

LOUISIANA STATE EMPLOYEES'
RETIREMENT SYSTEM

ACTUARIAL EXPERIENCE STUDY
July 1, 2008 – June 30, 2013

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January 16, 2014

Board of Trustees
Louisiana State Employees' Retirement System
Post Office Box 94123
Baton Rouge, Louisiana 70804-9123

Re: Actuarial Experience Study

Dear Board of Trustees:

The following report presents the results of the experience of the Louisiana State Employees' Retirement System for the period July 1, 2009 through June 30, 2013. The experience study reviews the demographic and economic assumptions currently being used for all plans. Four sets of assumptions are studied in the following sub-group of plans:

- Regular Members
- Judicial Members
- Corrections/Hazardous Duty
- Wildlife

In preparing this report, we compiled experience for the plans for the years 2009 through 2013 based on data furnished by the retirement system. While we cannot verify the accuracy of all the information provided, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy of the information and believe it has produced appropriate results.

The specific assumptions investigated throughout this study are as follows:

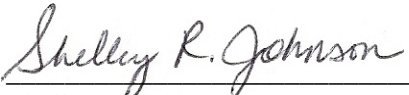
- Retirement Rates
- Withdrawal Rates
- Mortality Rates
- Disability Rates
- Salary Increases
- Actuarial Valuation Rate/Administrative Expenses/Gain-Sharing
- Demographic Statistics and Leave Converted to Service Credit or Lump Sum

The balance of this Report presents details of the experience analysis by plan. In addition, the report also contains the corresponding actuarial impact on funding requirements of the proposed changes.

To the best of our knowledge, this report is complete and accurate in all respects. I am a member of the American Academy of Actuaries and an Associate in the Society of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

I look forward to meeting with the Louisiana State Employees' Retirement System to discuss the Report and answer any pending questions concerning its contents.

Respectfully submitted,
FOSTER & FOSTER INC.

By: 
Shelley R. Johnson, ASA, MAAA

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Proposed Assumptions

Regular Members:

Current assumptions reflect rates that vary by age. To better match actual experience, we propose updating the retirement tables to reflect age and service components, and to reflect the probability of normal retirement or early retirement with reduced benefits. We propose age based tables that vary based on five service levels: less than 10 years of service, 10 to 19 years of service, 20 to 24 years of service, 25 to 29 years of service and greater than or equal to 30 years of service.

Judicial Members:

Current assumptions reflect rates that vary by age. To better match actual experience, we propose updating the retirement tables to reflect age and service components. We propose age based tables that vary based on three service levels: less than 15 years of service, 15 to 19 years of service and greater than or equal to 20 years of service.

Corrections/Hazardous Duty/Wildlife:

Current assumptions reflect rates that vary by age. To better match actual experience, we propose updating the retirement tables to reflect age and service components. We propose age based tables that vary based on two service levels: less 25 years of service, and greater than or equal to 25 years of service.

An illustration of the expected retirements using the proposed rates is included in the tables listed above. The proposed rates represent a better model for the actual retirement experience and therefore shall be an improved predictor of future retirement experience.

Impact on Valuation Results

Below are details by plan regarding the effects of updating the retirement rate assumptions as proposed. Note the change in accrued liability and normal costs are determined based on the recent June 30, 2013 actuarial valuation.

	Change in Accrued Liability	Change in UAL Pmt % Payroll	Change in Normal Cost	Change in NC % Payroll	Change in Total % Payroll*
Regular Members	149,463,363	0.4%	7,144,032	0.4%	0.9%
Judicial Members	(27,069,001)	0.4%	(1,454,745)	-3.1%	-2.6%
Corrections/Hazardous Duty	(18,028,054)	0.4%	6,652	0.0%	0.5%
Wildlife	(690,931)	0.4%	(27,846)	-0.3%	0.2%
TOTAL	103,675,377	0.4%	5,668,093	0.3%	0.7%

* Values may not sum to totals due to rounding.

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Disabled members:

The actual mortality experience for the disabled population is similar to expected mortality experience using the RP-2000 Disabled Retiree Mortality Table, however the current table reflects mortality improvement relative to recent experience. These results were consistent for males and females. We propose continued use of the RP-2000 Disabled Retiree Mortality Table, with no projection for mortality improvement.

Illustrations of the proposed healthy and disabled mortality tables are included in the Tables showing mortality experience.

Impact on Valuation Results

Below are details by plan regarding the effects of updating the mortality assumptions as proposed. Note the change in accrued liability and normal costs are determined based on the recent June 30, 2013 actuarial valuation.

	Change in Accrued Liability	Change in UAL Pmt % Payroll	Change in Normal Cost	Change in NC % Payroll	Change in Total % Payroll*
Regular Members	65,354,909	1.2%	4,344,350	0.3%	1.4%
Judicial Members	4,768,072	1.2%	9,854	0.0%	1.2%
Corrections/Hazardous Duty	8,733,202	1.2%	595,159	0.3%	1.5%
Wildlife	718,666	1.2%	50,157	0.5%	1.6%
Retirees/Inactive Members	188,566,808	-	-	-	-
TOTAL	268,141,657	1.2%	4,999,520	0.3%	1.4%

* Values may not sum to totals due to rounding.

Louisiana State Employees Retirement System

Table 8: Male Mortality Experience (Non-Disabled Members)*

Age	Exposures	Actual Deaths	Expected Deaths**	Actual Mortality	Expected Mortality**	Proposed Mortality***
<20	386	9	0	2.33%	0.00%	0.00%
20-24	3,364	34	1	1.01%	0.03%	0.03%
25-29	7,290	11	3	0.15%	0.04%	0.03%
30-34	8,167	38	4	0.47%	0.05%	0.05%
35-39	8,964	42	8	0.47%	0.09%	0.08%
40-44	10,872	81	13	0.75%	0.12%	0.10%
45-49	13,296	88	23	0.66%	0.17%	0.14%
50-54	16,494	118	44	0.72%	0.27%	0.19%
55-59	18,038	137	84	0.76%	0.47%	0.36%
60-64	17,389	185	151	1.06%	0.87%	0.70%
65-69	12,263	219	193	1.79%	1.57%	1.28%
70-74	9,801	338	262	3.45%	2.67%	2.13%
75-79	7,241	377	338	5.21%	4.67%	3.85%
80-84	5,093	411	406	8.07%	7.97%	7.03%
85-89	2,688	369	356	13.73%	13.24%	12.05%
90-94	902	173	188	19.18%	20.84%	19.73%
95-99	167	49	48	29.34%	28.74%	28.14%
100+	24	6	9	25.00%	37.50%	37.50%
Total	142,439	2,685	2,131	1.89%	1.50%	1.28%

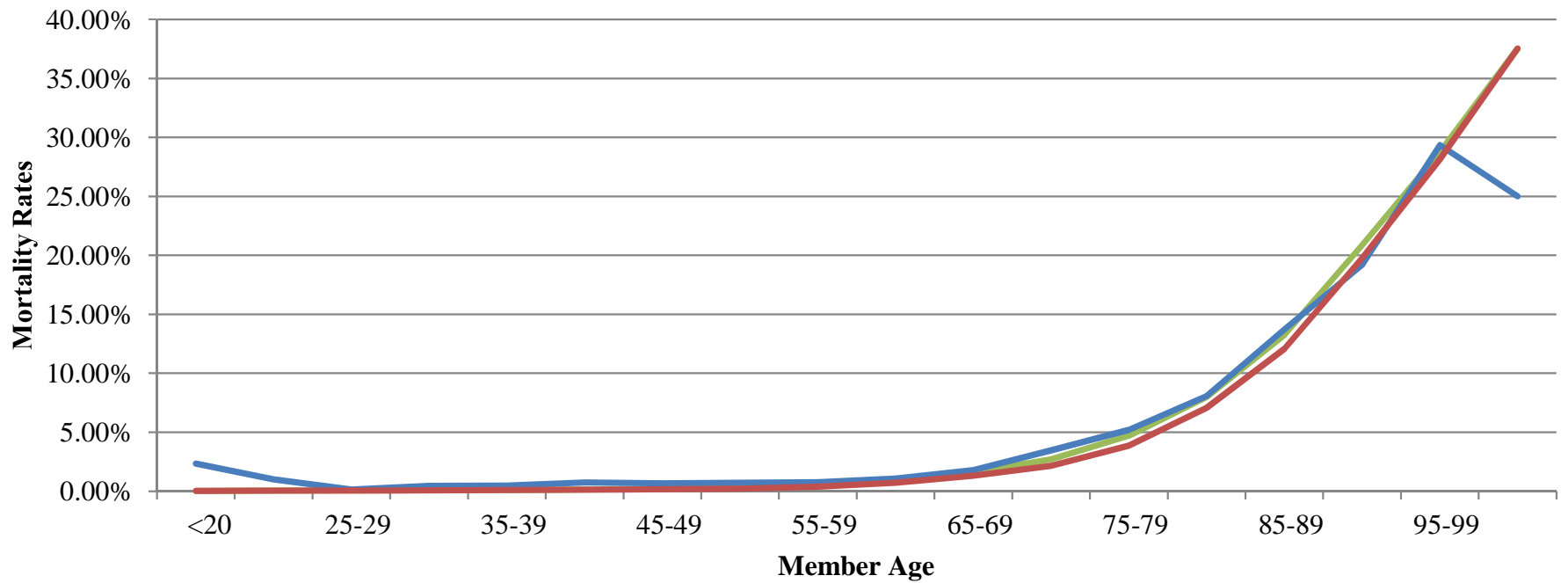
*Data from Valuation Year 2009 through 2013 sorted by Member Age.

