ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM

BOARD OF RETIREMENT
2223 WELLINGTON AVENUE, SUITE 100
SANTA ANA, CA 92701

AUDIT COMMITTEE MEETING
January 30, 2018
1:30 p.m.

AGENDA

This agenda contains a brief general description of each item to be considered. Except as otherwise provided by law, no action shall be taken on any item not appearing in the following agenda.

A. ACTUARIAL AUDIT OF OCERS' 2016 ACTUARIAL VALUATION
Presentation by Graham Schmidt and Anne Harper of Cheiron

Recommendation: Receive and file.

B. AUDIT OF OCERS' INVESTMENT REBALANCING REPORTING
Presentation by Mark Adviento, Internal Auditor

Recommendation: Receive and file.

C. STATUS OF 2017 INTERNAL AUDIT PLAN
Presentation by Mark Adviento, Internal Auditor

Recommendation: Receive and file.

D. STATUS OF 2018 INTERNAL AUDIT PLAN
Presentation by Mark Adviento, Internal Auditor

Recommendation: Receive and file.

*** * * * * * * END OF INDIVIDUAL ITEMS AGENDA * * * * * ***

CLOSED SESSION ITEM

E. THREAT TO PUBLIC SERVICES OR FACILITIES
(GOVERNMENT CODE SECTION 54957)
Adjourn pursuant to Government Code section 54957 to consult with *Steve Delaney, CEO, Brenda Shott, Asst. CEO; Jenny Sadoski, Director of Information Technology; Jon Gossard, Security Operations Manager; Cynthia Hockless, Director of Administrative Services, and Gina M. Ratto, Chief Legal Officer*

Recommendation: Take appropriate action.

*** * * * * * * END OF CLOSED SESSION ITEMS AGENDA * * * * * ***

PUBLIC COMMENTS: The public, plan members, beneficiaries, and/or representatives may speak to any subject matter contained in the agenda *either* at the time the item is addressed *or* at this time, provided that no action may be taken on any item not appearing on this agenda unless authorized by law. Persons who want to address items on the agenda should provide written notice to the Secretary of the Committee prior to the Committee's discussion on the item by filling out the Public Comment Form located in the back of the room. When addressing the Committee, please state your name for the record prior to providing your comments. Speakers will be limited to three minutes.

COMMITTEE MEMBER COMMENTS

CHIEF EXECUTIVE OFFICER/STAFF COMMENTS

ADJOURNMENT

NOTICE OF NEXT MEETINGS

REGULAR BOARD MEETING
February 13, 2018
9:00 A.M.

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM
2223 E. WELLINGTON AVENUE, SUITE 100
SANTA ANA, CA 92701

INVESTMENT COMMITTEE MEETING
February 20, 2018
9:00 A.M.

ORANGE COUNTY EMPLOYEES RETIREMENT SYSTEM
2223 E. WELLINGTON AVENUE, SUITE 100
SANTA ANA, CA 92701

All supporting documentation is available for public review in the retirement office during regular business hours, 8:00 a.m. – 5:00 p.m., Monday through Thursday and 8:00 a.m. – 4:30 p.m. on Friday.

It is OCERS' intention to comply with the Americans with Disabilities Act ("ADA") in all respects. If, as an attendee or participant at this meeting, you will need any special assistance beyond that normally provided, OCERS will attempt to accommodate your needs in a reasonable manner. Please contact OCERS via email at adminsupport@ocers.org or by calling 714-558-6200 as soon as possible prior to the meeting to tell us about your needs and to determine if accommodation is feasible. We would appreciate at least 48 hours' notice, if possible. Please also advise us if you plan to attend meetings on a regular basis.

A

ORANGE COUNTY OCERS EMPLOYEES RETIREMENT SYSTEM

Memorandum

DATE: January 24, 2018

TO: Members of the Audit Committee

FROM: Mark Adviento, Internal Auditor

SUBJECT: **ACTUARIAL AUDIT OF OCERS' 2016 ACTUARIAL VALUATION**

Recommendation

Receive and file.

Background/Discussion

Cheiron has issued its audit report of the December 31, 2016 actuarial valuation performed by Segal Consulting for OCERS. The report also includes the results of Cheiron's peer review of Segal Consulting's most recent Actuarial Experience Study (for the three years ending December 31, 2016).

The audit is part of OCERS' regular cycle of performing audits of its consulting actuary every five years.

As excerpted from page 1 of Cheiron's audit report (attached):

> The main findings of our review are as follows:
>
> 1. As a result of our efforts, we are able to confirm that the liabilities and costs computed in the valuation as of December 31, 2016 are reasonably accurate and were computed in accordance with generally accepted actuarial principles.
>
> 2. We have reviewed the economic and demographic assumptions recommended in the most recent Actuarial Experience Study presented by Segal. In general, we have found them to be reasonable and in accordance with generally accepted actuarial principles. However, we recommend that Segal review the recommendations in two areas – rates of retirement and mortality – and determine whether additional analysis is merited.

For item #2 above, further detail regarding Cheiron's recommendations related to rates of retirement and mortality can also be found on page 1 of the attached report.

As a reminder, the last actuarial audit report was received and filed by the Audit Committee in December 2012 with direction to staff to review the audit report findings with Segal Consulting. In the April 2013 Audit Committee meeting, Segal Consulting presented its responses to the audit report findings.

Memorandum

Submitted by:

M.A - Approved

Mark Adviento
Internal Auditor

Classic Values, Innovative Advice

Orange County Employees Retirement System

Actuarial Review of December 31, 2016 Actuarial Valuation and Actuarial Experience Study

Produced by Cheiron

January 2018

www.cheiron.us 1.877.CHEIRON (243.4766)

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Via Electronic Mail

January 24, 2018

Board of Trustees
Orange County Employees Retirement System
2223 Wellington Avenue
Santa Anna, CA 92701

Members of the Board:

Cheiron is pleased to present the results of our actuarial audit of the December 31, 2016 actuarial valuation of the Orange County Employees Retirement System (OCERS) and peer review of the Actuarial Experience Study covering the period from January 1, 2014 to December 31, 2016, performed by Segal Consulting (Segal). We would like to thank Segal for providing us with information and explanations that facilitated the actuarial audit process and ensured that our findings are accurate and benefit OCERS.

We direct your attention to the executive summary section of our report which highlights the key findings of our review. The balance of the report provides details in support of these findings along with supplemental data, background information, and discussion of the process used in the evaluation of the work performed by Segal.

In preparing our report, we relied on information (some oral and some written) supplied by OCERS and Segal. This information includes, but is not limited to, actuarial assumptions and methods adopted by OCERS, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness in accordance with Actuarial Standard of Practice No. 23. A detailed description of all information provided for this review is provided in the body of our report.

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

Board of Trustees
Orange County Employees Retirement System
January 24, 2018

This report was prepared exclusively for the Orange County Employees Retirement System for the purpose described herein. This report is not intended to benefit any third party, and Cheiron assumes no duty or liability to any such party.

Sincerely,
Cheiron

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

Anne Harper, FSA, MAAA, EA
Consulting Actuary

SECTION I – EXECUTIVE SUMMARY

Key Findings and Recommendations

The main findings of our review are as follows:

1. As a result of our efforts, we are able to confirm that the liabilities and costs computed in the valuation as of December 31, 2016 are reasonably accurate and were computed in accordance with generally accepted actuarial principles.

