stocks and on bonds. A negative coefficient of correlation indicates an inverse or negative relationship, whereas a positive value indicates a direct or positive relationship. The range of values is from -1 to +1 inclusive. A zero (0) value indicates that no correlation exists. Correlation coefficients are useful in **asset class** identification and portfolio **diversification**.

Correlation Coefficient Shows Strength & Direction of Correlation



Glossary

- Asset Allocation (1) The way investments are distributed and weighted among different asset classes.
 (2) The distribution of investments among categories of assets, such as equities, fixed income, cash equivalents, and real estate.
- CAPM Capital Asset Pricing Model. A system of equations that describes the way prices of individual <u>assets</u> are determined in efficient markets, that is, in markets where information is freely available and reflected instantaneously in asset prices. According to this model, prices are determined in such a way that <u>risk premiums</u> are proportional to systematic risk, measured by the <u>beta coefficient</u>, which cannot be eliminated by diversification. CAPM provides an explicit expression of the expected returns for all assets. Basically, the model holds that if investors are risk averse, high-risk stocks must have higher expected returns than low-risk stocks. CAPM maintains that the expected return of a security or a portfolio is equal to the rate on a risk-free investment plus a risk premium.
- Correlation A relationship between two quantities, such that when one changes, the other does. A measure (ranging in value from 1.00 to -1.00) of the association between a dependent variable (fund, portfolio) and one or more independent variables (index). Correlation is a measure, not necessarily of causality, but rather of the strength of a relationship. A <u>correlation coefficient</u> of 1.00 implies that the variables move perfectly in lockstep; a correlation coefficient of -1.00 implies that they move inversely in lockstep; and a coefficient of 0.00 implies that the variables as calibrated are uncorrelated.
- Efficient Frontier A set of optimal portfolios, one for each level of expected return, with minimum risk.
- **Expected Return** -- Estimate of the return of an investment or portfolio from a probability distribution curve of all possible rates of return; statistically, it is the mean (ether geometric mean or arithmetic mean) of the distribution or the "most likely" outcome.
- Factor Model Regression-based mathematical calculation used to determine the extent to which macroeconomic factors or other explanatory variables affect the value or price movement of a specific security or portfolio.

Glossary

- Geometric Return Similar to the arithmetic mean, which is what most people think of with the word "average", except that instead of adding the set of returns and then dividing the sum by the number of return observations (N), the numbers are multiplied and then the Nth root of the resulting product is taken. Also known as <u>compound return</u>.
- Mean Reversion Statistical phenomenon stating that the greater the deviation of a given observation (e.g. a quarterly or annual return) from its mean, the greater the probability that the next measured observation will deviate less far. In other words, an extreme event is likely to be followed by a less extreme event.
- Monte Carlo Simulation Uses stochastic processes to simulate the various sources of uncertainty that
 affect the value of the instrument, portfolio or investment in question, and calculates a representative value
 or distribution of possible outcomes given the simulated values of the underlying inputs.
- **Optimization** Process of determining the portfolio composition such that expected return is maximized for a given risk level, or risk is minimized for a given expected return level. Other optimizations could target risk of shortfall, maximization of Sharpe ratio, or minimization of tracking error.
- Sharpe Ratio A ratio of return to volatility, useful in comparing two portfolios or stocks in terms of riskadjusted return. The higher the Sharpe Ratio, the more sufficient are returns for each unit of risk. It is calculated by first subtracting the risk free rate from the return of the portfolio, then dividing by the standard deviation of the portfolio.
- Treasury Inflation-Protected Securities (TIPS) Inflation-indexed bonds issued by the U.S. Treasury. The principal is adjusted to the Consumer Price Index (CPI), the commonly used measure of inflation. The coupon rate is constant, but generates a different amount of interest when multiplied by the inflation-adjusted principal, thus protecting the holder against inflation. TIPS are currently offered in 5-year, 10-year and 20-year maturities. Beginning in February 2010, the U.S. Treasury will once again offer 30-year TIPS bonds.

STRATEGIC INVESTMENT SOLUTIONS, INC.

333 Bush Street, Ste. 2000 San Francisco, California 94104

TEL 415/362-3484 = FAX 415/362-2752

San Mateo County Employees' Retirement Association (SamCERA) Board 100 Marine Parkway, Suite 125 Redwood City, CA 94065

Dear Board Members:

This memo outlines the major changes under consideration as part of the 2013 SamCERA Asset/Liability Study ("ALS") and their justification. As reported to the SamCERA board during the asset allocation education session, we anticipate continuing to rely on Mean-Variance Optimization as the basis for asset allocation, but with an eye towards also assessing risk through the additional lenses increasingly employed by large institutional investors such as SamCERA. These lenses include factor analysis, economic scenario analysis, and historical extreme event analysis.

The purpose of this memo is to provide SamCERA with documentation of the ALS process and an understanding of the roles of the various asset classes under consideration.

	CURRENT POLICY	PROPOSED POLICY	DIFFERENCE
PUBLIC EQUITY	53	50	-3
US LARGE CAP	28	24	-4
US SMALL CAP	7	6	-1
INTERNATIONAL STOCK	18	20	+2
FIXED INCOME	22	20	-2
CORE BONDS	16	13	-3
TIPS	3	2	-1
OPPORTUNITY CREDIT	3	5	+2
ALTERNATIVES	14	16	+2
PRIVATE EQUITY	8	7	-1
HEDGE FUNDS	3	4	+1
COMMODITIES	3	3	0
REAL ASSETS	0	2	+2
REAL ESTATE	5	6	+1
RISK PARITY	6	8	+2
EXPECTED RETURN	7.4	7.5	
TOTAL RISK	13.8	13.7	

CURRENT AND PROPOSED SAMCERA ASSET ALLOCATIONS

SIS and your CIO have worked together to develop changes to the portfolio that in SIS' view, provide continuity and careful enhancement to the existing SamCERA asset allocation, rather than any significant change of strategic posture. However, we are proposing some changes that we believe will

allow us to continue to improve the portfolio and orient it more efficiently to evolving market risks and opportunities. We will explain the rationale for each allocation change, presented in order of their importance, in the discussion below.

INITIATE DISCRETE REAL ASSETS PORTFOLIO

One of the objectives of the ALS is to assess the primary risks SamCERA faces in managing the plan's assets relative to its liabilities. One of these risks is unanticipated inflation: if inflation is higher than expected over an extended period, wage inflation and higher cost-of-living adjustments ("COLAs") may cause the value of liabilities to increase. In addition, assets that respond negatively to inflation may lose value, which would also cause the plan's funded status to deteriorate.

SIS believes that the risk of unanticipated inflation in the future is perhaps the most underappreciated risk in pension administration today. Accordingly, in recent years, our plan sponsors have sought to hedge this risk by initiating or adding exposure to assets that are expected to respond *positively* to unanticipated inflation. These assets are known as "Real Assets" or, alternatively, "Real Return Assets", as they are expected to provide attractive returns on a real (net of inflation) basis.

Real Assets are comprised of both equity and fixed income oriented strategies. Real return fixed income performance is generally more closely tied to changes in CPI and/or short-term interest rate changes. (SamCERA's portfolio already has strong representation in these bond-like instruments.)

The fixed income sub-categories included in Real Assets are:

- TIPS
- Non-US Inflation-Linked Bonds
- Bank Loans and other floating-rate bonds and notes

While returns from equity oriented Real Assets are less directly tied to changes in CPI, and therefore provide a less optimal hedge against inflation risk, they can potentially generate more attractive returns and also diversification relative to other equity-oriented strategies. (The SamCERA portfolio currently only has full representation in one of these categories, commodities futures, though it has also made limited hard asset investments in the private equity portfolio.)

The equity asset sub-categories included in Real Assets are:

- Commodities
- Infrastructure (ports, toll roads, power generation, etc.)
- Hard Assets (Oil & Gas, Metals & Mining, Agricultural Land, Timberland, etc.)

SIS recommends that SamCERA implement a dedicated real return pool to complete its exposure to inflation hedging assets. The instrument sub-allocation of the portfolio will be determined during the next step in the strategic planning process, which we call the Manager Structure study.