**Expected experience based on current assumption: RP-2000 Combined Healthy (no projection)

***Proposed rates based on RP-2000 Combined Healthy (projected 15 years with scale AA)

Graph 8: Mortality Experience

All Non-Disabled Members - Male



Expected Mortality Actual Mortality Proposed Mortality

Louisiana State Employees Retirement System

Table 9: Female Mortality Experience (Non-Disabled Members)*

Age	Exposures	Actual Deaths	Expected Deaths**	Actual Mortality	Expected Mortality**	Proposed Mortality***
<20	270	5	0	1.85%	0.00%	0.00%
20-24	3,713	28	1	0.75%	0.03%	0.03%
25-29	12,708	19	3	0.15%	0.02%	0.02%
30-34	16,001	58	5	0.36%	0.03%	0.03%
35-39	16,963	75	9	0.44%	0.05%	0.04%
40-44	19,417	95	16	0.49%	0.08%	0.07%
45-49	25,197	121	33	0.48%	0.13%	0.10%
50-54	31,946	141	64	0.44%	0.20%	0.17%
55-59	33,429	189	115	0.57%	0.34%	0.32%
60-64	28,225	204	184	0.72%	0.65%	0.60%
65-69	19,028	203	227	1.07%	1.19%	1.11%
70-74	14,921	287	305	1.92%	2.04%	1.86%
75-79	11,990	424	410	3.54%	3.42%	3.06%
80-84	10,427	625	590	5.99%	5.66%	5.09%
85-89	7,208	671	685	9.31%	9.50%	8.89%
90-94	3,081	536	465	17.40%	15.09%	14.51%
95-99	673	171	140	25.41%	20.80%	20.36%
100+	86	27	22	31.40%	25.58%	24.42%
Total	255,283	3,879	3,274	1.52%	1.28%	1.18%

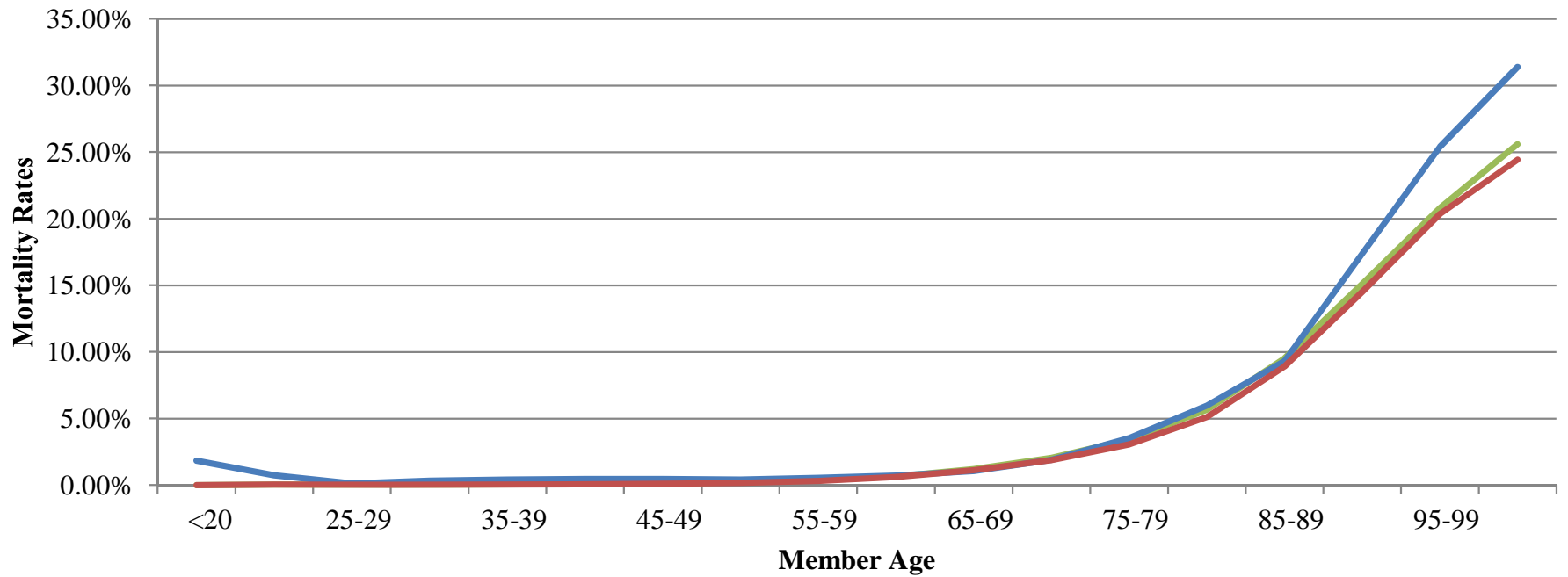
*Data from Valuation Year 2009 through 2013 sorted by Member Age.

**Expected experience based on current assumption: RP-2000 Combined Healthy (no projection)

***Proposed rates based on RP-2000 Combined Healthy (projected 15 years with scale AA)

Graph 9: Mortality Experience

All Non-Disabled Members - Female



Expected Mortality Actual Mortality Proposed Mortality

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Table 10: Disability Mortality Experience*

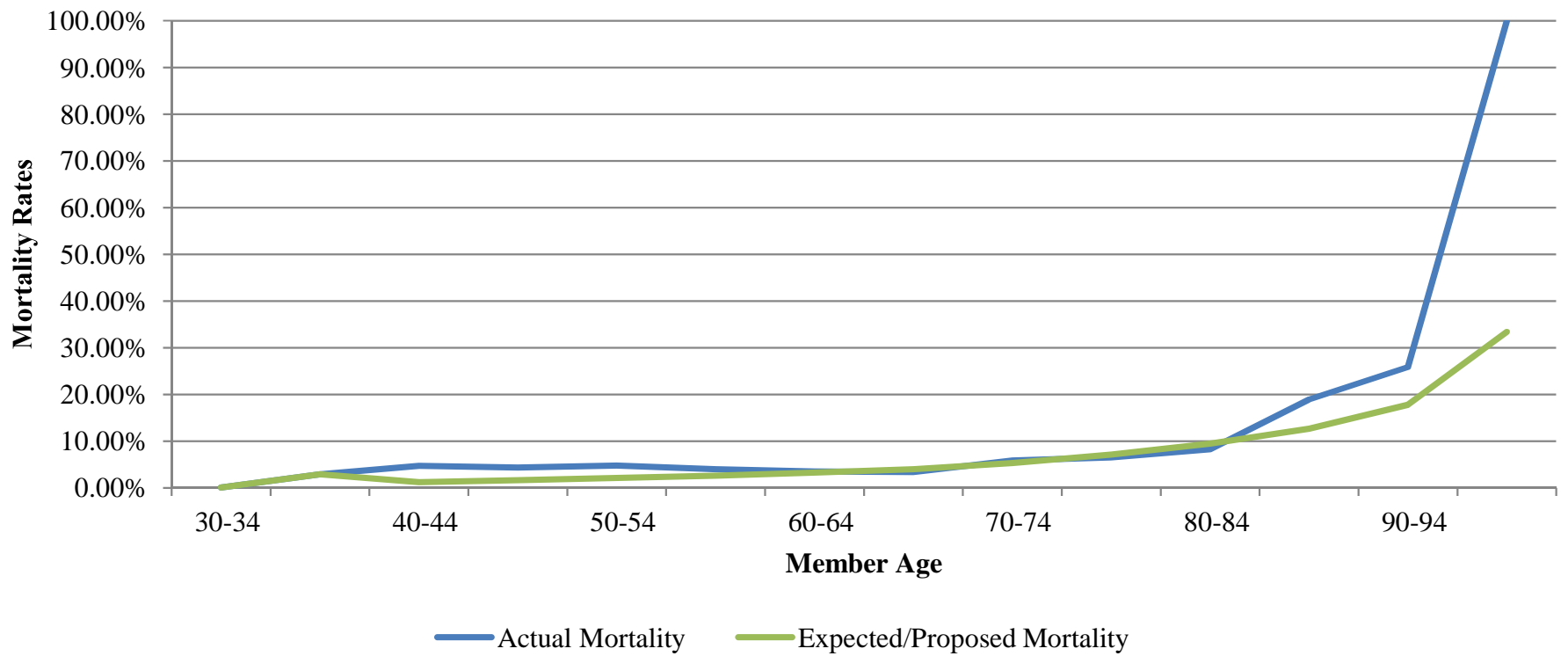
Age	Exposures	Actual Deaths	Expected Deaths**	Actual Mortality	Expected Mortality**
<20	0	0	0	N/A	N/A
20-24	0	0	0	N/A	N/A
25-29	0	0	0	N/A	N/A
30-34	2	0	0	0.00%	0.00%
35-39	35	1	1	2.86%	2.86%
40-44	172	8	2	4.65%	1.16%
45-49	511	22	8	4.31%	1.57%
50-54	1,171	55	24	4.70%	2.05%
55-59	2,031	80	52	3.94%	2.56%
60-64	2,051	71	66	3.46%	3.22%
65-69	1,606	53	63	3.30%	3.92%
70-74	1,258	73	66	5.80%	5.25%
75-79	793	51	56	6.43%	7.06%
80-84	415	34	39	8.19%	9.40%
85-89	254	48	32	18.90%	12.60%
90-94	62	16	11	25.81%	17.74%
95-99	3	3	1	100.00%	33.33%
100+	0	0	0	N/A	N/A
Total	10,364	515	421	4.97%	4.06%

*Data from Valuation Year 2009 through 2013 sorted by Member Age.