2. We have reviewed the economic and demographic assumptions recommended in the most recent Actuarial Experience Study presented by Segal. In general, we have found them to be reasonable and in accordance with generally accepted actuarial principles. However, we recommend that Segal review the recommendations in two areas – rates of retirement and mortality – and determine whether additional analysis is merited.

Our primary recommendations are related to the assumptions, and are summarized as follows:

- Cheiron determined the non-economic actuarial assumptions proposed in Segal's Experience Study to be generally reasonable and in compliance with acceptable standards of actuarial practice. In particular, we support their recommendation of a change to use generational mortality assumptions. However, as noted above, we believe Segal should review the methodology used to analyze the mortality and retirement assumptions:

  - In addition to examining the mortality experience based on the number of members who lived and died, we recommend analyzing the experience by the *benefit amounts*. Actuaries - ourselves included - have found that members with higher benefit amounts tend to live longer, on average. As a result, mortality assumptions based only on the number of deaths potentially understate OCERS liabilities.

  - As a related issue, since Segal recommends the use of base mortality tables derived from the most recent Society of Actuaries pension study (the RP-2014 Mortality Tables Report), we recommend they consider the use of the standard (benefit-weighted) RP-2014 tables, rather than the RP-2014 Headcount-Weighted versions.

  - We recommend that Segal consider how much credibility to assign to the mortality experience of the last nine years in developing proposed adjustments to the standard base tables, in particular for Safety service-retired members.

  - We recommend that Segal review the service retirement rates by both the age **and** service of the members in relation to the probability of leaving employment. The last experience study only showed the analysis using age-related rates. Based on our review of additional data provided by Segal, the number of years of service a member has earned affects the probabilities of retirement, which is consistent with our experience at other systems.

- Overall, the economic assumptions proposed in Segal's review represent a reasonable set of assumptions. However, we recommend that Segal clarify the meaning of their "risk adjustment" in developing the investment return assumption. The table in the report showing the "confidence level" over 15 years may be misleading because it overstates the probability of achieving the return on a compound basis.

Scope of Assignment

Cheiron performed a complete independent replication of OCERS December 31, 2016 actuarial valuation and reviewed the actuarial methods underlying that valuation. We reviewed the census data provided by OCERS staff, and compared it to the information used by Segal in their valuation. We then performed a full parallel valuation, including the calculation of the projected benefits, accrued liability, and normal cost for all OCERS members, and compared the results to those shown in Segal's actuarial valuation report.

Additionally, Cheiron performed a review of the assumptions recommended by Segal for the December 31, 2017 valuation, as reflected in the actuarial experience study covering the period from January 1, 2014 through December 31, 2016. This review did not constitute a full replication of the experience study; it was focused on a review of the recommendations and communications from Segal, based on the information provided within the study and on additional data provided by Segal based on follow-up requests.

This audit provides OCERS confirmation that:

- The results reported by Segal can be relied upon,
- Segal's actuarial valuation report, assumptions, and methods comply with Actuarial Standards of Practice (ASOPs),
- The communication of the actuarial valuation results is complete and reasonable, and
- The Board and Segal have considered recommendations and communications that may improve the valuation and experience study.

In a few areas, alternative assumptions should be considered based on review of trends that would be effective in anticipating future experience and could have a material impact on the liabilities and cost of the Plan going forward.

SECTION II – SUMMARY OF REVIEW AND RECOMMENDATIONS

This section summarizes our review of the actuarial valuation and experience study and our recommendations.

Valuation Procedures

Overall, we find that the December 31, 2016 actuarial valuation procedures applied in the reporting of the funded status and the determination of the funding requirements based on the current funding policies and adopted assumptions are technically reasonable and conform to the ASOPs. This is based on our review of: the valuation report, the census data used in the valuation and our parallel valuation using the information described above.

Valuation Results

Our independent replication of the December 31, 2016 actuarial valuation found no material difference in calculations of plan liabilities, actuarial value of assets, and overall contribution rates from the amounts calculated by Segal based on the adopted assumptions and methods. For the scope of this audit, materiality means the results in the aggregate were within industry standards of plus or minus 5%. Consequently, we conclude that the valuation prepared by Segal for OCERS as of December 31, 2016 is reasonable and can be relied on by the Board for its intended purpose. Our replication of the measures of plan liabilities and costs is summarized in Table II-1 below.

Table II-1
Summary of Valuation Results as of December 31, 2016
($ in millions)

	Segal	Cheiron	Ratio
Actuarial Accrued Liability	$ 17,933	$ 17,819	99.4%
Actuarial Value of Assets	13,103	13,103	100.0%
Unfunded Actuarial Accrued Liability (UAAL)	$ 4,830	$ 4,716	97.6%
Funded Percentage	73.1%	73.5%	100.6%
Contribution Rate by Component			
Employer Normal Cost Rate	14.61%	14.51%	99.3%
UAAL Rate	21.95%	21.43%	97.6%
Total Employer Contribution	36.56%	35.94%	98.3%

SECTION II – SUMMARY OF REVIEW AND RECOMMENDATIONS

We note that all results are within 5% of Segal's calculation.

Our replication of the actuarial accrued liability by Rate Group is shown below in Table II-2. We note that the liabilities by Rate Group are all within the 5% threshold.

Table II-2
Actuarial Accrued Liability by Rate Group

	Segal	Cheiron	Ratio
General Members			
Rate Group #1	$ 437.5	$ 431.7	98.7%
Rate Group #2	10,021.6	9,933.6	99.1%
Rate Group #3	606.8	602.9	99.4%
Rate Group #5	840.7	823.7	98.0%
Rate Group #9	39.7	39.7	99.9%
Rate Group #10	207.6	207.0	99.7%
Rate Group #11	8.6	8.5	99.4%
Rate Group #12	9.2	9.1	98.9%
Safety Members			
Rate Group #6	$ 732.8	$ 737.3	100.6%
Rate Group #7	3,514.5	3,507.4	99.8%
Rate Group #8	1,514.4	1,518.3	100.3%
Combined	$17,933.4	$17,819.3	99.4%

Our replication of the employer contribution rates by Rate Group is shown below in Table II-3. We note that the employer rates by Rate Group are all within the 5% threshold.

SECTION II – SUMMARY OF REVIEW AND RECOMMENDATIONS

Table II-3
Comparison of Employer Contribution Rates

	Segal	Cheiron	Ratio
General Members			
Rate Group #1	16.37%	16.48%	100.6%
Rate Group #2	33.66%	33.58%	99.7%
Rate Group #3	11.61%	11.30%	97.4%
Rate Group #5	25.48%	24.51%	96.2%
Rate Group #9	23.82%	23.25%	97.6%
Rate Group #10	30.54%	30.45%	99.7%
Rate Group #11	10.88%	10.59%	97.3%
Rate Group #12	22.74%	23.11%	101.6%
Safety Members			
Rate Group #6	47.79%	46.27%	96.8%
Rate Group #7	62.81%	61.43%	97.8%
Rate Group #8	47.81%	45.79%	95.8%
Combined	36.56%	35.94%	98.3%

In determining the unfunded actuarial liability, Segal relies on reserve balances provided by OCERS, as well as information related to the liabilities associated with the withdrawal calculations for individual employers provided outside of the actuarial valuation report. Our review did not include an audit of these additional sources of information.