INCREASE RISK PARITY ALLOCATION

The goal of the Risk Parity allocation is to enhance the overall portfolio diversification by introducing a portfolio that targets four equal risk factor contributions derived from across the asset classes (equity, credit, inflation, and duration) in order to provide the most risk efficient, balanced portfolio possible. The equal inputs from the risk factors tend to provide better risk adjusted returns, better downside risk protection, and also marginally reduce the overall portfolio's reliance on equity risk to drive long-term returns. SIS continues to believe that there is strong theoretical as well as empirical support for the risk parity methodology. Furthermore, we believe that last quarter's negative episode for risk parity, though painful, provides an attractive entry point for SamCERA to increase its exposure to the strategy.

INCREASE IN INTERNATIONAL EQUITY AS A PROPORTION OF ALL PUBLIC EQUITY

While the optimization suggests a slightly lower overall public equity allocation, the international equity allocation is higher, and thus the proportion of international to total rises from 34% to 40%. SIS encourages higher international equity allocations in client portfolios for the following primary reasons:

- Enhanced Diversification of plan assets
- Reduced Mismatch between global equity opportunity set and plan allocation
- Increased exposure to the higher growth economies of the Emerging Markets
- Increased protection against loss of global purchasing power from depreciating US dollar
- Increased exposure to market and sector leading companies domiciled outside the US

INCREASE IN HEDGE FUNDS

SIS does not believe that Hedge Funds qualify as an asset class per se, but instead represents a type of investment vehicle that allows greater freedom for skilled investment teams to pursue non-traditional alpha strategies in both traditional and alternative instruments. We do believe that, if carefully selected and implemented, Hedge Funds can potentially improve SamCERA's risk-adjusted returns. This is because of the combination of unique market exposures or "exotic betas" and/or management skill or "alpha" that good Hedge Funds provide. These attributes can lead to superior risk-adjusted returns and improved asset diversification relative to the more traditional asset classes that comprise the rest of the SamCERA portfolio. Our expected (net-of-fees) return for Hedge Funds is 5.5%, with an expected risk of just under 12%. This profile results in the highest reward to risk ratio (Sharpe Ratio) of any class of investments in the SamCERA portfolio, with a fairly low correlation of returns relative to both public equities and bonds.

Given these characteristics, our asset allocation model naturally favors Hedge Funds over most other investments. Therefore the appropriate allocation to Hedge Funds becomes a function of the board's comfort level with these strategies. Other SIS clients that have approved Hedge Fund investments generally have target Hedge Fund allocations ranging from 3% to 10%. We recommend that SamCERA increase its current 3% Hedge Fund allocation. SamCERA has an efficient core hedge fund position in the

AQR Delta product; we expect SamCERA to enhance its core position with a few carefully selected complements to the Delta strategy.

SLIGHT INCREASE REAL ESTATE

We believe Core Real Estate has several positive characteristics:

- Potential hedge against unanticipated inflation (many investors include real estate in their Real Assets allocation)
- Expected return greater than bonds
- Expected risk lower than equity
- A smoothed, appraisal based return series; thus "observed" and reported risk is low relative to other private asset classes
- Low correlation to equity and bonds

However, core institutional real estate has rallied strongly since the Global Financial Crisis. At this point in the cycle, SIS remains drawn to Core Real Estate's potential inflation hedging characteristics and its perceived cheapness relative to other asset classes, especially nominal bonds. The net of these cross-currents leads the optimizer to an initial target allocation of about 6% of the total fund, which would be a slight increase from the current Real Estate target allocation of 5%.

DECREASE IN CORE BONDS

SIS respects the critical role played by high quality "core" bonds in institutional portfolios in hedging against deflation, providing an anchor to safety during times of crisis, and generally providing strong diversification to the predominantly growth oriented assets in the rest of the portfolio. However, SIS continues to believe that the current market pricing of high quality bonds greatly reduces their ability to perform their traditional role, and even to an extent makes duration exposure a source of true price risk in the portfolio. As such, SIS is comfortable with using core bonds as a source of funds for other client portfolio initiatives, and SIS believes that SamCERA's proposed 20% allocation to the asset class is adequate for bonds to perform their traditional role in the portfolio. If and when bond prices moderate from their current level over the next few years, SIS will look to recommend that client bond portfolios return to higher allocations. (It should be noted that SamCERA's proposed increase in its Risk Parity allocation has the impact of also increasing the portfolio's bond allocation. Since Risk Parity employs leverage to increase bond risk, it has the effect of deploying greater bond exposure, so the 8% allocation to Risk Parity actually increases the bond exposure by approximately 3%, increasing the total portfolio's actual bond allocation to 23%.)

DECREASE IN TOTAL PUBLIC EQUITY

Decreasing the public equity allocation was not a goal of the process, however it became a necessity given the several attractive uses of funds available to SamCERA. SIS has in fact actively cautioned its

clients against selling too much public equity in the recent period of depressed risk asset valuations after the Global Financial Crisis when the temptation for many boards has been to reduce exposure to growth assets far too much. With valuations having rebounded somewhat in the last three years, we are now more comfortable with using public equity as a source of funds for other portfolio initiatives, especially for building the dedicated real return pool.

CONCLUSION AND NEXT STEPS

While the ALS is still ongoing and we do not yet have a final recommended policy target mix, we believe the ideas outlined in this memo will help SamCERA improve its long-term risk-adjusted returns and provide the flexibility to better position the fund to achieve its return objectives.

Once the ALS is complete, the next steps will be to conduct a manager structure study within International Equities, Real Assets, Hedge Funds, and Fixed Income to determine how to implement these broad asset classes in the most optimal way to meet their functions in the total portfolio.

We look forward to working with the SamCERA Staff and Board to complete the ALS and implement the fund's new investment strategy.

Sincerely,

Patrick Thomas Senior Vice President Strategic Investment Solutions, Inc.

September 24, 2013

Agenda Item 6.3

TO: Board of Retirement

Libeth Dames

FROM: Lilibeth Dames, Investment Analyst

SUBJECT: Report on Opportunistic Credit and TIPS Manager Annual Reviews (Angelo Gordon, Brigade Capital Management and Brown Brothers Harriman)

Staff Recommendation:

Review the report on the annual review of SamCERA's Opportunistic Credit and TIPS managers.

Background:

On September 5th, SamCERA staff and consultant held annual review meetings in SamCERA's office for our opportunistic credit and TIPS managers.

Each meeting lasted approximately 1.5 hours, and consisted of a firm/organizational update, investment process review, performance review and attribution, and current positioning/market outlook.

Discussion:

Angelo Gordon's Securitized Asset Recovery (STAR) Fund, which focuses on CMBS and non-agency RMBS and a follow-up fund to SamCERA's PPIP investment, was reviewed first. Next, Brigade Capital Management's Opportunistic Credit product, which is a fundamental, bottom-up strategy focused on high yield corporate bonds and bank loans with tactical allocations to structured securities, convertibles and other sectors of the bond markets, was reviewed. Lastly, Brown Brothers Harriman's Inflation Index Securities strategy was reviewed. BBH uses fundamental, technical and opportunistic strategies when managing the TIPS portfolio. BBH briefly discussed the implementation of SamCERA's recent guideline changes to allow BBH to hedge a portion of the interest rate sensitivity of the portfolio to reduce portfolio duration.

There were no significant concerns identified during the portfolio reviews. Attached you will find meeting notes from SIS summarizing the findings from these annual reviews.

Attachments:

- A. Angelo Gordon Securitized Asset Recovery Fund Annual Review Meeting Notes
- B. Brigade Capital Management Opportunistic Credit Annual Review Meeting Notes
- C. Brown Brothers Harriman Inflation Indexed Securities Annual Review Meeting Notes

Date of meeting: 9/5/2013 Location: SamCERA Office

<u>Manager Representative(s)</u> Colleen Casey (Client Service), Lisa Yahr (Director) SIS Representative(s)

Ping Zhu

Client Representative(s)

Mike Coultrip (CIO), Scott Hood (Assistant Executive Officer), Lilibeth Dames (Analyst)

Product Description

The Angelo Gordon STAR Fund focuses on CMBS and non-Agency RMBS priced between 25-75% of par, which Angelo Gordon believes are mispriced due to their complex nature and a dearth of natural buyers capable of accurately valuing these assets. In addition, Angelo Gordon will target securities that are well-positioned to benefit from home and commercial property price stabilization and recovery, and/or borrower credit quality improvement. In this regard the STAR Fund will be more aggressive than the PPIP Fund since it will target securities that are more geared to a recovery of the commercial and residential real estate markets. The Fund will utilize a moderate amount of leverage (1x to 1.5x) and is targeting a base-case 15% net IRR with a downside return in the mid/high single digits and an upside projection of 25%+ returns.