**Expected experience based on current assumption: RP-2000 Combined Healthy (no projection)

Graph 10: Mortality Experience

All Disabled Members



DISABILITY RATES

Overview

The disability rate assumption is the probability that a member will become disabled while he or she is an active participant in the plan.

The overall cost due to disability depends on the plan's disability provisions. For all LASERS plans, the benefit provisions for members who separate employment due to disability are similar to the provisions for Normal Retirement. Therefore, costs for retirement eligible members who decrement due to disability are similar to costs if the member had retired from service.

Determining future incidence of disability is difficult. Therefore, a review of past experience compared to the current assumption will provide the basis for examining the assumption.

Current Assumption

Currently, each LASERS plan has a distinct table of disability rates that vary by member age.

Experience

The rates illustrated are unisex and represent the probability of disability, given the member had met the eligibility requirements. If the member did not meet the eligibility requirements at a given age, the member's exposure was excluded for that age. As can be seen on the following tables, the overall incidence of disability is low among all plans.

Regular Members – The rate of disability incidence was slightly less than expected for most ages.

Judicial Members – During the studied period, the exposure base for disablement is low and the plan experienced few disablements. Therefore, no exhibits are shown for Judicial members.

Corrections/Hazardous Duty/Wildlife – The group has relatively low incidence of disability. The current experience was slightly higher than expected for most ages.

- Table 11 and Graph 11: Disability Experience – Regular Members
- Table 12 and Graph 12: Disability Experience – Corrections/Hazardous Duty/Wildlife

Proposed Assumptions

We recommend the following changes to the disability assumptions to more accurately reflect the associated costs of the disability provisions.

Regular Members - Lower rates of disability for most ages and smooth rates to better reflect anticipated experience.

Judicial Members – Given the low exposure base and minimal disability experience, we propose to keep the existing assumption of 0.02% for ages 46 to 69.

Corrections/Hazardous Duty – Increase disability rates for most ages and smooth rates to better reflect anticipated experience.

Wildlife – Update rates to align with disability rates for Corrections/Hazardous Duty.

Impact on Valuation Results

Below are details by plan regarding the effects of updating the disability assumptions as proposed. Note the change in accrued liability and normal costs are determined based on the June 30, 2013 actuarial valuation.

	Change in Accrued Liability	Change in UAL Pmt % Payroll	Change in Normal Cost	Change in NC % Payroll	Change in Total % Payroll
Regular Members	(1,772,856)	0.0%	(127,242)	0.0%	0.0%
Judicial Members	-	0.0%	-	0.0%	0.0%
Corrections/Hazardous Duty	78,728	0.0%	69,518	0.0%	0.0%
Wildlife	52,460	0.0%	4,403	0.0%	0.0%
TOTAL	(1,641,668)	0.0%	(53,321)	0.0%	0.0%

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Table 11: All Regular Members* - Disability Experience**

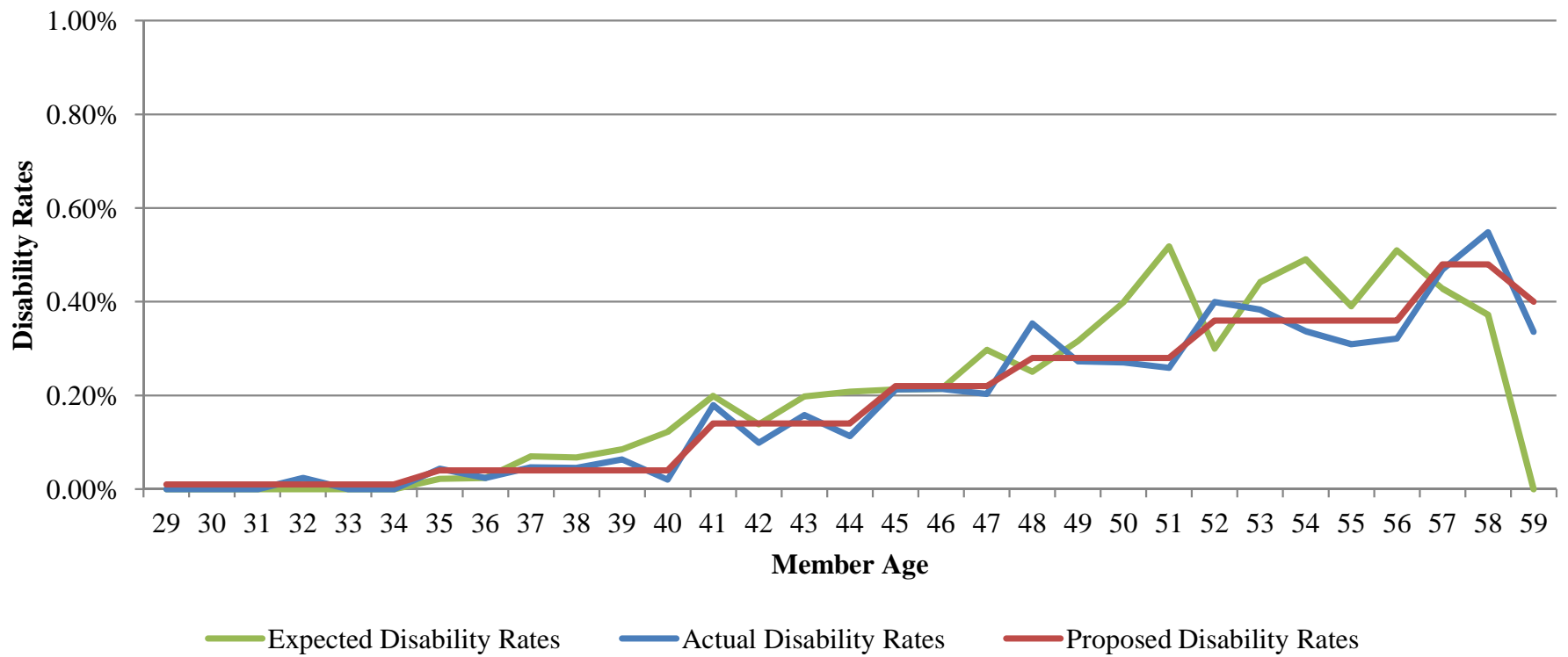
Age	Exposures	Actual Disabilities	Expected Disabilities	Actual Disability Rates	Expected Disability Rates	Proposed Disability Rates
< 20	249	0	0	0.00%	0.00%	0.00%
20	457	0	0	0.00%	0.00%	0.00%
21	656	0	0	0.00%	0.00%	0.00%
22	851	0	0	0.00%	0.00%	0.00%
23	1,370	0	0	0.00%	0.00%	0.00%
24	1,990	0	0	0.00%	0.00%	0.00%
25	2,623	0	0	0.00%	0.00%	0.00%
26	3,144	0	0	0.00%	0.00%	0.00%
27	3,531	0	0	0.00%	0.00%	0.00%
28	3,744	0	0	0.00%	0.00%	0.00%
29	3,940	0	0	0.00%	0.00%	0.01%
30	4,026	0	0	0.00%	0.00%	0.01%
31	4,144	0	0	0.00%	0.00%	0.01%
32	4,238	1	0	0.02%	0.00%	0.01%
33	4,229	0	0	0.00%	0.00%	0.01%
34	4,137	0	0	0.00%	0.00%	0.01%
35	4,593	2	1	0.04%	0.02%	0.04%
36	4,227	1	1	0.02%	0.02%	0.04%
37	4,297	2	3	0.05%	0.07%	0.04%
38	4,436	2	3	0.05%	0.07%	0.04%
39	4,716	3	4	0.06%	0.08%	0.04%
40	4,906	1	6	0.02%	0.12%	0.04%
41	5,023	9	10	0.18%	0.20%	0.14%
42	5,055	5	7	0.10%	0.14%	0.14%
43	5,064	8	10	0.16%	0.20%	0.14%
44	5,290	6	11	0.11%	0.21%	0.14%
45	5,636	12	12	0.21%	0.21%	0.22%
46	6,069	13	13	0.21%	0.21%	0.22%
47	6,391	13	19	0.20%	0.30%	0.22%
48	6,790	24	17	0.35%	0.25%	0.28%
49	6,968	19	22	0.27%	0.32%	0.28%
50	7,021	19	28	0.27%	0.40%	0.28%
51	6,950	18	36	0.26%	0.52%	0.28%
52	7,012	28	21	0.40%	0.30%	0.36%
53	6,789	26	30	0.38%	0.44%	0.36%
54	6,527	22	32	0.34%	0.49%	0.36%
55	6,147	19	24	0.31%	0.39%	0.36%
56	5,295	17	27	0.32%	0.51%	0.36%
57	4,908	23	21	0.47%	0.43%	0.48%
58	4,562	25	17	0.55%	0.37%	0.48%
59	4,171	14	0	0.34%	0.00%	0.40%
60	3,388	0	0	0.00%	0.00%	0.00%
61	2,310	0	0	0.00%	0.00%	0.00%
62	1,954	0	0	0.00%	0.00%	0.00%
63	1,602	0	0	0.00%	0.00%	0.00%
64	1,230	0	0	0.00%	0.00%	0.00%
65	934	0	0	0.00%	0.00%	0.00%
66	686	0	0	0.00%	0.00%	0.00%
67	499	0	0	0.00%	0.00%	0.00%
68	361	0	0	0.00%	0.00%	0.00%
69	281	0	0	0.00%	0.00%	0.00%
70	204	0	0	0.00%	0.00%	0.00%
71	166	0	0	0.00%	0.00%	0.00%
72	542	0	0	0.00%	0.00%	0.00%
Total	196,329	332	375	0.17%	0.19%	0.17%

*The Appellate Law Clerks were included with Regular Members for Disability Experience.