Employee Contribution Rates

As part of the audit, we replicated the calculations of the individual employee contribution rates based on the applicable provisions of the County Employees Retirement Law (the CERL) and our understanding of additional cost-sharing as described in the valuation report. For the Non-PEPRA (Legacy) tiers, we understand the employee contribution rates to be made up of the following components:

- A Basic rate providing for an annuity equal to
    - 1/200th (Plan A) One Year Final Average Compensation at a retirement age of 60, or
    - 1/120th (Plan B) Three Year Final Average Compensation at a retirement age of 60, or

SECTION II – SUMMARY OF REVIEW AND RECOMMENDATIONS

- 1/100th (Plans G, H, I and J) Three Year (One Year Plans G & I) Final Average Compensation at a retirement age of 55, or
- 1/120th (Plans M, N, O and P) Three Year (One Year Plans M & O) Final Average Compensation at a retirement age of 60, or
- 1/100th (Plan S) Three Year Final Average Compensation at a retirement age of 60, or
- 1/200th (Plans E and Q) One Year Final Average Compensation at a retirement age of 50, or
- 1/100th (Plans F and R) Three Year Final Average Compensation at a retirement age of 60.
- A COLA rate providing for one-half of the cost of the COLA.

Non-PEPRA Safety members with 30 or more years of service (and General members hired on or before March 7, 1973) are exempt from paying member contributions.

We have verified the calculations of the individual employee contribution rates based on the applicable provisions of the CERL and generally have found these rates to be correct. Our Basic (non-COLA) rates were within 0.01% of Segal's rates for all Legacy tiers. We checked the COLA loading factors for all Legacy Tiers and they were within 5% for all Tiers except where there are historical cost-sharing mechanisms in place.

For the PEPRA members, the employee contribution rates were calculated following the proposed methodology outlined in Segal's December 4, 2012 letter. The total member rates computed for the new CalPEPRA tiers are designed to provide for 50% of the total normal cost rate within each Rate Group. We checked that the total member rates determined by Segal meet this requirement and all but two Rate Groups where only a handful of members fall outside of the 5% margin. We do not believe this represents a significant discrepancy.

The Segal methodology is commonly used by '37 Act systems (determining Basic rates and then applying a COLA load based on each years' valuation results) and appears to meet the requirement that "*Any increases in contribution shall be shared equally between the county or district and the contributing members*" (CERL 31873). However, we have previously shared with Segal's consultants an alternative methodology for determining employee COLA contribution rates, which involves calculating a distinct COLA rate for each individual entry-age, rather than applying a certain percentage load to the Basic rates. This methodology has the advantage of avoiding annual changes to the COLA contribution rates; the COLA rates will only change if there is a modification to the benefit provisions or actuarial assumptions.

Census Data

Both the OCERS Staff and Segal provided us with the data that was used in the December 31, 2016 actuarial valuations. We reviewed the information in both files, and reviewed the data questions provided to OCERS by Segal and the OCERS responses.

We find that the data used in the valuation is valid, complete and contains the necessary data elements for purposes of performing the actuarial valuation of OCERS. In Table II-4 on the next page we include an exhibit comparing the processed December 31, 2016 data file - as modified appropriately based on the OCERS responses to Segal's questions, as noted in Segal's report and in follow-up communications for issues such as annualization of pay - to the raw data provided by OCERS to Segal and found only very minor differences between the two files. We understand that any discrepancies between these files are the result of the correspondence between Segal and OCERS described in the data questions and answers of which we were provided copies. Note that the average compensation shown for Segal is prior to any projection to 2017 and for Cheiron represents the full time equivalent pay provided by OCERS. We also find that the methods and requirements provided in the Actuarial Standard of Practice No. 23 *Data Quality* have been adhered to, to the extent applicable for the valuation of pension plan obligations.

SECTION II – SUMMARY OF REVIEW AND RECOMMENDATIONS

Table II-4
Summary of Member Statistics as of December 31, 2016

	Segal Processed Data	Cheiron Raw Data	Ratio
Active Members			
Total Number	21,746	21,828	100.4%
Average Age	45.4	45.4	100.0%
Average Service	12.9	12.9	100.0%
Average Compensation	$ 76,431	$ 76,019	99.5%
Vested Terminated Members			
Total Number	5,370	5,292	98.5%
Average Age	44.8	44.9	100.2%
Service Retirees			
Total Number	12,767	12,807	100.3%
Average Age	69.7	69.7	100.0%
Average Monthly Benefit	$ 3,946	$ 3,935	99.7%
Disabled Retirees			
Total Number	1,419	1,418	99.9%
Average Age	65.0	65.0	100.0%
Average Monthly Benefit	$ 3,458	$ 3,466	100.2%
Beneficiaries			
Total Number	2,183	2,183	100.0%
Average Age	72.8	72.8	100.0%
Average Monthly Benefit	$ 1,945	$ 1,956	100.6%

In reviewing the data processes employed in the valuation, we recommend the following improvements to enhance the valuation process:

a) Cheiron supports Segal's request to have all terminated members reported. Unreported members could affect experience study results if the decrement status is not valued correctly.

b) Cheiron recommends that the COLA amounts, STAR and regular, be reported separately since the STAR COLA may be handled separate from the pension valuation.
c) When computing full-time equivalent pay adjustments, Cheiron recommends reviewing members with large changes. Segal included members with changes greater than 20% in the data questions and asked OCERS to review a sample. OCERS' sample did not include the member with the largest change. We suggest that Segal request that OCERS look at the 10 (or some other figure) largest changes and a sample set of any remaining changes.
d) There are a large number of survivors with an unknown gender. Although assumptions can be made, Cheiron suggests updating the data with gender, if possible.
e) There are a number of retirees with Joint & Survivor elections and no beneficiary date of birth reported. We recommend updating this information, if possible, as the correct information could affect the type of benefit valued (life annuity vs. Joint & Survivor). If updated information is not available, the continued use of assumptions is acceptable.

Plan Provisions

We compared the summary of plan provisions shown in Section 4, Exhibit IV of Segal's December 31, 2016 valuation report to the benefits as summarized in the member handbooks shown on the OCERS website. In general, the plan provisions shown in the exhibit match what is in the handbooks, and based on our close match of the Segal liabilities as part of our parallel valuation, we conclude that Segal has appropriately reflected these provisions in the actuarial valuation.

Actuarial Assumptions

The December 31, 2016 actuarial valuation were based on the assumptions ultimately adopted by the OCERS Board, based on recommendations made by Segal in the Actuarial Experience Study covering the three-year period ending December 31, 2013. Normally, our review of the valuation report would include a review of the assumptions used in that report. However, since the December 31, 2016 actuarial valuation was issued, Segal has made recommendations to modify a number of these assumptions as part of the Actuarial Experience Study covering the three-year period ending December 31, 2016, to be used in the December 31, 2017 actuarial valuation. As part of our actuarial audit review, we have performed a peer review of this study and have the following comments and recommendations:

<u>Mortality</u>

Segal recommended that OCERS adopt a new approach for developing mortality assumptions based on the generational projection of mortality improvements. Segal suggested the following steps, which are consistent with those used by other actuaries:

1. Select a standard mortality table based on experience most closely matching the anticipated experience of the System.

SECTION II – SUMMARY OF REVIEW AND RECOMMENDATIONS

2. Compare the actual experience of the System to that predicted by the selected standard table for the period of the experience study.
3. Adjust the standard table, either fully or partially, depending on the level of credibility for the System's experience. This adjusted table is called the base table.
4. Select an appropriate standard mortality improvement projection scale and apply it to the base table.