Meeting Notes

Organization

With over 280 employees, Angelo Gordon (AG) remains privately owned by approximately 60 partners. The firm specializes in global alternative investments across five product lines: (i) distressed debt and leveraged loans, (ii) real estate equity and debt, (iii) residential and commercial mortgage-backed and asset-backed securities, (iv) private equity and special situations, and (v) multi-strategy.

In 2013, David Roberts was named Chief Operating Officer, and Art Peponis was named the head of Private Equity.

Investment Team

Angelo Gordon recently added 2 new professionals in its RMBS team. Jason Beigel officially joined the firm as managing director in February 2013, after working as a consultant for the firm. Florin Nedelciuc joined in April and worked for Jason. Angelo Gordon's CMBS team will also have one new professional joining from Goldman Sachs on October 1st.

Investment Strategy

Lisa commented on the challenging fixed income markets since Fed's recent tapering talk. She believes that recent selloff is technical driven, U.S. economy is OK and growing, and home price appreciation should continue. She also believes that the recent rise in Treasury yields will ultimately lead to credit spread widening.

AG has been very patient in terms of calling capital. In June and July, the team has done quite a bit of selling, although

it continues to find attractive "story bonds" in both CMBS and RMBS markets. AG feels comfortable about current market opportunities, given the capital constraints of large banks, combined with potential selling out of Fannie Mae and Freddie Mac from their private label RMBS and CMBS books. In fact, several large banks have billions of dollars' worth of subprime RMBS holdings that they are trying to sell, so AG has been opportunistically bidding on approximately 20 bonds every day. When evaluating those securities, AG understands that home price appreciation is very much localized, and lower-end markets have witnessed 3 times stronger appreciation than higher-end markets. Consequently, AG's RMBS model has always been focused on micro and localized level, with adaptive assumptions about home price appreciation. In addition, AG stays away from new issue markets in order to mitigate the risk of rising interest rates. As a result, AG has been buying more higher-coupon securities, and has factored in the interest rate risk when evaluating those securities. When asked about how the non-agency IOs behaved in the last couple of months. Lisa said IOs in general have performed well in the past. At this point, they are probably fully valued or even overvalued.

In terms of past loss experience for AG's CMBS investments, Lisa said there were two junior AAA bonds that are expected to take losses, and special servicers will hold on to these bonds until pricing gets better. Lisa also commented that AG has never experienced any unexpected losses, which is good testimony for the efficacy of the firm's credit analysis.

Mike asked about how AG's REPO positions were staggered. Lisa said AG gets favorable treatment and has access to attractive financing from its 30 lending relationships. AG sees no impact on term funding due to proposed regulatory changes for the REPO market. The average original days to maturity is 134 days broken down as follows – 61% over 30 days, 27% over 90 days, and 12% over 360 days. For the STAR portfolio, AG has \$130M-\$140M interest rate hedges.

When asked how AG monitors servicers on the whole loan side. Lisa said AG has contractual relationships with 5 servicers, including 3 high touch servicers. All servicers are paid a fixed fee; hence it's more profitable for servicers to maintain their loan portfolio current. Given AG's large size, these servicers have incentive to do a good job and maintain their relationship with AG.

Finally, Lisa and Colleen briefly discussed AG's newly launched whole loan fund. The fund will focus on nonperforming and re-performing loans because the manager sees opportunity that banks, HUD and GSEs will be motivated to sell their whole loan holdings to meet regulatory requirements. Barriers to entry are high so competition is less intense in this space. The fund has a low-teen net return target under its base case assumption, and its downside risk is limited with mid-single digit returns if further home price appreciation and credit expansion do not happen in the future. The fund has a two-year funding facility. On the legacy residential loan side, the fund is estimated to hold 60% in re-performing loans and 20% in non-performing loans, while the remaining balance will be invested in new issue jumbo origination and mortgage servicing rights. The fund is also expected to have some allocations on commercial real estate lending.

Performance & Positioning

As of 6/30/2013, AG STAR Fund has 169 positions, with 61% allocated in RMBS and 36% allocated in CMBS. The Fund's leverage is 1.51x. Year-to-date performance has been quite strong at around 14% net of fees. Overall duration for this portfolio is low, because its RMBS holdings are mostly floating rates.

As of 6/30/2013, SamCERA's investment in AG STAR Fund was \$28.8 Million, which represented over 80% of its \$35M total commitments. Following the most recent capital calls, SamCERA's account is now over 90% invested.

Date of meeting: 9/5/2013 Location: SamCERA Office

Manager Representative(s) John Ackler (Senior Vice President) SIS Representative(s)

Ping Zhu

Client Representative(s)

Mike Coultrip (CIO), Scott Hood (Assistant Executive Officer), Lilibeth Dames (Analyst)

Product Description

Brown Brothers Harriman (BBH) manages TIPS using three main types of strategies: Fundamental, Technical and Opportunistic. The Fundamental bucket has two sub-strategies, real yield duration and real yield curve slope vs. nominal yield curve slope. The Technical strategies consist of yield curve roll-down, auction cycle trading, seasonal vs. nonseasonal CPI and security selection/option value analysis. Finally, nominal Treasuries vs. TIPS, sector relative value (i.e., corporate or Agency inflation-linked bonds) and non-Dollar inflation-linked bonds make up the Opportunistic group. Real yield duration is held to +/- 1 year vs. the benchmark and the portfolio has a limited allocation to nonindex securities, typically 5-10% with a maximum of 20% (including nominal Treasuries).

Meeting Notes

Organization

BBH is structured as a private partnership. The firm's diversity of product offerings and its lack of involvement in proprietary trading have helped it go through the 2008 market crisis relatively unscathed compared with other large wall street names. The firm enjoys healthy margins and good profitability, so there is no expectation to change.

Investment Team

BBH has 5 new recent hires to beef up its fixed income team, including two senior hires – Paul Kunz and Vaidas Nutautas. However, none of these new hires will be dedicated in TIPS strategy, as BBH sees no need to add resources for TIPS. There is no recent departure from the firm's fixed income team.

BBH has a small but seasoned team managing its TIPS strategy. James Evans is the portfolio manager and has been managing the strategy since its inception. James is 100% focused on the TIPS strategy. Gregory Steier, managing director, spends about 50% of his time on the TIPS strategy.

Jorge Aseff is the head of quantitative research across various fixed income products, including TIPS. Douglas Mark is the primary trader for TIPS strategy although he also trades government securities for other BBH fixed income products. Jeff Adams is the backup trader for Douglas.

On the client relationship side, John Nelson recently left BBH after 26 years with the firm. As a result, John Ackler has taken over John Nelson's responsibilities.

Investment Strategy

As of 6/30/2013, 19% of BBH's \$27 Billion fixed income AUM is in the TIPS product. In fact, TIPS has been the fastest growing product across all BBH fixed income products over the past few years.

SamCERA's account had two recent guideline changes: 1) On 7/31/2013, the benchmark Barclay's index has been changed to take out securities owned by the Federal Reserve, which resulted in shorter duration than the old benchmark (duration was reduced by 0.5 year). BBH believes this change results in a better and fairer benchmark. 2) The account allowed manager to short Treasury futures in order to reduce portfolio duration. In hindsight, John acknowledged the proposed duration hedge was implemented a bit too late and it missed the 6 weeks' window of rapid real rate spike. However, John said the new duration hedge did help improve the account performance by 20bps, since it got implemented.