**Data from Valuation Year 2009 through 2013 sorted by Member Age.

Graph 11: Disability Experience

All Regular Members



Louisiana State Employees Retirement System

Table 12: Hazardous Duty and Wildlife Members - Disability Experience*

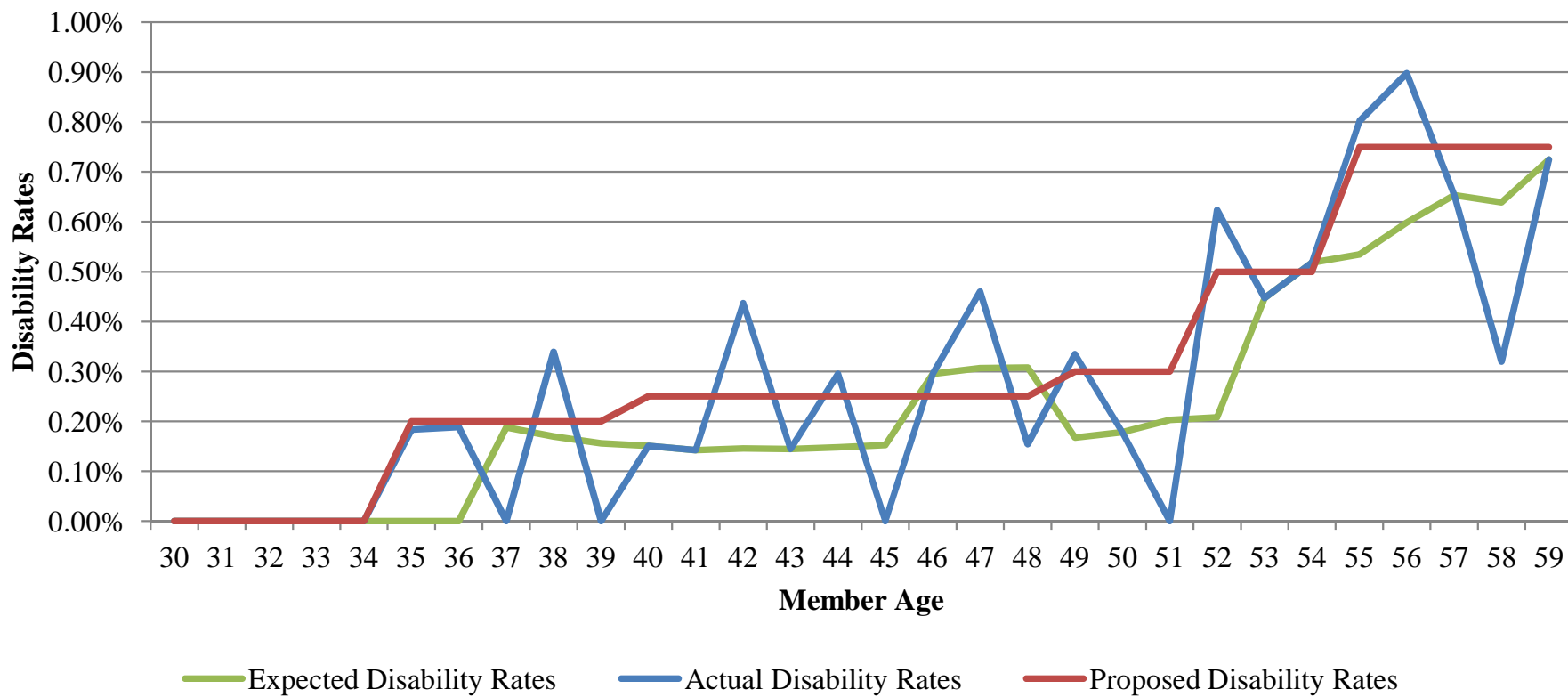
Age	Exposures	Actual Disabilities	Expected Disabilities	Actual Disability Rates	Expected Disability Rates	Proposed Disability Rates
<20	72	0	0	0.00%	0.00%	0.00%
20	140	0	0	0.00%	0.00%	0.00%
21	215	0	0	0.00%	0.00%	0.00%
22	245	0	0	0.00%	0.00%	0.00%
23	303	0	0	0.00%	0.00%	0.00%
24	368	0	0	0.00%	0.00%	0.00%
25	440	0	0	0.00%	0.00%	0.00%
26	475	0	0	0.00%	0.00%	0.00%
27	507	0	0	0.00%	0.00%	0.00%
28	527	0	0	0.00%	0.00%	0.00%
29	577	0	0	0.00%	0.00%	0.00%
30	577	0	0	0.00%	0.00%	0.00%
31	573	0	0	0.00%	0.00%	0.00%
32	574	0	0	0.00%	0.00%	0.00%
33	541	0	0	0.00%	0.00%	0.00%
34	547	0	0	0.00%	0.00%	0.00%
35	546	1	0	0.18%	0.00%	0.20%
36	531	1	0	0.19%	0.00%	0.20%
37	533	0	1	0.00%	0.19%	0.20%
38	590	2	1	0.34%	0.17%	0.20%
39	641	0	1	0.00%	0.16%	0.20%
40	663	1	1	0.15%	0.15%	0.25%
41	705	1	1	0.14%	0.14%	0.25%
42	687	3	1	0.44%	0.15%	0.25%
43	692	1	1	0.14%	0.14%	0.25%
44	677	2	1	0.30%	0.15%	0.25%
45	656	0	1	0.00%	0.15%	0.25%
46	677	2	2	0.30%	0.30%	0.25%
47	652	3	2	0.46%	0.31%	0.25%
48	650	1	2	0.15%	0.31%	0.25%
49	598	2	1	0.33%	0.17%	0.30%
50	561	1	1	0.18%	0.18%	0.30%
51	493	0	1	0.00%	0.20%	0.30%
52	481	3	1	0.62%	0.21%	0.50%
53	447	2	2	0.45%	0.45%	0.50%
54	386	2	2	0.52%	0.52%	0.50%
55	374	3	2	0.80%	0.53%	0.75%
56	334	3	2	0.90%	0.60%	0.75%
57	306	2	2	0.65%	0.65%	0.75%
58	313	1	2	0.32%	0.64%	0.75%
59	276	2	2	0.72%	0.72%	0.75%
60	225	0	0	0.00%	0.00%	0.00%
61	180	0	0	0.00%	0.00%	0.00%
62	132	0	0	0.00%	0.00%	0.00%
63	103	0	0	0.00%	0.00%	0.00%
64	66	0	0	0.00%	0.00%	0.00%
65	60	0	0	0.00%	0.00%	0.00%
66	44	0	0	0.00%	0.00%	0.00%
67	31	0	0	0.00%	0.00%	0.00%
68	20	0	0	0.00%	0.00%	0.00%
69	16	0	0	0.00%	0.00%	0.00%
70	12	0	0	0.00%	0.00%	0.00%
71	10	0	0	0.00%	0.00%	0.00%
72+	18	0	0	0.00%	0.00%	0.00%
Total**	21,067	39	33	0.19%	0.16%	0.21%

*Data from Valuation Year 2009 through 2013 sorted by Member Age.

**Total rates are based on the number of incidences divided by the number of exposures and do not represent an average of the numbers above.

Graph 12: Disability Experience

Hazardous Duty and Wildlife Members



ECONOMIC ASSUMPTIONS

ASOP No. 27, *Selection of Economic Assumptions for Measuring Pension Obligations*, provides guidance to actuaries in selecting (including giving advice on selecting) economic assumptions – primarily investment return, discount rate, and salary scale – for measuring obligations under defined benefit pension plans.

Throughout the remainder of this section, we have used the standards set forth in ASOP No. 27 as a guideline for reviewing and if applicable, selecting proposed changes to the following economic actuarial assumption:

- Salary Increases
- Actuarial Valuation Rate

Please keep in mind that ASOP No. 27 states that “the best an actuary can do is to use professional judgment to estimate possible future economic outcomes based on past experience and future expectations, and to select assumptions based upon that application of professional judgment.”

SALARY INCREASES

Overview

The salary increase assumption is used to project a member's salary from the valuation date until the assumed retirement age. Salary increase assumptions are typically represented as a flat salary scale assumption or as a service-based assumption. A flat salary scale assumption assumes that a member will get the same rate of salary increase for all years, whereas a service-based table may assume different rates based on the member's longevity with the fund.

Salary growth is comprised of three basic components:

Merit increases
Longevity increases
Inflation increases

The inflation assumption will remain at 3.0%, which is based on long-term expectations, and consistent with the inflation assumption used to determine the investment assumption. The balance is attributable to merit and longevity.

The salary increase assumption plays an important role in measuring individual pension costs and obligations.

Current Assumptions

Currently, the valuations assume service-related salary increases, based on prior plan experience:

Regular Members – Rates vary from 4.25% to 6% for most years of service, with higher increases during the first five years of service.

Judicial Members – Rates are 3.0% for most ages with the following exceptions: 5.5% at one year of service, 2.5% at 2 years of service, 3.5% for 11-13 years of service, and 4% at 4 and 7 years of service.