We strongly support the recommended change to the generational mortality approach. However, we have issues with the application of steps #1-3 in Segal's experience study.

Benefit vs. Headcount-Weighted

Our issues with steps #1 and #2 are related, and have to do with the fact that mortality studies in the U.S. have consistently shown that higher income individuals have longer life expectancies than lower income individuals. Because higher income individuals also typically have higher pension benefit amounts, it is important for a pension plan to use assumptions that are weighted to reflect the impact on liability. Otherwise, the mortality assumptions could accurately predict the number of deaths at each age, but still underestimate the liabilities, if the higher-benefit members are outliving the lower-benefit members.

Segal briefly mentioned the benefit-weighted approach in their experience study report, but then stated that the "head-count basis is the more common practice currently and is the approach used by Segal in the past for its California public system clients (including OCERS) and by other public sector actuaries in California." Segal included no other justification in their report for using the Headcount-Weighted RP-2014 Tables as the standard mortality table upon which to base their recommendations (step #1 above), as opposed to the standard RP-2014 Tables, which are benefit-weighted.

However, the report published by the Retirement Plans Experience Committee (RPEC) that accompanied the release of the RP-2014 tables clearly states, "*For the measurement of most pension obligations, tables weighted by benefit amount generally produce the most appropriate results.*" The report also describes a number of applications in which headcount-weighted tables may produce more accurate results, including estimates of average age at death, projections of retirement populations, and the measurement of OPEB plan obligations; the list of exceptions did not include the measurement of liabilities in traditional pay-related defined benefit plans.

One reason that RPEC recommends the use of the benefit-weighted tables for pension applications is that the behavior of the two tables are quite different: the mortality rates for the headcount-weighted tables are considerably higher at earlier ages, but gradually converge with the benefit-weighted rates at the highest ages. Using a headcount-weighted table will tend to overstate mortality rates in the early years of retirement, and understate it in later years, assuming the overall actual-to-expected ratio is close to 100% based on the number of deaths. Unless Segal has sufficient evidence to indicate that the pattern of mortality for OCERS looks closer to the headcount-weighted tables (measured on a liability-weighted basis), we believe the default should be to use a benefit-weighted table when a choice between such tables is available.

In addition to selecting the headcount-weighted RP-2014 tables as the standard table, Segal only reviewed the OCERS actual mortality experience on a headcount basis (step #2). We at Cheiron have made it a standard practice to at least review the mortality experience by both benefit amount and headcount in our studies for SACRS systems, and it is our understanding that the other actuarial consulting firm providing actuarial valuation services to non-Segal clients in the '37 Act systems (Milliman) has also been reviewing the experience on both bases in their recent experience studies.

In our experience with most (but not all) of the SACRS plans and other public plans we work with in California, we have found a significant difference in the actual-to-expected ratios calculated on a headcount-weighted basis compared to a benefits-weighted basis, though the amount of the difference does vary between plans and employee populations. We note that in the experience study that Milliman recently completed for the Oregon Public Employee Retirement System (http://www.oregon.gov/pers/Documents/2016-Exp-Study.pdf), the difference between the benefit- and headcount-weighted actual-to-expected ratios averaged about 10% for both males/females and Miscellaneous/Safety members, which is consistent with the level we have found in some systems and represents a material difference.

Credibility

Very few pension plans have sufficient experience to develop their own mortality tables. Most plans instead adjust a standard table (step #3). However, with approximately 1000 deaths necessary for full credibility (defined by a 90% probability that the observed rate is within 5% of the true rate) and actual mortality rates quite low at most ages, many plans lack sufficient data to perform even a full adjustment to a standard table (i.e. adjust the tables so the actual-to-expected ratio based on the plan's data is close or equal to 100%).

Segal's experience study report includes a table (page 41) that indicates the number of deaths included in the nine-year extended study period. The number of actual General member deaths is well over 1000, so it is reasonable to consider this experience fully credible and appropriate to propose an adjustment to the standard tables that results in an active-to-expected ratio close to 100%. However, the amount of Safety mortality experience is much smaller, with only 137 deaths reported over the nine-year period. This amount of data should not be considered to be fully credible, and caution should be used in applying significant adjustments to the standard tables, which Segal has done in their recommendation to apply a four-year setback to the ages for Safety members.

In particular, caution should be used when the proposed assumptions represent an unusual difference in assumptions from other groups. In this case, Segal has proposed mortality assumptions for the OCERS Safety members that are significantly more conservative (i.e. expecting longer lifespans, for members of the same gender) than those for the General members.

SECTION II – SUMMARY OF REVIEW AND RECOMMENDATIONS

Historically, public pension plans have generally assumed shorter lifespans for Safety members, and though that practice has been changing recently in some places, we have not seen a significant amount of experience that demonstrates the tables have completely turned. For example, in the Oregon PERS study referenced above, Milliman indicated that there was still a margin of somewhere between 5-9% between the actual-to-expected ratios for the Miscellaneous and Safety male experience, with the Safety members continuing to exhibit higher rates of mortality.

Similarly, we question whether an 80% adjustment to the Headcount-Weighted RP-2014 Employee table is appropriate for the active members. The Segal report does not include any information related to the number of active deaths, but we feel comfortable in assuming it was well under 1000 during the study period. Finally, we recommend that Segal consider whether the RP-2014 Disabled Mortality tables are more appropriate than the significantly-adjusted Headcount-Weighted RP-2014 Healthy Annuity Table recommended in the report, based on the limited amount of disability mortality experience.

Optional Forms

Segal stated in their report that an emerging practice in the development of age-based member contribution rates, optional forms of payment and reserves is to "approximate the use of a generational mortality table by the use of a static table with projection of the mortality improvement over a period that is close to the duration of the benefit payments for active members."

While we agree with this practice – and have suggested it to our own clients – for the determination of the member contribution rates, we have concerns over the use of this approach for determining the optional forms of payment and reserves. The use of a static projection period equal to that of the duration of payments for the average active member is expected to result in a projection well beyond that of a member *expected to retire in the next three years* (or the period of time we expect these factors to be applicable).

For our clients, we generally recommend the use of factors using the full generationally-projected mortality tables, based on those computed for a member expected to retire at the mid-point of the time period to which the factors are expected to be used. Alternatively, if there are significant operational advantages to using a static table, we recommend Segal calculate the expected duration for a member expected to retire in the next few years, rather than using the duration for the overall active population.

In summary for the mortality assumption, we recommend that Segal:

- Reconsider whether the RP-2014 Headcount-Weighted tables are the most appropriate to use as the basis of the OCERS-specific assumptions,
- Review whether an analysis of the OCERS actual experience on a benefit-weighted basis would have an impact on their recommended assumptions, and

SECTION II – SUMMARY OF REVIEW AND RECOMMENDATIONS

- Review whether the level of credibility assigned to the actual mortality experience of the subpopulations of OCERS - in particular the populations of Safety service retirees, and all disabled and active members – is appropriate, given the numbers of exposures and deaths in these populations, as well as prior behavioral differences.
- Review the duration used in the static projection of mortality for the optional forms of benefits and reserves.