When asked about the valuation of TIPS market, John said the recent TIPS selloff has come largely from retail investors. He believes that U.S. CPI has been well controlled, core inflation has been relatively stable, and foreign central banks in Japan and Europe are providing enormous monetary accommodation. BBH believes Fed tapering means less accommodation but does not mean tightening. Consequently, BBH believes that current breakeven rate of 2.15-2.2% is fairly cheaply priced. Compared with nominal Treasuries, BBH thinks that inflation protection is inexpensively priced at current level.

Unlike some other managers who overlay credit and other securities in their TIPS products, BBH's TIPS strategy is exclusively invested in inflation-linked securities and government bonds. Their investment process is focused on 3 strategy categories: fundamental, non-directional, and opportunistic. The fundamental strategy is more macro focused, using economic factors to check if real rates match up with status of economy. Due to lower batting average of this strategy, BBH only takes small active risks (e.g., one quarter of a year's deviation from benchmark duration). By comparison, the manager's non-directional strategy tends to get higher batting average albeit small incremental returns. Therefore, more active risks are taken in these non-directional strategies (e.g., auction cycle trading, seasonal pattern, deflation floor, index extension, etc.). The manager's opportunistic strategies include purchasing non-dollar inflation-linked bonds from large foreign countries.

Mike asked about the liquidity of the TIPS market versus the nominal Treasury bond market. John acknowledged that fixed income market has become less liquid due to government regulation. Liquidity for nominal Treasuries is decent, but they are a bit more costly to trade due to wider bid-ask spread. Liquidity impact on TIPS was not significant either, because dealer didn't hold lots of TIPS inventories in the past, and John expects they will likely continue to hold low inventories in the future. When Mike asked about new supplies in the U.S. TIPS market, John said he does not expect TIPS supply to shrink in the future.

Performance & Positioning

SamCERA's TIPS account significantly outperformed its benchmark during recent TIPS market selloff. About half of the account's excess returns came from its foreign inflation-linked bond holdings (such as those issued by France and Germany). The portfolio's duration also helped performance. In addition to its recent duration hedge, the account also had an additional 0.5 year shorter duration than its index. Overall duration stands at 5.2 years on the day of this meeting.

Going forward, BBH will separate its performance reports into different components, and specify the performance attributed to the account's duration hedging element.

As of 6/30/2013, SamCERA's investment in BBH is \$77.5 Million.

Date of meeting: 9/5/2013 Location: SamCERA Office

Manager Representative(s)

Gregory Soeder (Director of Strategies), Robert Brady (Director of Sales), Ben Renshaw (co-PM)

SIS Representative(s)

Ping Zhu

Client Representative(s)

Mike Coultrip (CIO), Scott Hood (Assistant Executive Officer), Lilibeth Dames (Analyst)

Product Description

Brigade Opportunistic Credit is a fundamental, bottom-up strategy focused on high yield corporate bonds and bank loans with tactical allocations to structured securities, convertibles and other sectors of the bond markets as they become attractive on a relative value basis. While performing credits represent the majority, Brigade will invest up to 35% of the portfolio in distressed securities and restructuring situations if these types of opportunities are attractive on a risk-adjusted basis and the timing is right with respect to the credit cycle. The portfolio is comprised of mostly North American issuers, but they are not restricted geographically and expect to have a moderate allocation to Europe over time. Although the portfolio is generally long-only, Brigade has the ability to implement a limited amount of tactical macro hedges.

Meeting Notes

Organization

There have been no significant changes recently in the firm's structure. Since December 2011, assets have grown from approximately \$8.4 Billion to \$14 Billion (as of 6/30/2013). The vast majority of asset growth has come from its opportunistic credit strategy, which has grown from \$357 Million to \$3.7 Billion during this period. Brigade has also seen a general shift in its client base, away from fund-of-funds and towards large, institutional public and private pension and sovereign wealth plans.

Investment Team

There was no recent departure in the team. Brigade hired a few recent hires on the research side to beef up the team's coverage on CMBS, CLO, and municipal bonds. The firm opened its London office 2 years ago, and has made 3 key strategic hires at this point. Ben said he expects the firm's European office size will be much smaller compared with its U.S. office, with a target of 8-12 people. Brigade currently has no plan to raise capital from European investors.

Investment Strategy

Mike started by asking about the firm's current AUM for its various strategies, as well as any concern about capacity. Brigade said its hedge fund has been soft closed for almost 2 years now, but it has just started to market that fund because one hedge fund of funds investor is going to withdraw capital. On the high yield side, Brigade has \$1.8B AUM in traditional high yield and is turning down new high yield investors. The firm also did a CLO deal about 2 weeks ago, with a blended financing cost of LIBOR+220bps and an asset pool generating LIBOR+500bps. Although Brigade opportunistic credit strategy does not invest in its own CLOs, Brigade said its CLO business is beneficial because it keeps the team more involved and abreast of the market. Brigade said it has a very sizable team managing opportunistic credit strategy, and it's comfortable with the strategy's current AUM and its 100bps-125bps average position size.

In terms of opportunity set in Europe, Brigade thinks that European high yield spreads are even tighter than those of comparable U.S. high yield bonds. Therefore, most of the team's time is spent in the loan space and investment-grade space in European markets. While the European loan market does not see many new issuances these days, the Brigade team sees interesting opportunities in distressed securities as many European banks are eager to get rid of troubled loans off their books. On the regular U.S. high yield side, the team continues to focus on event-driven investments.

Performance & Positioning

Overall, the opportunistic credit strategy's positioning is quite defensive. The portfolio's cash position has gone up to around 10% earlier this year, but has since pared back to 4% at this point. This portfolio also employed macro hedges to mitigate risk, including buying CDS options and put options on high yield index.

Brigade believes many bank loans no longer adequately compensate investors for taking on their risks, so the manager has pared back its bank loan allocation into the 25% - 35% range. High yield allocation is currently at 15% (excluding hedges). There is around 5% allocation in newer vintage BBB CLOs because the team believes these CLOs offer good value, with an average price in the low 90s and average current yield at around 6%. Brigade believes that BBB impairment is unlikely given low levels of default in current market.

SamCERA's account has 5% allocation in Distressed securities, with the largest distressed holding in TXU first lien bank debt. Brigade believes those TXU debt will trade up upon TXU's bankruptcy filing. Brigade also acquired exposure in Jefferson county when its bonds were traded at around 40 cents per dollar, while the manager's expected recovery is around 80 cents. In all these distressed investments, Brigade's focus is on the capital structure of borrowing firms' balance sheets. In addition to TXU, top holdings in SamCERA's account include a few expected take-out names, such as Cheniere Energy and Forest Oil. These bonds offer 6%+ yield even if a take-out does not happen. Brigade recently reduced its position in SuperValu and sold a portion to Cerberus.

All in, the SamCERA's account has around 30% in floating rate securities, and generates a current yield of around 7%. Brigade believes that the strategy's limited duration, combined with its ability to invest in non-traditional fixed income securities, will enable it to post strong future performances that should easily beat the low returns of Barclays Aggregate Index.

As of 6/30/2013, SamCERA's investment in Brigade Opportunistic Credit Fund is \$59.6 Million.

September 24, 2013

Agenda Item 6.4

TO:	Board of Retirement
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Libeth Dames

FROM: Lilibeth Dames, Investment Analyst

SUBJECT: Discussion and Approval Regarding Frequency of Trading Cost Analysis Due Diligence

Staff Recommendation:

Discuss and approve staff's recommendation to conduct a one-time trade cost analysis of the Association's equity and fixed income managers on a triennial basis.

Background:

At last month's Board meeting, Vinod Pakianathan, Senior Vice President of Zeno Consulting Group, presented an analysis of SamCERA's trading costs for Fiscal Year 2012-2013. Mr. Pakianathan provided a refresher on equity transaction costs and discussed SamCERA's equity trading costs analysis and observations for the fiscal year. He also presented information garnered from follow-up calls with two of SamCERA's investment managers whose transaction costs ranked them in the bottom quartile relative to their peers. The Board directed staff add a discussion of the trading costs services at the September Board meeting.