Corrections/Hazardous Duty – Rates are 15% for the first year of service, 8.5% for the second year of service, and generally grade down from 7.0% to 4.0% for all other years of service.

Wildlife – Rates grade from 15% - 17% for the first 3 years of service down to 6.0% at 23 years of service and remain at 6.0% for all other years

Experience

To assess the current assume annual increases and provide a basis for an updated assumption, we have reviewed the actual salary experience over the studied time period. The rates illustrated are unisex and represent the expected salary increase for a given duration of service.

Note increases during the studied period for many groups reflect increases less than the inflation assumption. The actual increases were substantially affected by the salary freeze imposed during a substantial part of the experience period.

On the following pages, we have included a service-based chart for each of the LASERS plans that compares the actual experience to the current assumptions. Historically, members received higher average salary increases toward the beginning of their careers and lower average salary increases later in their careers.

Regular Members – Actual salary increases were less than expected at all service levels.

Judicial Members – In total, actual salary increases were less than expected. However, increases were greater than expected at a few individual service levels

Corrections/Hazardous Duty – In total, actual salary increases were less than expected at all service levels

Wildlife – In total, actual salary increases were less than expected.

- Table 13 and Graph 13: Average Salary Increases by Service – Regular Members
- Table 14 and Graph 14: Average Salary Increases by Service – Judicial Members
- Table 15 and Graph 15: Average Salary Increases by Service – Corrections/Hazardous Duty/Wildlife

Proposed Assumptions

Given the budgetary environment, we propose the following:

Regular Members – Modify the existing salary increase tables since experience prior to 2009 is a better predictor of future experience, with recognition of recent experience through a slight reduction to the assumptions at most service levels.

Judicial Members – Largely retain prior assumptions with modifications at some service levels

Corrections/Hazardous Duty/Wildlife – The Wildlife salary experience is similar to that of the Corrections and other Hazardous Duty Plans. We propose to use a single table for all Hazardous Duty Plans, including Wildlife. As with regular members, due to the recent salary freezes, we propose to modify the existing Corrections/Hazardous Duty salary assumptions with a slight reduction in recognition of recent experience rather than adjust current assumptions to fully reflect recent plan experience

The updated proposed salary increase rates for Corrections/Hazardous Duty/Wildlife plans can be seen on the graph below.

Included are graphs to show a visual representation of how the actual and proposed salary increase rates compare to the current assumptions.

Impact on Valuation Results

Below are details by plan regarding the effects of updating the salary scale assumptions as proposed. Note the change in accrued liability and normal costs are determined based on the recent June 30, 2013 actuarial valuation retaining prior decrements for all other assumptions.

	Change in Accrued Liability	Change in UAL Pmt % Payroll	Change in Normal Cost	Change in NC % Payroll	Change in Total % Payroll*
Regular Members	(57,989,838)	-0.3%	(4,361,790)	-0.3%	-0.6%
Judicial Members	742,065	-0.3%	(287,685)	-0.6%	-0.9%
Corrections/Hazardous Duty	(9,668,064)	-0.3%	(966,383)	-0.5%	-0.8%
Wildlife	(2,099,194)	-0.3%	(227,399)	-2.2%	-2.5%
TOTAL	(69,015,031)	-0.3%	(5,843,257)	-0.3%	-0.6%

* Values may not sum to totals due to rounding.

Louisiana State Employees Retirement System

Table 13: All Regular Members* - Salary Increase Experience**

Service	Eligible Members	Prior Year Salary***	Actual Salary***	Expected Salary***	Actual Salary Increase	Expected Salary Increase	Proposed Salary Increase
<1	16,878	513,153	577,115	584,925	12.46%	13.99%	13.00%
1	9,925	341,965	360,568	372,730	5.44%	9.00%	8.00%
2	8,467	301,419	315,576	324,018	4.70%	7.50%	7.00%
3	7,114	260,294	272,858	278,508	4.83%	7.00%	6.50%
4	5,475	205,693	215,222	219,056	4.63%	6.50%	6.00%
5	5,404	210,946	219,818	223,603	4.21%	6.00%	5.75%
6	5,402	212,856	221,753	225,628	4.18%	6.00%	5.55%
7	5,241	210,865	219,636	223,517	4.16%	6.00%	5.40%
8	4,753	194,858	202,626	206,541	3.99%	6.00%	5.30%
9	4,529	188,821	196,098	199,199	3.85%	5.50%	5.20%
10	4,545	193,664	200,839	203,348	3.70%	5.00%	5.10%
11	4,322	188,367	195,378	197,785	3.72%	5.00%	5.00%
12	3,957	175,508	181,836	184,282	3.61%	5.00%	4.90%
13	3,734	171,164	177,744	179,723	3.84%	5.00%	4.80%
14	3,747	175,600	181,222	184,374	3.20%	5.00%	4.70%
15	3,607	175,091	180,932	182,969	3.34%	4.50%	4.60%
16	3,364	166,939	172,703	174,451	3.45%	4.50%	4.50%
17	3,512	177,034	183,368	185,001	3.58%	4.50%	4.40%
18	3,616	184,217	190,343	192,506	3.33%	4.50%	4.30%
19	3,345	174,817	180,691	182,684	3.36%	4.50%	4.20%
20	2,615	139,812	144,450	146,102	3.32%	4.50%	4.10%
21	1,993	106,251	109,517	110,768	3.07%	4.25%	4.00%
22	1,724	92,183	94,896	96,100	2.94%	4.25%	4.00%
23	1,797	95,034	98,136	99,073	3.26%	4.25%	4.00%
24	1,764	95,670	98,652	99,736	3.12%	4.25%	4.00%
25	1,777	97,711	100,942	101,863	3.31%	4.25%	4.00%
26	1,814	101,807	105,319	106,135	3.45%	4.25%	4.00%
27	1,995	112,408	115,955	117,184	3.16%	4.25%	4.00%
28	951	54,502	56,604	56,819	3.86%	4.25%	4.00%
29	617	37,287	38,741	38,876	3.90%	4.26%	4.00%
30	471	29,452	30,357	30,924	3.07%	5.00%	4.00%
31	354	22,606	23,405	23,736	3.53%	5.00%	4.00%
32	253	16,413	16,920	17,398	3.09%	6.00%	4.00%
33	191	12,343	12,839	13,084	4.02%	6.00%	4.00%
34	138	9,671	9,960	10,251	2.99%	6.00%	4.00%
35	83	5,542	5,719	5,876	3.19%	6.03%	4.00%
36	49	3,098	3,183	3,252	2.74%	4.97%	4.00%
37	35	2,216	2,278	2,327	2.80%	5.01%	4.00%
38	21	1,316	1,322	1,381	0.46%	4.94%	4.00%
39	7	377	387	396	2.65%	5.04%	4.00%
40+	41	2,449	2,507	2,572	2.37%	5.02%	4.00%
Totals	129,627	5,461,419	5,718,415	5,808,701	4.71%	6.36%	5.94%

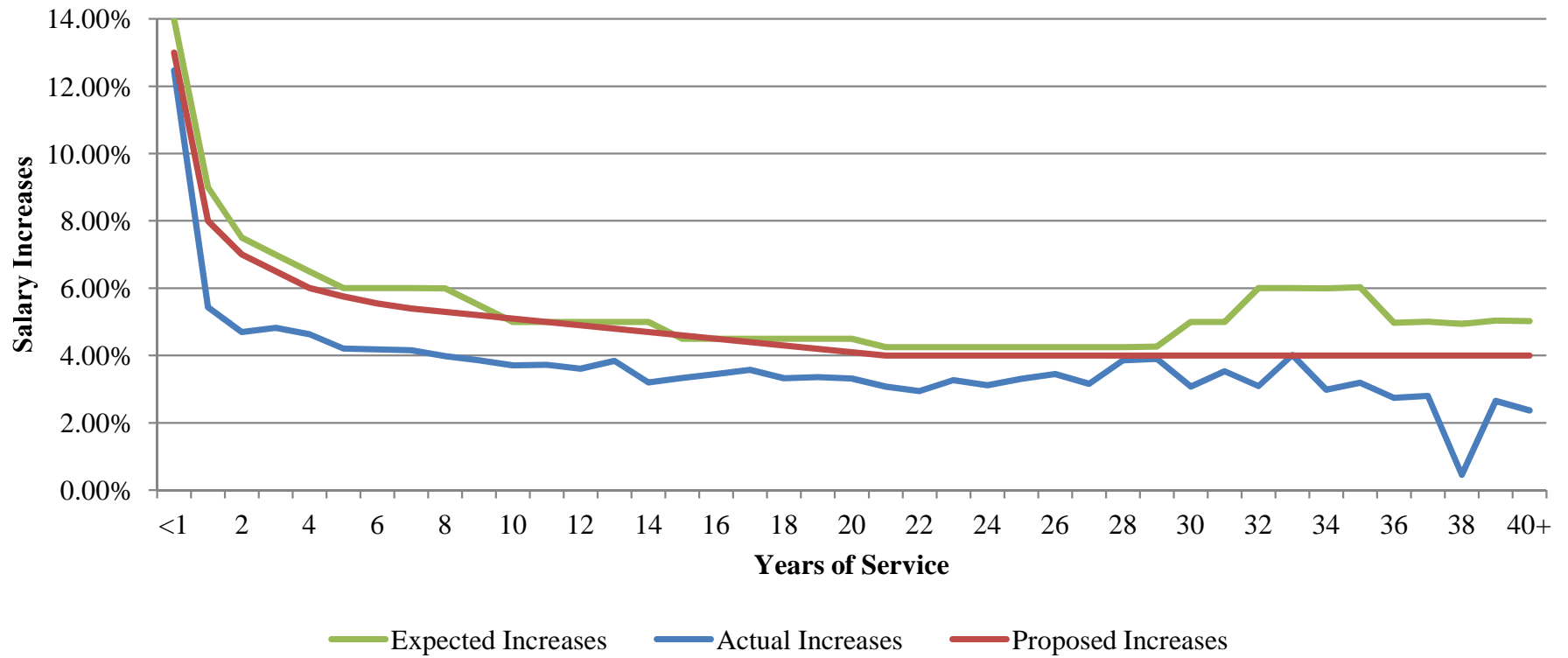
*The Appellate Law Clerks were included with Regular Members for Salary Increase Experience.