We note that the mortality assumptions are of particular importance in the measurement of Plan liabilities, since they are used to determine both the member and employer rates, for both Legacy and PEPRA members. In our experience, it is likely that the use of a benefit-weighted derived mortality table and/or analyzing the mortality experience on a benefit-weighted basis will increase the Plan's liabilities and as a result increase the Plan costs, if the pattern of OCERS mortality experience is similar to that of other plans.

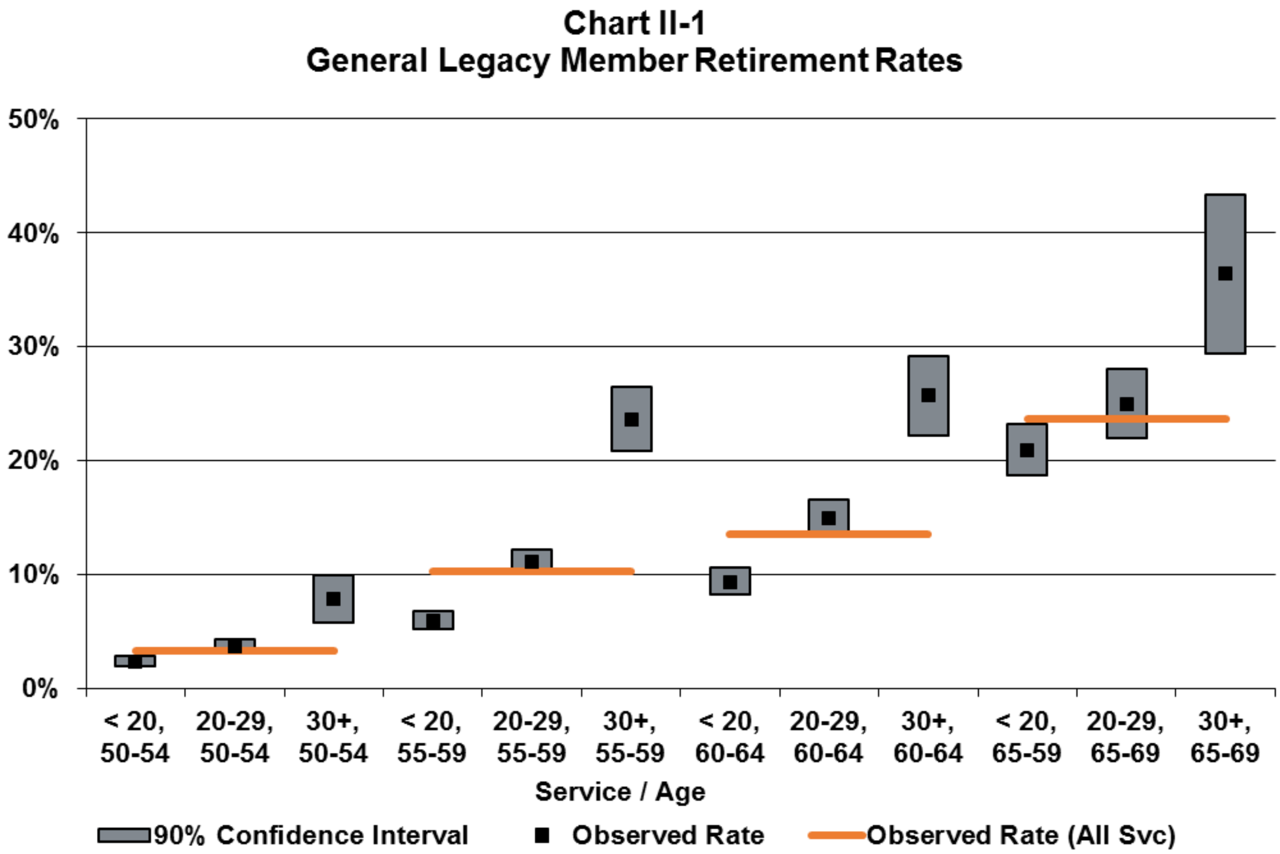
Retirement

Segal proposed rates that vary by age and Tier. We focused our analysis on Segal's recommendations related to the General and Safety Legacy members (excluding those covered under formulas 31676.12 and 31664.2), because those were the groups with the most observed experience.

The rates recommended by Segal appear reasonable based on the experience presented in their report, if the comparison of the actual and expected number of retirements *looks only at the member's age at retirement*. However, the appropriateness of the assumptions appears quite different when reviewing the experience by looking at both the age and service of the members in relation to the probability of retirement.

We requested – and Segal provided – a summary of the service retirement decrements and exposures by five-year age *and* service bands. In Chart II-1 below, we summarize this information for the General Legacy members (excluding those in Plan S), based on grouping the experience into separate categories for those with less than 20 years of service, between 20 and 30 years of service, or greater than 30 years of service. The black squares represent the actual percentage of members within each age and service band who retired during the study period. The orange lines represent the actual percentage of members within each age band (across all service levels) who retired during the study period; equivalent to the approach Segal has taken in developing their rates. The gray bars represent the 90% confidence interval for the decrement rate (i.e. there is a 90% likelihood that the underlying rate lies within the band).

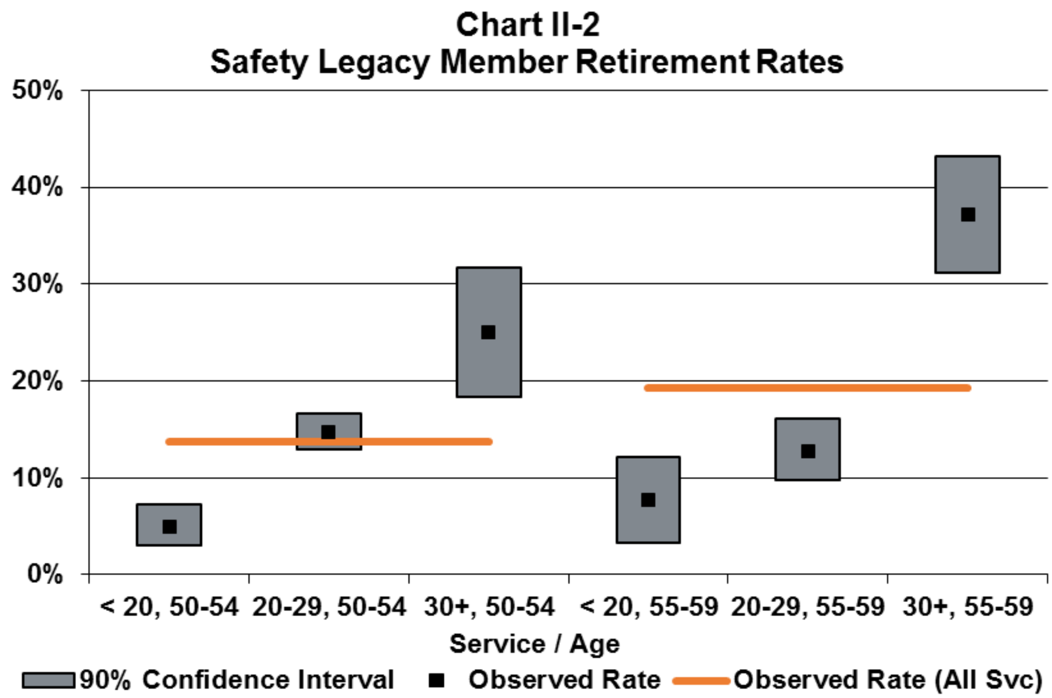
SECTION II – SUMMARY OF REVIEW AND RECOMMENDATIONS



As seen in this graph, a large difference exists between both the observed rates and the 90% confidence intervals at the selected service levels. This discrepancy in the rates matters, because all other things being equal, the liabilities will be more heavily weighted towards those with higher levels of service (and thus higher benefits). If the retirement rates accurately predict the number of retirements by age, but overestimate the number of retirements for those with low levels of service and underestimate the number of retirements for those with high levels of service, it is likely that the assumptions will underestimate – potentially significantly – the future liabilities and costs of the Plan.