Discussion:

As of May 2012, Zeno Consulting Group has been retained by SamCERA to conduct trade cost analysis for the Association's equity and fixed income portfolios. Since then, Zeno has provided SamCERA staff with quarterly reports that provide an in-depth analysis of the trading costs of each of SamCERA's managers held in separate accounts. The data points that Zeno examined have allowed them to determine why unnecessary costs may have occurred and what negative trends may be affecting SamCERA's performance. As previously mentioned, Zeno has also followed up with two of SamCERA's managers in an effort to better understand their trading process. Zeno has also conducted a Manager Search analysis during SamCERA's most recent large cap growth equity manager search.

Overall, staff is quite pleased with the diligence that Zeno has provided SamCERA over the past 16 months and believes that TCA is beneficial for the fund's due diligence process. The annual cost of Zeno's consulting service is \$30,000. Considering the cost/benefit trade-off of the service and given the fact that TCA can be a helpful component to SamCERA's manager due diligence, staff recommends that SamCERA conduct a one-time trade cost analysis of the fund's managers every three years. Staff is comfortable with retaining Zeno Consulting Group to conduct this analysis on a triennial basis. Additionally, should a potential manager search arise at any time, staff would

also like the authority to engage Zeno to conduct a TCA of the search finalists, should it be the Board's inclination to do so. The Board's approval of staff's recommendation would terminate Zeno's current contract with SamCERA.

Attachments:

None.

September 24, 2013

Agenda Item 6.5

TO: Board of Retirement

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FROM:

M: Michael Coultrip, Chief Investment Officer

SUBJECT: Discussion and Approval Regarding Proposed Changes to Western Asset Investment Guidelines

Staff Recommendation:

Approve changing the provision in the Western Asset Investment Asset Guidelines regarding overall portfolio weighted average credit rating quality from an absolute level (AA-) to a relative level to that of the portfolio benchmark.

Background:

In December 2012, a number of changes to the Investment Guidelines that govern the Core Plus strategy with Western Asset Management were executed. These changes put new limits on some of the higher risk securities in the bond market. During this process, the requirement that the overall portfolio weighted average credit rating be higher than AA- was not changed.

Discussion:

Western currently sees relative value opportunities in the 'plus' sectors of the bond market, including high yield bonds, bank loans, and emerging market debt. Their Core Plus model portfolio currently has a target allocation of 20% to these sectors. SamCERA's portfolio is currently underweight their target allocation to these sectors (by about 25% in aggregate) due to the AA-average credit quality provision in the investment guidelines.

In order to fully implement Western's relative value tilts and to provide further flexibility in case of further downgrades of U.S. debt, Western is proposing changing the investment guidelines so that the overall weighted average credit rating not be more than 3 rating notches below the benchmark's (BC Aggregate Index) average weighted credit quality. Given that the weighted average credit quality of the index is currently AA+, a 3-rating notch provision would result in a portfolio minimum average credit quality of A+. Attached is the red-line version of the investment guidelines showing this proposed change.

Attachments:

A. Western Asset Management Investment Guidelines

EXHIBIT C Investment Objectives, Guidelines and Fee Agreement

The following investment objectives and guidelines shall apply to the portfolio(s) (the "Portfolio") of the San Mateo County Employees' Retirement Association (hereinafter referred to as the "Board") that are managed by Western Asset Management, Inc. ("WAM") under the Investment Management Agreement dated October 25, 2004 (the "Agreement").

Pursuant to the provisions of the *Investment Plan* (the "*Plan*") as incorporated as Exhibit A the Board will, from time to time, allocate Assets to the Investment Manager for investment in a Portfolio of domestic fixed income securities. The Investment Manager shall invest and reinvest such Assets within the Portfolio to which they were allocated and will segregate each allocation into individual accounts for reporting purposes. The Investment Manager may allocate any or all of the Assets to commingled funds, when it determines that it is prudent to do so. The Board, from time to time, may direct the Investment Manager to rebalance the allocations in accordance with applicable provisions of the *Plan*.

Investment Objectives

The Portfolio shall be treated as a tax-exempt portfolio. As a result, the tax consequences of individual transactions shall not be considered as part of the Investment Manager's purchase and sales decisions.

The primary objective of the portfolio will be current income and growth through moderate capital appreciation. Acceptable risk levels will be maintained through the use of mainly high-quality securities. Additional considerations governing investments shall include:

Objectives

Subject to the considerations outlined below, overall Investment Policy shall seek to:

- (1) maximize long term total return in the portfolio;
- (2) control and restrict overall portfolio risk.

Eligible Securities

Any of the following fixed income securities and their futures or options derivatives, individually or in commingled vehicles, subject to credit, diversification and marketability guidelines below, may be held outright and under resale agreement:

- (1) Obligations issued or guaranteed by the U.S. Federal Government, U.S. Federal agencies or U.S. government-sponsored corporations and agencies;
- (2) Obligations of U.S. and non-U.S. corporations such as mortgage bonds, convertible and non-convertible notes and debentures, preferred securities, commercial paper, certificates of deposit and bankers acceptances issued by industrial, utility, finance, commercial banking or bank holding company organizations;
 a) Maximum 5% in convertibles and preferred securities.
 b) No PIK bonds are allowed
- Mortgage-backed and asset-backed securities (excluding CDOs, CBOs & CLOs, which are prohibited); CMBS are limited to benchmark + 5%; Non-agency residential mortgage backed securities are limited to 10%;
- (4) Obligations, including the securities of emerging market issuers, denominated in U.S. dollars or foreign currencies of international agencies, supranational entities and foreign governments (or their subdivisions or agencies), as well as foreign currency exchangerelated securities, warrants, and forward contracts;

(5) Obligations issued or guaranteed by U.S. local, city and state governments and agencies;

(6) Swaps, forwards, options on swaps, options on forwards;

(7) Securities defined under Rule 144A and Commercial Paper defined under Section 4(2) of the Securities Act of 1933;

(8) Bank Loans.

Duration Exposure

The average weighted duration of portfolio security holdings including futures positions is expected to range within $\pm 20\%$ of the benchmark. Options positions will be limited to those which, in a reasonable range of market scenarios, will not change the portfolio's average weighted duration by more than + 20%.

Credit Quality

In all categories, emphasis will be on high-quality securities and the

portfolio must have an overall weighted average credit rating of not more than 3 rating notches below the benchmark's average weighted credit quality. For the avoidance of doubt, if the benchmark is rated AA-, then 3 notches below would be A-.

In all categories, emphasis will be on high-quality securities and the weighted average of portfolio holdings will not fall below AA- or equivalent. Holdings are subject to the following limitations:

 Rated Securities: At least 70% of the portfolio will be of "investment grade", i.e. rated as high as or higher than the following standards or their equivalent by one or more nationally recognized statistical rating organizations (NRSRO):

Standard & Poor's	BBB-, or A-2, or
Moody's	Baa3, or Prime-2, or
Fitch	BBB-, or F-2

- (2) Other Unrated Securities: Securities not covered by the standards in (1) above will normally be, in the judgment of Western Asset Management, at least equal in credit quality to the criteria implied in those standards.
- (3) Downgraded Securities: In the event downgraded securities cause a breach of the maximum percentage allocation permitted in below investment grade or in any securities that are downgraded below B flat, the client will be consulted on the appropriate course of action.
 - (4) Securities Inside 270 Days: For securities with legal final maturities of 270 days or less, Western Asset Management may use the underlying credit's short term ratings as proxy for establishing the minimum credit requirement.

Diversification

- (1) Maturity: Securities covering the full range of available maturities are acceptable.
- (2) Sector: The portfolio will at all times be diversified subject to the following limitations:
 - (a) up to 20% of the portfolio may be invested in non-dollar denominated securities; up to 10% of the portfolio may be invested in un-hedged non-dollar denominated securities;

- (b) up to 20% of the portfolio may be invested in U.S. securities rated below investment grade; and
- (c) up to 10% of the portfolio may be invested in non-U.S. securities (dollar and non-dollar denominated) rated below investment grade.
- (d) up to 5% in subordinated debt.
- (3) Issuer: Holdings are subject to the following limitations:
 - (a) Obligations issued or guaranteed by the U.S. government, U.S. agencies or U.S. government-sponsored corporations and agencies are eligible without limit.
 - (b) Obligations of other national governments are limited to 10% per issuer.
 - (c) Private mortgage-backed and asset-backed securities are limited to 10% per issuer, unless the collateral is creditindependent of the issuer and the security's credit enhancement is generated internally, in which case the limit is 25% per issuer.
 - (d) Obligations of other issuers are subject to a 5% per issuer limit excluding investments in commingled vehicles.
 - (e) Minimum issue credit rating of B flat;
 - () No more than 2.5% of securities rated below B flat
- (4) Credit: No more than 30% of the portfolio will be invested in issues rated below Baa3 or BBB- / A2 or P2.
- (5) Derivatives: No more than 5% of the portfolio will be invested in original futures margin and option premiums, exclusive of any inthe-money portion of the premiums. Short (sold) options positions will generally be hedged with cash, cash equivalents, current portfolio security holdings, or other options or futures positions.