**Data from Valuation Year 2009 through 2012 sorted by Member Age.

***All salary figures are shown in 1,000s

Graph 13: Salary Increase Experience

All Regular Members



Louisiana State Employees Retirement System

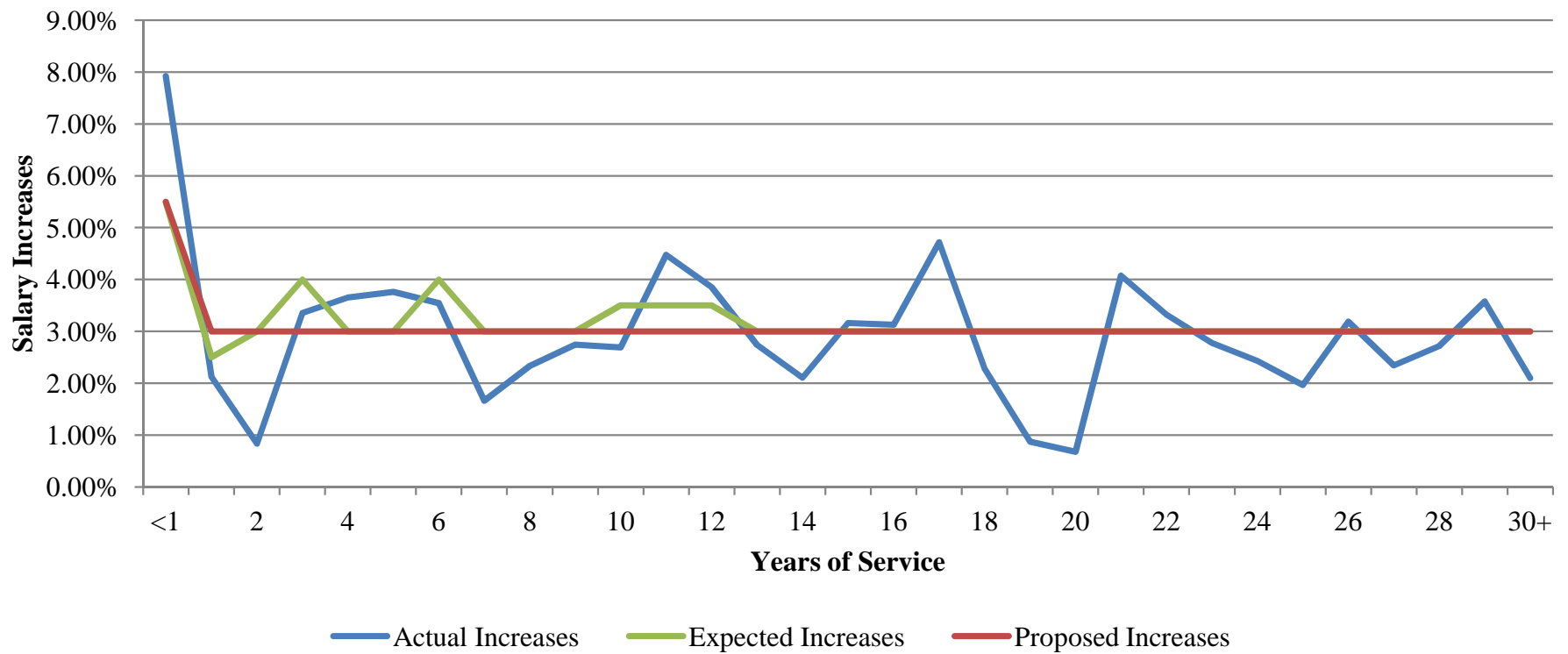
Table 14: Judicial Members - Salary Increase Experience*

Service	Eligible Members	Prior Year Salary	Actual Salary	Expected Salary	Actual Salary Increase	Expected Salary Increase	Proposed Salary Increase
<1	138	16,026,217	17,296,075	16,907,658	7.92%	5.50%	5.50%
1	61	7,667,098	7,829,749	7,858,775	2.12%	2.50%	3.00%
2	58	7,517,536	7,580,376	7,743,062	0.84%	3.00%	3.00%
3	20	2,419,605	2,500,779	2,516,389	3.35%	4.00%	3.00%
4	23	2,833,635	2,937,150	2,918,644	3.65%	3.00%	3.00%
5	43	5,247,556	5,444,942	5,404,983	3.76%	3.00%	3.00%
6	40	5,039,650	5,218,284	5,241,236	3.54%	4.00%	3.00%
7	46	5,891,045	5,988,940	6,067,776	1.66%	3.00%	3.00%
8	46	5,790,865	5,925,967	5,964,591	2.33%	3.00%	3.00%
9	35	4,455,777	4,578,000	4,589,450	2.74%	3.00%	3.00%
10	37	4,598,986	4,722,755	4,759,951	2.69%	3.50%	3.00%
11	59	7,293,312	7,619,505	7,548,578	4.47%	3.50%	3.00%
12	65	8,297,250	8,616,932	8,587,654	3.85%	3.50%	3.00%
13	74	9,614,921	9,878,177	9,903,369	2.74%	3.00%	3.00%
14	66	8,759,587	8,943,838	9,022,375	2.10%	3.00%	3.00%
15	59	7,621,050	7,861,910	7,849,682	3.16%	3.00%	3.00%
16	50	6,537,414	6,741,975	6,733,536	3.13%	3.00%	3.00%
17	57	7,250,337	7,592,452	7,467,847	4.72%	3.00%	3.00%
18	49	6,419,350	6,565,617	6,611,931	2.28%	3.00%	3.00%
19	40	5,233,363	5,278,863	5,390,364	0.87%	3.00%	3.00%
20	34	4,360,777	4,390,188	4,491,600	0.67%	3.00%	3.00%
21	16	1,997,561	2,078,965	2,057,488	4.08%	3.00%	3.00%
22	20	2,503,866	2,587,055	2,578,982	3.32%	3.00%	3.00%
23	18	2,314,209	2,378,509	2,383,635	2.78%	3.00%	3.00%
24	13	1,583,434	1,621,954	1,630,937	2.43%	3.00%	3.00%
25	15	1,856,671	1,893,170	1,912,371	1.97%	3.00%	3.00%
26	14	1,821,345	1,879,444	1,875,985	3.19%	3.00%	3.00%
27	9	1,187,747	1,215,586	1,223,379	2.34%	3.00%	3.00%
28	8	1,034,613	1,062,699	1,065,651	2.71%	3.00%	3.00%
29	13	1,654,716	1,713,944	1,704,357	3.58%	3.00%	3.00%
30+	28	3,723,584	3,801,785	3,835,292	2.10%	3.00%	3.00%
Totals	1,254	158,553,077	163,745,585	163,847,528	3.27%	3.34%	3.25%

*Data from Valuation Year 2009 through 2013 sorted by Member Age.