In the following graph, we show a similar breakdown in the Safety Legacy member (excluding those in Plan R) retirement experience, for those between the ages of 50 and 59 (the patterns are less dramatic after age 60).

SECTION II – SUMMARY OF REVIEW AND RECOMMENDATIONS



These differences in behavior make sense on an intuitive level as it is reasonable to assume that, for two members of the same age, the one with the higher level of service will be more likely to retire, if for no other reason than the higher-service member is more likely to have achieved their desired level of post-retirement replacement income.

In their report, Segal discussed the use of retirement assumptions based on age and service. They concluded that they did not have enough reliable experience to develop credible assumptions by age and service. However, they did not provide any explanation or supporting information to support their claim that there is not enough "reliable experience to make credible recommended retirement assumptions". We strongly disagree with this conclusion; the information presented in the graphs shown above clearly indicate that the OCERS retirement experience can be used to conclude with a high degree of confidence that assumptions based only on age are inadequate for appropriately anticipating member behavior.

While it is true that the amount of experience may make it difficult to generate reliable assumptions at *each* age and service combination, it is certainly possible to develop reasonable assumptions that distinguish between higher and lower service levels. Segal has used this approach themselves for other clients: for the University of California Retirement System Staff members, they have recommended that their base retirement rates be multiplied by 70% for those with less than 10 years of service and by 160% for those with more than 20 years of service. A similar adjustment could certainly be developed for OCERS, especially given that the level of experience necessary to develop credible retirement assumptions is much less than that needed to develop fully-credible mortality assumptions (since the frequency of retirement is much higher than that of death).

SECTION II – SUMMARY OF REVIEW AND RECOMMENDATIONS

In Segal's report, they also accurately noted that CalPERS produces and utilizes retirement rates that vary by age and service. As an alternative to developing a set of broad service-based adjustment factors based on OCERS experience, Segal could review whether the relative differences in retirement rates at various service levels used by CalPERS for similar benefit formulas provide a reasonable fit to the OCERS data, and then adjust those rates as necessary to bring the overall level of expected retirements into closer alignment with the OCERS experience at each age.

For example, if the CalPERS rate of retirement for a 2.7% @ 55 Miscellaneous member (similar to the 31676.19 CERL formula for many General OCERS members) at age 55 with 25 years of service is approximately double that of an individual of the same age but with only 10 years of service, Segal could develop a set of retirement rates for OCERS that reflect the same relationship between these service levels, but provide a more accurate fit to the overall number of members expected to retire at each age (based on the OCERS data). This table could then be reviewed to determine whether it provides a better fit (measured by age and service) to the actual OCERS experience than the current age-only based rates.

Regardless of the approach taken, we recommend that Segal review the retirement experience for OCERS by age and service, and determine whether their recommended age-based retirement rates could be expected to materially underestimate the liabilities if the recent patterns of behavior by age and service continue to present themselves.

Economic Assumptions

Overall, all three of the economic assumption scenarios (Recommendations A, B and C) proposed in Segal's review represent a reasonable set of assumptions. In particular, we agree with Segal's recommendation to maintain or reduce the assumed rate of price inflation from 3.00% to 2.75%, and to reduce the investment return assumption from 7.25% to 7.00% or 6.75%, reflecting a net real return of either 4.00% or 4.25%.

We have comments, however, on the "risk adjustment" that Segal used in developing their return recommendation, as well as several other aspects of the economic assumptions.

Risk Adjustment

In their experience study report, Segal spends a significant amount of time discussing the concept of a "risk adjustment" – also referred to as a margin for adverse deviation. The following language is from their experience study report (page 14):

> *In our model, the confidence level associated with a particular risk adjustment represents the likelihood that the actual average return would equal or exceed the assumed value over a 15-year period. For example, if we set our real rate of return assumption using a risk adjustment that produces a confidence level of 60%, then there would be a 60% chance (6 out of 10) that the average return over 15 years will be equal to or greater than the assumed value.*

Later in their report, they note that they anticipate a 0.47% offset to the investment return assumption to be a sufficient "risk adjustment" to provide a confidence level of 55%. However, this does **not** mean that there is a 55% chance of achieving the proposed return assumption of 7%, **when compounded over a 15-year period**. Average annual returns and average compound returns are different concepts, and the Board should focus on achieving an average compound return equal to or greater than the assumed rate of return.

To illustrate the difference between these concepts, consider an extreme example: if your return is 100% one year (i.e. you doubled your money) and -100% the following (i.e. you lost all your money), then the arithmetic average annual return is 0%, but the average compound return is 100% (i.e. you still don't have any money!). At the end of the day, most investors care about the geometric or compound rate. In the extreme example above, an investor would gladly agree to hide their money under a mattress and earn nothing for two years, versus double their money and then lose it all the next year (but still earn the same arithmetic return!).

As stated above, Segal's "confidence level" model provided OCERS with the likelihood that the arithmetic average investment return will exceed the assumption over a 15-year period. However, the likelihood that the geometric or compound average return will exceed the assumption is considerably less. In fact, rather than a 55% chance, there is roughly a 46% chance that the compound return will equal or exceed 7.00%. The expected return would need to be lowered to around 6.75% to obtain a 50/50 confidence level, and lowered all the way down to 6.25% to achieve a 55% confidence level on a compound basis.

Investment Expenses

A frequent assumption used in setting return assumptions is that the additional returns earned due to active management will offset the higher level of expenses associated with active management. Instead of this approach, Segal assumes that additional expenses for active management simply reduce the return, which is a more conservative assumption but implies that - all other things being equal - Segal's model would result in a higher recommended return assumption if the Board were invested passively instead of using active managers. While there is much debate about this question among investment professionals, we prefer to remain neutral, assuming no advantage or disadvantage to active management.

We appreciate that Segal has identified this issue - of whether the expenses associated with active management should be excluded from the expected return - for further study with Staff. We also note that the conservatism included in this approach may enhance the likelihood that the investment return assumption could be achieved on a compound basis, thus offsetting a portion of the impact from the risk adjustment issue identified above. However, we still anticipate that there would be less than a 55% chance of achieving the 7.00% proposed assumption on a compound basis, even if the majority of the active management expenses were *not* deducted from the investment returns.

Inflation

We believe Segal's recommendation to maintain a 3% inflation assumption still represents a reasonable long-term assumption. However, we note that the average inflation assumption for the investment consultants cited by Segal (2.3%), as well as the inflation forecasts used by Social Security (2.6%) and derived from 30-year Treasury bonds (1.87%) are all still significantly below the recommended rate.