Marketability

All holdings will be of sufficient size and held in issues that are traded actively enough to facilitate transactions at minimum cost and accurate market valuation. Futures and options contracts will be limited to liquid instruments actively traded on major exchanges or, if over-the-counter for options, executed with major dealers.

Performance Measurement

Total portfolio return will be reported at the end of each calendar quarter, and the increment from management will be judged against the following standards:

- (1) general inflation levels as measured by CPI;
- (2) other managers as measured by recognized measurement services; and
- (3) the market as measured by the Barclays US Aggregate Bond Index.

Performance Objectives

The manager shall aim to exceed these standards as follows:

- (1) inflation by 2% annually over the long term (over 10 years);
- (2) the 25th percentile of other managers over the medium term (3-7 years); and
- (3) the market by 115 basis points annually over the medium term (3-7 years)

These standards will be treated as a target only and should not be considered as an assurance or guarantee of performance.

SamCERA's Investment Plan defines underperformance as:

- Four cumulative quarters in which the manager's performance (gross of fees) falls below the style based benchmark return times 0.8 (for example, if the benchmark return is 10%, the manager's return would be less than 8.0%). Or
- (2) Performance (gross of fees) below the 50th percentile for equity managers and 60th percentile for fixed income managers in a universe of the managers' peers over any consecutive 8-quarter period. Below median performance on a risk adjusted basis will also be a guiding tool in the evaluation of the investment manager.
- (3) Cumulative annualized performance (net of fees) over a three-year period below a broad market based benchmark return times 0.9, or

five year return (net of fees) below the broad market based benchmark return, subject to the paragraph above which discusses interim progress toward multi-year objectives. Or

(4) Performance will be evaluated in light of the manager's stated style and discipline.

Investment Objectives, Guidelines and Fee Agreement (Continued)

Fees

A. The fees shall be payable to the Investment Manager at the completion of each calendar quarter. Such fees will be one-quarter of the Annual Management Fee Schedule (or pro-rated portion for a period of time less than a calendar quarter) computed on the market value of the Assets as determined by the Custodian as of the end of each quarter for which such fee is paid, using an average of the end of month values for the three months comprising the quarter

B. Annual Management Fee Schedule:

On first \$100 million (or part thereof) of fund value0.30% per annumBalance of fund value0.15% per annum

September 24, 2013

Agenda Item 7.1

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To: Board of Retirement

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From: Chezelle Milan, Retirement Senior Accountant Mabel Wong, Finance Officer

Subject: Preliminary Monthly Financial Report for the Period Ending August 31, 2013

Comment: The attached preliminary statements fairly represent SamCERA's Financial Statements.

Statement of Fiduciary Net Assets

SamCERA's Net Assets Held in Trust for Pension Benefits as of month end totaled \$2,824,883,019.

Statement of Changes in Fiduciary Net Assets

Net assets held in trust for pension benefits decreased by approximately \$52M million, month over month. The decrease is due to market depreciation of assets.

The following reports are attached to this agenda item:

Table of Contents	Page
Statement of Fiduciary Net Assets (Year to Year YTD Comparative) Statement of Changes in Fiduciary Net Assets (Year to Year YTD Compara Cash Flow Statements Statement of Fiduciary Net Assets (YTD Monthly Comparative) Statement of Changes in Fiduciary Net Assets (YTD Monthly Comparative)	4 5
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San Mateo County Employees' Retirement Association Statement of Fiduciary Net Assets - YTD Comparative August 2013 PRELIMINARY

	August 2013	August 2012
ASSETS		
CASH AND CASH EQUIVALENTS	59,920,691	69,352,202
CASH MANAGEMENT OVERLAY	6,962,547	0
SECURITIES LENDING CASH COLLATERAL	135,798,686	198,602,805
TOTAL CASH -	202,681,924	267,955,008
RECEIVABLES		
Contributions	0	0
Due from Broker for Investments Sold Investment Income	147,394,285	118,660,785
Securities Lending Income	4,545,304 23,224	5,299,200 61,412
Other Receivable	113,712	113,437
TOTAL ACCOUNTS RECEIVABLES	152,076,525	124,134,834
PREPAID EXPENSE	7,669	7,669
INVESTMENTS AT FAIR VALUE		
Domestic Fixed Income Securities	430,595,412	457,987,900
International Fixed Income Securities	109,508,715	102,654,956
Domestic Equities	1,137,286,265	938,949,436
International Equities	514,804,428	448,931,016
Real Estate	166,154,482	146,917,122
Private Equities	89,306,594	28,696,375
Risk Parity	159,447,854	161,788,871
Hedge Funds Commodities	83,922,532 78,030,158	70,421,832 78,377,533
Held for Securities Lending	78,030,138	10,377,555
Other Investment	0	0
· -	2,769,056,440	2,434,725,042
FIXED ASSETS	0	0
LESS ACCUMULATED DEPRECIATION	0	0
	-	
	0	0
TOTAL ASSETS	3,123,822,557	2,826,822,552
LIABILITIES		
Investment Management Fees	2,004,102	2,533,727
Due to Broker for Investments Purchased	160,432,209	132,500,760
Collateral Payable for Securities Lending	135,798,686	198,602,805
Other	704,541	614,021
TOTAL LIABILITIES	298,939,538	334,251,313
NET ASSETS HELD IN TRUST FOR PENSION BENEFITS	2,824,883,019	2,492,571,239

San Mateo County Employees' Retirement Association Statement of Changes in Fiduciary Net Assets - YTD Comparative August 2013 Preliminary

	August 2013	August 2012	
ADDITIONS			
CONTRIBUTIONS Employer Contribution Employee Contribution	72,436,235	71,490,259 6,921,402	945,976 (947,161)
TOTAL CONTRIBUTIONS	78,410,476	78,411,661	(1,185)
INVESTMENT INCOME Interest and Dividends Net Appreciation (Depreciation) in fair value of investments	5,656,574 42,416,728	7,252,798 74,994,564	(1,596,224) (32,577,836)
Less Investment Expense Less Asset Management Expense	(2,389,748)	(3,313,627)	923,880 0
NET INVESTMENT INCOME	45,683,554	78,933,735	(33,250,180)
SECURITIES LENDING INCOME Earnings Less: Securities Lending Expenses NET SECURITIES LENDING INCOME	37,825 <u>13,790</u> 51,615	93,825 	(56,000) (16,150) (72,150)
OTHER ADDITIONS TOTAL ADDITIONS	8,637 124,154,283	807,386 158,276,546	(798,749) (34,122,264)
DEDUCTIONS			
ASSOCIATION BENEFITS Service Retirement Allowance Disability Retirement Allowance Survivor, Death and Other Benefits TOTAL ASSOCIATION BENEFITS	22,851,254 2,965,634 116,097 25,932,985	21,579,134 2,679,105 <u>134,292</u> 24,392,531	1,272,120 286,529 (18,195) 1,540,454
REFUND OF MEMBER CONTRIBUTIONS ADMINISTRATIVE EXPENSE OTHER EXPENSE TOTAL DEDUCTIONS	417,586 735,545 10,478 27,096,595	966,142 642,631 7,657 26,008,961	(548,556) 92,915 2,822 1,087,634
NET INCREASE	97,057,687	132,267,586	(35,209,898)
Net Assets Held in Trust for Pension Benefits: Beginning of Period End of Period	2,727,825,332 2,824,883,019	2,360,303,654 2,492,571,239	