Graph 14: Salary Increase Experience

Judicial Members



Louisiana State Employees Retirement System

Table 15: Hazardous Duty/Wildlife Members - Salary Increase Experience*

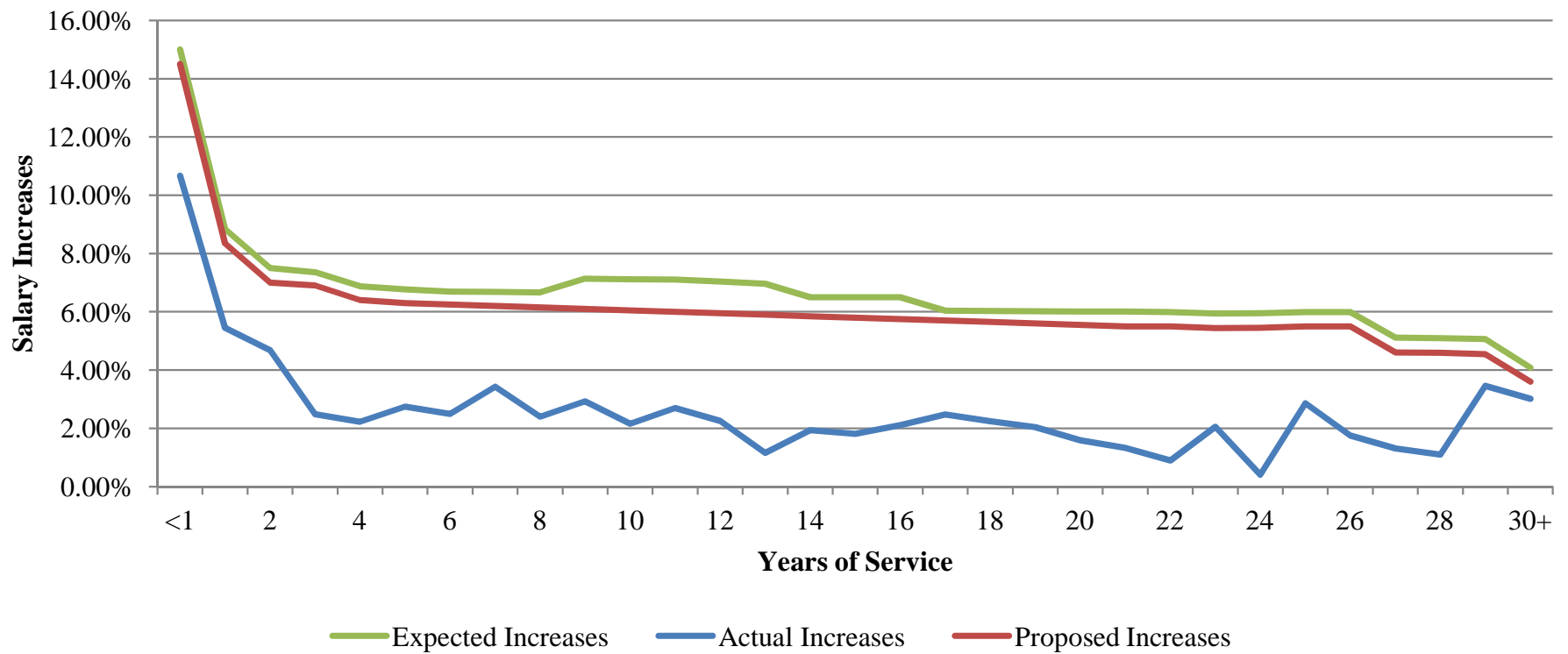
Service	Eligible Members	Prior Year Salary**	Actual Salary**	Expected Salary**	Actual Salary Increase	Expected Salary Increase	Proposed Salary Increase
<1	2,418	70,667	78,209	81,266	10.67%	15.00%	14.50%
1	1,180	38,045	40,120	41,410	5.45%	8.84%	8.35%
2	1,075	36,582	38,293	39,325	4.68%	7.50%	7.00%
3	977	34,951	35,821	37,524	2.49%	7.36%	6.90%
4	803	29,788	30,451	31,835	2.23%	6.87%	6.40%
5	704	26,880	27,618	28,700	2.75%	6.77%	6.30%
6	724	28,400	29,108	30,301	2.49%	6.69%	6.25%
7	755	30,564	31,613	32,607	3.43%	6.68%	6.20%
8	801	33,328	34,126	35,549	2.39%	6.66%	6.15%
9	819	35,222	36,254	37,737	2.93%	7.14%	6.10%
10	797	35,855	36,628	38,405	2.16%	7.11%	6.05%
11	725	33,627	34,534	36,018	2.70%	7.11%	6.00%
12	674	32,182	32,906	34,447	2.25%	7.04%	5.95%
13	580	28,594	28,925	30,586	1.16%	6.97%	5.90%
14	454	22,918	23,361	24,407	1.93%	6.50%	5.85%
15	433	22,728	23,140	24,205	1.81%	6.50%	5.80%
16	402	21,918	22,381	23,343	2.11%	6.50%	5.75%
17	448	25,378	26,006	26,911	2.47%	6.04%	5.70%
18	477	27,451	28,066	29,105	2.24%	6.03%	5.65%
19	456	26,685	27,229	28,292	2.04%	6.02%	5.60%
20	385	22,886	23,250	24,262	1.59%	6.01%	5.55%
21	331	19,973	20,239	21,173	1.33%	6.01%	5.50%
22	219	13,765	13,888	14,589	0.89%	5.99%	5.50%
23	91	5,988	6,111	6,344	2.05%	5.95%	5.45%
24	76	5,196	5,217	5,505	0.40%	5.95%	5.45%
25	62	3,989	4,103	4,228	2.86%	5.99%	5.50%
26	48	2,973	3,025	3,151	1.75%	5.99%	5.50%
27	37	2,290	2,320	2,407	1.31%	5.11%	4.60%
28	25	1,550	1,567	1,629	1.10%	5.10%	4.60%
29	13	810	838	851	3.46%	5.06%	4.55%
30+	48	2,721	2,803	2,832	3.01%	4.08%	3.60%
Total	17,037	723,904	748,150	778,944	3.35%	7.60%	6.97%

*Data from Valuation Year 2009 through 2013 sorted by Completed Service.

**All salary figures are shown in 1,000s

Graph 15: Salary Increase Experience

Hazardous Duty and Wildlife Members



ACTUARIAL VALUATION RATE

The assumed actuarial rate of return, or the discount rate, is used to determine the present value of expected future plan payments. Generally, the appropriate discount rate is the same as the investment return assumption. The rate is used to measure the plan's present value of accumulated benefits on an ongoing basis, so the assumption should reflect a long term horizon and a diversified investment portfolio.

The Board of Trustees adopted a decrease in the discount rate from the previously prescribed rate of 8.25% to 8.00%, effective July 1, 2012, following a request by the Board of Trustees that the system actuary review the appropriateness of the current rate and recommend an appropriate assumed rate. The result of the analysis was that an assumption in the range of 7.75% to 8.25% would be reasonable. It was recommended that the actuarial valuation rate be set at 8.00%. The recommendation was adopted by the Board. PRSAC adopted the 8.00% assumed valuation rate in May 2012.

Because no one knows what the future holds with respect to economic and other contingencies, actuaries must use professional judgment when selecting assumptions to estimate possible future economic outcomes based on past experience and future expectations. Therefore, the best-estimate assumption is generally represented by a range rather than one specific assumption. A specific point can then be selected from within that range. ASOP #27, regarding the Selection of Economic Assumptions for Measuring Pension Obligations, provides guidance regarding the determination of an appropriate assumed investment return and discount rate. The standard was revised in September 2013 and the revisions apply to actuarial work products with a measurement date on or after September 30, 2014, therefore will apply to LASERS actuarial valuations beginning in 2015. However, we believe the revisions in the standard are appropriate guidance for the 2014 valuation as well so will be viewed as the applicable standard beginning immediately for purposes of this study. The methods demonstrated below are consistent with the guidance provided in the ASOP. The Sections of particular relevance are described below:

3.5.1 Adverse Deviation or Plan Provisions That Are Difficult to Measure - Depending on the purpose of the measurement, the actuary may determine that it is appropriate to adjust the economic assumptions to provide for considerations such as adverse deviation or plan provisions that are difficult to measure (such as gain-sharing provisions), as discussed in ASOP No. 4.

3.6.2 Range of Reasonable Assumptions - The actuary should recognize the uncertain nature of the items for which assumptions are selected and, as a result, may consider several different assumptions reasonable for a given measurement. The actuary should also recognize that different actuaries will apply different professional judgment and may choose different reasonable assumptions. As a result, a range of reasonable assumptions may develop both for an individual actuary and across actuarial practice.

3.8 Selecting an Investment Return Assumption - The investment return assumption reflects the anticipated returns on the plan's current and, if appropriate for the measurement, future assets. The section states that the actuary should consider various factors including but not limited to forecasts of inflation, GDP growth, and total returns of each asset class, historical plan performance and the judgment of investment professionals. The investment return assumption should be reduced to reflect investment and other administrative expenses that are paid from plan assets and not otherwise recognized. The prior standard did not address administrative expenses not otherwise recognized, so explicit recognition of administrative expenses in the development of the valuation rate is a new requirement. When

determining a forward looking expected geometric return for an entire portfolio, the actuary generally should not take the weighted average of the forward looking expected geometric return for each of the asset classes, but should take the weighted average of the forward looking expected arithmetic return for each class and adjust such determination to reflect the variance of the entire portfolio.

Historical returns should be considered when determining the assumed rate, however, due to the long term nature of the plans, undue weight should not be given to recent experience. The historic rates of return on LASERS' actuarial value of assets for the period ending June 30, 2013 are shown below. These returns are not adjusted to exclude administrative expenses or funds diverted to the experience account, but are net of investment expenses. It is important to note that the recent investment losses of 2007 and 2008 have been entirely recognized in the returns below but much of the recovery has not yet been recognized through the actuarial smoothing process.

Actuarial Return - Geometric Average				
5 Year	10 Year	20 Year	25 Year	30 Year
3.62%	7.07%	7.27%	7.76%	8.21%

A review of the system's target asset allocation and long-term expected investment return is an important part of determining an appropriate discount rate. The target asset allocation is determined after a thorough study conducted by LASERS external investment consultant, NEPC, and LASERS internal investment staff. Expected returns and LASERS target asset allocation are shown below:

Asset Class	Market Value Target	Net Expected Arithmetic Return	Net Expected Geometric Return	Standard Deviation
Domestic Large Cap	15%	9.46%	8.00%	18.0%
Domestic Mid Cap	4%	10.21%	8.25%	21.0%
Domestic Small Cap	8%	10.21%	8.25%	21.0%
Established International (Large Cap)	15%	10.21%	8.25%	21.0%
Established International (Small Cap)	3%	10.21%	8.25%	21.0%
Emerging International (Equity)	12%	12.43%	9.50%	26.0%
Core Fixed Income	--	--		
Investment Grade Credit	2%	4.52%	4.25%	7.50%
Mortgage Backed Securities	2%	4.73%	4.50%	7.50%
Emerging Market Debt (LC)	2%	7.16%	6.25%	14.0%
Domestic High Yield	5%	6.04%	5.25%	13.0%
Global Bonds	0%	--		
Opportunistic Credit	2%	6.04%	5.25%	13.0%
Private Equity	--	--		
Private Equity	6.5%	16.06%	13.0%	27.0%
Private Debt	6.5%	14.55%	13.0%	19.0%
Absolute Return	7%	8.66%	8.0%	12.0%
Global Asset Allocation	7%	6.25%	5.59%	11.92%
Real Assets/Inflation Protection Inv.	--	--		
Commodities	1.5%	6.99%	5.50%	18.0%
TIPS	1.5%	3.52%	3.25%	7.50%
Other	--			
Total/Return	100%	9.92%	8.90%	15.05%

The allocation is designed to maintain a broadly diversified portfolio that maximizes the system's upside potential for higher yields with minimum downside risk. Using NEPC's long-term 2013 Capital Market Assumptions for all categories except Private Equity, Private Debt, and Absolute Return, and using LASERS Private Market assumptions for Private Equity, Private Debt, and Absolute Return, the expected long-term geometric return resulting from LASERS allocation is 8.9%. This is based upon NEPC's long-term inflation assumption of 3.25%, which is based on a global view of inflation, particularly as it will affect investments. NEPC has retained this assumption for their 2014 long-term capital market assumptions. In order to adjust for the 3.0% inflation assumption used for LASERS recommended salary assumptions, adjusting downward by 0.25% results in a long-term expected return of 8.65%. These assumptions do not include additional expected return resulting from active management, so could be considered conservative from this perspective.