While we understand that large and sudden changes in long-term assumptions can be disruptive to the employers and members, and we acknowledge that a 3% inflation assumption still represents a reasonable long-term expectation given historical rates, we recommend that Segal and the Board continue to monitor this assumption and consider further reductions if market-based inflation expectations remain low.

Actuarial Methods

Actuarial methods relate to the application of actuarial assumptions in the determination of Plan liabilities and contributions. These methods include the actuarial cost method, amortization policy, actuarial asset smoothing, and cost-sharing methodologies. The questions guiding our review of the actuarial methods were the following:

- Are the methods acceptable and appropriate for the intended purpose?
- Do the methods comply with relevant accounting and actuarial standards?

Actuarial Cost Method

The individual Entry Age actuarial cost method is used in the December 31, 2016 actuarial valuation. Under this method, the expected cost of benefits for each individual member is allocated over that member's career as a level percentage of that member's expected salary. The normal cost for the plan is the sum of the individual normal costs calculated for each member. We concur with this methodology and note that it is a "Model Practice" based on the guidance issued by the California Actuarial Advisory Panel (CAAP), and a "Best Practice" based on guidance issued by the Government Finance Officers Association. Segal has also applied this method in a manner which complies with the disclosure requirements under GASB Statements 67 and 68.

Asset Smoothing Method

The actuarial (or smoothed) value of assets is determined using a five-year period for gains and losses. We have confirmed that the Segal report applies the actuarial smoothing method as described.

In our opinion, this method satisfies the Actuarial Standard of Practice which governs asset valuation methods (ASOP No. 44), which requires that the actuarial asset value should fall within a “reasonable range around the corresponding market value” and that differences between the actuarial and the market value should be “recognized within a reasonable period of time.”

We commend Segal for including the funded ratio and unfunded liability using both the market value and smoothed value of assets in their report. These disclosures are included in the “Model Disclosure Elements for Actuarial Valuation Reports” adopted by the CAAP.

Amortization Policy

The current Amortization Policy for OCERS is a layered amortization policy, with the balance of the unfunded liability as of December 31, 2012 amortized as a level percentage of payroll over a closed 20-year period beginning December 31, 2013 (17 years remaining as of December 31, 2016). Each subsequent year’s unfunded liability attributable to experience gains or losses, assumption changes, and cost method changes is amortized as a level percentage of payroll over a new closed 20-year period. Plan amendments are amortized over closed 15-year periods and early retirement incentive programs will be amortized over five years.

We have confirmed that the Segal report applies the amortization method as described. This amortization method is in accordance with the recent funding policy guidance issued by the CAAP, GFOA, and the Conference of Consulting Actuaries Public Plans Community. This amortization policy also meets the minimum standards of the ’37 Act.

Contents of the Reports

We find the actuarial valuation and experience study reports to be in compliance with Actuarial Standards of Practice. We have already mentioned one area in which we believe the experience study report could be enhanced – such as clarifying the risk adjustment factor in the experience study report.

More disclosure regarding the methodology and calculation of the employee COLA contribution rates would better satisfy the Actuarial Standards of Practice No. 41. In particular, adding a description of the cost sharing arrangements for the legacy tiers, the mechanisms for determining the COLA loading and scaling factors should be addressed and included in the valuation report.

We also encourage Segal to consider whether a demonstration of future expected funding progress and contribution rates and/or additional statements regarding risk should be contained within the actuarial valuation report. This report represents to the public the current financial condition of OCERS, and as such, we recommend it include a prospective view.

We believe that a longer projection can also be helpful to the Board, and we typically include such projections as part of our actuarial valuation reports. For example, such a projection could show the Board how the costs are expected to be affected by the interplay of the assumptions changes *and* the deferred losses currently reflected in the smoothed value of assets.

SECTION II – SUMMARY OF REVIEW AND RECOMMENDATIONS

With respect to risk, although Segal does briefly describe some common volatility ratios in the Section 2 of their report, there is no mention of these ratios or any other discussion of volatility in the Executive Summary. Also, there is no discussion regarding positive or negative cash flow and the risks associated with these situations. We note that the Actuarial Standards Board has recently released a new Standard of Practice related to the disclosure of risk for pension plans, the content of which may be useful to Segal and the Board in assessing whether additional risk disclosures could add value to the valuation report.

APPENDIX A – GLOSSARY OF TERMS

1. Actuarial Assumptions

Estimates of future experience with respect to rates of mortality, disability, turnover, retirement, investment income, and salary increases. Demographic assumptions (rates of mortality, disability, turnover, and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

2. Actuarial Gain (Loss)

The difference between actual experience and actuarial assumption anticipated experience during the period between two actuarial valuation dates, as determined in accordance with a particular actuarial funding method.

3. Actuarial Liability

The Actuarial Liability is the present value of all benefits accrued as of the valuation date using the methods and assumptions of the valuation. It is also referred to by some actuaries as the "accrued liability" or "actuarial accrued liability."

4. Actuarial Present Value

The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest, and by probabilities of payment.

5. Actuarial Value of Assets

The Actuarial Value of Assets equals the Market Value of Assets adjusted according to the smoothing method. The smoothing method is intended to smooth out the short-term volatility of investment returns in order to stabilize contribution rates and the funded status.

6. Actuarial Cost Method

A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal costs and the actuarial liability. It is sometimes referred to as the "actuarial funding method."

7. Funded Status

The Actuarial Value of Assets divided by the Actuarial Liability. The Funded Status can also be calculated using the Market Value of Assets.

8. Governmental Accounting Standards Board

The Governmental Accounting Standards Board (GASB) defines the accounting and financial reporting requirements for governmental entities. GASB Statement No. 67 defines the plan accounting and financial reporting for governmental pension plans, and GASB Statement No. 68 defines the employer accounting and financial reporting for participating in a governmental pension plan.

9. Market Value of Assets

The fair value of the Plan's assets assuming that all holdings are liquidated on the measurement date.

10. Normal Cost

The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. It is sometimes referred to as "current service cost." Any payment toward the unfunded actuarial liability is not part of the normal cost.

11. Present Value of Future Benefits

The estimated amount of assets needed today to pay for all benefits promised in the future to current members of the Plan, assuming all Actuarial Assumptions are met.

12. Present Value of Future Normal Costs

The Actuarial Present Value of retirement system benefits allocated to future years of service.

13. Unfunded Actuarial Liability (UAL)

The difference between the Actuarial Liability and the Actuarial Value of Assets. This is sometimes referred to as the "unfunded accrued liability."

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Memorandum

DATE: January 20, 2018

TO: Members of the Audit Committee

FROM: Mark Adviento, Internal Auditor

SUBJECT: **AUDIT OF OCERS' INVESTMENT REBALANCING REPORTING**

Recommendation

Receive and file.

Background/Discussion

OCERS' Internal Audit Division completed an audit of OCERS' investment rebalancing reporting to the Investment Committee between December 2015 and June 2017. Internal Audit concludes that OCERS' investment rebalancing reporting to the Investment Committee was accurate and complete.

- There are no audit findings.