9/24/2013

San Mateo County Employees' Retirement Association CHANGES IN FIDUCIARY NET ASSETS - TRAILING TWO MONTHS For the Month Ending August 31, 2013 PRELIMINARY

	July 2013	August 2013	YTD
ADDITIONS			
CONTRIBUTIONS Employee Contribution	2,559,300	3,414,941	5,974,241
Employer Contributions - Regular	5,387,029	7,274,431	12,661,460
Employer Contributions - COLA	3,079,236	4,083,687	7,162,923
Employer Prefunded Contribution	<u>63,916,571</u> 74,942,135	<u>(11,304,718)</u> 3,468,341	52,611,852 78,410,476
INVESTMENT INCOME Interest and Dividends	2,491,294	3,165,280	5,656,574
Net Appreciation (Depreciation) in fair value	86,287,594	(43,862,229)	42,425,365
of investments			
Securities Lending Income Other Additions	19,682 0	18,143 0	37,825 0
Other Investment Related Expense	(241,248)	(28,760)	(270,008)
Securities Lending Expense	6,434	7,355	13,790
TOTAL ADDITIONS	163,505,891	(37,231,869)	126,274,022
DEDUCTIONS			
ASSOCIATION BENEFITS		· .	
Retiree Annuity	2,992,088	3,038,393	6,030,481
Retiree Pension Retiree COLA	6,926,721 2,960,035	7,067,925 2,942,052	13,994,645 5,902,087
Retiree Death and Modified Work Benefit	2,886	2,886	5,772
Active Member Death Benefit	0	0	0
Voids and Reissue	00	13,051,256	25,932,985
REFUND OF MEMBER CONTRIBUTIONS	258,672	158,915	. 417,586
ACTUARIAL FEES	1,250	1,250	2,500
CONSULTANT FEES - INVESTMENT (SIS) CUSTODIAN FEES - STATE STREET	33,333 15,351	66,667 15,089	100,000 30,439
OTHER PROFESSIONAL FEES	7,500	7,500	15,000
INVESTMENT MANAGEMENT FEE - R1000 INDEX	10,262	9,947	20,209
INVESTMENT MANAGEMENT FEE - ABERDEEN	0	0	0
INVESTMENT MANAGEMENT FEE - PYRAMIS INVESTMENT MANAGEMENT FEE - ANGELO GORDON PPIP	19,455 0	19,348 0	38,803 0
INVESTMENT MANAGEMENT FEE - ANGELO GORDON STAR	0	0	0
INVESTMENT MANAGEMENT FEE - BROWN BROTHERS	9,764	9,605	19,369
INVESTMENT MANAGEMENT FEE - BRIGADE CAPITAL INVESTMENT MANAGEMENT FEE - FRANKLIN TEMPLETON	39,703	39,724	79,427
INVESTMENT MANAGEMENT FEE - FRANKLIN TEMPLETON	38,189 67,603	37,425 67,264	75,614 134,867
INVESTMENT MANAGEMENT FEE - D E SHAW	63,993	61,625	125,618
INVESTMENT MANAGEMENT FEE - T ROWE PRICE	0	0	0
INVESTMENT MANAGEMENT FEE - BLACKROCK INVESTMENT MANAGEMENT FEE - BARROW HANLEY	0 61,059	0 59,327	0 120,386
INVESTMENT MANAGEMENT FEE - THE BOSTON COMPANY	73,225	69,841	143,066
INVESTMENT MANAGEMENT FEE - BROWN ADVISORY	39,173	38,963	78,136
INVESTMENT MANAGEMENT FEE - JENNISON ASSOCIATES INVESTMENT MANAGEMENT FEE - MONDRIAN	0 33,532	0 29,008	0 62,540
INVESTMENT MANAGEMENT FEE - ARTIO	0	29,008	02,040
INVESTMENT MANAGEMENT FEE - PYRAMIS SELECT	42,745	41,625	84,370
INVESTMENT MANAGEMENT FEE - EATON VANCE	47,869	54,182	102,051
INVESTMENT MANAGEMENT FEE - BAILLIE GIFFORD INVESTMENT MANAGEMENT FEE - WESTERN ASSET	70,900 18,941	69,954 27,012	140,854 45,953
INVESTMENT MANAGEMENT FEE - INVESCO CORE	51,493	51,493	102,986
INVESTMENT MANAGEMENT FEE - SHERIDAN PRODUCTIONS	0	0	0
INVESTMENT MANAGEMENT FEE - ABRY ADVANCED INVESTMENT MANAGEMENT FEE - ABRY PARTNERS	108,477 0	0	108,477 0
INVESTMENT MANAGEMENT FEE - REGIMENT	0	0	0
INVESTMENT MANAGEMENT FEE - GENERAL CATALYST	0	61,880	61,880
INVESTMENT MANAGEMENT FEE - SYCAMORE PARTNERS	141,083	0	141,083
INVESTMENT MANAGEMENT FEE - SYCAMORE SIDECAR INVESTMENT MANAGEMENT FEE - WARBURG PINCUS	0	0	0
INVESTMENT MANAGEMENT FEE - AQR GLOBAL RISK PARITY	52,481	52,481	104,962
INVESTMENT MANAGEMENT FEE - AQR DELTA FUND	61,554	61,554	123,108
INVESTMENT MANAGEMENT FEE - SSGA MULTISOURCE _ TOTAL PROFESSIONAL FEE	<u>35,758</u> 1,144,692	22,284 975,048	58,043 2,119,740
ADMIN EXPENSE - SALARIES & BENEFITS ADMIN EXPENSE - SERVICES & SUPPLIES	213,550 144,343	259,567 118,085	473,117 262,428
TOTAL ADMINISTRATIVE EXPENSES	357,893	377,652	735,545
INTEREST FOR PREPAID CONTRIBUTION	0	0	0
OTHER DEDUCTIONS	(3,099)	13,577	10,478
TOTAL DEDUCTIONS	14,639,887	14,576,448	29,216,335
NET INCREASE	148,866,004	(51,808,317)	97,057,687
	140,000,004	(31,000,317)	37,100,1007

August 2013 Financials Prelim.xls

San Mateo County Employees' Retirement Association Statement of Fiduciary Net Assets - Monthly Comparative For the Month Ending August 31, 2013

	August 2013	July 2013	Increase/(Decrease)	% of Incr/Decr
ASSETS				
CASH AND CASH EQUIVALENTS CASH MANAGEMENT OVERLAY	59,920,691 6,962,547	80,177,329	(20,256,639)	-25.26%
SECURITIES LENDING CASH COLLATERAL	135,798,686	135,798,686	0	0.00%
TOTAL CASH	202,681,924	215,976,015	(20,256,639)	-9.38%
RECEIVABLES				
Contributions	0	0	0	N/A
Due from Broker for Investments Sold	147,394,285	146,583,555	810,730	0.55%
Investment Income	4,545,304	4,085,322	459,982	11.26%
Securities Lending Income	23,224	23,841	(618)	-2.59%
Other Receivable	113,712	113,712	0	0.00%
TOTAL ACCOUNTS RECEIVABLES	152,076,525	150,806,430	1,270,095	0.84%
PREPAID EXPENSE	7,669	7,669	0	0.00%
INVESTMENTS AT FAIR VALUE				
Domestic Fixed Income Securities	430,595,412	434,951,365	(4,355,954)	-1.00%
International Fixed Income Securities	109,508,715	109,772,510	(263,795)	-0.24%
Domestic Equities	1,137,286,265	1,171,371,557	(34,085,292)	-2.91%
International Equities	514,804,428	521,763,672	(6,959,244)	-1.33%
Real Estate	166,154,482	166,154,482	0	0.00%
Private Equity	89,306,594	89,321,953	(15,359)	-0.02%
Risk Parity	159,447,854	159,447,854	0	0.00%
Hedge Funds	83,922,532	83,922,532	. 0	0.00%
Commodities	78,030,158	75,376,436	2,653,722	3.52%
Held for Securities Lending	0	0	0	N/A
Other Investment	0	0	. 0	N/A
-	2,769,056,440	2,812,082,361	(43,025,922)	-1.53%
FIXED ASSETS	0	0	0	N/A
LESS ACCUMULATED DEPRECIATION	Ö	0	0	N/A
-	0	0	0	0.00%
TOTAL ASSETS	3,123,822,557	3,178,872,475	(62,012,465)	-1.95%
LIABILITIES				
Investment Management Fees	2,004,102	1,931,520	72,581	3.76%
Due to Broker for Investments Purchased	160,432,209	163,837,337	(3,405,128)	-2.08%
Collateral Payable for Securities Lending	135,798,686	135,798,686	. 0	0.00%
Other	704,541	613,596	90,945	14.82%
TOTAL LIABILITIES	298,939,538	302,181,139	(3,241,601)	-1.07%
NET ASSETS HELD IN TRUST FOR PENSION BENEFITS	2,824,883,019	2,876,691,336	(58,770,864)	-2.04%