A reasonable range for the actuarial assumed rate of return should be based on the system's investment portfolio and adjusted for any expenses that are paid from investment returns before any gains are credited to valuation assets for purposes of paying plan benefits.

The following expenses, other than regular plan benefits, are paid from plan assets:

a) Investment Expenses, such as consultant, custodian, and management fees

Investment expenses are paid from plan assets, but the long-term expected return of 8.9% is net of the majority of investment expenses, per NEPC and LASERS investment staff, so an adjustment for these expenses is not necessary.

b) Administrative expenses

LASERS' administrative expenses are approximately 15 to 20 basis points. Current law, by omission of language regarding the funding of administration expenses, precludes funding these expenses by direct allocation through the employer contribution rate. In the absence of legislation providing for alternative funding, these expenses will continue to be funded through the employer rate with the 30 year amortization of the experience losses. However, since section 3.8 of the recently revised ASOP 27 states that the investment return assumption should be reduced to reflect investment and other administrative expenses that are paid from plan assets and not otherwise recognized, we believe it is appropriate to reduce the investment assumption in recognition of administrative expenses paid from plan assets. However, it should be noted that we have been advised by LASERS legal staff that current law does not allow this expense to be netted from the investment gain relative to the discount rate prior to determining the experience account allocation. If the long-term investment returns are achieved as expected, investment gains will offset the experience losses to the extent these gains are not transferred to the experience account. These expenses are not expected to increase at the same rate as plan assets so the 15-20 basis points range is expected to decrease over time.

c) Gain-Sharing

One-half of investment gains (above the actuarial assumed rate of return) in excess of \$100 million are withheld from valuation assets and credited to the experience account to fund future permanent benefit increases, or cost of living increases. This is expected to represent on average 50 basis points of investment return, after consideration of the \$100 million hurdle. It should be noted that any reduction in the discount rate will increase future expected investment gains, and will correspondingly increase the cost of gain-sharing. Also, as asset values increase, the value of

the fixed hurdle has a diminishing effect, so the expected cost of 50 basis points will increase over time. In light of this, it is recommended that 50 to 75 basis points be recognized as the expected cost of gain-sharing, based on sharing of gains above the current valuation rate of 8.0%.

The above estimated expenses total approximately 0.65% - 0.95% of plan assets annually. Subtracting these from the long term expected investment return of 8.65% results in a range of 7.70% - 8.00%. **Based on the above assumptions and expenses, we believe an actuarial assumed rate of return in the range of 7.50% to 8.00% would be reasonable.** Should the above portfolio allocation, return expectations or expenses change significantly, this recommendation should be reconsidered.

The total impact on the projected fiscal year 2014/2015 funding requirements resulting from a decrease in the current actuarial valuation rate of 8.00% to 7.90%, 7.75%, or 7.50%, effective June 30, 2014, assuming all other actuarial assumptions and methods remain constant, is shown below. The table also shows the increase in the Unfunded Accrued Liability, Normal Cost, UAL Payment and composite projected contribution requirements for each discount rate scenario based upon the June 30, 2013 valuation. These values do not include the impact of the change of any other assumptions recommended in this report.

	Discount Rate					
	7.90%		7.75%		7.50%	
	\$ Change	% Payroll	\$ Change	% Payroll	\$ Change	% Payroll
Total UAL Change	\$143.8 M	N/A	\$364.2 M	N/A	\$744.4 M	N/A
Projected Contribution Increase:						
Normal Cost	4.2 M	0.2%	\$10.7 M	0.5%	\$22.0 M	1.1%
Amortization of UAL	8.0 M	0.4%	\$20.1 M	1.0%	\$40.1 M	2.0%
Total Contribution Increase:	12.2 M	0.6%	\$30.8 M	1.6%	\$60.8 M	3.1%
Composite Projected Employer Rate Change FY 14/15	0.6%		1.6%		3.1%	

* Values may not sum to totals due to rounding

DEMOGRAPHIC STATISTICS

Marital Status: Recent data from the United States Census Bureau suggests that the current valuation assumption that 80% of active members are married should be reduced to 75%. This statistic is used to determine the probability that spousal benefits will be payable in the event of an active member's death.

Spouses' Ages: Male spouses are assumed to be 3 years older. Correspondingly, female spouses are assumed to be three years younger. This assumption will be retained.

Dependent/Minor Children: Dependent/Minor Children statistics are based on Current Population Reports published by the United States Census Bureau. Data from these reports suggest the current assumptions regarding number of children by age of member should be slightly decreased, as shown below. The current Years of Benefit Eligibility assumptions shown below remain consistent with current statistics so will be retained. Sample rates are as follows:

Age of Member	# of Dependent Children	Years of Eligibility
25	1.2	17
30	1.4	15
35	1.7	13
40	1.7	10
45	1.4	8
50	1.1	4

CONVERTED LEAVE

Retirements during the five year observation period were reviewed to determine the amount of leave credit converted to service credit or lump sum at retirement. Since leave credit is accrued throughout the duration of the member's career, the average converted credit is expressed as a percentage increase of the accrued benefit as follows. Proposed rates for members retiring after DROP are the same as those proposed for regular retirement.

	Prior Rates			Proposed Rates	
	Regular Retirement	Retire after DROP	Disability	Regular Retirement	Disability
Regular Members	3.0%	2.0%	1.5%	3.5%	1.5%
Judicial Members	1.0%	1.0%	1.0%	1.0%	1.0%
Corr/Haz Duty	4.5%	2.5%	2.5%	5.0%	3.0%
Wildlife	6.0%	5.0%	3.0%	6.0%	3.0%

Impact on Valuation Results

Below are details by plan regarding the effects of updating the converted leave assumptions as proposed. Note the change in accrued liability and normal costs are determined based on the recent June 30, 2013 actuarial valuation.

	Change in Accrued Liability	Change in UAL Pmt % Payroll	Change in Normal Cost	Change in NC % Payroll	Change in Total % Payroll
Regular Members	16,106,555	0.1%	1,125,826	0.1%	0.1%
Judicial Members	-	0.1%	-	0.0%	0.1%
Corrections/Hazardous Duty	736,711	0.1%	54,392	0.0%	0.1%
Wildlife	961	0.1%	296	0.0%	0.1%
TOTAL	16,844,227	0.1%	1,180,514	0.0%	0.1%

SUMMARY

Adoption of the proposed assumptions from the 2009 – 2013 Experience Study will alter future funding for each changed decrement. The total change in liability and funding requirements when compared to the results of the June 30, 2013 actuarial valuation are summarized as follows:

	Change in Accrued Liability	Change in Shared UAL Payment % Payroll	Change in Normal Cost	Change in Composite Normal Cost % Payroll	Total Composite Change % Payroll *
Retirement rates	103,675,377	0.4%	5,668,093	0.3%	0.7%
Termination rates	40,755,652	0.2%	(984,507)	0.0%	0.1%
Disability rates	(1,641,668)	0.0%	(53,321)	0.0%	0.0%
Mortality rates	268,141,657	1.2%	4,999,520	0.3%	1.4%
Salary growth rates	(69,015,031)	-0.3%	(5,843,257)	-0.3%	-0.6%
Demographic stats	16,844,227	0.1%	1,180,514	0.1%	0.1%
TOTAL	358,760,214	N/A	4,967,042	N/A	N/A
Composite Valuation Change	361,231,175	N/A	8,092,394	0.4%	N/A
UAL Payment Change	30,875,960	1.5%	N/A	N/A	N/A
Composite Projected Contribution Rate Change FY 14-15		1.5%		0.4%	1.9%

* Values may not sum to totals due to rounding.

The Composite Valuation Change does not equal the sum of the individual changes because the decrements do not operate in isolation of each other. Changes to one decrement will alter the effects of changes to another decrement. If the proposed changes had been effect on June 30, 2013, the combined changes would have resulted in an overall increase in funding requirements of 1.9% of payroll. This estimate is based on a revised total projected payroll for FY 14/15 of \$2.025 Billion, determine using all proposed assumptions.

If adopted, the new rates could be incorporated in the June 30, 2014 actuarial valuation. The corresponding change in funding requirements would be reflected in employer rates beginning July 1, 2015.