Submitted by:

M.A. - Approved

Mark Adviento
Internal Auditor

Audit of OCERS' Investment Rebalancing Reporting

Report Date: January 11, 2018

Internal Audit Department

Mark Adviento, CPA, Internal Auditor

Table of Contents

Conclusion / Executive Summary

OCERS' Internal Audit Division completed an audit of the Investment Division's investment rebalancing reporting to OCERS' Investment Committee.

Internal Audit concludes that OCERS' investment rebalancing reporting to the Investment Committee was accurate and complete. There are no audit findings.

Objective, Scope, and Methodology

The **objective** of this audit was to review investment rebalancing reporting to the Investment Committee for accuracy and completeness.

The **scope** of the audit included rebalancing reporting to the Investment Committee between December 2015 and June 2017. Internal Audit randomly selected the following Investment Committee reports for detail testing - no audit exceptions were found in the testing.

- Monthly portfolio "Asset Allocation" compliance charts (comparing OCERS' Strategic Asset Allocation targets/ranges vs. actual market values as of month end).
- Semi-annual "Portfolio Rebalancing" reports that summarizes and details rebalancing activity (i.e. January through June or July through December of each year).

The audit testing **methodology** included:

- Inspecting supporting spreadsheets used by Investments Division staff to create the above compliance charts and rebalancing reports for numerical accuracy and manager asset/sub-asset classifications.
- Tracing market value data from the above spreadsheets to supporting State Street Bank documentation for a match.
- Ensuring that OCERS' adopted Strategic Asset Class and Sub-Asset Class target allocations/ranges in effect during the rebalancing reporting periods were used in the above spreadsheets and compliance charts.

Background

The semi-annual "Portfolio Rebalancing" reports summarizes re-balancing activity in the first page for the Investment Committee, with more detailed re-balancing activity listed by month following the summary. Following is a sample excerpt from the 1st half 2017 "Portfolio Rebalancing Report" provided to the Investment Committee:

Orange County Employees Retirement System
Portfolio Rebalancing Report
January 2017 – June 2017

During the first half of 2017, major portfolio rebalancing activity included:

- Received approximately $467 million in employer contributions in prepayments.
- Funded $222.5 million to BlackRock Russell 1000 Funds, $72.5 million to BlackRock EAFE Index, $200 million to BlackRock TIPS Index, $250 million to BlackRock US Debt Index.
- Fully redeemed assets from BlueMountain, Fore and Alphadyne (hedge funds), GMO (global equity) as unwound the currency hedges.

Stated within OCERS' Board *Investment Policy Statement*:

Rebalancing the Asset Allocation

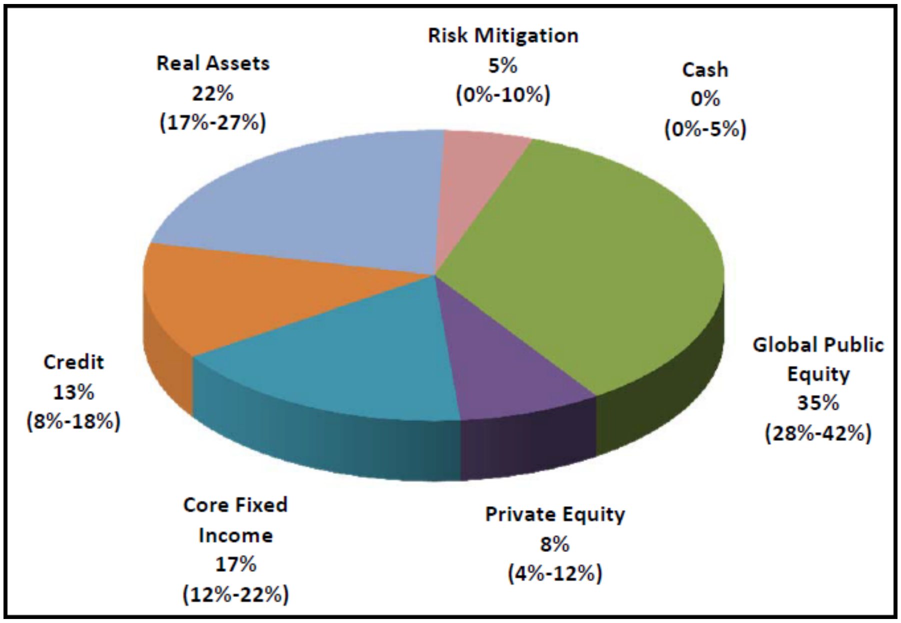
The Chief Investment Officer will monitor the asset allocation and rebalance to the approved ranges as and when necessary. Any such rebalancing will be reviewed with the Investment Committee in the subsequent monthly report. Whenever practicable, major shifts in funds will be discussed in advance with the Investment Committee.

The Chief Investment Officer may also recommend dynamic or tactical rebalancing strategies as appropriate under various market conditions, if appropriate and prudent.

As a business practice, OCERS' Investment Division reviews the portfolio on a monthly basis to determine if rebalancing is needed to comply with the above allocation targets and target ranges, or if the CIO has a particular market view requiring a rebalancing transaction (i.e. dynamic or tactical rebalancing). Investment staff cannot directly rebalance a significant portion (~25% of the portfolio) currently invested within private investments. These are instead subject to capital calls at the discretion of money managers. Private investments currently include private equity, direct lending, direct-real estate, energy, and agriculture/timber investments.

OCERS' Chief Investment Officer is currently developing modifications to the Investments Division's rebalancing procedures.

The below chart contains OCERS' current asset allocation targets and target ranges (adopted by Investment Committee in early 2017). OCERS' portfolio value was $14.9 billion as of month ending September 2017.



Findings, Recommendations, and Management Responses

-NONE-

C

Memorandum

DATE: January 20, 2018

TO: Members of the Audit Committee

FROM: Mark Adviento, Internal Auditor

SUBJECT: **STATUS OF 2017 INTERNAL AUDIT PLAN**

Recommendation

Receive and file.

Background/Discussion

Following is a brief description of the last remaining in-progress internal audit from the 2017 audit plan.

- **OCFA Payroll Transmittal Audit:** A draft of the audit report will be sent to OCFA for management's comments and feedback. A meeting with OCFA management is scheduled for February 1st to discuss the audit findings. OCFA's official responses to the audit findings will come from OCFA's Budget & Finance Committee which publicly meets monthly. The objective of this audit is to determine that OCFA payroll transmittals submitted to OCERS were accurate and complete.

Submitted by:

M.A. – Approved

Mark Adviento
Internal Auditor

D

Memorandum

DATE: January 20, 2018

TO: Members of the Audit Committee

FROM: Mark Adviento, Internal Auditor

SUBJECT: **STATUS OF 2018 INTERNAL AUDIT PLAN**

Recommendation

Receive and file.

Background/Discussion

Following is a brief description of status of in-progress projects for the 2018 audit plan.

- **2018 Plan Sponsor Review Report:** A first draft of the annual plan sponsor review report is with management for review. The report provides the Board with information about plan sponsors' financial position to ascertain their capacity to meet financial obligations to OCERS. The report will be presented at the March 19, 2018 Regular Board Meeting.
- **OCTA Payroll Transmittal Audit:** This is in the planning phase and Internal Audit will perform fieldwork in February. The objective of this audit is to determine that OCTA payroll transmittals submitted to OCERS were accurate and complete.

Submitted by:

M.A. – Approved

Mark Adviento
Internal Auditor