9/24/2013

San Mateo County Employees' Retirement Association Statement of Changes in Fiduciary Net Assets - Monthly Comparative For the Month Ending August 31, 2013

	August 2013	July 2013	
ADDITIONS			
CONTRIBUTIONS Employer Contribution Employee Contribution TOTAL CONTRIBUTIONS	72,436,235 5,974,241 78,410,476	72,382,835 2,559,300 74,942,135	53,400 <u>3,414,941</u> 3,468,341
INVESTMENT INCOME Interest and Dividends Net Appreciation (Depreciation) in fair value of investments Less Investment Expense	5,656,574 42,416,728 (2,389,750)	2,491,294 86,287,252 (1,385,940)	3,165,280 (43,870,524) (1,003,810)
Less Asset Management Expense NET INVESTMENT INCOME	45,683,552	87,392,606	0 (41,709,054)
SECURITIES LENDING INCOME Earnings Less: Securities Lending Expenses NET SECURITIES LENDING INCOME	37,825 13,790 51,615	19,682 6,434 26,116	18,143 7,355 25,499
OTHER ADDITIONS TOTAL ADDITIONS	8,637 124,154,280	<u>342</u>	8,295 (38,206,920)
DEDUCTIONS			
ASSOCIATION BENEFITS Service Retirement Allowance Disability Retirement Allowance Survivor, Death and Other Benefits TOTAL ASSOCIATION BENEFITS	22,851,254 2,965,634 	11,412,336 1,411,345 <u>58,048</u> 12,881,729	11,438,918 1,554,289 58,048 13,051,256
REFUND OF MEMBER CONTRIBUTIONS ADMINISTRATIVE EXPENSE OTHER EXPENSE TOTAL DEDUCTIONS	417,586 735,545 <u>10,478</u> 27,096,595	258,672 357,894 (3,099) 13,495,196	158,915 377,652 13,577 13,601,399
NET INCREASE	97,057,685	148,866,004	(51,808,319)
Net Assets Held in Trust for Pension Benefits: Beginning of Period End of Period	2,876,691,336 2,824,883,019	2,727,825,332 2,876,691,336	

September 24, 2013

Agenda Item 7.2

TO: Board of Retirement

FROM: Mabel Wong, Finance Officer Maber Mark

SUBJECT: Report on Status of 2012-13 Annual Financial Audit

Staff Recommendation

Staff recommends that the board accept staff's oral report on any open items, potential findings and possible discussion items on the June 30, 2013 Financial Audit conducted by SamCERA's independent auditor, Brown Armstrong Accountancy Corporation.

September 18, 2013

Agenda Item 7.3

Board of Retirement
An Und
Scott Hood, Assistant Executive Officer

SUBJECT: Update on Information Technology Project Progress

Staff Recommendation

Staff recommends that the board accept staff's oral report on the status of current IT Projects.

Background

Will Morrow from LRWL will provide a status update on the IT Modernization Project including updates on the Electronic Content Management effort; Pension Administration Software System procurement; Data Cleansing; Investments Business Process Re-engineering; and Change Management.

September 24, 2013

Agenda Item 7.4

TO:	Board of Retirement
FROM:	Paul Hackleman, Chair, Succession Planning Committee David Bailey, Chief Executive Officer
SUBJECT:	Approval of General Plan for Succession Planning for the Chief Executive Officer Position

Recommendation

Staff recommends that the Board approve the general approach described below for the work of the Board and the Succession Planning Committee regarding the transition from the current SamCERA Chief Executive Officer to a successor CEO.

General Plan

The current SamCERA CEO plans to retire at the end of March 2015. This provides the Board approximately 18 months in which to plan the transition and conduct a candidate search and selection process.

At the August 2013 meeting, Natalie Kwan Lloyd, Board Chair, appointed the Succession Planning Committee to include:

0	Paul Hackleman, Chair	0	Ben Bowler
0	Michal Settles	0	Al David

We recommend that the process proceed with an initial meeting of the Succession Planning Committee to discuss the recruitment and various issues involved with it. Then the committee would return to the Board of Retirement at the October meeting with its recommendations.

Topics of discussion would include, but not be limited to:

- Overall goals of the recruitment.
- \circ $\,$ The role of the committee, the Board and a recruitment consultant.
- The roles, if any, of SamCERA stakeholders.
- The responsibilities and services expected from a recruitment consultant.
- Whether the consultant should be the County's Human Resources Department or a private sector executive recruiting firm.
- The breadth of the recruitment (local, California, national, global?)

September 24, 2013

Agenda Item 7.5

TO: Board of Retirement

FROM: David Bailey, Chief Executive Officer

SUBJECT: Approval of SACRS Voting Delegate and Alternates for the SACRS Fall 2013 Business Meeting

Staff Recommendation

Staff recommends the Board designate **Natalie Kwan Lloyd**, Chair, as the Voting Delegate, **Lauryn Agnew**, Vice Chair as the First Delegate Alternate, and **David Bailey**, CEO, as the Second Delegate Alternate to cast SamCERA's votes at the SACRS Fall 2013 Conference.

Summary

Prior to each SACRS conference the retirement boards are asked to select the individuals from each county system who are authorized to serve as voting delegates and alternate voting delegates at the conference business meeting.

Background

SamCERA normally selects the highest-ranking board officer who will attend the conference as the voting delegate. Delegates can be either trustees or staff. For this SACRS conference, Board Chair Natalie Kwan Lloyd will be the highest-ranking board officer in attendance. As Vice Chair, Lauryn Agnew is next. We typically recommend the CEO be the final alternate.

The business meeting will occur on the last morning of the conference, at 10:00 a.m., Friday, November 15, 2013.

September 24, 2013

Agenda Item 7.6

TO: Board of Retirement

FROM: David Bailey, Chief Executive Officer

SUBJECT: Approval to Cancel the November Meeting and Reschedule the October and December Meetings of the Board of Retirement

Staff Recommendation

Staff recommends that the Board:

- reschedule the October 22, 2013, meeting of the Board of Retirement to a new date of October 29, 2013;
- cancel the November 26, 2013, meeting of the Board of Retirement;
- reschedule the December 24, 2012, meeting of the Board of Retirement to a new date of December 10, 2013;
- direct the Chief Executive Officer to make all appropriate communications to notify the public and all interested parties of these changes.

Background

The Board of Retirement's regular meetings are scheduled on the fourth Tuesday of each month. This year the regular October, November and December meetings conflict with other events. In October the meeting conflicts with the IFEBP annual conference, which some trustees regularly attend and are planning to attend this year. The two-week period prior to the November meeting, which is normally focused on preparing the board packets, conflicts with the fall SACRS conference. And the date of the November meeting itself is the same week as Thanksgiving. Some staff and board members normally take time off during that week. The December meeting has a similar conflict. This year the regular meeting would fall on the day after Christmas.

Because of these conflicts, the staff recommends cancelation of the November meeting and rescheduling of the October and December meetings. Staff polled the board members regarding their availability for meeting dates in October and December. The dates that were free for most board members were October 29 (8 available) and December 10 (8 available). Accordingly, those are the recommended meeting days for those months.

The Board has the authority to schedule meetings other than on its normal meeting day and time. Per the Regulations of the Board of Retirement:

2.4 Regular Meetings: ... The Board may cancel and or approve a change in the date, time and/or location of meetings within the County, if the proposed change is included on the agenda of a regular meeting.